

*Check against
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PROJECT PAPER
BOLIVIA
RURAL HEALTH DELIVERY SYSTEM

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT PAPER FACESHEET

1. TRANSACTION CODE
A ADD
C CHANGE
D DELETE
 A

2. DOCUMENT CODE
PP
3

3. COUNTRY/ENTITY
Bolivia

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 digits)
 511-0483

6. BUREAU/OFFICE
A. SYMBOL B. CODE
 .3

7. PROJECT TITLE (Maximum 40 characters)
 Rural Health Delivery Systems

8. ESTIMATED FY OF PROJECT COMPLETION
FY 8 3

9. ESTIMATED DATE OF OBLIGATION
A. INITIAL FY 7 9
B. QUARTER 1
C. FINAL FY 8 2
(Enter 1, 2, 3, or 4)

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 --)

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	5,200	5,700	10,900	7,600	5,700	13,300
(GRANT)	(900)	(-)	(900)	(3,300)	(-)	(3,300)
(LOAN)	(4,300)	(5,700)	(10,900)	(4,300)	(5,700)	(10,000)
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						6,700
OTHER DONORS)						600
Communities						
TOTALS						20,600

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY <u>80</u>		K. 3RD FY <u>81</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) HE	530			900	10,000	900	-	900	-
(2)									
(3)									
(4)									
TOTALS				900	10,000	900	-	900	-

A. APPROPRIATION	N. 4TH FY <u>82</u>		O. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULE MM YY <input type="checkbox"/> 8 <input type="checkbox"/> 79
	P. GRANT	Q. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1) HE	600				3,300	10,000	
(2)							
(3)							
(4)							
TOTALS	600				3,300	3,300	

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

2 1 = NO
2 = YES

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE *Frank B. Kimball*

TITLE Frank B. Kimball
Mission Director
USAID/Bolivia

DATE SIGNED
MM DD YY
07 07 78

15. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS. DATE OF DISTRIBUTION
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AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT PAPER FACESHEET		1. TRANSACTION CODE <input type="checkbox"/> A ADD <input type="checkbox"/> C CHANGE <input type="checkbox"/> D DELETE		PP
3. COUNTRY/ENTITY Bolivia		2. DOCUMENT CODE 3		
5. PROJECT NUMBER (7 digits) 511-0483		6. BUREAU OFFICE A. SYMBOL B. CODE [3]		4. DOCUMENT REVISION NUMBER <input type="checkbox"/>
8. ESTIMATED FY OF PROJECT COMPLETION FY [8] [3]		7. PROJECT TITLE (Maximum 40 characters) [Rural Health Delivery Systems]		
		9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY [7] [9] B. QUARTER [1] C. FINAL FY [8] [2] (Enter 1, 2, 3, or 4)		

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 -)						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	5,100	5,700	10,800	7,600	5,700	13,300
(GRANT)	(800)	(-)	(800)	(3,300)	(-)	(3,300)
(LOAN)	(4,300)	(5,700)	(10,800)	(4,300)	(5,700)	(10,000)
OTHER	1.					
U.S.	2.					
HOST COUNTRY						6,700
OTHER DONOR(S)						600
Communities TOTALS						20,600

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY <u>80</u>		K. 3RD FY <u>81</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) HE	530			800	10,000	900	-	900	-
(2)									
(3)									
(4)									
TOTALS				800	10,000	900	-	900	-

A. APPROPRIATION	N. 4TH FY <u>82</u>		Q. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED MM DD YY 0 8 7 9
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1) HE	700				3,300	10,000	
(2)							
(3)							
(4)							
TOTALS	700				3,300	10,000	

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

2 1 = NO
2 = YES

14. ORIGINATING OFFICE CLEARANCE		15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION	
SIGNATURE <i>Frank B. Kimball</i>	TITLE Frank B. Kimball Mission Director USAID/Bolivia		DATE SIGNED MM DD YY 0 7 0 7 7 8
		DATE OF DISTRIBUTION MM DD YY 0 7 1 0 7 8	

RURAL HEALTH DELIVERY SYSTEMS (RHDS)

(511-0483)

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N. Technical Assistance Plan *	
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Q. Health Services Program* (In Spanish)	

* In LAC/DR files

** Technical Analysis in LAC/DR files, Environmental Analysis included in PP.

PART I - SUMMARY AND RECOMMENDATIONS

A. Face Sheet

B. Recommendations

1. Borrower and Implementing Entities

The Borrower will be the Government of Bolivia (GOB). The executing agency for the GOB will be the Ministry of Social Welfare and Public Health (MSW/PH).

2. Recommendations

It is recommended that a loan be authorized to the Government of Bolivia, in the amount not to exceed \$10,000,000 and a grant in the amount of \$3,300,000 to finance the dollar and local currency costs of the Rural Health Delivery System. The loan is described herein, and will be subject to those conditions precedent and covenants specified in Section VII. It is further recommended that a source/origin waiver be granted for the purchase of motorcycles from Code 000 to Code 899 (free world).

3. Terms

Repayment within thirty (30) years from the first disbursement with a grace period of ten (10) years. Interest payable in United States dollars at (2%) two percent per annum during the grace period and three (3%) percent thereafter on the disbursed balance and unpaid interest.

C. Description of the Project

1. Project Goal and Purpose

Goal: The goal of the project is to improve the health and well being of the rural poor. This will be achieved by decreasing the incidence and prevalence of the major diseases which affect the productivity and quality of life of the rural poor.

Purpose: The purpose of the Rural Health Delivery System Loan is to extend, improve and support the health services available to the rural poor. The project will also introduce certain administrative improvements and reforms in the Ministry of Social Welfare and Public Health necessary for accomplishing this purpose. The program is designed to stimulate community participation and responsibility for designing and supporting an appropriate mixture of health and nutritional services which will most effectively

and efficiently reduce the current high levels of morbidity and mortality. The program emphasizes the delivery of preventive rather than curative health services through community based health promoters, who are supported and supervised by an improved rural health infrastructure and administrative capacity of the Ministry of Social Welfare and Public Health.

2. Project Activities:

The project will develop the capacity of individual communities and the GOB to provide basic health and nutrition services to the rural population. The project consists essentially of the following activities: the motivation of community participation in essential health activities and services; the development of a low-cost health and nutrition delivery system; the establishment of a paramedical training capacity to supply essential human resources; the improvement of basic health infrastructure to facilitate the care of referred patients and the delivery of preventive health services; the strengthening and improvement of the administrative and supply capacity of the Ministry of Social Welfare and Public Health and the GOB to expand basic rural health services; and the design and implementation of a maintenance management system which stresses preventive maintenance activities.

The project stresses the organization and education of community personnel to participate and assume responsibility for the development of community health services and projects. Central to these activities will be the support of a low-cost health and nutrition delivery system which will utilize the services of a community health promoter to extend basic preventive and curative care to the rural population. This community/promoter low-cost health system has been tested and improved over the past two years in the Montero Rural Health Project (USAID Grant 511-0453) and has been found to be an effective and efficient system of delivering health and nutrition services. The rural health promoter, who is paid by a community health committee, will be trained and supported through the infrastructure of the Ministry of Social Welfare and Public Health (MSW/PH).

The MSW/PH infrastructure and referral system includes health posts, health centers, departmental hospitals and central level health and management services. To improve the capacity of the referral system to support this new level of community health services the loan will provide funding for the training of selected personnel, the introduction of management and administrative improvements and reforms, the development of effective supply and maintenance systems, the

modernization of the information-statistical system and a complementary transport system, the basic equipping and improvement of facilities in direct support of the community promoter and adequate technical assistance and evaluation studies to adjust program inputs and activities in a timely manner.

The project will improve the institutional bases of the MSW/PH at the national and departmental level through training, equipment and improvements in administration and maintenance. This will allow these levels to fully support an improved and expanded rural health delivery system. In addition, in three departments (La Paz, Potosí and Santa Cruz) the project will allow the implementation of a complete rural health delivery system from the rural community level through the departmental Unidad Sanitaria. This will be achieved by a gradual implementation and expansion of services over a period of four years.

Under the project the most fundamental changes in the Bolivian public health system will occur at the rural community level, where services are virtually non-existent at present. By means of a program of rural health promoters from the rural communities, supported by a Community Health Committee and an efficient system of supplies and supervision, rudimentary health care, nutrition interventions and environmental sanitation services will be delivered to the rural population. Project activities at this level will concentrate on preventive services. The curative care will be somewhat more advanced than at the promoter level, being provided by a Rural Auxiliary Nurse I, as has been found successful in the Montero project, or by a physician in the case of a medical post. The Auxiliary I will also provide the supervision at the rural community level necessary to assure that the promoter carries out his/her activities as required.

Hospital Health Centers, with an average of ten beds, focus almost exclusively on curative services in the present system of the MSW/PH and only attempt to meet the demand placed on them by patients coming to the facility. No community services are provided by most of the Centers, thus population coverage is very low. Lack of equipment, supplies (especially drugs) and supervision sharply decreases the ability of these Health Centers to deliver even basic curative services. The RHDS Project will provide personnel, facilities, equipment and supplies to strengthen the Hospital Health Centers. The project will also create an administrative infrastructure at this level, supported by both the departmental and national levels. The Rural Nurse Auxiliaries II, aided by Social Work Auxiliaries, will provide services to patients of the Health Center. More importantly, this Rural Health Staff will supervise and assist the Promoters and Auxiliaries I at the Rural Community and Health/Medical

Post levels. The medical staff will also provide supervision and assistance to the other levels, especially to the physicians in the Medical Posts. Through this system, new preventive techniques and more complex curative services may be introduced as the project progresses.

