

BOLIVIAN EPIDEMIOLOGICAL SHIELD AND SUPPORT FOR HEALTH-SECTOR REFORM

(BO-0115)

EXECUTIVE SUMMARY

BORROWER AND GUARANTOR: Republic of Bolivia

EXECUTING AGENCY: Ministry of Health and Social Insurance

AMOUNT AND SOURCE:

IDB (FSO):	US\$45.0 million
Borrower:	US\$ 8.7 million
Total:	US\$53.7 million

FINANCIAL TERMS AND CONDITIONS:

Amortization period:	40 years
Grace period:	10 years
Disbursement period:	6 years
Interest rate:	1% during grace period 2% thereafter
Inspection and supervision:	1%
Credit fee:	0.5%

OBJECTIVES: The program's objectives are to: (i) help lower mortality and morbidity in Bolivia associated with the leading risk factors (communicable diseases), and (ii) support the health-sector reform process by designing and implementing, as a pilot initiative, a family-centered primary health-care model as one vehicle for delivery of basic health insurance, to help reduce maternal and child mortality.

DESCRIPTION: The program has been divided into two components to pursue the above-listed objectives: (i) Bolivian epidemiological shield, and (ii) support for health-sector reform.

1. Bolivian epidemiological shield (US\$40.5 million)
 - a. Chagas' disease control, prevention, and treatment project (US\$25.2 million)

The project's aim is to take actions to halt vector-borne transmission of Chagas' disease and prevent this affliction by instituting controls for blood transfusions and identifying and treating infected children under 5 years of age. The project will be carried through in two stages. The first will combat vectoral transmission of this disease by fumigating about

700,000 homes, taking in the entire endemic area. The second stage will control reinfestation of residual foci, set in place a solid community surveillance system, and hand responsibility over to departments, districts, municipalities, and communities.

During the first stage the project will fund the following activities: (i) training for health practitioners and officers and community leaders, and research and surveys to make more and better information available on the presence of vectors by geographic area; (ii) purchase of insecticides; (iii) purchase of spraying equipment (sprayers and parts); (iv) purchase of drugs and medical supplies to diagnose and treat the disease in children under 5; (v) procurement of transportation equipment (vehicles and motorcycles, spares, fuel and lubricants); (vi) procurement of field and protective equipment; and (vii) mobilization of personnel and payment of household spraying teams. Slated for funding during the second stage are training, institution-strengthening, and development of organizational capacity of health services and communities for ongoing surveillance for Chagas' disease and to halt reinfestation.

b. Project to strengthen the National Epidemiological Surveillance System (US\$15.3 million)

This project's main goals are to strengthen: (i) the National Health Information System and the flow of information needed for decision-making in the health sector; (ii) the national network of laboratories for early diagnosis and research into prevalent emerging and reemerging diseases; and (iii) the national blood-bank network, to eliminate the risk of contamination from blood-borne pathogens and ensure safe transfusions of blood and blood products.

The following activities are planned: (i) training of government, nongovernmental, and community health workers; (ii) integration of the local health sector with other public and private health agencies, in order to broaden coverage; (iii) development of information networks and provision of effective communication media (Internet, telephone, radiotelephone, etc.); (iv) implementation of epidemiological surveillance at the community level by way of grass-roots community and mega-municipal

organizations, watch committees, and other organized community groups; (v) strengthening the laboratory network at the national, departmental, and district levels, as well as blood banks and transfusion centers, by purchasing equipment, instruments, and inputs required according to the complexity of treatment in each case, and development of internal and external quality assurance mechanisms; (vi) training of personnel and blood recipients and promotion of voluntary unpaid blood donation; and (vii) development of epidemiological surveillance, through a strategy of family-centered health-care delivery.

2. Support for health sector-reform (US\$5.8 million)

a. Human-resources training (US\$0.3 million)

The aim of this subcomponent is to develop human resources with the expertise to carry through the reform process. It will fund training courses in health-sector management for staff of the MSPS, departmental governments, and health districts.

b. Studies for structuring of the reform (US\$3.5 million)

The central focuses of study will be: (i) a strategy for health labor-force conversion and training; (ii) review of labor laws and legislation governing career service in the health sectors; (iii) institutional and functional analysis of the health sector, particularly of the MSPS as the sectoral policy-making body; (iv) public relations and information strategy; (v) funding and sustainability of the new system; (vi) revamping of social-security health services; and (vii) legal framework for health reform.

c. Pilot reform initiatives (US\$2 million)

This subcomponent will fund pilot health-reform initiatives grounded in a family-centered care model. If these pilot projects are successful, the model can be replicated elsewhere in Bolivia, using new sources of funding.

**ROLE OF THE
PROJECT IN THE
BANK'S COUNTRY AND
SECTOR STRATEGY:**

The Bank's primary strategy objective in Bolivia is to further the government's poverty-reduction effort, including support for initiatives to improve access to basic education and health services, sanitation, and housing. The strategy pursues three main lines of action: (i) economic growth and creation of opportunities; (ii) human capital development and access to basic social services; and (iii) support for governance and consolidation of the reforms. The proposed operation would directly pursue action line (ii) and would also contribute, through the reform component, to line (iii). The Bank's priorities for the health sector are posited upon increased public expenditure to overhaul the system, to develop a new care model that can improve health indicators, particularly for mothers and children, and reduce the currently high incidence of communicable diseases.

The program proposed here is concordant with that strategy, inasmuch as it would help broaden access to health care and thereby raise the standard of living of vulnerable groups, particularly women, children, and indigenous persons. It also would step up efforts to reduce communicable diseases in Bolivia, specifically by combating Chagas' disease and setting in place an epidemiological surveillance system. The program also would help lay the groundwork for more efficient allocation of public resources and streamlined service delivery, through support for health-sector reform with an emphasis on primary health care delivered via a family-centered model.

**ENVIRONMENTAL AND
SOCIAL REVIEW:**

To strengthen the program's impact and maximize the benefits that would accrue to the different population segments, funding will be provided for staff training, environmental education, public information, and health promotion, with due regard to ethnic, cultural, and gender variables in the target population and correct procedures for fumigation and application of chemicals, adhering to PAHO/WHO technical guidelines (paragraphs 4.17 and 4.18 of the proposal which follows).

BENEFITS:

Bolivia is still at the first epidemiological-transition stage, i.e., the burden of disease is concentrated on endemic communicable diseases (chiefly Chagas' disease, malaria, and tuberculosis) which are preventable and controllable. The program will directly reduce mortality and morbidity from communicable diseases. Likewise, program actions to control the supply of blood and blood products will help block the transmission of diseases such as Chagas', hepatitis, HIV/AIDS, and others via blood

transfusions, making for safer treatment in hospitals and other health-care establishments. The benefits expected from the epidemiological surveillance system and laboratory network will be quicker decision-making, a solid database for planning and evaluating the program, and early warning and control mechanisms to deal with outbreaks of disease.

The new health-care model to be developed will: (i) broaden coverage to take in the most vulnerable groups, particularly rural indigenous communities, and lower the risks associated with mother and child mortality and morbidity, and (ii) cut down on unnecessary referrals of patients to second- and third-level care, whereupon health services can operate more efficiently and effectively.

RISKS:

Tendering and procurement: A large sum would be allocated under the epidemiological-shield component for the purchase of insecticides, drugs, and fumigating equipment and for blood banks and a public health laboratory. Traditionally, tendering processes in Bolivia are very protracted. Delays in tendering and purchasing of the aforementioned inputs and equipment could compromise the program's performance. To counter this risk it is proposed that the Pan American Health Organization (PAHO/WHO) purchase and oversee the acquisition of insecticides, critical supplies, and drugs to diagnose and treat Chagas' disease. That agency has the infrastructure and international experience to do so transparently and quickly, and to assure product quality. It is proposed that procurement of other inputs and equipment (transportation equipment, blood banks, laboratory, etc.) be done by the United Nations Development Programme (UNDP).

Institutional apparatus ill-equipped to implement the program and chart reforms. The MSPS does not have a pool of human resources qualified to implement this program and also lay the foundations for health reform as mapped out in Bolivia's strategic plan for its health sector. Accordingly, the guiding principle behind the program's organizational arrangement is the strengthening of the formal structure of the MSPS, building technical capacity within the directorates involved so they can carry through the activities falling to each. Program funds thus will be used to set up core technical teams within the directorates to coordinate and execute the respective projects (with support from the current structures) in concert with their counterparts in the departments and districts.

A Program Coordinating Unit (PCU) will be set up to guide the program activities generally; it also will have the human resources needed to advise on the reform process. For the epidemiological-shield projects, the MSPS will receive technical advisory support from PAHO/WHO on logistics and operations, monitoring and evaluation, and management support. The MSPS will also have the services of UNDP to help administer and monitor the program.

SPECIAL CONTRACTUAL CONDITIONS:

The following would be conditions precedent to the first disbursement: (i) demonstration that agreements have been signed with PAHO/WHO (paragraph 3.1) and with the Ministry of Defense (paragraph 3.10); (ii) demonstration that six management contracts have been signed with departmental governments to start off the epidemiological-shield activities (paragraph 3.8), and that an agreement has been signed with the Health Supplies Distribution Center (CEASS) for distribution of supplies, drugs, and insecticides (paragraph 3.6); and (iii) hiring of UNDP as a specialized agency to administer the program resources and purchase goods other than those covered under the proposed arrangement with PAHO/WHO (paragraph 3.3).

Special conditions in the program's implementation are: (i) municipalities will not be eligible to join the program until they have executed an agreement with the MSPS (paragraphs 3.29 and 3.30); (ii) before training courses in health management may be commissioned, the MSPS must submit to the Bank, for its approval, the proposed course curricula, selection criteria for participants, the final list of health professionals to be trained, and a short-list of Bolivian or international firms equipped to deliver the training (paragraph 3.26); and (iii) for purposes of instituting the program's follow-up and review mechanism, the contract will contain conditions to assure activities programming and monitoring and evaluation of program activities as agreed upon with the country (paragraphs 3.43 to 3.45).

POVERTY-TARGETING AND SOCIAL-SECTOR CLASSIFICATION:

Under the terms of the Eighth Replenishment document (AB-1704, paragraph 2.15), the proposed program qualifies as poverty-targeted, inasmuch as the improvements in government-delivered health services would target mainly the poor. According to paragraph 2.13 of that document, the program would classify as an operation in pursuit of social equity and poverty reduction.

EXCEPTIONS TO BANK POLICY: See the section on procurement which follows.

PROCUREMENT: As an exception to the requirement that consultants be selected through open calls for proposals, it is recommended that PAHO/WHO be engaged directly. That agency would procure insecticides, supplies, and drugs using its 'reimbursable procurement' mechanism, which is concordant with the Bank's rules and procedures (see paragraphs 3.32 to 3.34). Furthermore, it is recommended that UNDP be engaged for financial management of the program resources and to procure goods and services not covered under the PAHO/WHO arrangement. Both these proposed contracts satisfy the requirements in chapter GS-403 of the Bank's Procurement Manual (see paragraphs 3.35 to 3.37).

Consulting services, goods and related services (other than insecticides and drugs), and construction work would be contracted for and purchased following the Bank's procedures. International competitive bidding will be mandatory for purchases of goods and related services costing over US\$250,000. Tendering for items below that threshold will be conducted in accordance with Bolivian law. Considering their low cost, construction contracts (for remodeling or adapting premises) will be let in accordance with local legislation (see paragraphs 3.36 and 3.37).

I. FRAME OF REFERENCE

A. Health profile of Bolivia

- 1.1 Bolivia is the fifth poorest country in Latin America and the Caribbean, with a per capita GDP of US\$939 in 1996. Over 20% of Bolivian adults are illiterate; only about half the population has sewer service. Though the economic adjustments of the 1990s tamed inflation, they did not bring down unemployment, which stands at 9%, or thin the ranks of workers in the informal economy, who currently account for an estimated 60% of the economically active population. The country's population (8 million in 1998) is still growing at a rapid rate of 2.11% a year, but only 60% of Bolivians live in towns or cities. Life expectancy at birth is 59 years, the second-lowest in Latin America and the Caribbean. The majority (over 60%) of the population are indigenous, spread among 35 ethnic groups, with the Quechua and Aymará groups predominating. Close to 70% of the population subsists at or below the poverty line, measured by the index of unmet basic needs.
- 1.2 Bolivia's 1996 infant mortality rate of 68.1 per 1,000 live births is the region's second highest. Over a quarter (28%) of children under 3 years of age suffer from chronic malnutrition. Acute respiratory infections and intestinal infectious diseases are the two leading causes of death in young children.
- 1.3 The maternal mortality rate of 390 per 100,000 live births between 1989 and 1994 is likewise the second highest in the region. Only a small percentage of women receive prenatal care, professional care during delivery, and perinatal care: only 53% of pregnant women receive prenatal care of any kind, and only 27% receive full care, in the form of four visits to trained professionals. Less than half (43%) of pregnant women give birth in health-care establishments; only 36% of births are attended by trained personnel. An estimated 27% to 35% of maternal deaths ensue from abortion complications. The high fertility rate – 5 children per woman of childbearing age, climbing to 8.5 in indigenous communities – attests to the dearth of reproductive-health programs. Domestic violence is another very serious problem for women's health: in 1992 and 1993 there were close to 22,000 reported cases of violence against women in Bolivia's four largest cities.
- 1.4 Vector-borne diseases, which are a problem in 75% of Bolivian territory, contribute prominently to the country's morbidity and mortality patterns. **Chagas' disease** accounts for 13% of deaths in the age 15 to 75 group, the highest incidence rate in the region. The main vector is present in 60% of the country. Chagas' disease is costing the country some US\$189 million a year in production losses (2.6% of GDP), taking into account the current unemployment rate and average per capita output of the economically active population only. A total of 64,000 cases of **malaria** were reported

in 1996 in eight of Bolivia's nine departments, for a prevalence of 19.4 per 1,000 population; incidence rates based on reported cases tripled between 1991 and 1996. Malaria-associated losses to the economy stand at about US\$18.8 million a year. **Tuberculosis** is the leading chronic communicable disease reported in Bolivia. Though its incidence began to decline around 1990, in 1995 it was still 129 cases per 100,000 population, the second highest rate in the region.