At the departmental level, the Unidad Sanitaria has primary responsibility for most administrative matters, while the Departmental Hospital(s) concentrate on service delivery and functions in a considerably independent fashion. The technical, programmatic, and administrative offices within the MSW/PH's Unidad Sanitaria in each department do little more than carry out perfunctory administrative functions, primarily due to inadequate staff, office materials and medical supplies and funds for transportation. As a result, the existing Hospital Health Centers, Health Posts and Medical Posts, receive little or no support from the departmental level. The RHDS Project will strengthen the Unidades Sanitarias by creating a Departmental Rural Health Project Team within the Unidades Sanitarias that will provide supervision and technical assistance to the three lower levels. Also, administrative and support systems will be established so that the capacity exists for the departmental level to respond to requests for support from the three lower levels.

A Departmental Training Center will be established in the three target departments to prepare the personnel required by the RHDS Project. In addition to formal courses designed to produce various types of personnel (for example, Health Promoters and Rural Nurse Auxiliaries I and II), this Training Center will also provide courses for various types of personnel already in the field, and continuing education courses for its graduates.

The MSW/PH currently centralizes its administrative activities at the national level, thus causing many of the problems at the lower levels. Programmatic areas are supervised through the various national offices where programs are approved and forwarded to the lower levels for implementation. The decentralization of activities to the Unidad Sanitaria and other levels is a vital facet of the Project. However, even with this decentralization, the Central MSW/PH will play an important role in administering the Project at the national level. An efficient purchasing and storage system for supplies and equipment is necessary at the national level. Since existing facilities are inadequate, a national warehouse will be built as part of this project. Norms and procedures for purchasing and distributing standard supplies and equipment will be established at the national level by the Project Team.

In addition, an important part of the Project's human resources development activity will take place at the national level. The Project will strengthen the School of Public Health

by providing the personnel and equipment that will permit it to provide courses for physicians (departmental level staff and Directors of Hospital Health Centers) and support personnel which will teach the participants how to run their respective parts of the RHDS Project. In addition, the School of Public Health will provide formal public health programs for physicians, something that does not presently exist in Bolivia.

D. Financial Summary (In US\$000)

	A. I. D.			<u>BOLIVIA</u>	<u>Total</u>
	<u>Grant</u>	<u>Loan</u>	<u>Total</u>		
Technical Assistance	3,030	240	3,270		3,270
Rotating Drug Fund		1,400	1,400		1,400
Human Resources and Training		980	980		980
Information and Evalu- ation		480	480		480
Construction		3,420	3,420		3,420
Equipment		2,380	2,380		2,380
Personnel and Travel				5,215	5,215
Maintenance				435	435
Promoter Salaries				600	600
Miscellaneous				150	150
Sub-Total	3,030	8,900	11,930	6,400	18,330
Inflation and Con- tingency	<u>270</u>	<u>1,100</u>	<u>1,370</u>	<u>900</u>	<u>2,270</u>
TOTAL	3,300	10,000	13,300	7,300	20,600

E. Project Committee

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PART II - PROJECT BACKGROUND AND DETAILED DESCRIPTION

A. Background

1. Priority and Relevance

The GOB's National Economic and Social Development Plan 1976-1980 has as its highest priority the improvement of the standard of living and well being of the population and a progressive redistribution of income. The National Health Plan which is an important component of the five year economic and social development plan has as its primary objective the improvement of the health status of the population through the extension of coverage of health and nutrition services. The Rural Health Delivery Services (RHDS) Loan directly contributes to these economic, social and health sector objectives by developing and implementing a low-cost health delivery system which will maximize the extension of coverage and impact of basic health services, especially improving the health and well being of the rural poor.

The health profile of Bolivia is typical of most developing countries. Poor environmental sanitation conditions, low nutritional status, high fertility rates, and high prevalence of communicable disease reservoirs contribute to staggering levels of infant mortality (147 to 250/1,000) maternal mortality (480/100,000) and general mortality (18.4/100) which limit life expectancy to only 47 years of age. This limited life expectancy is further complicated by many days of illness which severely limits individual productivity and places a large dependency burden on family members and the society at large. These high rates of morbidity and mortality are further compounded by the severe cultural, geographical, communication and transportation limitations particular to Bolivia, and the inadequate human, financial, material and technical resources available to the health sector (see the Bolivia Health Sector Assessment for greater details on the problems and limitations facing the health sector).

Although the problems facing Bolivian health agencies are formidable, large improvements in the health status of the population can be made if a basic preventive and curative health system can be designed to reach those rural poor presently without coverage of these services. The RHDS Loan described in this project paper has programmed a series of activities which will bring these vital health services to the campesino rural communities. This project is particularly relevant to the Bolivian health and development situation in that it will not only provide vital health services to reduce high rates of morbidity and mortality, but it will do so through a low-cost health delivery system which will receive considerable support from community sources. This combination of high priority health services and complementary community support will facilitate the development of activities for the eventual extension of this program to all segments of the rural population.

2. Relationship to Current A.I.D. Activities

The GOB and USAID have had a long and productive relationship in the development of important health services. Beginning in 1974 the GOB and USAID recognized the need for developing an integrated, programmatic approach to the delivery of health services, and initiated the first health sector assessment which helped to formulate a comprehensive analysis of health sector problems and establish a health sector strategy to guide future GOB-USAID health programs. The Health Sector Assessment reached the conclusion that to resolve the major health problems and health sector constraints particular to Bolivia, a comprehensive health improvement program needed to be initiated and evaluated as a pilot project grant activity prior to the expansion of such services on a national scale.

Since June of 1975, the GOB and USAID have been developing and testing a comprehensive Rural Health Delivery Services Project (511-0453) in the Montero area of the department of Santa Cruz. Working in some 31 rural communities, the Montero project has developed the planning, organizational, training, support and information/evaluation methodology to effectuate the delivery of rural health care services. Using the community health committee and the community health promoter as the basic elements of a low cost health delivery system, the pilot project has been able to achieve coverage of the target population of Northern Santa Cruz including training, equipping, drug and vaccine stocking and other activities. Additionally, high impact delivery mechanisms in maternal child health, environmental sanitation, nutrition, curative medical and dental services, morbidity and mortality investigations, and health education activities have also been developed for implementation at the community level by rural health promoters. These person to person services, which in most parts of the rural areas is the only service-type government contact with the campesino, have been developed within an improved support infrastructure of the Ministry of Social Welfare and Public Health. With concentrated technical assistance, facility and transport improvement, technical training, and administrative/information system reform, the Montero project has demonstrated the feasibility of developing the support services necessary to extend and improve the health and nutrition services available to the rural poor.

USAID/B and the MSW/PH are currently initiating activities under the Rural Sanitation Loan/Grant Project (511-0458) which provides for construction of potable water systems and latrines in 200 rural communities in the departments of Cochabamba and Northern Chuquisaca. Included in this project is A.I.D. financing for: 1) long-term technical assistance in administration and maintenance for the Environmental Sanitation Division (ESD) of the MSW/PH; 2) short-term technical assistance in evaluation, training and organization; and 3) procurement of a considerable amount of materials and equipment.

Since these activities have already begun it is expected that they will provide an appropriate mechanism to work with the MSW/PH in identifying problems in the areas of procurement of services and supplies, as well as with increased community activities. Additionally, these project activities will provide the MSW/PH with the necessary experience to develop the appropriate systems to carry out these types of activities in relation to the Environmental Sanitation project, and should facilitate the expansion of these same types of activities contemplated in the RHDS project for the departments of La Paz, Potosí and Santa Cruz.

The Village Development Project (511-0499) which is financed by A.I.D. and the GOB, through the National Community Development Service (NCDS), provides for construction of social infrastructure projects to be built through community participation, with NCDS supervision. These projects include 160 potable water systems and latrines and 169 health/medical posts in the 12 new NCDS zonal offices established under Project auspices, which are located in the nine departments of Bolivia. Six of these offices are located in the three departments included in the RHDS project area. Additionally, up to one third of the projects funded under the Village Development Loan may be built outside the 12 zonal office areas. The Project Agreement further provides that these health sector projects, to be built by NCDS and the communities, must be approved by the MSW/PH prior to initiating construction in order to allow the MSW/PH to budget sufficient funds for staffing and equipping of the health/medical centers and for support of the potable water systems. To this end the MSW/PH and NCDS have signed an agreement which formalizes the procedures to be followed in determining when and where these structures will be built, and the project supported staffing, equipping and support costs required. The additional administrative structure and logistic systems proposed under the RHDS project will facilitate the planning and staffing of these health/medical centers and provide improved support and supervision of the Auxiliary Nurses located at these. Additionally, the RHDS project will allow for the creation of health promoters in the smaller adjacent communities, thereby extending the reach and benefit of these health services structures.

Other AID projects which are planned to impact on the RHDS project area of Santa Cruz, Potosí and La Paz include: 1) The Nutrition APD Grant (511-0468) which assists the GOB in carrying out nutrition planning and evaluation activities through the Ministry of Planning and Coordination and the Departmental Development Corporations; 2) the Sub-Tropical Lands Development Project (Loan 511-T-050) which assists the GOB in colonizing the San Julian area in Santa Cruz and developing cropland the National Institute for Colonization is also discussing with MSW/PH expanding the Montero Project into the San Julian area; 3) the Rural Electrification I Project (511-L/T-046) which will provide electrical connections to 9,600 residential, 11,000 farm and 2,600

commercial users in the Santa Cruz area; 4) the Rural Electrification II Project (511-T-049) which will provide service to 7,300 residential, 9,100 farm and 3,250 commercial users in La Paz and Potosi; 5) the Rural Roads I Project (511-T-056); 5) the Rural Roads II (511-T-061) which will construct 800 kilometers of feeder roads in La Paz, Santa Cruz and Potosi, departments; 6) the Educational Management and Instructional Development Program (511-V-051) will establish District Educational Development Centers in the three departments to facilitate decentralization of educational services; and the Rural Education II Program (511-V-057) to improve rural normal schools in Santa Cruz and Potosi; 7) the Title II FFP which provides foodstuffs for mothers' clubs in the target departments, the use of which should be improved under this project; and 8) the Title III Program which will supply funds over a five year period to support the development of a National Nutrition Institute and a national Communicable Disease Control Program which will carry out programs in the target departments, providing the required communicable disease control component of the Project.

The Rural Health Delivery System Loan (RHDS), therefore, builds upon the solid analytical base of the Health Sector Assessment and the programmatic testing of the extension of health services through the Montero Rural Health Delivery Services model. The loan is a logical follow-on activity to the previous GOB-USAID health sector activities and also complements the other USAID rural sector activities. It takes advantage of these and other GOB-USAID activities by providing the continuing infrastructure and human resources to insure the maximization of present health sector/community investments and to guide the long term improvement of health status in rural communities.

3. Other Donor Activities

Private Voluntary Organization and other international organizations have played an important role in the initiation of innovative programs and the delivery of health care services in Bolivia. It might be said that Bolivia, which designates only 1.5% of its central government budget to the MSW/PH for public health services, depends heavily on international sources to energize its efforts in preventive and curative health services.

The Pan American Health Organization, which has influenced the development of health services since 1931, is primarily involved in providing technical assistance and small amounts of seed money to improve the technical and administrative capacity of the health sector. PAHO activities scheduled for 1978-1982 complement activities contemplated in the RHDS Project.

Recently, several international donors have discussed with AID mutual interests in the health sector. The IDB, which had tentatively programmed and postponed a health sector loan for Bolivia for the last several years, informed the Mission that they were permanently withdrawing their proposal. This was due to the difficulty of developing a program with the MSW/PH, IDB's lack of a permanent technical health staff in Bolivia and the cost of the IDB financing versus other alternative uses for these development funds in Bolivia. The British Government had indicated possible interest in financing a

health project - possibly hospital construction or drug and equipment imports - as an alternative to the financing of the importation of mining equipment for the Bolivian State Mining Corporation (COMIBOL), which was cancelled due to opposition by British labor groups. As a result of the GOB's decision to hold elections this year and to allow union activities to resume, opposition by the British unions has been withdrawn and the British Government has indicated that this financing will now be focused on the mining sector. The German Government had indicated the desire to provide financing in the health sector for a rural health program oriented towards hospital and construction activities. The focus of these activities, however, seemed to be on the development of curative services and not on a comprehensive rural health program. The lack of a resident technical staff, the impending elections and the German Government's uncertainty as to the GOB's intentions with regard to the initiation of a Campeſino Social Security Program (discussed in Part II.A.5 of this paper) has resulted in a postponement of this financing for the time being. Finally, the Japanese Government has been involved in financing the construction and equipping of three gastro-enterological hospitals, one each for La Paz, Cochabamba and Sucre, and the training of the staffs of these. While urban based hospital construction is not contemplated under the RHDS project, these hospitals will provide complementary services to those of the project.

4. Evaluation of Montero Rural Health Project and its Relation to the RHDS Project

Background

Following conclusions based on the Bolivian Health Sector Assessment, the Mission in coordination with the MSW/PH, initiated a pilot project in the northern section of the Santa Cruz department, based in the town of Montero. The initial purpose of this effort was to improve the MSW/PH's ability to plan rural health services and provide the basis for a national effort to establish a rural health delivery system.

In implementation, a shift was made from a broad health research effort to the design and implementation of a systematic delivery of health services in a limited rural area. This shift and an extension of the project by 18 months enabled the Mission and the MSW/PH to gain experience in the development of each of the components of the system and in limited implementation and management of the system as a whole, before proceeding to establish a national rural health delivery system. In May, 1978, additional funding was approved to provide for additional services contemplated under the national health delivery system, and at the same time to expand services to new areas adjacent to the current project area.

Design of the Project

The criteria utilized in the implementing structure developed under this project, was to work within the possibilities of the technical, administrative, financial, and human resources framework of the MSW/PH. That is not to say that the model created was to be limited to simple improvements of existing schemes, but that major modifications of the present system would be identified, and programmed according to actual limitations of the current system. Under this guideline, the two major criteria have been the cost of replication and the commitment by the GOB to rural health services.

In terms of the Montero Project, the MSW/PH has met its financial obligations regularly. The GOB's concern and interest in rural health has increased notably over the life of the Montero project. This commitment is manifested by the publication of two major planning documents exclusively for rural health service expansion and the partial financing by the central government of initial activities of these plans.

Another major concern in the design of the Montero project was to work within the existing rural socio-economic system, maximizing the advantages of its rural social, cultural and economic characteristics. This meant that utilizing the heterogeneity and strong traditions of the rural population which implies a natural resistance to the introduction of new ideas, in the positive aspects the strong tradition of community self-help and unity. This implied the introduction of community participation in the national health system which would enable expanded coverage with minimal additional cost to the national treasury and maximum flexibility in terms of defining the method of service delivery in each individual community. The aspects of the project that respond directly to this concern are: community participation in determining their health services, within a set of general guidelines; community acceptance of sharing the costs of a health services system; and the selection of a target group most nearly representative of the diverse ethnic and cultural characteristics found in rural Bolivia.

The first two aspects are addressed in the Community Organizing Methodology (Annex L) developed as part of the project, which takes into account among other things, the community experience of self-help and working together.

In terms of the third aspect, socio-cultural representativeness, the area selected has the three major ethnic groups: Aymara, Quechua and "Camba". The experience of the Montero Project has shown that ethnic composition is not a major variable in determining the success or failure of community participation in a rural health system; rather, a critical determinant is the community's experience in working together.

Administration Structure

There are three key administrative aspects of the Montero Project: (1) Organization and coordination; (2) Personnel administration; and (3) Financial management. The Montero Project has a structure consisting of five programmatic levels, but it is the top three (national MSW/PH, departmental -- Unidad Sanitaria -- and the District Project Team) that have the primary administrative responsibilities.

At the national level, the MSW/PH Executive Committee has been established with a membership consisting of the Chief of Planning as Project Coordinator, the Chief of Administration and the Chief of the National Directorate of Public Health. This Committee has been responsible for the overall Project management, including coordinating the Project's activities with counterparts in other Ministries and private groups at the national level.

At the departmental level, the MSW/PH has provided a Departmental Coordinator to work within the Santa Cruz Unidad Sanitaria. A Departmental Executive Committee has been established, and consists of the Departmental Project Coordinator, the Chief of Planning MSW/PH, the Chief of Planning of the Departmental Public Works Committee, the Chief of Administration of the MSW/PH, the head of the Outreach Team in Montero and the Chief of the Montero Hospital. In addition, the chiefs of the Unidad Sanitaria's operating divisions, including maternal and child health, nutrition and environmental sanitation, assist the Committee upon request.

The District Outreach Team located in Montero is the local project implementation group. This Team is made up of the head of the Outreach Team, a biostatistician technician, an Auxiliary Nurse II, a supplies technician and a driver. A District Coordinating Committee also has been established which meets informally. Membership consists of representatives of the Normal School, Rural Education, the National Colonization Institute, the National Community Development Service, the Training School and the Methodist Rural Medical Program, and is chaired by the head of the outreach Team.

Considerable decentralization has been possible due to the departmental and district level elements of the Montero project. Basically, the district level has primary responsibility for meeting the support services needs of the lower levels. Although problems have occurred in procuring and distributing some of the support materials, the idea of decentralized administration has been accepted by the MSW/PH and Unidad Sanitaria. Regarding personnel administration, the MSW/PH has decentralized responsibility for staff appointments to the Departmental Project Coordinator at the Unidad Sanitaria. In the past, all such appointments were initiated at the national level and approved by the Minister.

Supervision of personnel at all levels has been an important component of this Project. The Health Promoter is supervised by the Auxiliary Nurse I from the appropriate health post or medical post; the Auxiliary Nurse I is supervised by the Auxiliary Nurse II; the Auxiliary Nurse II by the District Outreach Team; and, the District Outreach Team by the Departmental Project Coordinator at the Unidad Sanitaria.

The Auxiliary Nurse II is a new personnel position for the MSW/PH. This helps create some much-needed job mobility within the lower levels of the MSW/PH, since the Auxiliary Nurse I may be given additional training and promoted to Auxiliary II. The MSW/PH has also approved accepting Health Promoters for training as Auxiliary I's.

Financial administration of the Project is based on joint departmental and district budgeting coordinated with the MSW/PH at the national level. The project has been able to decentralize salary payments to the departmental level. The salary of the Health Promoter is determined and paid by the Community Health Committee, the funds for his salary coming from the Promoter's charges for services and medicines. The Promoter turns funds collected over to the Treasurer of the Community Health Committee, which also raises money from the community, if necessary, to support the program.

Implementation

After six months of implementation of actual service delivery the Montero Project has in its area of influence 30% of the total communities fully participating and an additional 55% in the process of organization. This represents a substantial increase in the rural population that is served by the MSW/PH. According to the USAID/B Rural Health Sector Assessment, the MSW/PH provides sporadic health services to 15% of the rural population. Through the Montero Project, the MSW/PH is providing continuous services to 31% of the rural population of the northern Santa Cruz area, after a very limited implementation period. This is expected to be expanded substantially in the next year.