- 1.5 A quick analysis of health conditions in Bolivia reveals that: (i) the most salient feature of the country's epidemiological profile is the high incidence of communicable diseases and high maternal and under-5 morbidity and mortality rates; (ii) health conditions are worst among the poorest Bolivians and indigenous groups, this being a result of their living conditions, lack of good care-delivery systems, and logistical, economic, and cultural barriers to regular use of health services; (iii) three communicable diseases - Chagas' disease, malaria, and tuberculosis - account for 40% of the burden of disease in the country and thus are priorities for prevention, control, and treatment; and (iv) Bolivia's alarming epidemiological profile for communicable diseases poses a threat to neighboring countries, which have already stepped up their efforts to combat these endemic diseases.

B. The Bolivian health system

- 1.6 Bolivia's health system is divided into three subsectors: the public system, social-security services, and private health services. The **public subsector** is made up of: (i) the Ministry of Health and Social Insurance (MSPS); (ii) Departmental Health Services (SEDES) in each of the country's nine departments; (iii) 93 health districts; and (iv) municipal health services, overseen by the health districts. The **social-security subsector** consists of: (i) the Health Insurance Directorate in the Office of the MSPS Deputy Minister for Social Insurance; (ii) 17 industry-specific funds (*Cajas de Salud*) and two health insurance plans; and (iii) the National Health Insurance Institute (INASES). Operating in the **private subsector** are: (i) private health insurance plans; (ii) for-profit private institutions; (iii) nonprofit private institutions and nongovernmental organizations (NGOs); (iv) Church-run health services; and (v) traditional-medicine practitioners. An estimated 30% or more of the population have access only to traditional practitioners. A considerable percentage of the population has dual coverage (public plus social security), making it difficult to ascertain the true coverage rate by subsector.
- 1.7 In 1996 Bolivia spent US\$367 million on health services (US\$49 per capita, 5.2% of GDP); a breakdown is presented in Table I-1. Public expenditures were funded from the national budget (general tax revenues), municipal budgets (own resources), and international

technical-cooperation grants. Social-security revenues expended on health care come from employer and pensioner contributions. Private expenditures take in: (i) Church and NGO contributions and (ii) household outlays to pay for health plans, pharmaceuticals and other medicinal products, health services, traditional medicine, and fees and copayments for public health services and those run by the Church and NGOs.

Table I-1
Health spending in Bolivia, 1996

Subsector	Health expenditure (US\$million)	% of GDP
1. PUBLIC	135	1.99
National government	99	1.39
Municipalities	8	0.11
International	28	0.49
2. SOCIAL SECURITY	107	1.50
3. PRIVATE	125	1.75
Church/NGOs	20	0.28
Households	105	1.47
TOTAL	367	5.24

NOTE: Aggregate per capita health expenditure: US\$49.58

1. The public health subsector

- 1.8 Bolivia's universal-access public health system is gradually being decentralized. Its costs are defrayed by the national treasury (general tax revenues), municipalities (locally generated tax revenues), borrowings, and international technical cooperation, supplemented by contributions from individuals and communities. The country's departments supply 2.7% of the monies that the national government transfers to the municipalities, pursuant to the Community Participation Act.
- 1.9 The MSPS is responsible for regulation, epidemiological surveillance, management and oversight of health programs, policies, and plans, and compliance monitoring in the system. The Departmental Health Services (SEDES), which are part of the respective departmental government apparatus, are in charge of funding and implementing health programs, policies, and plans, and run each department's health system. Local responsibility for health-services management and delivery falls to health districts which report to the SEDES. Maintenance of health-services plant and equipment is a municipal responsibility.

2. The social-security subsector

- 1.10 The insurance funds called *Cajas de Salud* cover the formal workforce (1.8 million people, comprising 23% of the population). They are funded by way of employer contributions (10% of payrolls), 5% of pension benefit payments, and a fixed premium for the self-employed. Contrary to the practice in most Latin American social-security administrations, Bolivian wage-earners do not pay into the system. The *Cajas* run 217 health-care establishments offering a total of 3,436 beds, and provide mainly inpatient care. Each *Caja* is separately administered, but the system is regulated and overseen by the MSPS Health Insurance Directorate and INASES, which should have a regulatory role. The largest of these funds are *Caja Nacional de Salud* and *Caja Petrolera de Salud*, which account for 86% and 5%, respectively, of coverage.

3. The private health subsector

- 1.11 Private health-insurance plans are residual, with 11 institutions serving a mere 35,000 members. Prepaid medical plans account for the lion's share of this option, with private health-care providers or contractors operating under agreements with the public or companies in a prepayment system. A sign of their growing popularity was the creation in 1993 of the Bolivian Association for Prepaid Medical Insurance (ABOSMEP).
- 1.12 In 1994 there were 141 NGOs operating in the health sector in Bolivia, with a higher or lower profile depending on the region or zone and municipal poverty levels. A large percentage of these agencies are engaged in health-promotion work (reproductive health, health education). Most are receiving international funding (USAID, United Nations, bilateral funds); few receive enough Bolivian funding to be self-sustaining. An estimated 10% of the population is benefiting from health-related activities of these providers; taking health promotion into account, they are improving the lives of as many as 30% of all Bolivians.
- 1.13 The Church is an important provider of services to the community, particularly in pockets of abject poverty and low-income urban areas. Its work in this sector is paid for with funds it raises on its own, cross-subsidies, and user contributions.

C. Epidemiological surveillance services and reporting system

- 1.14 Programs to combat communicable diseases are managed at the central-government level by the MSPS Epidemiology Directorate. Departmental governments and health districts lack the intermediate-level apparatus they would need to be able to standardize, record, and monitor epidemiological surveillance work. Few if any of the public, private, and NGO-sponsored services operate with a culture of health promotion and prevention or are reporting epidemiological information properly. Because of these

structural shortcomings in local networks, chronic shortages of funding to sustain programs, and the dearth of physical and human resources, surveillance activities are one of the most serious bottlenecks in the search for a self-sustaining solution to the high incidence of communicable diseases in the country.

D. Main problems in the system

- 1.15 **Public subsector.** The chief problems in the public health subsector have to do with coverage, financing, quality, and efficiency. They can be summed up as follows: (i) there is no overarching policy for combatting the leading endemic diseases, and no epidemiological surveillance system in place in the country, particularly at the local level; since not enough money is being allocated for such policies and they are continually interrupted, the incidence of these diseases is on the rise; (ii) health-care coverage for the poorest Bolivians is inadequate; (iii) central and municipal government spending is insufficient (US\$14.4 per capita) and is heavily concentrated on hospitals, leaving only 7% for primary health care; this speaks to the low priority accorded to public health promotion and disease-prevention strategies; (iv) the decentralization effort has yet to produce a sound health-care model: responsibilities and reporting lines are still blurred and the management, physical, human, and financial resources needed to expand local primary health-care coverage have not been forthcoming; (v) the public health system is characterized by multiple providers operating independent of one another, without a regulatory apparatus to make for a rational system that would operate more efficiently and to a higher quality standard and reach more people; and (vi) because grants and loan inflows from different international agencies are not coordinated, there are program and activity overlaps.
- 1.16 **Social security.** The main problems in this health subsector lie in its low coverage and weak management. In brief: (i) the coverage provided is mainly for hospitalization; of the 23% of Bolivians with social-security health coverage, only those living in urban areas (12%) actually use the services; (ii) because primary care is not available, individuals covered by the social-security plan turn to public health services; in the absence of a cost-recovery arrangement, the social-security plans are being indirectly subsidized with government budget funds; (iii) with few exceptions, the social-security hospitals provide poor service and have considerable idle capacity; (iv) the system is running a surplus, but only because some services are not being offered or are not accessible to all plan members, particularly primary care; and (v) there are no mechanisms to foster competition between the *Cajas* and insurance plans such as would enhance the quality of care, since those insured are not free to switch to other plans.

- 1.17 **Private subsector.** Here, the chief problems are a plethora of providers whose operations are not coordinated or integrated with those of the public health subsector, and the absence of a regulatory policy for the private health-insurance industry.

E. The government's health-reform program

- 1.18 In an effort to bring in reforms to assure basic health coverage for the country's most vulnerable, the previous administration (1993-1997) proposed the creation of national mother and child and old-age insurance, but these reforms never materialized. The government which took office in 1997 is proposing a package of reforms set out in a Strategic Plan for the Health Sector to address, one step at a time, the sector's most serious problems, primarily those relating to coverage and quality of care. The core intervention strategies have already been framed: (i) establish a Bolivian epidemiological shield to eradicate and control the major communicable diseases and set up an epidemiological surveillance system; (ii) create a basic basket of services called Basic Health Insurance, with services for mothers and children and health-promotion and disease-prevention actions, targeting communicable diseases particularly; (iii) establish a family health program as an organizational model and single gateway to a countrywide network of providers, funded by the government, social security, and client outlays; and (iv) revamp social-security health services, to integrate them with other public providers and increase their coverage and efficiency.
- 1.19 The government sees the reform program as a comprehensive undertaking, to be conducted from the central level with the MSPS at the helm. The MSPS has appointed a health-reform coordination team to coordinate actions within and between agencies and the support proffered by bilateral and multilateral financing agencies.

F. Constraints for the reform program

- 1.20 The following are the most serious constraints for the success of the above-mentioned Strategic Plan: (i) a lack of capital funding to revamp management systems and supply human resources with the expertise needed to implement the epidemiological surveillance system, Basic Health Insurance plan, and family-centered health-care model, and (ii) the absence of a strategy to assure the program's financial sustainability, since recurrent costs ensuing from the planned actions could only be defrayed under a new financing scheme. To help overcome these constraints, the proposed program would pay for a study on funding alternatives for the sector and defray part of the cost of the epidemiological-shield activities and development and implementation of a family-centered care model, with funding for pilot reform initiatives.

G. The Bank's strategy

- 1.21 The Bank's primary strategy objective in Bolivia is to further the government's poverty-reduction effort, including support for actions that will improve access to basic education and health services, sanitation, and housing. The strategy pursues three main lines of action: (i) economic growth and creation of opportunities; (ii) human capital development and access to basic social services; and (iii) support for governance and consolidation of the reforms. The proposed operation would directly pursue action line (ii) and would also contribute, through the reform component, to line (iii). The Bank's priorities for the health sector are posited upon increased public expenditure to overhaul the system and advocate a new health-care model to improve health indicators, particularly for mothers and children, and reduce the currently high incidence of communicable diseases, notably Chagas' disease, malaria, and tuberculosis.
- 1.22 In pursuit of the above-mentioned strategy, the proposed program would afford the means of stepping up efforts to lessen the impact of endemic communicable diseases. In addition, the program will help lay solid groundwork to equip the MSPS to: (i) adopt an organizational and institutional structure for itself, departmental governments, health districts, and municipalities, to keep pace with the continuing decentralization process that is part of the planned reforms; (ii) expand health services, particularly to reach the most vulnerable (women, children, and indigenous communities); (iii) apportion public-sector monies more efficiently; and (iv) rationalize care delivery, by way of support for health-sector reform, emphasizing good-quality primary care with a family-health-centered model.
- 1.23 As for the epidemiological shield, actions planned by the MSPS in this project would combat the three leading endemic diseases - Chagas' disease, malaria, and tuberculosis - and modernize the epidemiological surveillance system by strengthening the National Health Information System, the national laboratory network, and the network of blood- and blood-products banks. In all, the epidemiological shield would cost about US\$66.8 million. Considering the cost of the project and the funds that would be made available under the proposed IDB loan, it has been agreed with the MSPS that the Bank would finance the Chagas' disease projects and those designed to strengthen the epidemiological surveillance system, which have an aggregate cost of approximately US\$40.5 million.
- 1.24 As separate initiatives, the Bank has been overseeing the development of specific projects to combat the malaria vector and treat that disease (US\$17 million) and for a tuberculosis control plan (US\$11 million); those projects could eventually be funded by the Bank when new FSO funds were available for Bolivia, if the Bolivian government so requested. In that event, the Management of the Bank would reformulate the program to build the two new

projects into the epidemiological-shield component. However, because the MSPS is anxious to launch its malaria and tuberculosis control and prevention initiatives, the ministry plans to present these projects to the European Union and Spanish cooperation authorities, respectively.