The prime objective of the Montero Project is to assure that the basic health needs of the rural population are met, utilizing a system which emphasizes preventive services in five basic programs, i.e. Maternal-Child Health, Nutrition, Communicable Diseases Control, Environmental Sanitation and a Medical Attention Program. The MSW/PH goal is to provide complete coverage of these services, but the current emphasis falls primarily on curative, hospital care and various individually isolated preventive programs. This means that in rural areas the auxiliary nurse assigned to a health post is expected to carry out more than three hundred different tasks, and provide all the necessary information to the central level. This situation compounded with a chronic lack of supplies, travel money and supervision forces the system to a virtual standstill.

Under the Project, these barriers to service delivery have been addressed by integrating the various activities of each of the four basic preventive programs into manageable sets of tasks at various levels within a regionalized system of service delivery. This allows the Auxiliary Nurse more time for preventive services and similar tasks, since the more complex services are assigned to higher service levels which serve as their reference centers. In addition, the new system facilitates supervision and training by giving each level of health services a clear set of functions and interrelationships on which to base their work.

In addition to the newly structured services, the project has also improved the effectiveness of the coverage of the ongoing MSW/PH services. First, the project has provided training to the physician and environmental sanitation technicians at the level of the hospital/health centers, so that they can provide support to the personnel in their area of responsibility. Further reinforcement of these activities is needed as additional funds for supplies and equipment to improve medical attention and to install potable water systems is available. Second, the project has assisted the Rural Auxiliary Training School in Montero to improve its curriculum for Rural Auxiliary Nurses I. Third, the project has created a District Outreach Team based in Montero which is responsible for setting up the service system, supervising all rural activities in northern Santa Cruz district and providing administrative and technical support to all levels within the district. This team needs further reinforcement in terms of additional personnel which the MSW/PH has budgeted for 1978. Finally, under the Project a Regional Coordination Unit in Santa Cruz has been created which serves to strengthen the support of the regional technical personnel at all levels of service activity.

According to the information available for activities in the project area, there is significantly greater utilization of services than on a national basis. The national average of attention provided at the health post by the Auxiliary I is 16 consults per month, while in Montero the average is 63 per month. Considering that in the Montero area the Auxiliary Nurse I dedicates a maximum of 50% of her/his time to this activity, while the rest are dedicating 100%, this increase is significant. In terms of the promoter, for which there is no national comparison, approximately 60 household visits per month is considered average.

Thus, the MSW/PH and USAID have carried out a pilot project which has provided the basis for development of a rural health system. This project took into account the appropriate technical, administrative, financial, organizational, cultural and human resources requirements of the system, without ignoring the reality of the Bolivian Health Sector. The experience gained served to provide the MSW/PH with the experience and confidence necessary to initiate a more ambitious program for health services delivery.

5. Current Status of Rural Health Activities

The MSW/PH is currently the major actor in health activities in Bolivia, although the Social Security System, over which it has nominal control, does provide coverage for a small number of rural residents employed in the petroleum and mining sectors, and for a somewhat larger group of urban salaried workers, totaling approximately one million persons. Through the departmental Health Units (Unidades Sanitarias), which are located in the departmental capitals the MSW/PH plans and supervises preventive and curative health services in each department, which are executed through the Hospital Health Centers, Medical Posts and Sanitary Posts, all primarily located in rural areas. Auxiliary Nurse personnel stationed at the lowest level, and physicians, nurses and auxiliary personnel at the Medical Posts and Hospital Health Centers provide a range of curative services, in accord with their capabilities and the physical facilities equipment and supplies available.

Other than sporadic communicable disease vaccination programs, little is done in preventive services, which is undoubtedly where the biggest impact on the health status of the rural population can be made. Furthermore, outreach activities occur only occasionally, and depend for the most part on the good intentions of a few isolated, dedicated health workers, rather than a concerted MSW/PH program.

At the departmental level the larger hospitals located in the capital cities perform more complex surgical interventions, as well as treatment requiring specialized training and equipment. Also located here in the Health Unit is the Ministry's technical staff which provides programmatic guidance and technical and administrative support to the hospital health center, medical and sanitary posts. At the national level are found the specialized hospitals, as well as the Ministry's national technical and administrative staff.

Given the inadequate training of the staff of the health and medical posts and the lack of adequate supplies and equipment, those who are able to afford treatment and are in need generally by-pass the first two levels, going instead to the hospital health center or directly to the departmental hospitals located in the departmental capitals. This same situation prevails with regard to the urban population and the urban health centers. Combined with the problems mentioned above, this treatment pattern reduces the attention provided at the sanitary and medical posts to a very low level, and overburdens the already inadequate hospital services system.

Cognizant of these shortcomings and in response to Five Year planning requirements emanating from the Ministry of Planning and Coordination, the MSW/PH had developed several plans which attempted to ameliorate these problems. Most recently a plan for the period 1977-1980

was prepared which evaluated the physical plant and equipment requirements of the MSW/PH for the expansion of rural health services, and proposed an investment plan for funding by the GOB to overcome these shortcomings. Similarly, human resource requirements have been identified and an attempt has been made to start training of adequate numbers of auxiliary personnel to begin to cover the existing service deficit. Missing from these planning activities, however, were two important factors: an overall implementation strategy and funding sources which would permit the GOB to provide the investments required for service expansion. Lacking both of these, it was impossible to put these plans into action.

Shortly before the Mission proposed to the MSW/PH that the development of the RHDS Loan/Grant Project be moved up to fiscal year 1978, the idea of financing this rural service delivery system expansion through a program originally proposed by the present government some six or seven years ago, was reactivated. It was envisioned as the last major social program of this government and as a way to initiate the service delivery expansion program. This financing scheme, called the Campesino Social Insurance (CSI) program, requires obligatory enrollment of all rural residents in the social insurance program as the first stage of instituting a full rural social security system. The program would be capitalized through fixed monthly charges of approximately \$2.00 per rural worker during a period variously estimated at six months to one year, prior to beginning service delivery. Initial coverage provided would include curative and some preventive services, and in subsequent years basic services would be expanded and other social security benefits would be included such as old-age pensions, death and survivors benefits. In addition to the obligatory payments from each rural worker, a considerable amount of external financing, estimated at \$20 to \$30 million, would have been required to implement the system in its first 5 years of operation.

When the Mission made its proposal to the MSW/PH for moving up the RHDS project, the Ministry suggested that AID instead provide the investment needed for initiation of the Campesino Social Insurance program. After carefully analyzing the proposal, which had very limited distribution up until that time, the Mission declined to participate directly in the program. This was done for the following reasons:

- a. The capitalization of the program very definitely depended on 100% involvement of the rural population, which was clearly envisioned by the MSW/PH as being obligatory, rather than voluntary. The Mission saw no means which permitted the Ministry to enforce this enrollment, thereby endangering the program's financial viability, nor any means to overcome the hostilities which would be created if the attempts to enroll rural workers failed.

- b. Very elaborate detail was devoted in the program to the construction, remodeling and equipment requirements, as well as to the phased national implementation by geographic areas. However, little attention was given to the human resource and training requirements, the implementation constraints of the MSW/PH nor to the reform of the administrative, maintenance and logistic support systems required to implement this ambitious program. The Mission felt that these components were as crucial, if not more so, to the success of the project as those emphasized by the MSW/PH.
- c. The GOB Five Year Plan stressed increased life expectancy and decreased rates of infant and maternal mortality and communicable disease levels as goals for the MSW/PH programs. However, the Campesino Social Insurance program stressed curative, hospital and health center based services rather than preventive services. The Mission felt that the latter would have been a more adequate response to the problem than that proposed by the MSW/PH.

For these reasons the Mission proposed instead that the MSW/PH and USAID jointly develop a program for the expansion of health services to rural areas, which would be based on the most recent Five Year Plan goals, the Montero Rural Health Project and aspects of the Campesino Social Insurance Program, with the following exceptions to the Social Insurance concepts:

- a. The proposed program would involve financing by the central government for all regular MSW/PH personnel and voluntary community financial support for the health promoters located in the rural communities, thus eliminating the forced participation of the population in the program.
- b. Emphasis would be placed on preventive community-based activities, but also provide for improvements of curative service delivery in rural areas.
- c. Training, administrative reform and the development of a logistic and maintenance system would be given high priority.
- d. Phased geographical implementation for the program would be instituted for three departments and the national level, rather than attempting to cover the entire country initially.

Given the lack of GOB financing capabilities, the extreme reluctance of any external donor to become involved in the Campesino Social Insurance project and the MSW/PH's sincere desire to expand service coverage

in rural areas, the Minister of Social Welfare and Public Health met with Mission representatives and agreed on a plan for development by the MSW/PH of the information required for the PP. The Director General of Public Health was designated responsible for coordinating the activities of the various technical groups formed in the Ministry to develop the initial analyses and information required. The Mission contracted consultants worked closely with these groups and used the information developed by them as a basis for the analyses included in the PP.

As of the date of preparation of this document, the GOB and the MSW/PH continued to indicate interest in the Campesino Social Insurance (CSI) program, but without specifying what concrete form it might take. The Mission therefore, proposed that the MSW/PH utilize the RHDS Project as the means of beginning implementation of the health services component of the CSI program, based on the RHDS service and financing mechanism, since the components which comprise the social security aspects of the CSI program were not scheduled for implementation by the MSW/PH for some ten years. This strategy would permit the Ministry to begin expanded service delivery in rural areas and upgrade its technical, administrative and logistic systems which would subsequently provide the basis for implementation of the social security aspects of the CSI program.

B. Detailed Description

1. Goal

The general health sector goal, as described in the Mission's Health Sector Assessment, and to which this Rural Health Delivery Systems Project is being directed, is to improve the standard of living of the rural population through improvement of the health status of this group. This will be achieved by decreasing the incidence and prevalence of the major diseases which affect the productivity and quality of life of the rural poor. This RHDS Project will contribute to the accomplishment of this goal by addressing one of the major constraints to improved health status, namely the lack of adequate health services, both preventive and curative, in the rural areas of Bolivia.