- 1.25 The proposed program complements an operation currently being prepared by the World Bank, so the preparatory work has been duly coordinated with that agency. This joint action involved preparations for the studies and the programming and implementation of the pilot reform projects. In future, joint IDB-World Bank action will concentrate on: (i) broadening access of vulnerable groups, particularly indigenous women and children, to an integrated health-care package (Basic Health Insurance); (ii) removing economic and cultural barriers to the use of health services; and (iii) strengthening the MSPS, equipping it to track the reforms and perform its supervisory, monitoring, and evaluation work. The main points of confluence of the program proposed here and the planned World Bank activities are in the design and implementation of the Basic Health Insurance delivery strategy, built around a family health-care model.
- 1.26 The World Bank's program will have two components: (i) strengthening of local and community networks for mother and child health care and for the Expanded Immunization Program; and (ii) bolstering the State's response to health needs, by implementing the Basic Health Insurance scheme and supporting the development of information systems for management, supervision, and evaluation. This World Bank loan for about US\$20 million is expected to be approved in mid-1999, as part of an Adaptable Program Loan facility that will aggregate US\$100 million over the next 10 years.

H. The Bank's experience in the health sector

- 1.27 The most recent IDB-funded health-sector operation in Bolivia was a basic health services and institution-strengthening program (858/SF-BO and ATN/SF-3712-BO) approved in May 1991. That operation was built around targeted actions in urban and rural areas in every Bolivian department except La Paz, Santa Cruz, and Cochabamba. Its core objectives were as follows: (i) strengthen health programs, through training and disease-prevention actions for mothers and children; (ii) build operating capacity in health establishments (training, information systems organization, supply of inputs, transportation, and communications); and (iii) expand coverage by building, rehabilitating, and equipping health centers, health posts, and hospitals.
- 1.28 In terms of attainment of the program's original objectives and targets, 70% of the loan proceeds and 87% of the technical-cooperation funds have been disbursed; from a physical/operational standpoint the program is about 80% complete. According to a mid-term evaluation done by Management Sciences for Health in 1997, the

institutional structure built around regional executing units has worked quite well. The assessment found that: (i) the project addressed rural and semi-urban populations in traditionally unserved departments, thereby making sector investments more equitable; (ii) in its final year and a half the program would need to place more emphasis on certain areas (e.g. public information and communications) and further systematize and consolidate investments made in the institution-strengthening and health-programs components; and (iii) the new teams that have been formed thanks to the public-health and management training received by departmental and district staff can now operate the local health system efficiently. The Bank's Country Office in Bolivia and the MSPS are currently reprogramming the funds left in this operation to make certain its objectives are achieved and to ease the transition to the reform. Among the measures envisaged are expanding the experience with the revolving fund for pharmaceuticals, supporting epidemiological-shield actions in 1999, training health personnel in epidemiology, and strengthening nutrition centers to heighten their impact, make them more sustainable, and tie them in to other government child-development activities.

- 1.29 Though the operation has been relatively successful from a technical standpoint, there were critical problems from the outset in management and administration which are only now being resolved. They seriously impaired the project's implementation, obliging the Bank to successively extend the disbursement deadline, most recently to May 12, 2000.
- 1.30 The chief lesson learned from the above-described health services and institution-strengthening project is the need to find a way to assure efficient and transparent administration of the Bank's funds. Accordingly, for the proposed operation, it has been agreed with the MSPS that specialized agencies or consulting firms would be hired to administer the loan proceeds. Additional lessons learned are as follows: (i) in a weak and unsettled environment, training and system-strengthening activities have the greatest impact at the local level, where staff turnover is lower; (ii) the revolving fund for pharmaceuticals has been a great success, most of all because it left decision-making and resource management to the local level; (iii) the nutrition centers and women-and-health activities had scant impact because they were isolated from the other project activities; (iv) the institutional arrangement that was adopted to counter serious weaknesses in the health ministry, in the form of a coordinating unit outside the ministry for each of the three large projects in the sector - financed by the IDB, World Bank, and USAID - set in place three structures parallel to the ministry, weakening it even further and making for inefficiency and overlaps in investment outlays, particularly for institution-strengthening; and (v) if the objectives of social projects in weak sectors are to be achieved, the Bank needs to closely monitor their management from a technical and operational standpoint.

- 1.31 The Bank is aware of the general problem of timely allocation of funds for projects in its Bolivia loan portfolio, and has therefore fostered stronger relations between the Ministry of Finance (Social and Economic Policy Analysis Unit) and the MSPS Planning Directorate. Negotiation of commitments for the timely allocation of local counterpart funds for the operation proposed here is provided for in agreements worked out in the framework of the program of fiscal adjustment and protection of social spending (1019/SF-BO) recently approved by the Bank's Board of Executive Directors.

II. THE PROGRAM

A. Objectives and goals

- 2.1 The program's objectives are to: (i) help reduce mortality and morbidity associated with the main communicable diseases in Bolivia; and (ii) support health-sector reform to reduce maternal and child mortality by designing and implementing, on a pilot basis, a family-centered primary health-care model as one vehicle for the delivery of a basic basket of health services (Basic Health Insurance).
- 2.2 The following are the specific objectives:
 - (a) Lower the incidence of Chagas' disease through mass residential fumigation programs and quality-assurance measures for blood and blood products.
 - (b) Support the gradual implementation of an epidemiological surveillance system in the country, to reduce the incidence of other communicable diseases by integrating 'vertical' programs to combat endemic diseases with routine ('horizontal') activities of health-care establishments; help strengthen program management as the decentralization process unfolds; and, by way of a concentrated training effort, help instill a surveillance and preventive health-care culture among local primary health-care workers and communities. This system will be firmly underpinned by a network of laboratories and quality-assurance systems that will enable more efficient epidemiological research and analysis, with early identification of outbreaks so decisions can be taken quickly.
 - (c) Strengthen the National Health Information System, for the establishment of: (i) decentralized bases in the departmental and district health services, for operation and integration with epidemiological surveillance activities; and (ii) mechanisms for systematic use of the information produced, for local and central health planning and evaluation.
 - (d) Support the design and progressive implementation of health reform in Bolivia by devising and testing alternative models for Basic Health Insurance delivery that are geared to conditions in each region and social segment (urban, periurban, rural areas).
 - (e) Strengthen health-sector agencies at the central, departmental and district level for the activities that will fall to them as the reform proceeds, to leave the country with a truly decentralized health system in which the MSPS can take on a stronger role in regulation, control, and funding, and make for more equitable access to services.

- (f) Support the conduct of studies to establish a new legal, institutional, and financial framework for the health sector, examining in particular such issues as: (i) autonomy of care management and delivery modes, and the menu of approaches; (ii) a health finance model; (iii) targeting and cost recovery from users who have the means to pay; (iv) reorganization of the social-security health model and its integration into the Bolivian health system; and (v) new forms of labor relations for government health workers that allow for new compensation strategies such as capitation and productivity incentives, as opposed to fixed salaries. Table II-1 sums up the program's main targets; the logical framework is in Annex II-1.

Table II-1

OBJECTIVE	TARGETS
1. Lower the incidence of Chagas' disease.	1.1 End the vectoral transmission of Chagas' disease by 2005. 1.2 Lower numbers of infected children under age 1 by 25% (2000), 50% (2001), 75% (2002) and 100% (2003). 1.3 Eradicate Chagas' disease in children under 5 by 2004.
2. Assure quality control of blood.	2.1 Reduce transmission of diseases such as Chagas', hepatitis, syphilis, HIV/AIDS, and malaria by blood transfusions by 25% (2000), 50% (2001), 75% (2002) and 100% (2003).
3. Gradually set up an epidemiological surveillance system in the country.	3.1 Identify, record, and report at least 75% of new cases of communicable diseases in 2002 and 100% in 2004. 3.2 By 2004, establish a national laboratory system for epidemiological surveillance.
4. Support health-system reform.	4.1 By 2001, establish legal frameworks for the new Bolivian health system and its funding base. 4.2 By 2001, produce a group of managers at the central and local levels trained to carry through the reform. 4.3 By 2002, implement pilot health-reform initiatives in coordination with the World Bank.

B. Strategy to be pursued

- 2.3 The program would combine activities to address the urgent need to combat communicable diseases and long-range strategies to progressively shape the reform process. A large percentage of the program funds thus will go to support a Bolivian epidemiological shield, with actions to combat Chagas' disease and set up a decentralized epidemiological surveillance system integrated with the local health-services network. The staff training and other activities planned to that end will promote behaviors such as will instill an epidemiological surveillance culture, to achieve sustainable low incidence rates for communicable diseases in the long term, with active community, departmental, and municipal involvement.

- 2.4 The three core focuses of support for the reform will be: (i) institutional strengthening at the central, departmental, and district levels of the health sector, to better equip these agencies to craft and monitor the reform; (ii) funding of studies to devise new operating mechanisms for the health system and build them into a new legal framework for the system; and (iii) *pari passu* implementation of pilot projects to test the validity of the study findings and the new instruments developed.
- 2.5 Expected outcomes of the epidemiological-shield component are: (i) eradication, within five years, of vectoral transmission of Chagas' disease and of its transmission via blood transfusions; (ii) a stronger network of blood banks and transfusion centers and an end to blood-borne disease transmission; (iii) a stronger network of public health laboratories for the early detection of communicable diseases in the primary health-care system; and (iv) a strengthened epidemiological surveillance system.
- 2.6 Expected outcomes of the reform-support component are: (i) legal frameworks for Bolivia's new health system and its funding; (ii) a group of managers trained at the central and local level in the tasks needed to carry through the reform programs, particularly the Basic Health Insurance scheme and family health system; and (iii) implementation of pilot reform initiatives, to come up with and test models which could subsequently be replicated throughout the country.
- 2.7 The epidemiological-shield activities would be launched before the reform program, since infection levels of communicable diseases need to be lowered while local epidemiological surveillance capacity is being bolstered and the departmental and municipal governments are taking over the programs. The epidemiological-shield program will help speed up the epidemiological transition process in Bolivia while the groundwork is being laid, under the program, for decentralized health reform. It would be difficult to start off the reform without first improving the epidemiological profile: local systems are not equipped to lower the incidence of communicable diseases without central-government coordination of the fight against vector-borne pathogens by way of 'vertical' programs. Once those incidence rates have been lowered and the health-care decentralization process has been bolstered, it will be possible to move from vertical to horizontal programs to combat communicable diseases, managed by health districts.
- 2.8 Responsibility for dovetailing this program with the health-sector reform objectives will rest with the MSPS, which is to integrate the program components with operations being funded by other donors and by the World Bank, and avoid duplication of efforts and overlaps in activities.

C. Program components

1. Bolivian epidemiological shield (US\$40.5 million)
 - a. Chagas' disease control, prevention, and treatment project (US\$25.2 million)
- 2.9 The actions planned under this project are designed to prevent Chagas' disease and halt its vectoral transmission through vector controls, controls over blood transfusions, and identification and treatment of infected children under 5. These actions will be continuous, carried out in adjacent geographic areas, and integrated with existing departmental and district health services. The main project target will be endemic areas in the departments of Cochabamba, Santa Cruz, Chuquisaca, Tarija, Potosí, and La Paz.
- 2.10 The project will run for six years, with the active and coordinated involvement of other sectors and agencies such as the Ministry of Defense, NGOs, and community organizations. The strategy for combating Chagas' disease will be pursued in two distinct stages, with centralized leadership but deconcentrated implementation. **The first stage will be interventions** to combat transmission of this disease; it will cover the entire endemic region, fumigating about 700,000 homes over the space of four years. Staff of other agencies (Ministry of Defense, teachers), community leaders, and others will need to assist with this stage. **The second stage will be consolidation, surveillance, and transfer**, to control reinfestation and residual foci, set up a sound community surveillance system, and move responsibility to the departments, districts, and municipalities. The goal in this stage is to refumigate between 10% and 20% of the homes, to effectively reduce the risk of reinfestation and halt the vector-borne transmission of the disease.
- 2.11 The first stage will be divided into two phases: preparation and attack. Funds for the preparatory phase will pay for education, information, and communication activities to raise awareness in communities in the project area; training of health practitioners and officers and community leaders; research and surveys to improve the information available on vectors present in these areas and profile households by geographic area, and vehicle purchases. The attack phase will finance the purchase of insecticides and spraying equipment, drugs to treat the disease in children under 5, fuel and lubricants, maintenance of field-staff vehicles, and subsistence allowances for vector control teams that will be spraying homes.
- 2.12 The second stage will consist of surveillance and monitoring and evaluation of the program. It will fund training, institution-strengthening, and organizational capacity-building in health services and communities, so that the processes implemented will

endure. Operations to prevent reinfestation of homes will also be funded during this stage.

- 2.13 The Bank will provide US\$21.5 million in funding, which is 86% of the total program cost of US\$25.2 million. The other 14% will be supplied by the Bolivian treasury. Most (64%) of the planned outlays are for the purchase of insecticides, fumigating equipment, and transportation.
- 2.14 The program's goal is to eradicate vectoral transmission of Chagas' disease in four years, in the following sequence: a 25% reduction in numbers of infected children under 1 year of age by year 1; a 50% reduction in year 2, 75% reduction in year 3, and 100% in year 4. The program will promote annual serologic sample testing of children under age 1 in risk areas to track attainment of the objectives.

b. Project to strengthen the National Epidemiological Surveillance System (US\$15.3 million)

- 2.15 This project will help develop an effective surveillance system and a systematic means of discerning public health problems, to arrange for timely planning and early disease control and prevention and health-promotion interventions.
- 2.16 The outcome sought by this project is the strengthening of the National Health Information System, through support for: (i) ongoing surveillance for notifiable diseases, with an immediate flow of information and weekly and monthly reporting; (ii) interface of this system with specialized surveillance work done in programs to combat tuberculosis, AIDS, cholera, tetanus, whooping cough, measles, polio, leprosy, leishmaniasis, malaria, Chagas' disease, hemorrhagic fever, dengue fever, rabies, tapeworm infection, snakebite, yellow fever, and noncommunicable chronic diseases; reporting on these diseases and events, and data processing and analysis; (iii) greater vigilance in government-run and private first-, second-, and third-level health services; (iv) stepped-up mortality surveillance through immediate and precise cause-of-death reporting; (v) better surveillance of living conditions, by reporting on basic sanitation, access to services, etc.; (vi) tighter and interfaced laboratory surveillance, with laboratory reference standards established, stricter quality control in diagnostic testing, and safer blood transfusions; and (vii) enhanced community epidemiological surveillance.
- 2.17 The following activities will pursue the above-listed outcomes: (i) training of government, nongovernmental, and community health workers; (ii) at the local level, integration of the health sector with other public and private health agencies, to broaden coverage; (iii) development of epidemiological surveillance and research in local health systems; (iv) epidemiology training for health-services staff; (v) implementation of epidemiological surveillance

at the community level, through grass-roots community and mega-municipal organizations, watch committees, and other organized community groups; (vi) strengthening of the laboratory network and blood transfusion centers, with internal and external quality-assurance systems; and (vii) development of epidemiological surveillance through a care-delivery strategy built around a family health model.

2.18 The project's main goals are as follows: (i) strengthen the National Health Information System (SNIS) and the flow of information needed for decision-making in the health sector; (ii) strengthen the national laboratory network for early diagnosis and research into prevalent emerging and reemerging diseases; and (iii) set up a system for surveillance and control of blood-borne diseases, to ensure safe transfusions. The Bank would fund 88% of the project's US\$15.3 million cost; the Bolivian treasury would contribute the other 12%. The program will pay for staff training for epidemiological surveillance, laboratory and blood-bank management, public relations and information, laboratory apparatus and fixtures, supplies and equipment to produce diagnostic reagents, equipment and apparatus for blood banks, computer hardware, and communications equipment.

2.19 Attainment of the above goals would be verified by reference to the following: (i) identification, recording, and reporting of at least 75% of new cases of communicable diseases by 2002, and 100% by 2005; (ii) improvements in the volume and quality of communicable-disease reporting in the Departmental Health Services (SEDES) and health districts; (iii) establishment of a network of laboratories; and (iv) eradication of blood-borne transmission of pathogens.

2. Support for health-sector reform (US\$5.8 million)

a. Human-resources training (US\$0.3 million)

2.20 The objective of this subcomponent is to train Ministry of Health staff to coordinate the revamping of all the internal and external resources that need to be mobilized for the reform, and build the institutional capacity that a new organizational structure for the ministry would call for. The program will fund executive-level training courses in health management.

2.21 The institution-strengthening activities will last about two years, by which time basic preparatory studies for the reform are to be ready. They will be carried out in coordination with other multilateral agencies which are financing health reform in Bolivia, among them the World Bank, USAID, and the European Economic Community.

2.22 The executive-level courses will train staff of the MSPS, SEDES, and health districts engaged in the health-sector reforms in modern

management techniques, addressing the following areas: (i) managing primary-care systems which can deliver a basic basket of core services to low-income Bolivians; (ii) introduction of capitation payment systems; (iii) introduction of disease-prevention and health-promotion and public relations and information strategies; and (iv) decentralized management of budgeting, procurement arrangements, autonomous human resources management, contracting of providers, and other areas as necessary.

b. Studies for structuring of the reform (US\$3.5 million)

2.23 The objective of this subcomponent is to fund basic studies to map out the institutional, technical, legal, and financial underpinnings for MSPS health reforms. The studies will be produced in 2000 and 2001. Their terms of reference are to be drawn up by the Program Coordinating Unit and approved by the Bank before they are commissioned through an open international call for proposals. The studies will look at the following key issues:

- a. **Strategy for conversion and training of human resources in the health sector.** This study will survey the present emplacement and functions of health workers, identifying needs in each of the 93 health districts that are slated for support in the reform process. It also will cover the development, in the short term, of curricula and criteria to select staff that would be reassigned to family health-care teams (physician, nurse, nurse's aide, home health worker), to make the training process more efficient and shorten the time that trainees spend away from work. The possibility of distance-training strategies would be examined here. The study is to set out training and continuing-education strategies for staff that, in the medium term, will bring them up to date, and set up a communications network between health professionals under the new model.
- b. **Review of labor laws and legislation governing career service in the health sector.** This study will outline ways of converting part-time health-sector jobs to full-time positions, compensated on the basis of formulas that offer financial incentives for productivity and quality (use of promotion and prevention, client satisfaction, etc.). It will also set out strategies to move away from the current system of public employees, gradually downsize the MSPS staff complement and introduce a contractual-staff approach with capitation strategies.
- c. **Institutional and functional analysis of the health sector.** This study will lay the groundwork for institutional modernization of the sector to adapt it to the new reform environment. The analysis will center on the following issues:
 - (i) **organizational setting:** administrative and legal environ-

ment in which the sector operates, description of external factors that affect it (form of government, access to government funds, decision-making, etc.); description and assessment of the sociocultural environment in which it operates (standards, values, attitudes, etc.); description and assessment of its technological apparatus; (ii) **organizational motivation**: mission, culture, and pay structure and incentives in the sector (health-sector career service, civil service); (iii) **organizational capacity**: strengths and weaknesses of the sector's planning system, organization and functional structure, administration of physical and human resources and its technology base, quality of training and development, compensation and equity, quality and effectiveness of process and program management systems, and interagency relations; and (iv) **organizational performance**: efficacy of the policy-making and regulatory role (evaluation, monitoring, policy design, etc.), efficiency in resource use (staff productivity, client relations, etc.), relevance of institutions and adaptability to change, sustainability of their work and interventions, etc.

- d. **Public relations and information strategy.** This study is to devise mechanisms to identify which individuals and agencies should be targeted for awareness-building and what processes can be essayed to change the behavior of the public, care providers, physicians and other health workers, and the various levels of government, so as to reduce resistance and expedite the reforms.
- e. **Funding and sustainability of the new system.** The object of this study is to design a new Bolivian health-system funding model that duly considers the needs ensuing from the reform and sustainability of mechanisms to broaden Basic Health Insurance coverage, and from the family health-care strategy. The model must take the following into account: (i) design of mechanisms for targeting Basic Health Insurance and health care in the country, identifying those who can afford neither basic insurance nor, eventually, more complex health care; (ii) cost recovery from social-security and prepaid health-care plan members and families who can afford to pay; (iii) equitable allotment of funds between departmental governments and between municipalities, and assurances of a good balance of funding sources; (iv) the need to assure sustainable nonwage recurrent spending plus the requisite capital outlays for the reform program and the epidemiological shield; and (v) establishing a computerized health-expenditure tracking and management system to expedite programming and accounting for budget monies and budget performance, and tracking of the spending targets set out in sector loan 1019/SF-BO.
- f. **Social-security health reform.** This study would examine: (i) establishing a legal framework for the social-security

health subsector to segregate funding and care delivery in the *Cajas de Salud* and do away with captive membership, giving those covered the freedom to switch; (ii) arrangements for autonomous management of social-security hospitals by formally separating them from the *Cajas de Salud* or through privatization or concessions; (iii) integrating the family health-care model into the system run by social security, by purchasing services from the network of Basic Health Insurance providers; and (iv) institutional strengthening of a system regulator independent of the MSPS. The funding will be mainly for consulting services and information and awareness-raising seminars for stakeholders.

- g. **Legal framework for the reform.** Drawing on all the above-listed studies, this study will lay the groundwork for a draft Framework Health Reform Act and all associated legislation.

c. Pilot reform projects (US\$2 million)

- 2.24 This subcomponent will fund pilot health-reform initiatives based on a family-centered health-care model, drawing on the studies commissioned and pursuant to the strategies devised. Criteria for the new family health networks will be: (i) management by the health districts; (ii) a menu of providers (government establishments and those run by NGOs, the Church, social security, and others); (iii) staff reassignment and training strategies to be developed as the pilot projects are implemented, the aim being to set up or train family health-care teams and staff needed to manage the new model; (iv) adoption of a health-worker compensation structure that encourages productivity, quality, and client satisfaction, giving users, wherever possible, freedom to elect their family health team; and (v) strengthening of self-management processes in government-run health-care establishments, to give these institutions greater freedom to administer their operations and funds.
- 2.25 Municipalities or districts will be selected for these pilot projects from among localities in which the earlier basic health services and institution-strengthening program (858/SF-BO) carried out management initiatives and investments. Care is to be taken, in these pilot projects, to reflect different sets of circumstances and conditions in Bolivia. If the experiments are successful they could be replicated elsewhere in the country, with new sources of funding.
- 2.26 Depending on legal and institutional circumstances, availability of the health-care establishment network, and readiness of the reform project, the pilot initiatives should start off using a capitation approach and a multiprovider network involving specialized health NGOs and services run by the Church and the social-security system.

D. Project Preparation Facility support (US\$1.25 million)

- 2.27 To expedite the development and implementation of the epidemiological shield, the Bank and Bolivia are negotiating a US\$1.25 million Project Preparation Facility operation to fund the setup of the program's implementing structure, to defray expenses for its operation before the proposed loan would be eligible for disbursement.

E. Administration and supervision

- 2.28 The equivalent of US\$5.2 million has been budgeted to fund the Program Coordinating Unit for six years. It has been agreed with the MSPS that IDB funding for consultants to help the ministry implement the program will be phased out over the life of the project: as from the fifth year, the MSPS will provide regular funding for those services. The loan proceeds will pay part of the remuneration of coordinators, specialists, technical officers, and consultants, the cost of basic equipment (computers, telecommunications, reproduction and document transmission equipment), plus the administrative fees of specialized agencies/firms hired to purchase supplies and equipment and to administer the program resources. The counterpart contribution will fund remuneration, travel and per diems, PAHO/WHO technical advisory support, stationery and office supplies, event organization, and overheads.

F. Program cost and financing

- 2.29 The total cost of the program is the equivalent of US\$53.7 million. The following table gives a breakdown of each component by expenditure item and funding source.

Table II-2
Cost table
(millions of U.S. dollars)

ITEM OF EXPENDITURE	FUNDING SOURCE			
	IDB	Bol. Treasury	Total	%
1. Administration and supervision	2.8	2.4	5.2	9.7
2. Component 1 — Epidemiological shield	35.0	5.5	40.5	75.4
2.1 Chagas' disease	21.5	3.7	25.2	46.9
2.1.1 Insecticides	8.5	1.8	10.3	
2.1.2 Equipment and transportation	3.6	0.4	4.0	
2.1.3 Diagnosis and treatment	6.7	0.9	7.6	
2.1.4 Operating costs, education/information/ communication, support, training	2.7	0.6	3.3	
2.2 Epidemiological surveillance	13.5	1.8	15.3	28.5
2.2.1 Strengthening of SNIS	10.1	1.3	11.4	
2.2.2 Organization of laboratory network	1.2	0.4	1.6	
2.2.3 Implementation of blood banks	2.2	0.1	2.3	
3. Component 2 - Support for health reform	5.0	0.8	5.8	10.8
3.1 Human-resources training	0.3	-	0.3	
3.2 Studies	3.5	-	3.5	
3.3 Pilot initiatives	1.2	0.8	2.0	
4. Project Preparation Facility	1.2	-	1.2	2.2
5. Associated costs	0.5	-	0.5	0.9
5.1 Evaluation ¹	0.5	-	0.5	
6. Inspection and supervision	0.5	-	0.5	0.9
TOTAL	45.0	8.7	53.7	100.0

¹ Two external evaluations will be done in the course of the program, at an estimated cost of US\$250,000 each.