2. Purpose

The purpose of the Project is to extend, improve and support health services to the rural poor in order to improve the health status of the rural population of the three target Departments of La Paz, Potosí and Santa Cruz. Certain administrative and technical improvements and reforms will also be introduced into the MSW/PH which will facilitate health services delivery to this group. Achievements toward meeting this Project purpose will be measured by means of pre and post-sample household health surveys that will indicate the relative success of the program through changes in standard community health indicators, as well as through personnel and supervision reports which will indicate the frequency and coverage of the health services being provided. The Project is designed to stimulate community participation and responsibility for directing and supporting an appropriate mix of health, nutritional and environmental sanitation services that will most effectively and efficiently reduce the current high levels of mortality, morbidity and disability. The Project emphasizes the delivery of preventive rather than curative health services through community based rural health promoters and rural nurse auxiliaries who are supported and supervised by a Community Health Committee, as well as by an improved rural health infrastructure and administrative system of the Ministry of Social Welfare and Public Health. Although the focus is on preventive services, rudimentary and basic curative services will also be provided at the community level, both in the homes of the rural poor and in simple outpatient health facilities.

The RHDS Project focuses on the rural poor population of Bolivia in communities with a population of 150 to 500 persons through a health delivery system which is designed to provide basic preventive and curative services using Rural Health Promoters. Larger rural towns are also covered under the RHDS Project through services provided

by Health/Medical Posts or Hospital Health Centers. An estimated 43.8% of the rural population in communities of this size in the three target Departments of Santa Cruz, Potosí and La Paz lives in accessible areas, and is estimated at about 651,000 using the 1976 census data. Santa Cruz is selected as a target area because the Montero project is operating there, and expansion to the rest of the Department is facilitated by the existence of the infrastructure created for this pilot project. La Paz and Potosí have been included since these departments and Santa Cruz have the largest relative concentration of MSW/PH resources in rural areas, the infrastructure is reasonably developed, and other development projects (e.g., education, roads, electrification agriculture) have activities in these departments. These departments rank 1st, 2nd and 4th respectively with regard to rural population which will provide the opportunity for a significant impact on the rural population through the project activities.

3. Project Design

This section will present and discuss the various levels and components of the Rural Health Delivery Systems proposed by this project. It represents the first major effort at establishing a national system of this type in Bolivia. The Project will have major impact on all levels of the public health system in Bolivia; that is, rural communities, health/medical posts, hospital health centers, departmental health units (Unidades Sanitarias), and the national Ministry of Social Welfare and Public Health. At each level, this Project's impact or changes will be in terms of population coverage, service delivery, human resource development, community organization, logistical support systems, facilities and equipment, administration, information and evaluation systems and planning.

The Project focuses initially on the institutional improvements required in the MSW/PH to effectively support the Rural Health System, prior to beginning the actual delivery of services. In this way the Project provides for the systematic, institutional support necessary for effective delivery of preventive services to rural areas and the improvement of the referral system. Thus, the Project concentrates actions earlier in the implementation period in the areas of human resource development, logistical support systems, facilities and equipment, administration, information, evaluation and planning. The systems, commodities, equipment, facilities and personnel required to select, train, logistically support and supervise the Community Health Committees and the Rural Health Promoters is assured in this way prior to entering each level of Project activities. Development or reformulation at the national level of policies regarding personnel, training, drug, equipment and supply procurement, facilities, administration and morbidity and mortality data are initial Project activities and are followed by implementation of these through the specific systems required in each of these areas. Construction and remodeling of facilities and procurement of drugs, supplies and equipment is begun shortly thereafter. Project implementation at the Departmental level in the three target departments builds on these activities through the implementation of the systems developed and the orientation of current MSW/PH personnel and training of new personnel. Subsequently, this personnel begins implementation of the service delivery model by selecting zones within the departments, and the respective Hospital Health Centers, Health/Medical Posts and Rural Communities. These basic systems of logistic support, supervision and training thus facilitate the service delivery and are necessary prerequisite to the community level activities.

Each level of the RHDS Project is discussed below, as well as the accomplishments, and linkages among them, starting with the Rural Community or local level. A chart is presented in Annex D which summarizes the Project activities accomplished at each level.

a. Rural Community (Level I)

The most fundamental changes in the Bolivian public health system will occur at the Rural Community level, where services are virtually non-existent at present. By means of a program utilizing Rural Health Promoters, who will be selected from the Rural Communities and supported by a Community Health Committee, an efficient system of supplies and supervision, rudimentary health care, nutrition services and environmental sanitation services will be delivered to the rural population.

Based on the successful experience in the Montero Rural Health Delivery Systems pilot project, Rural Communities of 150 to 500 persons will be organized to establish Community Health Committees. These Committees will recruit and pay a Rural Health Promoter, who will be selected from among communities' residents. The MSW/PH will train these Promoters at the Hospital Health Center level, using the curriculum developed in the Montero project. Remuneration for the Promoter will be arranged by the Community Health Committees and the Promoter, and will not be the responsibility of the GOB. The Promoter will charge standard fees for services delivered, and for the drugs or medicines used in treatment. The Promoter will turn this money over to the Health Committees, and this money then will be used to pay the Promoter and to buy replacement stocks of medicines, drugs and supplies for the Promoter's health kit.

In addition, the Committees will be responsible for managing Mothers' Clubs, which currently act as the community level conduit of the supplementary feeding programs under the general supervision of the MSW/PH. Under the project, existing and new Mothers' Clubs also will be strengthened to improve their nutrition impact, as well as provide a mechanism for increasing rural community savings. The Community Health Committee may incorporate the Mothers' Clubs into the Committee or, in many instances, the existing Mothers' Club will expand its functions to include those of the Community Health Committee. The Committee will be responsible for setting the beneficiary charge for the foodstuffs, for assuring foodstuff delivery and for assisting the health promoter in measuring nutrition status of the beneficiaries. Finally, the Committee may decide to set the beneficiary charge from 10 to 30 per cent above the minimum required for transportation and distribution costs. The Committee can use these additional funds to support its other health and nutrition activities, such as paying its Health Promoter, building a health post or buying land and supplies for a community garden.

The Promoter will provide extensive health services to the Rural Community. These services emphasize prevention, and thus include education in nutrition, communicable disease control, maternal and child health and environmental sanitation. Each Promoter will be given a manual which explains in simple terms what, how, and when s/he should do in curative terms when faced with a specific illness. Further, through their training and manuals, the Promoters will be expected to know their skill limits and recognize a problem beyond these limits for referral of the problem to the level which can handle it. The primary mechanisms for delivering preventive services will be individual and group talks, as well as demonstrations in such areas as hygiene or food habits and group projects such as covering a well

or keeping height and weight charts in conjunction with a feeding program. Curative services, quite rudimentary at this level, would emphasize recognition of symptoms and strict adherence to the manual for proper treatment and/or referral for further treatment.

The Environmental Sanitation Technician assigned to the Hospital Health Center will provide orientation to the Community Health Committee with regard to sanitation activities in the community. This will include evaluation of the environmental sanitation situation in the community and recommendations as to what types of projects to undertake and assistance in determining water sources to be utilized, latrine construction, etc. He will also provide periodic supervision of the promoter's and the community's activities and the specific project carried out.

Regular logistic support (medicines and supplies including supplemental foods and equipment for latrines and potable water supplies) will be provided through the Rural Auxiliary Nurse I at the assigned health or medical post. In addition to the Promoter's responsibility to the Community Health Committee, s/he will also be supervised by the Auxiliary I. The data that the Promoter collects from the families that are visited will form the basis for planning and evaluation of the RHDS Project at all levels. Once s/he has surveyed the rural community, the Promoter will develop a monthly plan of activities in conjunction with the Auxiliary I supervisor and the Community Health Committee. The actual delivery of services will be compared to this plan as part of the evaluation of the Promoter. On the supervision visits, the Rural Nurse Auxiliary I will visit families with the Promoter, and will provide somewhat more advanced curative services when necessary.

b. Health/Medical Post (Level II)

Currently, health services at the health post are very often not provided because of personnel and/or supplies shortages, as well as the lack of supervision and other support. The situation at the medical post, which often has a physician serving an obligatory rural year, is usually not much better. Those services that are delivered at this level focus on curative medicine, and very little is done in the way of prevention. Under the RHDS Project, services at this Health/Medical Post level will concentrate on preventive services, such as nutrition and environmental sanitation. The curative care will be somewhat more advanced than at the Promoter level. The Rural Auxiliary Nurse I will be the primary provider of these services, as has been found successful in the Montero project. In the smaller areas where there are Health Posts, a Promoter

will be assigned with the Auxiliary I. Larger areas with health posts will have two Auxiliary I's. The largest areas which have medical posts will have a physician and an Auxiliary I.

The health/medical post communities will also be organized to form a Community Health Committee, which will be responsible for selecting the Health Promoter and programming the community health activities with the Auxiliary I. The Auxiliary I will deliver services both in the community (in homes and in schools), and in the Health Post. Based on the Montero project experience, about half of the Auxiliary I's time is spent providing services, and half supervising the Promoters.

Supervision of the Promoters is key to the Project's success. By visiting the Promoter at least once a month, the Auxiliary I provides direct feedback on how the services are being delivered. This is important both as motivation for the Promoter, who will know that there is a system supporting his or her work, and also for control to make sure that the Promoter is working efficiently and effectively.

c. Hospital Health Center (Level III)

Hospital Health Centers, with an average of ten to twenty beds, focus almost exclusively on curative services in the present MSW/PH system. Furthermore, these Centers simply attempt to meet the demand placed on them by patients coming to the facility. No community services are provided by most of the Centers, thus population coverage is very low. Lack of equipment, supplies (especially drugs) and supervision sharply decreases the ability of these Health Centers to deliver adequately even basic curative services.