III. PROGRAM IMPLEMENTATION

A. Organizational arrangement for the program's implementation

- 3.1 Bolivia's Ministry of Health and Social Insurance will be the program's executing agency. The object of the organizational arrangement devised for the program is to bolster the formal structure of the MSPS by building technical capacity within the directorates involved, to equip them for the work that will fall to each in the various projects comprising the program. Core technical teams of local personnel hired with program funds will be set up within those directorates; with support from existing structures they will coordinate and execute the projects in concert with the corresponding departmental and district authorities. The direct counterpart to the Bank with responsibility for overall coordination of the program will be a **Program Coordinating Unit** which will report directly to the Minister of Health and advise the minister on managing the reform process. For projects in the epidemiological-shield component the MSPS will execute a technical-cooperation agreement with the Pan American Health Organization (PAHO/WHO) whereby that agency will assist the MSPS in honoring the covenants of its loan contract with the Bank. Formal execution of that agreement will be a condition precedent to disbursement of the loan.

1. Program Coordinating Unit

- 3.2 The Program Coordinating Unit (PCU) will ensure that the program is carried through effectively and on schedule. It will oversee the planning and implementation of its technical, financial, and administrative elements and the production of basic studies to shape the reform process, monitoring and evaluation of the program, and coordination of international support for the reform process. The PCU will be headed by a General Coordinator who will be the direct liaison with the Minister of Health for the general course of the program and its implementation policies. The PCU coordinator likewise will assure that the program's components are coherent internally and with other external financing or aid, and will coordinate work with the MSPS directorates involved in the program and with decentralized departmental and municipal government agencies.
- 3.3 The General Coordinator will have support from a technical team, one member being in charge of the program's monitoring and evaluation, another of execution and monitoring of activities pertaining to the family health-care model, another of execution and monitoring of institutional and legal elements for the reform process, and another of crafting a financial reengineering strategy for the sector, with a technician to set up and maintain the program's management information system. Providing additional

backing will be an administrative support group consisting of an accountant, a secretary, and an office clerk. The specialists hired to steer and monitor the reform-related elements will work in coordination with the Planning and Health Services directorates; their performance will be evaluated by reference to specific outputs that are to be spelled out in the terms of reference for their contracts. The PCU, on behalf of the MSPS, will engage the United Nations Development Programme (UNDP) to administer the program funds and procure goods and services other than those covered in the proposed PAHO/WHO agreement, which are described later in this section. The contracting of UNDP will be a condition precedent to disbursement of the loan.

2. Health Directorate

- 3.4 A Central Coordinating Unit for the Chagas' Disease Project (UCCH) attached to the Health Directorate will execute and coordinate activities for the Chagas' disease control and prevention project. The UCCH's start-up will be funded under the Project Preparation Facility (PPF). Its core technical team will consist of a general coordinator, three operations officers, and a logistical support officer. This unit will be responsible for devising national standards for the project, drawing up annual action plans with input from the respective regional officials, coordinating training activities in departments and districts for agency staff, persons recruited from the community, and seconded Ministry of Defense personnel, arranging for funds to implement the annual plans, and supervising, monitoring, and evaluating progress on the project in each health district.

3. Epidemiology Directorate

- 3.5 A Central Coordinating Unit for the Epidemiological Surveillance Project (UCSV) attached to the Epidemiology Directorate will implement and coordinate activities for that project. This unit, too, will start up with PPF funds. It will be made up of two professionals, one an expert in epidemiological surveillance systems and the other in laboratory networks, who will coordinate their work with the National Laboratory Institute to set up the network of laboratories and with the National Health Information System for the information system subcomponent. The UCSV will coordinate activities pertaining to adjustment and validation of the epidemiological surveillance reporting system, refresher training for technical teams responsible for the new surveillance system in the departments and districts, the laboratory network, preparatory work (with PAHO/WHO support) to tender out equipment and inputs, preparation, monitoring, and evaluation of work plans for implementing the new system, and training and information workshops on the new system.

4. Pan American Health Organization

- 3.6 The MSPS generally, and the UCCH and UCSV in particular, will receive technical and administrative support from the Pan American Health Organization (PAHO/WHO) on two main fronts: (i) purchase of insecticides, supplies, and drugs for diagnosis and treatment of Chagas' disease in children under 5, and (ii) technical advice on logistics and operations to implement the epidemiological-shield projects and for monitoring, evaluation, and management support. PAHO/WHO's support to the MSPS will be provided by technical officers in that agency's Bolivia office. In this regard, the Bolivian government has asked PAHO/WHO to focus its technical-support and cooperation efforts in Bolivia on activities to implement and monitor the epidemiological shield. As additional support for PAHO/WHO's procurement of insecticides, supplies, and drugs, the MSPS will sign an agreement with the Health Supplies Distribution Center (CEASS) which is to arrange for customs clearance, storage, transportation, and distribution of these items. **Signature of this agreement will be a condition precedent to disbursement of the loan.**

B. Operating arrangements

- 3.7 To assure efficient management of the epidemiological-shield program, the MSPS has decided to adopt a new structure **at the central level** under the Health Directorate and the Epidemiology Directorate, giving those bureaus management autonomy. They will carry through integrated, organized activities in all endemic areas of the country, to provide leadership coordination and ensure optimal resource use, the macro impact of technical cooperation in the program, and the crafting of umbrella policies and strategies for control, prevention, and surveillance of Chagas' and other diseases. This new vertical, centralized structure will remain in place for five years, during the attack and consolidation phase. The surveillance and the definitive transfer of the program to departments and municipalities will begin with the project and be consolidated in the following two years. An important consideration here is that though the aforementioned structure is centralized insofar as coordination, rule-making, standardized procedures, equipment and input purchases, supervision and evaluation are concerned, it is decentralized for planning, implementation, and evaluation of activities at the departmental and district level. In furtherance of the decentralization process, in December 1998 the Bolivian government issued a supreme decree laying out management and organizational principles for Departmental Health Services (SEDES) as operating agencies of departmental governments, in charge of health-system management.
- 3.8 Responsibility for implementing the project **at the departmental level** will rest with Departmental Technical Program Executing Units which will come under the departmental government structure,

specifically the SEDES, and for functional purposes will report to the UCCH at the national level. These departmental units will be staffed by technical officers presently working in SEDES vector-control units. Their function will be to coordinate, administer and enforce policies, plans, and procedures, draw up annual departmental plans, monitor and supervise health districts, compile, process, analyze, produce, and disseminate technical and management information that comes out of the program at the departmental level (integrating this with the National Health Information System), and produce monthly reports for the respective departmental and national Health and Epidemiology directorates, the UCCH, and the UCSV. For a department to be eligible for program-funded investments, its government, through the respective SEDES, must first sign a management contract with the MSPS setting out the department's rights and obligations for the program's implementation, with assurances that the activities can be sustained after the loan ends. The model management contract must be presented to the Bank for clearance; before proceeds of the loan can be disbursed it must be demonstrated that the contracts have been signed.

- 3.9 Program activities at the district level will be carried through by the District Health Directorates concerned. By way of a consultation and coordination process they will bring municipal governments and other local institutional stakeholders into the program activities, and elicit community input into activities and decisions. As some of their primary functions the districts will implement planned activities that fall to the district office and coordinate the work of health-care establishments and work teams for the program's execution at the subnational level; give feedback for planning and programming of activities relating to implementation of the national program in the districts; identify and systematize training needs of district health workers and arrange with the SEDES and the Departmental Program Executing Units for training to improve the program's performance and outputs; coordinate with municipal governments and community organizations to build the district activities into the respective annual work plans; and coordinate and supervise the program's specific epidemiological-surveillance activities, to become the regional reference center for the information system.
- 3.10 As its part in this national effort the Ministry of Defense will provide operational support in the form of manpower, through military personnel quartered in different parts of the country where the program's priority activities would take place. The MSPS is currently negotiating an agreement with the Ministry of Defense; before funds could be disbursed, the Bank would require evidence that the agreement had been formally executed.
- 3.11 Each of the program's two components would have its own operating guidelines, which are described below.

1. Component 1: Epidemiological shield

a. Subcomponent 1: Chagas' disease control, prevention, and treatment project

- 3.12 The following work is being done as part of the PPF operation to help ready the MSPS for this subcomponent: (i) completion, validation, text production, and approval of technical, operational, and administrative rules and procedures; (ii) layout of manuals; (iii) organization and training of operations teams; (iv) operations programming at the department, district, and municipal level; (v) devising a baseline from which to track impact benchmarks; (vi) designing standards and procedures for blood transfusions, case treatment, and training; (vii) preparations for calls for bids for equipment and inputs; (viii) study of a strategy for distributing supplies and equipment; and (ix) startup of operations and signature of management contracts with departments. These tasks are expected to be completed in late 1999. To plan and carry through this work the MSPS has a Manual of Technical Standards and Procedures for Control of Vector-borne Diseases which lays out basic rules and standards, functions, and operating procedures for field work.
- 3.13 The MSPS has a large enough team of experts in vector-borne disease to oversee the work of control teams, of which they will be members, with support from conscripts and community leaders who will be trained for this task. These teams will be directly responsible for the various kinds of field work planned for each phase of the program, as described in the following paragraph. From the technical officers it has on staff the MSPS can put together 193 control teams; since each team could fumigate about eight homes a day during the attack phase, the target of some 700,000 homes could be attained between years 4 and 5 of the program, at the latest.
- 3.14 The program is divided into four phases: preparatory phase, attack phase, surveillance phase, and monitoring and evaluation phase. The **preparatory phase** takes in the following activities, to be performed by MSPS headquarters technical officers and SEDES staff: (i) **information, education, and communication**, targeted to local authorities and to communities, to make them aware of the program and elicit their involvement, with due regard to ethnic and gender considerations in designing and executing these activities; (ii) **training** to ensure that the program is efficiently executed at the institutional level (professionals and technical officers) and at the community level (community health workers and leaders); (iii) **devising the baseline**: the control teams will do a geographic survey (population census, number of dwellings, construction features, sketches of each community and municipality) and an entomological survey to ascertain the dispersion of the

vector, species, and infestation in homes, and serologic testing of children under 5. The baseline data will guide the attack phase.

- 3.15 The aim of the **attack phase** is to eradicate the Chagas' vector in dwellings situated in endemic areas and to begin to identify and start treating children under 5 who are infected with the parasite. The sequence of activities will be as follows: training in spraying techniques, to be given by agency technical officers (following the field operations manual) to community health workers and leaders; a first comprehensive spraying cycle (inside and around homes) and sanitizing of furniture and fixtures (attack 1); a second fumigation cycle (attack 2) between 6 and 12 months after the first; other cycles on a case-by-case basis, depending on the dynamic of the residual infestation as gauged in post-fumigation checks; and start of treatment of infected 5-year-olds.
- 3.16 The **surveillance phase** will set in place an expeditious, reliable, simple, and timely epidemiological-surveillance system to support local decision-making. The ongoing activities that comprise it will need to be underpinned by the health services and the support of the community at large. Two types of surveillance are involved: **institutional surveillance**, to actively seek out the vector in homes through sampling by health workers, which will strengthen community surveillance, and **community surveillance**, with planned Cone-nosed Bug [Chagas' disease vector] Reporting Posts (PIVs) to be set up, and with the community taking full ownership of the problem of this disease, so residents can keep constant watch in their own homes and quickly report any signs of reinfestation to a PIV. The PIVs will report monthly to the health services, which in turn will report to the districts. Each health district will have permanent vector-control officers equipped to schedule and spray reinfested homes that the community reports to a PIV.
- 3.17 In the **monitoring and evaluation phase** there will be instruments to gather baseline and routine data and perform sampling studies to gauge the project's impact at the various levels. One important point here is that information will come from the community, make its way to the different project coordination levels (district, department, central), and then be fed back to the community. The following are the instruments whereby information will be captured in communities, and which will be monitored by area health personnel: (i) **annual community work plans** whereby communities, with assistance from technical officers, will draw up a timetable of work for the respective phase of the program; (ii) **epidemiological sketches**, which are referenced illustrations of dwellings in the community, to pinpoint infestations and portray housing quality, follow up and track improvements, and check the effectiveness of spraying and surveillance for reinfestation; and (iii) **trend charts** which the community can use for semiannual monitoring of the reinfestation dynamic and come to a quick decision. The risk level for each community will be calculated by

reference to number of dwellings, using an easy-to-understand coding system to guide local actions.