The RHDS Project will provide personnel, facilities, equipment and supplies to strengthen the Hospital Health Centers. The Project will also create an administrative infrastructure at this level, supported by both the departmental and national levels. On the service side, the Rural Nurse Auxiliaries II, aided by Social Work Auxiliaries and Nutrition Auxiliaries, will provide services to patients of the Health Center. But, more importantly, this Rural Health Staff will supervise and assist the Promoters and Auxiliaries I at the Rural Community and Health/Medical Post levels. The Auxiliary II is a new type of personnel for the MSW/PH, and their use is based on the experience of the Montero project. The Medical staff will also provide supervision and assistance to the other levels, especially to the physicians in the Medical Posts. Through this system, new preventive techniques and more complex curative services may be introduced as the project progresses. The Hospital Health Center will

also treat patients referred from the Rural Community and Health/Medical Post Levels.

The administrative staff will be strengthened at the Hospital Health Center level. This will allow the decentralization of key support functions to this district level, which can respond more rapidly and effectively to the needs of the direct service providers. The RHDS Project will not only provide the necessary drugs, immunizations, supplies and equipment, but will also create a system that will insure that these materials get to the people that need them when they need them. This re-enforced administrative staff will also permit the Hospital Health Center to serve as the collection point for the data needed for an information system that permits effective administration, evaluation and planning at all levels. Certain Hospital Health Centers (about 1 out of every 4-5) will be designated as support centers for the other 3-4 centers, and will be provided with additional supplies, warehousing capacity, as well as additional administrative personnel.

The RHDS project addresses the rural health problems of Bolivia in two degrees of depth, recognizing resource and infrastructure constraints. Three departments (Santa Cruz, Potosí, and La Paz) will be the targets for development of all five levels of the RHDS Project; that is, the Project will reach down to the Rural Communities. In the other six departments, the Project will concentrate on changes in the administration and support systems at the departmental (Unidad Sanitaria) and the Hospital Health Center level. In short, in these six departments the Hospital Health Centers will be strengthened by providing the required administrative systems that will allow them to deliver services in a more effective and efficient manner. Such a strategy provides the basis in these six departments for the next step, which is to develop the Rural Community and the Health/Medical Post levels.

Another unique feature of the RHDS project is that personnel will be trained at the Hospital Health Centers, thus allowing practical training with close proximity to the service delivery levels. Health Promoters will be trained at the Hospital Health Center, as will traditional midwives and rural teachers. The midwives' training will provide them with improved techniques for carrying out their work in the communities, without challenging their service delivery role. The classes for the rural teachers is a tactic that was found to be successful in the Montero project, both in terms of support for the community organization activity and in terms of acceptance and support for the Promoter and his/her services.

d. Departmental Level (Unidad Sanitaria) (Level IV)

The Unidad Sanitaria has primary responsibility for most administrative matters at the departmental level, while the Departmental Hospital concentrates on service delivery and functions in a considerably independent fashion. The technical, programmatic and administrative offices within the MSW/PH's Unidad Sanitaria in each department do little more than carry out perfunctory administrative functions, primarily due to inadequate staff, office materials, medical supplies and funds for transportation. As a result, the existing Hospital Health Centers, Health Posts and Medical Posts, receive little support from the departmental level.

The RHDS Project will strengthen the Unidades Sanitarias by creating a Departmental Rural Health Project Team composed of members of the technical and administrative staff that will provide supervision and technical assistance to the three lower levels. Also, administrative and support systems will be established so that the capacity exists for the departmental level to respond to requests for support from the three lower levels.

The purpose of the Project Team in the Unidades Sanitarias is to administer the RHDS Project within a given department. A secondary purpose is to provide the expertise to improve both the administrative and programmatic capability of the Unidad Sanitaria. Many important administrative functions will be decentralized to the Departmental level, and these will be implemented through the Unidad Sanitaria and the members of the Team. These include the management of supplies and equipment, supervision, financial administration, information system management, programming and personnel training.

Departmental Training Centers will be improved and established where they are insufficient, in the three target departments to prepare the personnel required for the RHDS Project. In addition to formal courses designed to produce various types of personnel (for example, Health Promoters and Rural Nurse Auxiliaries I and II), this Training Center will also provide courses for personnel already in the field (e.g., Environmental Sanitation Technicians and Nurse Auxiliaries I), and continuing education courses for its graduates. The Training Center will provide training for Promoters, traditional midwives and rural teachers at the appropriate Hospital Health Center. The Training Center, working with the Project Team, will also identify additional topics or short courses which should be incorporated into the formal training activities at the Center for various types of personnel.

Given the type of community organization that is included in this project, it will be feasible for those doing the organizing to identify traditional practitioners including midwives, and select those who will be most likely to respond positively to short courses on their roles and new activities that they may be able to perform. These traditional practitioners will also be given instruction on the RHDS Project and how it works, so that referrals may be made.

Support systems will be established at the Unidad Sanitaria, giving the departmental level considerable control over the procurement and distribution of supplies and equipment. The Project Team will also develop a program and a budget for the RHDS Project to meet the departmental objectives within the national budget framework. The input from the three lower levels is crucial in this programming and budgeting process. Once the MSW/PH has approved these program and budget guidelines, the Ministry will delegate personnel functions for the RHDS Project-specific positions to the departmental level. Thus, the departmental level, working closely with the Hospital Health Centers, will develop area-specific programs to meet the specific needs of each area and will be delegated sufficient authority to execute them.

In addition to its responsibilities in personnel and supplies administration, the RHDS Project Team in the Unidad Sanitaria will be a key element in the Project's information and evaluation system. Vital statistics and health status data will be aggregated at the departmental level, and analyses will focus on determining the Project's impact in these terms. The existing MSW/PH planning process pays little or no attention to determining effects in health status terms, and the poor quality of the existing health status data makes it extremely difficult even if the desire was present. The quality of this data will be greatly improved since the Promoters and Auxiliaries I will be collecting family health data (diseases and risk factors) directly from the communities. This will greatly increase the validity of the MSW/PH's present health status information system which gathers data only on that small proportion of the rural population that comes to health facilities seeking care.

The Project Team will also aggregate service and resource data, thus enabling it to develop cost information in order to permit adequate evaluation of the RHDS Project in financial terms, and to permit programming the expansion of the project in light of available funds. Currently the MSW/PH has no cost data by services, and little cost data in any terms, so that it cannot tell what it is costing to deliver services at any level within the present system. The cost data from the RHDS Project will permit the Project

Team to develop program budgets, which are not presently employed within the MSW/PH (traditional line budgets are used).

e. National Level - Ministry of Social Welfare and Public Health (Level V)

As already mentioned in the previous sections, the MSW/PH currently centralizes its administrative activities at the national level, thus causing many of the problems at the lower levels. Programmatic areas are supervised through the various national offices where programs are approved and forwarded to the lower levels for implementation. Due to personnel and funding limitations, little personal supervision can be provided at the Unidad Sanitaria level, much less at the sub-departmental levels.

The decentralization of activities to the Unidad Sanitaria and other levels has been described in the two previous sections. Even with this decentralization, the MSW/PH RHDS Project Team plays a very important role in administering the Project at the national level. An efficient purchasing and storage system for supplies and equipment is necessary at the national level. Since existing facilities are inadequate, a national warehouse will be built as part of this project. Norms and procedures for purchasing and distributing a standard set of medicines, supplies and equipment will be established at the national level by the Project Team.

An important part of the Project's human resources development activity will take place at the national level. Currently the MSW/PH exercises only minimal influence over the training of health professionals, such as doctors, nurses or nutritionists at the University level, either in terms of the content of the professional training programs or in terms of the number of professional trained. The MSW/PH's School of Public Health, however, provides additional training to nursing personnel and some health technicians at its La Paz facility, and through formal departmental training programs (for example, the Montero District Auxiliary Training School) and departmental seminars. This School of Public Health, however, is very understaffed and underfunded, and thus it rarely offers other courses than for nurses training.

The RHDS Project will strengthen the School of Public Health by providing the personnel and equipment that will permit it to provide courses for physicians (Departmental level staff and Directors of Hospital Health Centers) and support personnel. These courses will be designed in conjunction with the MSW/PH Project Team, and will concentrate on teaching the participants how to run the activities for which they have responsibility under the RHDS Project.

Those support personnel, particularly from the departmental level, that will benefit from exposure to the national system will be trained at the national level. For example, departmental warehouse supervisors will be familiarized with the national warehousing system; departmental biostatisticians will work with the MSW/PH biostatisticians to learn about the national information system.

In addition, the School of Public Health will provide formal public health programs for physicians, something that does not presently exist in Bolivia. Few Bolivian doctors receive scholarships to study public health and health administration in universities outside of Bolivia, and of these, few if any, train in the United States. In order to provide the future technical leadership in public health and health administration for the country, this Project will provide participant training in these areas.

Under the RHDS Project, funds will be provided to permit the national level staff to travel to other levels to provide technical assistance and supervision, and also to get to know the problems that exist at these levels. This knowledge of operational aspects at the lower levels is crucial for the MSW/PH Project Team, because it will enable the establishment of feasible objectives and norms. Objectives will be established for the RHDS Project in a multi-dimensional approach, including health status, service delivery, population coverage, costs, and resources availability. These objectives will be established only after close coordination with the Departmental Project Teams. The MSW/PH Project Team also has the responsibility for developing norms that provide detailed guidance for such areas as types and content of services delivered; training content; personnel requirements; facility specifications and drugs, supplies, and equipment standardization. Again, close coordination with the departmental level is necessary in establishing these norms.