- 3.18 Information gathered locally (health posts) will be reported to the districts for compiling and analysis. This will be the most important operational level, where immediate decisions will need to be taken when reinfestations are detected and to coordinate the supply of inputs. Data consolidated by district will be forwarded for analysis by the Departmental Technical Program Executing Units, which will give prompt feedback to districts, which in turn will inform the community. All departmental data will be consolidated at the central level for analysis and evaluation and use in planning and supervision.

b. Subcomponent 2: Project to strengthen the National Epidemiological Surveillance System

- 3.19 The planned epidemiological surveillance system will require an information system equipped to collect, process, interpret, analyze, and disseminate data and help in planning surveillance actions, early intervention in the event of outbreaks of emerging or reemerging diseases, and assessment of the system's impacts and the impacts of the surveillance activities, from the moment a piece of information is collected until a decision is made or an intervention arranged. Serving this function will be the recently modernized National Health Information System, which is now equipped with a georeferencing system. Further support will be provided by a network of laboratories which will perform different functions depending on the complexity of the health system they serve.
- 3.20 Information produced by the system will be passed on using operational mechanisms and reporting lines established in keeping with the hierarchy of the various levels of government, starting with health posts - the basic level - and continuing through to the Epidemiology Directorate, which is level IV. At the **basic level** (some 2,200 health establishments or reporting units) reporting will be based not only on cases requiring treatment but also on the community organization to be fostered in each locality (volunteers, locally-elected community health workers, community leaders, other community participation strategies). Reports from this level to Level I will be monthly, weekly, or immediate, by radio or telephone, using epidemiological surveillance forms to provide systematic information on notifiable diseases, distinguish cases by epidemiological week, and pinpoint them on maps and sketches. This basic level will be the last link in the laboratory network, as the gateway to the health system; accordingly, where so decided, sampling will be done at this level to diagnose or confirm diseases. At this level there will be regular meetings with community groups and organizations to look at information and take decisions.

- 3.21 **Level I** will be the 450 existing epidemiological analysis units that correspond administratively to the country's health zones. These establishments have a physician, nurse, or nurse's aide on staff. Consolidated data from health posts will be handled at this level, for a preliminary analysis based on epidemiological categories of time, space, and individual, using instruments to chart trends, coverage, and case identification by health post. It will forward information to Level II immediately, weekly, and monthly by radio or telephone, using a weekly epidemiological surveillance form and information recorded in a case book. It will also fill out epidemiological fiches for all cases requiring further investigation. It will receive monthly reports of the National Health Information System (SNIS) to examine against the weekly reports, to confirm the month's cases. It will process laboratory samples if it has the necessary apparatus, and may even have a simple laboratory, depending on the size of its service area and its priority as an endemic zone. At this level there will be monthly meetings with basic-level personnel to monitor and evaluate the reporting system and the effectiveness of control measures adopted.
- 3.22 **Level II** will consist of 93 computerized epidemiological analysis units corresponding administratively to the health districts. Health workers at this level will be trained in epidemiology and, using computerized information systems, will compile, process, and analyze data. Level II will receive information from Level I and forward it via the Internet to Level III (departments) using databases into which will be fed immediate, weekly, and monthly SNIS data. It will process health-profile data by municipality, health zone, and health-care establishment, including socioeconomic information such as the index of unmet basic needs and human development index. Level II and Level I personnel will meet monthly to track and evaluate the reporting system and gauge the success of interventions. At this level there will be a more sophisticated laboratory and, in priority zones, blood transfusion centers.
- 3.23 **Level III** will consist of the nine Departmental Epidemiological Units that for administrative purposes will come under the Departmental Health Services (SEDES). With a team of epidemiologists, statisticians, laboratory technicians, and health officers, it will administer the departmental epidemiological surveillance network. It will process information from the respective Level II computerized analysis units, reviewing coverage, quality, and timeliness of information. Its mandate will be to produce departmental epidemiological profiles, analyze departmental health status, and organize the response to emerging and reemerging diseases by way of prevention and intervention programs. This level will manage the SNIS database for analysis, decision-making, and reporting to the central level. There will be third-tier or national reference laboratories at this level for

prevalent emerging and reemerging diseases and for quality assurance in blood banks and transfusion centers.

- 3.24 Level IV will be the Epidemiology Directorate, which will manage the system. It will develop a database of basic health indicators broken down to districts and health zones; produce epidemiological profiles for the main communicable and noncommunicable diseases and their risk factors; coordinate the national response capability to deal with health problems by administering disease prevention and control programs; and head up sentinel surveillance studies to ascertain the true epidemiological status of emerging diseases. It is to coordinate its work with the National Laboratory Institute and the National Center for Tropical Diseases to identify pathogens requiring surveillance and to supervise, monitor, and evaluate the laboratory network. The MSPS has issued a ministerial order classing these institutes as national and regional reference laboratories and specifying the responsibilities that will fall to them in the program.

2. Component 2: Support for health-sector reform

- 3.25 Component 2 will be coordinated by the Program Coordinating Unit (PCU), which will work in concert with the MSPS Planning Directorate and Health Services Directorate. Over the course of the program those two bureaus will be given responsibility for control, monitoring, and evaluation of the program activities.

a. Subcomponent 1: Institution-strengthening to support the reform

- 3.26 This subcomponent will consist of training courses in health-sector management. The PCU has course modules reviewed by the Bank for the different categories of MSPS, SEDES, and district professionals to be trained. The courses are to be held in Bolivia and the technology is to be appropriated by Bolivian firms or universities so these can be replicated as the reform is being mapped out. Before engaging these services the PCU must present to the Bank for final approval the course curricula, criteria for selecting participants, a final list of professionals slated for training, and a short-list of Bolivian or international firms equipped to deliver the training.

b. Subcomponent 2: Studies for structuring of the reform

- 3.27 The PCU will commission these studies from Bolivian or international consulting firms following Bank rules and procedures. The studies are to be made public: the PCU will devise a strategy for publicizing and disseminating their findings, dovetailing with the health reform's public relations and information plan.

c. Subcomponent 3: Pilot reform initiatives

- 3.28 The PCU will decide in which areas the pilot reform projects will be implemented. They are to incorporate the innovations being developed by technical officers and consultants who have been working on the reform process, particularly for Basic Health Insurance and the family health-care strategy.
- 3.29 **Selection of pilot initiatives.** The pilot reform projects will be selected by reference to the following criteria: (i) array of models to be implemented (urban, rural, periurban); (ii) facilities, equipment, and human resources already in place in the locality; (iii) menu of care providers currently in operation, to offer an array of provider relationships (public, private, NGOs, Church-run, social security, etc.); and (iv) access to more complex treatment levels such as health centers, second- and third-level hospitals, etc. **The Bank's non-objection will be required for selection of the pilot initiatives.**
- 3.30 **District Health Reform Implementation Plan (PIRDS).** When the four municipalities or health districts that will be the site of the pilot initiatives have been chosen, the PCU will draw up an implementation plan for each, setting out: objectives and rationale; consulting service needs; human resources training and development; plant and facilities requiring remodelling; personnel compensation plan; care delivery plan; pharmaceuticals and supplies procurement and management strategy; strategy for self-managing health units (family health care, health centers, hospitals); compensation strategy for nongovernmental establishments (private, NGOs, Church-sponsored, social security, etc.); District Health Fund financial strategy and setup; public relations and information plan with special attention to ethnic groups; expected outcomes; timetable; and costs and indicators of process (implementation) and output (expected outcomes). The plan for each district is to be worked out by consensus with local authorities, community leaders, professional associations, and providers. The plan implementation agreement cannot be signed until such a consensus has been achieved. **The implementation plans and model agreements must be presented to the Bank for clearance. A district will not be eligible for funding under the program until it is demonstrated that it has signed an agreement.**
- 3.31 **District Health Plan Management Unit (UGPDS).** Each district will set up a management unit in charge of its PIRDS. The unit will have the support of the Program Coordinating Unit and the Departmental Health Services, which will transfer funds for the PIRDS. The UGPDS will manage the District Health Fund, which will be the pool of transfer monies received for investments for the reform (from the program and other sources) and funds for operation of the reform (national and departmental transfers and own resources of municipalities in the district). These funds will be passed on to

family health units, health centers, and hospitals, which will gradually come to manage their own operations, and to pay external care providers (private sector, NGOs, social security, Church-affiliated, etc.). Responsibility for PIRDS implementation will fall to the UGPDS, closely supervised by the Program Coordinating Unit. Supervision will take the form of monthly visits to the districts involved and intermediate benchmark monitoring. The success of the PIRDS will be gauged by reference to performance (outputs, outcomes, impact on broadening access and improving health indicators); to this end, an early performance benchmark method will be devised.

C. Procurement and contracting

- 3.32 Given the type of insecticides and drugs needed for this program, they have been classified as highly specialized procurement items. ^{1/} Since the Bank's general procurement rules and procedures do not cover market-specific procurement approaches of this kind, it is proposed that PAHO/WHO be in charge of acquiring these items. For purposes of this program, the PAHO/WHO 'reimbursable procurement' arrangement would be used, that approach being consistent with the Guidelines for Procurement under IDB Loans inasmuch as it promotes competition, economy, and efficiency.
- 3.33 Under the above-mentioned mechanism, purchase orders are examined looking at competitive pricing, including freight and insurance, as well as product quality and timely delivery. The contract is awarded to the lowest evaluated bid. Pursuant to PAHO/WHO procurement rules, all insecticide and drug purchases for this program will require approval by PAHO/WHO's Washington-based Contract Review Committee, whose members are the chief of the PAHO/WHO Procurement Unit, General Services Director, Finance Director, and Director of the Technical Department in charge of the program in question. The Committee will evaluate the bids received and give its opinion and grounds for the offer selected.
- 3.34 The Program Coordinating Unit (PCU), on behalf of the MSPS, will provide PAHO/WHO with a list of items it wishes to purchase under the reimbursable-procurement mechanism. PAHO/WHO will compile preliminary information on prices and availability of the items, to be supplied from IDB member countries only. On the basis of this information the PCU will ask the Bank to transfer directly to PAHO/WHO headquarters the funds needed to pay the estimated cost of

^{1/} These items are deemed to be specialized for three main reasons: (i) a small number of manufacturers has already been identified, making publicity unnecessary; (ii) stringent quality controls are a must, since any mistake in product selection or formulation could mean a huge waste of money, operational failures, and a risk to public and environmental health; and (iii) timing of delivery is of the essence in deciding on these contracts.

the items, freight, and insurance, to final delivery, plus 3% of the product's net price as a service fee. Pursuant to the MSPS-PAHO/WHO contract, PAHO/WHO will operate a special account for the program to record funds received and amounts debited to pay for purchases, and will present cumulative procurement reports every six months to the MSPS with a copy to the Bank.

- 3.35 PAHO/WHO offers a number of comparative advantages for this type of service. Briefly: (i) its team of technical advisers continually research and evaluate programs throughout the world to ascertain which drugs, insecticides, other inputs and equipment work best in communicable-disease control programs; (ii) it issues worldwide standards and policies as to dosage and types of pharmaceuticals and insecticides that should be used in such programs; (iii) it is in permanent contact with world producers of drugs, insecticides, and other supplies to assure product quality and also secure the best prices; (iv) through the revolving funds it operates for certain items it is able to buy in bulk at prices far lower than those available to any one country or institution; (v) it checks the quality of all the products it buys and issues a quality certificate before they are shipped to the country of destination; (vi) its administrative structure assures transparent procedures, expeditious purchasing, and arrival and inward clearance of inputs in the country of destination; and (vii) its team of communicable-disease experts continually monitors the use and outcomes of the products the agency purchases.
- 3.36 The United Nations Development Programme (UNDP) will be engaged to procure goods and services other than those covered in the proposed agreement with PAHO/WHO (vehicles, motorcycles, computers and communications equipment, spraying apparatus and parts, equipment and supplies for blood banks and public health laboratories, etc.). UNDP also will administer the program funds, coordinating with the PCU (see paragraph 3.3). These goods and services would be acquired following procedures set out in Annex B to the loan contract, international competitive bidding being mandatory for items or services costing over US\$250,000. Below that threshold, procurement would be governed by local legislation. Studies and consulting services provided for in the program would be contracted for following procedures set out in Annex C to the loan contract. The program's procurement timetable is shown in Annex III-1.
- 3.37 The decision to engage UNDP for the above-listed tasks was taken jointly by the Bank and the Bolivian government, in light of lessons learned about administration of program funds in the previous IDB-funded basic health services and institution-strengthening operation (see paragraph 1.29). UNDP has a long track record in administering programs and projects funded by the IDB and the World Bank in Bolivia; with its specialized services, funds are administered transparently and there is less risk of their being mismanaged. Its involvement will give the program an image, credibility, and prestige, and leave the MSPS free to focus

its full attention on the technical elements. UNDP's fee will be 3.3% of the funds it administers.

- 3.38 The pilot reform initiatives to be funded by the program may include small-scale remodeling or adaptation of health-establishment premises. Since any such work would be inexpensive, it would be contracted for in accordance with local laws.

D.→ Disbursement timetable

- 3.39 The program would run for six years. The proposed revolving fund of 5% of the loan proceeds would not include the direct payments to PAHO/WHO referred to in the following paragraphs. On the basis of the proposed duration of the program the following disbursement table has been worked out.

Table III-1
(millions of U.S. dollars)

SOURCE	1999	2000	2001	2002	2003	2004	TOTAL
IDB	4.2	16.3	11.5	8.3	2.8	1.9	45.0
Local counterpart	0.4	1.7	2.6	2.2	1.0	0.8	8.7
TOTAL	4.6	18.0	14.1	10.5	3.8	2.7	53.7
Percentage	8.5	33.5	26.3	19.5	7.0	5.2	100.0

- 3.40 To provide funds to PAHO/WHO for its technical advisory services for the program, the PCU, on behalf of the MSPS, will arrange with the Bank for payment to be made directly to PAHO/WHO to cover estimated activities for the first six months, as per the work plan drawn up for the first year. PAHO/WHO is to submit that plan to the MSPS when the agreement is signed. Before sending any subsequent requests to the Bank for direct payments to PAHO/WHO, the PCU will provide the Bank with a semiannual report listing PAHO/WHO expenditures during the preceding six months and estimates for the coming six months, based on the work plan worked out by the parties. Once it has submitted that report the PCU will send a new request to the Bank for direct payment to PAHO/WHO of the estimated outlays for activities slated for the following six months.
- 3.41 For items acquired using PAHO/WHO's reimbursable-procurement method, the PCU will send requests to the Bank for direct payment to PAHO/WHO of the full estimated cost of the items. Each such payment request must state the origin and particulars of the goods and services procured by that method.

E. External audits

- 3.42 The program funds received by PAHO/WHO and the UNDP-administered funds will be audited, in accordance with those organizations' rules and guidelines as specialized U.N. agencies, by their independent auditors (provided the latter are acceptable to the Bank). These rules must be concordant with independent-audit requirements for Bank-funded projects. The borrower will forward audit reports to the Bank annually throughout the life of the program.

F. Monitoring and evaluation system

- 3.43 Within 30 days after the end of each six-month period during the program, the MSPS will send to the Bank, for review, semiannual status reports on the program. The reports that coincide with the end of a program year will also include the work plan for the ensuing year, the program's financial statements, and information on procurement the preceding year and the procurement plan for the coming year. For purposes of monitoring and evaluating the program's performance, these reports are to include a comparative annual status report on attainment of a set of benchmarks worked out by the Bank and the MSPS (see Annex III-2 in the technical files).
- 3.44 Within 30 days after preparation and delivery of each semiannual progress report that coincides with the end of a program year, the Bank will send an administration mission to review the information presented with the MSPS, assess progress on the program, look at problems that have arisen, and work out solutions.
- 3.45 Two impact evaluations would be conducted as part of the program evaluation process - a mid-term review and a final evaluation - using a methodology and guidelines to be agreed on by the MSPS and the Bank. The evaluations are to be performed by outside firms selected through an international call for proposals. The findings of the first evaluation must be submitted to the Bank when 50% of the program funds have been committed or 42 months after the effective date of the loan contract, whichever occurs earlier. This interim evaluation will assess the status of the program and check attainment of targets, pinpoint problems, and decide on corrective measures to make certain that the program's ultimate aims will be achieved. The final evaluation, with the same content and using the same methodology as the interim review, will be done in the six months preceding the loan disbursement deadline. Its findings are to be sent to the Bank before the final disbursement request.

IV. PROGRAM VIABILITY AND RISKS

A. Economic analysis of the program

4.1 Evidence from Latin America and elsewhere points to very high rates of return in programs and campaigns to combat communicable diseases. In the case of Chagas' disease, studies done in the Argentine province of Salta show a 64.2% internal rate of return (IRR) on prevention efforts. Similar studies taking in a group of Latin American countries (Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, and Uruguay) came up with an average IRR of 14%, without factoring in a series of indirect benefits associated with eradication of the disease.

4.2 The economic analysis here will look only at the impact of the Chagas' disease project (in the epidemiological-shield component), since the impact of the health-reform support component will depend on instilling institutional conditions and an enabling environment for implementation of the Strategic Plan for the Health Sector.

1. Economic appraisal of the Chagas' disease control project

4.3 The economic appraisal of the Chagas' disease program was done using cost-effectiveness analysis techniques. Such an analysis seeks to answer one core question: why spend money to combat the Chagas' disease vector rather than fight and/or treat other diseases? The answer is that controlling the Chagas' vector can avert more deaths and extend the healthy life span of Bolivians more cheaply than it would cost to tackle other disease vectors.

4.4 A first issue here is the comparability of vector-control actions and those designed to treat the afflicted. When looking at efficacy, programs designed to combat a vector need to be compared with other such programs: vector-control campaigns and treatment programs, while mutually complementary, are not alternatives and are not interchangeable. In public health programs, vector-control initiatives need to come before treatment actions for a given disease. In some cases it may be possible to achieve a cost-per-death-averted or cost-per-year-of-life-gained from having treated a given communicable disease that would be lower than the individual prevention cost; but launching a lengthy treatment program for that disease without large-scale prevention initiatives (as when vector-borne transmission of the pathogen is first eradicated) would be ill-advised.

4.5 The US\$25.2 million in expenditures budgeted for the proposed project to combat the Chagas' disease vector will prevent 1.8 million new cases of the disease in Bolivia; this takes into account only the number of children under 5 who were infected in 1998 plus all individuals who will be born and could become

infected between 1999 and 2006. Some 14,000 deaths would thereby be prevented in this population group.

- 4.6 As Table IV-1 illustrates, the cost-per-death-prevented and cost-per-healthy-year-of-life gained expected from the Chagas' disease vector control program is lower than for malaria vector control because: (a) Chagas' disease takes a far more severe toll on children's health than does malaria, and (b) controlling the Chagas' vector will do more to lower mortality than would malaria-control efforts. This would be the rationale for directing funds to combat the Chagas' disease vector rather than the malaria vector, even though the latter effort is also effective compared to other diseases.

Table IV-1
Estimated cost-effectiveness of selected
preventive interventions in Bolivia

Intervention	Cost per death prevented (US\$)	Cost per year of life gained (US\$)
Chagas' disease vector control	1,090	2.50
Malaria vector control	19,822	736.38

Source of data on cost-effectiveness of other procedures not associated with Chagas' disease: María Cárdenas Robles, *Análisis costo-efectividad de intervenciones de salud en Bolivia*. Ed. UDAPSO, Working Paper 56/97. La Paz, July 1997.

- 4.7 The question of combatting different vectors having been resolved, the options for treatment of communicable and noncommunicable diseases could be compared. As Table IV-2 shows, the cost-per-death-prevented when Chagas' disease in children under 5 is treated is US\$3,009.00; the cost-per-year-of-life-gained is US\$99.96. Hence, this is more cost-effective than treating other diseases such as intestinal infections caused by worms in school children, pneumonia control programs, or family planning services. Furthermore, the number of children born of women who are Chagas' carriers (about 1% of infected mothers) who develop acute congenital Chagas' disease is insignificant.

Table IV-2
Estimated cost-effectiveness of treatment of selected
diseases and procedures relative to deaths prevented
and years of life gained

INTERVENTION	COST PER DEATH PREVENTED (US\$)	COST PER YEAR OF LIFE GAINED (US\$)
Enlarging the Expanded Immunization Program	519.00	28.38
Vitamin A supplements	227.00	7.57
Treatment of intestinal infections caused by worms in school children	17,578.00	603.57
Family planning services	3,297.00	112.40
Oral rehydration therapy for diarrhea	3,498.00	116.22
Pneumonia control	3,048.00	101.26
Prenatal care and attendance at delivery	2,132.00	71.56
Treatment of congenital Chagas' disease in children under 5	3,009.00	99.96
Treatment of malaria	347.00	12.86
Treatment of tuberculosis	717.00	31.43

Source of data on cost-effectiveness of other procedures: María Cárdenas Robles, *Análisis costo-efectividad de intervenciones de salud en Bolivia*. Ed. UDAPSO, Working Paper 56/97. La Paz, July 1997.

- 4.8 The cost-per-death-prevented in malaria or tuberculosis treatment campaigns, expansion of immunization programs, and vitamin A supplement programs is lower than for Chagas' disease treatment in children under 5. However, those other interventions would not require support under the proposed program because they are part of the package of actions funded by Basic Health Insurance and will be paid for with Bolivian funds.
- 4.9 The government has not as yet invested in treatment for the estimated 420,000 Bolivians who have chronic Chagas' disease. Such treatment would cost US\$41 per patient per year, for an annual outlay of US\$17.2 million. Combatting the Chagas' disease vector now could put an end to this type of expenditure in future. Treating the infected alleviates their condition but does not cure them. But monetary outlays to treat children under 5, even chronic cases, before or in tandem with programs to combat the Chagas' vector, do cure the disease. An estimated 288,000 infected children in risk areas could be cured at a treatment cost of about US\$8 million.
- 4.10 To assure lasting benefits and continuing efficacy of the Chagas' disease control and prevention project it will be essential to strengthen local epidemiological surveillance systems. Underpinned

by a solid network of public health laboratories and blood banks and transfusion centers, those local systems will come to control the disease in the health-care network, averting new outbreaks that could threaten the gains achieved during the vector-control stage.

2. Economic impact of Chagas' disease

- 4.11 The high prevalence of communicable diseases in Bolivia takes a heavy toll on individuals, families, and Bolivian society and labor generally. Given the estimated incidence of Chagas' disease in the working-age population and the US\$1,680 average per capita output of that population, losses associated with work days missed and deaths from the disease could be as high as US\$201.7 million in today's terms, the equivalent of 2.6% of the country's gross domestic product. ^{2/} It would take some 13 years for the effects of the Chagas' disease control project to be felt in starting to reduce these losses, and the loss figures will likely climb if measures are not taken to control the vector.

B. Institutional viability

- 4.12 The organizational and functional structure of the Ministry of Health and Social Insurance (MSPS) is weak at headquarters and in the decentralized agencies. Though the MSPS and the Departmental Health Services (SEDES) are experienced and have officers trained in vector control, the scale of the proposed epidemiological-shield actions will require these agencies to be strengthened at every level, to equip them to carry through their activities properly and on schedule. The program therefore will bolster existing MSPS structures by setting up technical teams of Bolivian professionals to work in the directorates involved, taking care not to create parallel structures. This will ensure that the program's actions will be sustainable and that the know-how developed in the course of the program will be permanently instilled in the MSPS and filter to the decentralized agencies. The present staff of the SEDES and health districts will be organized into work teams to carry through the program in the departments and districts.
- 4.13 The many training activities the program would fund at the institutional level (MSPS/central level, SEDES, health districts, health-care establishments, laboratories, and blood banks), in civil society organizations (NGOs), and in the community (grass-roots organizations) will build technical, organizational, and

^{2/} The calculation methodology used may underestimate the real value of such losses, since it did not factor in the indirect costs of the disease in the form of treatment and sustenance of those with chronic Chagas' disease, government pensions being paid to those disabled by the infection, the hardship it means for families, school absenteeism, and side effects such as malnutrition and maternal and child health problems.

institutional capacity in the MSPS and decentralized agencies. In addition, starting in 1999, with proceeds of the loan, the MSPS will deliver a program of applied epidemiology for health services, to train about 100 physicians in this specialty. Those practitioners then will apply their knowledge in the program at the health-district level. To help the MSPS administer and steer the program it has been agreed with that ministry that: (i) PAHO/WHO would be engaged to provide technical support to the ministry in two fundamental areas - specialized procurement (insecticides and drugs) and planning, operating logistics, control, monitoring, and evaluation of the epidemiological-shield activities, and (ii) UNDP would be engaged to administer and monitor the program funds.

- 4.14 The program is expected to strengthen human resources at the central, departmental, and district levels, thereby effectively decentralizing activities and shifting from vertical actions like those pursued under this program to horizontal ones in the form of surveillance, prevention, and promotion at the health-care establishment and community level.
- 4.15 As for health reform, that process needs to be launched on the basis of conceptual underpinnings and internal consensus-building within the MSPS and in the national and local governments, so that those agencies can develop laws, technical and management instruments, and projects and interventions that will prove successful. The MSPS does not have the means to sustain the institutional-development effort needed for this process to yield fruit and also help phase in the reform mechanisms set out in the Strategic Plan for the Health Sector.
- 4.16 The proposed Bank support for the strengthening of MSPS technical staff, studies to map out the reform, and pilot reform initiatives would pave the way for an institutionally sustainable process of preparing for the reform by way of new laws, standards, and regulations, studies, and technical instruments.