The MSW/PH now adheres to a traditional emphasis on curative services. Activities such as the construction of facilities, funding and staffing related to curative services receive the largest portion of the MSW/PH's resources. Preventive services, other than national vaccination campaigns against TB and DPT, etc, are officially encouraged, but actually receive marginal amounts of the total, albeit inadequate, resources available. As already described in the previous sections, the RHDS Project seeks to strengthen the delivery of preventive services, while also providing rudimentary and basic curative services to that large proportion of the rural population that presently receives little if any formal health services. The MSW/PH Project Team must be carefully selected to ensure that the

persons chosen have sufficient expertise to provide the technical leadership necessary to implement the RHDS Project. Particularly important are expertise in preventive services and in the various aspects of health system administration. In some cases, it may be necessary to provide international training to persons that will fill these positions in order to augment their existing knowledge and skills.

Another important responsibility of the MSW/PH Project Team is to coordinate the RHDS Project activities with the overall MSW/PH's planning, and with the planning programs of other related sectors (e.g., agriculture). Inter-sectoral planning coordination recognizes that the development of rural area is multi-dimensional, with health services providing only one step in the development process. The Project Team will also keep track of, and coordinate its activities with (if appropriate) the efforts of other international organizations involved in rural health programs. These include, among others, PAHO and the World Bank.

In summary, at the national level the RHDS Project will emphasize decentralized programming for personnel and budgeting activities; developing training goals with the Bolivian Universities' Medical Faculties and the School of Public Health training programs, utilizing para-medical personnel; increasing preventive health programs; and, improving logistical support, planning, administrative and information systems.

4. Project Outputs

At the termination of the Project the following outputs will have been obtained.

a. Health Services

Rudimentary health care and first aid, maternal and child health, nutrition, immunizations, patient referrals and health education, as well as environmental health services, will be provided in approximately 780 rural communities of 150 to 500 persons. At the Health/Medical Post level in approximately 300 communities with 500 to 3,000 persons each basic health care will be given in conjunction with periodic visits by the medical and technical staff from the Hospital Health Center, who will provide supervision, more complex curative services and introduce additional prevention techniques. In approximately 50 towns of 3,000 to 20,000 persons each similar personal health services will be provided. For the population of these towns, and that of the corresponding rural communities and communities with health/medical posts, the following additional services will be provided: High-risk deliveries; Treatment of third degree malnutrition; Laboratory services; Professional medical care; Simple and emergency surgery; Dental services; and Ambulance service. Supervision of the health/medical posts and rural communities will also be carried out by the Hospital Health Center Staff. At the departmental (Unidad Sanitaria) level in the three departments of La Paz, Potosí and Santa Cruz, environmental sanitation services in support of water systems and latrine construction will be provided, as well as supervision of personal and environmental health services at lower levels. At the national level supervision, norms and protocols for service delivery at all levels will be established.

b. Community Organization

In the approximately 780 rural communities included in the project area, Community Health Committees will be established with the assistance of the Community Organization Team. The Committee will be responsible for the personal and environmental health activities carried out in the community and the recruitment, payment and supervision of the rural health promoter. At the Health/Medical Posts in approximately 300 communities Social Work Auxiliaries and Rural Nurse Auxiliaries I and II will also assist in the organization of these communities to also establish Community Health Committees. The approximately 50 Rural Nurse Auxiliaries I and II and the Social Work Auxiliaries assigned to the Hospital Health Centers will assist in the community organizing activities at lower levels. The Social Work Auxiliaries will also have conducted a community analysis for each rural community and those with Health/Medical posts. The Nutrition Auxiliary will have assisted these same communities in organizing

mothers' clubs for health and nutrition activities, including supplementary feeding and nutrition education programs. At the departmental (Unidad Sanitaria) level a system for financial and administrative support for community leadership training will exist, as well as the community organization training for the staff of the Health/Medical Posts, Hospital Health Centers and the Unidad Sanitaria. Programming of expansion of community organization activities will also take place at this level on a regular basis. At the national level norms, supervision, allocation of resources and review and evaluation of the community organization strategy will be established.

c. Personnel

By the end of the project an adequate system of personnel recruitment, training, supervision and remuneration will be established so as to facilitate the rural health activities. This will include establishing new types of personnel such as Rural Nurse Auxiliaries level II, Social Work Auxiliaries, Nutrition Auxiliaries and appropriate levels of required maintenance and logistic support personnel.

d. Logistic System

Under the project a logistic system will be established for the provision of medicines, vaccines, drugs, expendable medical and other commodities, vehicles, equipment and maintenance. A rotating drug fund will provide for initial purchase of drugs and supplies to cover requirements of the Rural Communities through the Hospital Health Centers and will be replenished through user fees. A system for the timely purchase, storage and distribution of these items will be instituted through the Health/Medical Posts, Hospital Health Centers, Unidades Sanitarias and national warehouses. A maintenance capability will also be established for vehicles and equipment, with appropriate service facilities at each level.

e. Facilities

Under project auspices a system of warehouses -one at the national level, three at the departmental level and ten at the Hospital Health Center level- will be built and equipped. Additionally, loan funds will be used to build and equip three new Hospital Health Centers and complete equipping of approximately 57 others, as well as to build and equip approximately 70 new Health/Medical Posts and remodel and equip approximately 90 Health/Medical Posts. The exact number of new and remodeled service facilities required in the project area will be determined based on an update of a 1976 MSW/PH survey. The Health/Medical Post buildings will be built under a currently existing agreement between the MSW/PH and the National Community Development Service (NCDS), and financed through the A.I.D. and GOB funded

Village Development Project (511-0499). The Village Development Project provides for the construction, equipping and staffing of approximately 170 Health/Medical Posts in 12 NCDS zonal office areas, which cover parts of the three departments included in the RHDS Project area. Additionally, the Village Development Project provides that roughly one third of the projects to be executed by NCDS under the Project will be outside the area of the project concentration. Thus financing and administrative arrangements currently exist to allow for the construction, equipping and staffing of the estimated 70 Health/Medical Posts required under this Project. Additionally, the Village Development Project provides for construction of 160 potable water systems and a correspondingly appropriate number of latrines under the same circumstances. Thus, through the RHDS organizational and support activities at the departmental (Unidad Sanitaria), the Hospital Health Center and the Health/Medical Post levels, and the NCDS's mobilization and administration of community resources for construction of these posts and water systems the required facilities will be provided.

f. Other Support Systems

An information and evaluation system will be established and functioning at the conclusion of the Project which will consist of the following components. First, the Rural Health Information System which will provide data on a monthly basis concerning: Activities of the Rural Health Personnel and gross morbidity, mortality and fertility data detected by them; Disease treatment given and diagnoses made at the Health/Medical Post and Hospital Health Center levels; Supplies and drugs used and on-order throughout the system with the corresponding financial reports; and, Morbidity, mortality and fertility data analyzed at the Hospital Health Center level. Additionally, baseline studies will be carried out before the initiation of the service delivery activities in each area with periodic updates. Finally, specific studies concerning special areas such as nutrition, water quality and systems functioning, incidence of communicable diseases and incidence of water borne and diarrheal diseases will be carried out periodically.

Administrative improvements and reforms will be introduced in order to facilitate the systematic delivery of rural health services. These will include changes in personnel classification and management systems, purchasing and inventory systems and improved information handling.

Finally, improvements in the planning system will be instituted to facilitate the utilization of the current and newly generated information available for decision making; the revision and establishment of specific program objectives and norms; and the execution of specific analyses of existing resources and personnel; and, the establishment of resource allocation guidelines.

5. Inputs

The project's inputs are: health delivery personnel, training, technical assistance, construction of facilities, equipment, and seed capital for a revolving fund for drug and supplies. These are summarized below. Detailed description of these may be found in Annexes J through I.

a. Health Delivery Personnel

The estimated 780 participating rural communities will provide a total of 780 Community Health Promoters who will work half time on community health matters. These communities will also form a total of 780 Community Health Committees composed of an average of five persons each who will devote approximately three days a month to the committees. The MSW/PH will provide 1,360 current and 970 new employees to the project.

b. Training

A major element of the project is training to be given at all levels. A total of forty participants will receive loan funded fellowships to study Public Health and Health Administration abroad - 10 for academic year training and 30 for short courses outside Bolivia. Of the mid-level technical personnel such as Nutrition Auxiliaries, Social Work Auxiliaries, Environmental Health Technicians, Administrative Support Personnel, Nurse Auxiliary -II's, and Nurse Auxiliary I's, 540 new personnel will be trained in basic skills through 47 courses, and 500 MSW/PH staff members will be trained in 90 refresher courses. These and other administrative personnel will also receive informal, on-the-job training with technical assistance personnel. At the community level 780 Community Health Promoters will receive eight week courses; 780 Community Health Committees will receive five-day leadership training; and 780 rural teachers and 780 community leaders will receive health-service oriented leadership training. The training activities will generally be conducted by MSW/PH personnel with materials, and other costs covered by the loan. The loan also will finance travel and living maintenance allowance for non-MSW/PH persons such as the Community Health Promoters.

c. Technical Assistance

Long and short-term technical assistance provided by the project grant and loan, respectively, will assist in many aspects of the project's development. The technical advisers will: provide advice and assistance to the Departmental Health Units in developing administrative, logistic, and personnel systems for the Rural

Health Delivery System; assist with training activities; and provide advice on specific implementation questions which arise during system development.

d. Construction of Facilities

The loan will provide for remodeling of 90 Health/Medical Posts; construction of three Hospital Health Centers; construction or remodeling of Unidad Sanitaria administrative offices, warehouses maintenance shops and training centers in the three departments; construction or remodeling of the national MSW/PH warehouse and the MSW/PH training facility; and provision of 80 wells for rural community water systems. Funds for the construction of 70 New Health/Medical Posts required in the Project area will be provided under the recently approved Village Development (511-0499) Loan/Grant Project, as will the construction of the potable water systems and latrines. This contribution, which is not included in the Summary Cost Estimate on page 67, is calculated at approximately \$1 million each.

e. Equipment

The loan will fund purchase of equipment and vehicles to equip the rural health service, training and administrative facilities in rural areas of the three departments, at the departmental and national level.

f. Rotating Drug and Supply Fund

The loan will provide the seed capital to establish a revolving drug and supply fund to establish a national rural distribution system under the project based at the national level of the MSW/PH. The MSW/PH will use funds to purchase medicines and supplies to be distributed by the health personnel within the Project areas. Rural users will pay standard fees for medicines. These payments will replenish the fund for further purchases of drugs, medicines and supplies.