C. Environmental and social impact and proposed measures

- 4.17 To maximize the program's impact and its benefits on the different segments of the population, and at the same time mitigate the impact of any mishandling of spraying or of laboratory wastes, the project team: (i) reviewed Bolivian and international laws and environmental standards relevant to the health sector, particularly those governing fumigation and the use of toxic substances and insecticides; (ii) included environmental issues and beneficiary education in the budget for staff training and public relations and information; (iii) paid particular attention to indigenous and aboriginal groups, to assure an accurate epidemiological profile of these communities and their reaction to communicable diseases, against a backdrop of respect for their ethnicity and culture; (iv) provided for ethnic and gender considerations and traditional health practices in the family health component; and (v) stipulated

that districts and municipalities could be selected as sites for the pilot reform initiatives only if they have potable water and proper sewage disposal and are handling hazardous medical waste correctly.

- 4.18 In the above-mentioned review the following were examined and found to be acceptable: (i) the MSPS Manual of Technical Standards and Procedures for Control of Vector-borne Diseases, which contains detailed procedures for the three stages – preparation, attack, and monitoring – and training for spraying personnel; (ii) the Laboratory Biosafety Manual; (iii) the Field Operations Manual, which contains the Information, Education, and Communication Plan; (iv) regulations under the Environment Act; and (v) the Bolivian Health Code.

D. Benefits and risks

1. Benefits

a. Reduction in morbidity and mortality from communicable diseases

- 4.19 The effort to combat Chagas' disease by a mass residential fumigation campaign and by bolstering the country's epidemiological surveillance system will have a direct effect on reducing mortality and morbidity from communicable diseases. Bolivia is still at the first epidemiological-transition stage, i.e., the burden of disease is concentrated on endemic communicable diseases – chiefly Chagas' disease, malaria, and tuberculosis – which are preventable and controllable. Program actions to control blood and blood products will help prevent the transmission of diseases such as Chagas', hepatitis, and others via blood transfusions, making for safer transfusions in hospitals and other health-care establishments.

b. Development of a new health-care model

- 4.20 Support for health reform through the proposed institutional development activities, studies, and pilot reform projects will help develop and consolidate a new health-care model in keeping with the ongoing decentralization and participation process. The new model will open the door to more equitable and efficient health-care delivery, providing a basket of basic services (Basic Health Insurance) that will: (i) extend coverage to take in the country's poorest, particularly rural indigenous groups, and lower the risks associated with maternal and child mortality and morbidity; and (ii) cut down on unnecessary referrals of patients to second- and third-level care facilities, thereby making for more efficient and effective services.

2. Risks

a. Tendering and procurement

- 4.21 A large sum would be allocated under the epidemiological-shield component for the purchase of insecticides, drugs, and fumigating equipment, and for blood banks and public health laboratories. Traditionally, tendering processes in Bolivia are very protracted. Delays in tendering and purchasing the aforementioned supplies and equipment could compromise the program's performance. To counter this risk it is being proposed that the Pan American Health Organization (PAHO/WHO) purchase and oversee the acquisition of insecticides, critical supplies, and drugs to diagnose and treat Chagas' disease. That agency has the infrastructure and international experience to do so transparently and quickly, and to assure product quality. It is proposed that the other supplies and equipment (transportation equipment, items for blood banks and community laboratories, etc.) be acquired by UNDP, which has a great deal of experience in procuring goods and services funded by multilateral financial organizations.

b. Institutional apparatus ill-equipped to implement the program and pursue health-sector reforms

- 4.22 The MSPS does not have a large enough pool of human resources with the expertise to implement this program and also lay the foundations for health reform as mapped out in Bolivia's Strategic Plan for the Health Sector. Accordingly, the focal point of the program's organizational arrangement is strengthening of the formal structure of the MSPS, building technical capacity within the directorates involved so they can carry through the activities falling to each. Program funds thus will be used to set up core technical teams within the MSPS directorates to coordinate and execute the respective projects (with support from the current structures) in concert with their counterparts in the departments and districts.
- 4.23 A Program Coordinating Unit will be set up to oversee the program activities generally, with the personnel needed to advise on the reform process. The MSPS will also have support from UNDP in administering and monitoring the program.

E. Beneficiaries

- 4.24 The program's direct beneficiaries in the short term will be the most vulnerable Bolivians who are exposed to high incidences of Chagas' disease. The population at greatest risk among those groups are indigenous communities in periurban and rural areas, in which prevalence rates for this disease are highest.
- 4.25 The indirect beneficiaries will be Bolivians generally, who will share the fruits of a more productive economy and higher national

output once one of the country's major communicable diseases is eradicated, and with the prospect of health-sector reforms that will make the overall health system more efficient and equitable.

- 4.26 The proposed program qualifies as poverty-targeted under the terms of paragraph 2.15 of the Eighth Replenishment document (AB-1704), inasmuch as improvements in health care delivered by the public sector in Bolivia target mainly the low-income population. It likewise classifies as an operation in pursuit of social equity and poverty reduction, under the terms of paragraph 2.13 of that same document.

LOGICAL FRAMEWORK FOR COMPONENT I: BOLIVIAN EPIDEMIOLOGICAL SHIELD

SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Proportionate mortality and morbidity in Bolivia due to the main communicable diseases	Project lowers proportionate mortality from program-targeted communicable diseases by 25% compared to 1998 figures.	Proportionate mortality statistics obtained from the National Health Information System (SNIS).	<ol style="list-style-type: none"> 1. SNIS health statistics improve. 2. Malaria and tuberculosis control programs are funded and implemented.
Implementation of an epidemiological surveillance system and priorities set out in the National Health Sector.	<ol style="list-style-type: none"> 1. Vector-borne transmission of Chagas' disease is reduced by 25% (2000), 50% (2001), and 75% (2002) and eradicated by 2003. 2. Transmission via blood transfusions of such diseases as Chagas', hepatitis, syphilis, HIV/AIDS, and malaria is reduced by 24% in 2000 and ended by 2004. 3. At least 75% of nationwide new cases of communicable diseases are identified and recorded by 2002, and 100% by 2004. 4. By 2003, 100% of children under 5 who are seropositive for Chagas' disease are identified and treated. 	<ul style="list-style-type: none"> - Annual serological and entomological surveys conducted by the Central Coordinating Unit for the Chagas' Disease Control Project (UCCH) and the Central Coordinating Unit for the Epidemiological Surveillance Project (UCSV). - Annual sampling surveys of blood quality in Bolivia. - Comparison of ongoing epidemiological sampling surveys with SNIS records. - Mid-term evaluation of the program. - Final evaluation of the program. 	<ol style="list-style-type: none"> 1. The country's epidemiological surveillance system is decentralized. 2. National Transfusion Medicine Bank Program is implemented. 3. Epidemiological surveillance activities are decentralized to the Departmental Health Services (SEDES) and health districts.
Implementation of disease vector control and treatment of infected children under 5.	<ol style="list-style-type: none"> 1. In the year 2000, 200,000 homes are fumigated twice-yearly; 170,000 homes in 2001; 170,000 in 2002; 160,000 in 2003. 2. Approximately 260,000 children infected with Chagas' disease are treated. 3. Cone-nosed bug [Chagas' disease vector] reporting posts are set up in 3,770 communities. 4. About 1,200 agency employees and 18,800 community health workers are trained. 	Physical monitoring and financial tracking of program targets by the UCCH and Program Coordinating Unit (PCU).	<ul style="list-style-type: none"> - Program funds are allocated on schedule. - Management contracts are signed with the Ministry of Health and Social Insurance (MSPS) and departmental governments. - Ministry of Defense staff and community personnel assigned on schedule with fumigation and surveillance.

SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Control of blood in blood banks and transfusion centers.	<ol style="list-style-type: none"> 1. Seven blood banks and six transfusion centers are equipped and reconditioned. 2. 60 people are trained in blood banks and transfusion centers. 3. 2,000 blood recipients and health professionals are trained in proper use of blood. 4. Quality of 100% of blood banks and transfusion centers is checked and maintained, with ongoing evaluations. 5. Voluntary unpaid blood-donation strategy is implemented. 	Physical monitoring and financial tracking of program targets by the UCCH and PCU.	<ul style="list-style-type: none"> - Funds are allocated on schedule. - Management contracts are signed with departmental governments. - Network of blood banks and transfusion centers is adequately coordinated at the central level.
Epidemiological surveillance system and laboratory network.	<ol style="list-style-type: none"> 1. 4,000 people are trained for health services and 10,000 in the community in epidemiological surveillance and information systems between 1999 and 2004. 2. A national, regional, and district epidemiological map is produced by 2004. 3. 116 lab technicians are trained in local technical diagnostics, recording, and reporting of prevalent emerging and reemerging diseases by 2004. 4. 100% of laboratories are equipped by 2002. 5. 100% of health posts are equipped with radio systems and other communications equipment by 2002. 	Physical monitoring and financial tracking of program targets by the UCCH and PCU.	<ul style="list-style-type: none"> - Program funds are allocated on schedule. - Management contracts are signed with departmental governments. - National laboratory network is coordinated at the central level.

LOGICAL FRAMEWORK FOR COMPONENT II: SUPPORT FOR HEALTH-SECTOR REFORM

SUMMARY OF OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Health-sector reform process by new primary-care model centered on core package of health services, health strategies.	<ul style="list-style-type: none"> - Basic Health Insurance Act is passed in 2000. - By 2001, the country's nine departments have signed agreements with the MSPS to fund Basic Health Insurance. 	Verification of passage of laws and standards and signature of the respective agreements.	<ul style="list-style-type: none"> - MSPS's Health Planning Department restructured.
and improve equity and health for the most vulnerable Bolivians, health-system management more	<ul style="list-style-type: none"> - By 2004, maternal and child mortality in areas selected for the pilot reform initiatives has been reduced by 25%. - At least 50% of the pilot projects have been implemented with capitation funding approaches. 	<p>Research on baselines, statistical records of health districts, mid-term evaluation.</p> <p>Administration missions.</p>	<ul style="list-style-type: none"> - Basic Health Insurance scheme operational.
Establish legal frameworks for new health system and its funding	<ol style="list-style-type: none"> 1. Studies included in the program are completed. 2. New health-worker hiring law is in place, consistent with capitation payment systems. 3. New health-sector funding law is passed stipulating social-security, departmental, and municipal involvement. 4. Model agreement and model management contracts for service providers (government, NGOs, social security) are designed and approved. 	Administration missions.	Budget line items to pay for studies consultants are approved.
Have in place a trained group of at the central and local level with to implement the reform.	10 MSPS officers and 100 SEDES and health-district managers receive training to implement the reform.	Administration missions.	Budget funds allocated.
Implement pilot health-reform	<ol style="list-style-type: none"> 1. By 2000, health districts are selected and agreements signed. 2. By 2002, the pilot initiatives are operational. 	Administration missions.	<ul style="list-style-type: none"> - Budget funds allocated. - Resources from departments and districts are assured.

MAIN PROCUREMENT ITEMS FOR THE PROJECT

MAIN PROCUREMENT ITEMS	FUNDING (US\$000)			PROCUREMENT METHOD (ICB or other)	PREQUALIFI- CATION (Yes/No)	SPN PUBLICATION		
	IDB	LOCAL	TOTAL			YEAR	PRESS	
							International	National
BASE PROJECT								
on (vans, motorcycles, spare parts)	1,477	-	1,477	ICB	No	1999/2000	Yes	Yes
ipment	1,475	-	1,475	ICB	No	1999/2000	Yes	Yes
protective equipment	178	-	178	LCB	No	1999/2000	No	Yes
	8,954	-	8,954	SP	Yes	1999/2002	No	No
diagnostic supplies	7,610	-	7,610	SP	Yes	1999/2002	No	No
TELESYSTEM PROJECT								
ions equipment (radios, fax machines,	2,830	-	2,830	ICB	No	2000	Yes	Yes
ardware	250	-	250	LCB	No	2000	Yes	Yes
equipment and supplies	500	-	500	ICB	No	2000	Yes	Yes
and supplies for blood banks	995	-	995	ICB	No	2000-2001	Yes	Yes
HEALTH-SECTOR REFORM								
	3,500	-	3,500	ICP	No	2000	Yes	Yes
	27,769	-	27,769					

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PROPOSED RESOLUTION

BOLIVIA. LOAN /SF-BO TO THE REPUBLICA DE BOLIVIA PROGRAM FOR A BOLIVIAN EPIDEMIOLOGICAL SHIELD AND SUPPORT TO HEALTH SECTOR REFORM

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 Bolivia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a Program for a Bolivian Epidemiological Shield and Support to Health Sector Reform. Such financing shall be for the amount of up to US\$45.000.000, or its equivalent in other currencies, except that of Bolivia, which are part of the Fund for Special Operations resources of the Bank, and will be subject to the “Special Contractual Conditions” and the “Terms and Financial Conditions” of the Executive Summary of the Loan Proposal.