Biologicals for the communicable disease control component of this Project will be provided through the local currency generations of the Title III Project. Between \$7 and \$9 million will be available for this national program of which up to an estimated \$3.4 million would be available for the project area.

PART III - PROJECT ANALYSIS

A. Technical Feasibility

1. Appropriateness of Technology

The RHDS project has been designed to maximize the use of resources available in the project area to support the proposed rural health delivery system and to minimize the capital input required to implement this system. The technology chosen is appropriate for the target areas being served by the project and is sufficiently light capital to allow replication of the system in rural areas throughout Bolivia.

The project focuses on delivery of primarily preventive health services in rural communities as small as 150 inhabitants. The project design takes advantage of resources available at the community level to be the basis for the proposed rural health system. Community Health Committees will be organized at the community level, which will appoint and support health promoters from the community. In some cases, these health promoters may be traditional curers or others presently involved in traditional health services. Personnel involved at other service delivery levels of the system (levels II and III) are principally auxiliary personnel: nurse auxiliaries, social worker auxiliaries, nutrition auxiliaries. This design, therefore, does not require large numbers of highly trained, college educated personnel who would not be likely to be available in these types of rural settings. Based on experience to date with the Montero Project, the scopes of work for the various health personnel at these levels of the system have been found to be within the abilities of the people chosen for these positions. Furthermore, the training courses offered for these personnel will be related to the environment of the rural areas where they will be providing services and take into account the existing traditions with respect to health care and services.

In addition to being appropriate to the areas in which it will be implemented, the technology employed through the project will be of a light-capital nature. Capital investment will be made in facilities which are the minimum required at each service level of the system: health/medical posts and hospital health centers. These facilities will have substantial outreach capability, which minimizes the need for additional capital outlays for construction. A logistic system has been designed to support the hierarchy of physical facilities which, together with the low-cost health personnel, provides an inexpensive delivery mechanism without substantial capital investment. The information and evaluation system designed for the project places maximum emphasis on collection of data by the health promoters themselves and routine data analysis for evaluation, planning and programming is designed so as not to require automatic data processing

techniques. In addition, the project's focus on preventive rather than curative services will result in lower costs for the health system as a whole, since curative services are much more costly per individual served in both economic and human terms.

In the design of the project, several alternative technologies were considered for the provision of expanded rural health services. These alternatives were rejected as being more costly per beneficiary and less appropriate to the areas being served than the system contemplated by the project design. One alternative considered was an expansion of the current system, through upgrading physical facilities and equipment. This alternative would have implied continued reliance on treatment in hospitals, would have had no real outreach capability, would have reinforced the present curative/urban focus of the Bolivian health system and would have resulted very expensive per individual served. A second alternative considered was to combine improvement to the current system with the addition of an outreach capability. This would have entailed providing transportation to nurse auxiliaries to permit them to make visits to rural areas. While this would have increased the number of consults, the outreach would have been significantly less than the proposed RHDS project design and at a higher cost. A variation of this alternative also considered was to provide outreach to rural areas through health teams, which would include a physician. This alternative, while also expanding the services provided to rural areas, would have tended to be an irregular solution rather than a permanent one. It would have essentially maintained the urban/curative focus of the existing system and a top-down approach. In contrast, the system proposed in this PP will involve the communities to be served themselves, will entail a referral chain upward through the system based on the seriousness of the illness to be treated and on the capabilities of promoters and auxiliaries at each level, and will focus on preventive rather than curative services at the lowest levels.

The fundamental logic behind programs such as the Montero project and this project is that the medical technology exists to drastically reduce the high mortality rate in most LDC's. The problem is one of delivering it. Also, in LDC's there is the overwhelming problem of cost. Due to the synergistic nature of the causes of death, planners must wrestle with a major issue. This issue is, what is the appropriate set of interventions and the efficiency of any one taken alone and their accompanying costs over the long run?

In the past twenty-five years, many programs have been undertaken to provide better health to underserved populations. Some of these programs were for the purposes of research and designed to determine at least some portion of the answer to the problem of alternatives. The first efforts of such research have determined the components of effective programs. These components are water and sanitation, nutrition supplements (usually protein), immunization at early ages, and modern medical care. The missing determinant is the relative impact of one component compared to each of the others. Failing this information, the other factor of cost must be considered. Of the above components it has been shown that an immunization program, using unskilled outreach workers, trained only to immunize, is the least costly initially. However, experience in India, Ethiopia, and other countries has shown that approximately two to three years after the start of such a program, it is no longer functioning because it is not a part of the regular health delivery system. It is not supplied and does not meet the needs of the people it serves. Since the investment is, therefore, lost, the initial lower cost is not particularly relevant

What has been learned, then, is that the most effective approach for the long term is a systems approach. The components of the system may vary slightly from country to country, but all stress the combination of several attempts to impact on health status and most importantly focus on the linkages and relationships of the elements.

The question of cost enters into the system in terms of delivery mechanisms of the components. The literature, and, indeed, the philosophy of LDC health care is that, (a) outreach workers are less expensive than other medical personnel; (b) small facilities and simple equipment cost less to build and maintain and; (c) the system must have a certain portion of the high cost elements in it in order to provide all types of care needed. The cost per visit to the rural health system with some lower cost elements supported by AID has ranged from \$1.30 in Nicaragua to \$2.00 in Guatemala. The average cost per beneficiary of the entire system, (all supporting and interlocking components is approximately \$33.00 in Nicaragua and \$26.00 in Montero area of Bolivia. The design of the Rural Health System project, therefore, has taken into consideration what has been learned in the past, and within the framework of Bolivia, appears to be the most appropriate.

In summary, the project design provides for the introduction of technology which is appropriate for the areas to be served and replicable nationwide because of its low cost and light capital nature.

2. Engineering Analysis

a. Designs and Construction Plans

The engineering and construction phase of this project will entail routine planning, design and construction of health facilities varying in size and complexity, from day-time clinics to small rural Hospital Health Centers, as well as related warehousing and maintenance shops in support of these facilities.

Technical and professional experience will be provided in the design of the facilities to be constructed and/or renovated as a part of the project as follows:

1) In the cases of simple facilities, such as Health/Medical Posts, by the National Community Development Service (NCDS). The NCDS has performed similar work in previous AID-financed programs of similar scope and complexity with a considerable degree of success.

2) In the cases of larger and more complex facilities, invitations for technical proposals will be requested and the required professional expertise will be obtained in the form of architect engineer services on a case by case basis.

The smaller projects such as the medical and health posts will be constructed or remodelled by NCDS using standard designs as summarized in Annex I. Costs of the approximately 70 new posts to be constructed will be paid for from the Village Development Program. For the approximately 90 posts to be remodelled, the Mission will use a Fixed Amount Reimbursement approach - paying only for completed work at an agreed upon rate.

Final designs for the larger projects such as the hospital health centers, training centers and warehouses will be provided by contracts with private architectural and engineering firms. Preliminary designs are shown in Annex I, and are based on prototypes developed by Mission financed technical assistance.

AID will reserve the right to approve the plans and specifications for each type of project, and insure that minimum professional standards are employed during construction.

The engineering and construction of each project will be the responsibility of the MSW/PH or NCDS, under guidelines reviewed and approved by AID. A sampling of typical projects to be built under the loan has already been submitted to USAID/Bolivia and reviewed by its technical divisions. They are considered to be well conceived, complete and adequate for the kind of projects intended. Based on an analysis of these sample projects, it was concluded that the technical and professional capability to develop the type of facilities described above exists and that this will not be a constraint to project implementation.

A list of new construction or remodelling required in the project areas has been prepared by specialists in the field of facilities planning and reviewed by the Mission (see Annex I). These requirements are based on MSW/PH surveys and are considered to be the minimal upgrading needed to provide reasonably satisfactory rural health services.

b. Facility and Equipment Maintenance

Provision has been made in the project for the regular maintenance of the facilities and equipment financed under the project. In the case of health and medical posts, communities will be organized to undertake routine maintenance, principally through provision of voluntary

labor. This system has been used effectively in the past with community facilities of this nature. For larger facilities (hospital health centers, warehouses, offices), building upkeep and maintenance needs have been estimated including MSW/PH personnel salary costs. These requirements are included in the GOB's contribution to the project.

With regard to vehicles and equipment, costs of routine maintenance have been included in the project budget. In addition, some equipment maintenance equipment has been included in the commodities to be procured under the project, especially for much of the medical equipment being financed. In addition, assistance will be provided to the Ministry through the project to upgrade their maintenance system. A detailed maintenance plan for the major equipment, vehicles and facilities will be presented by the MSW/PH as a condition precedent to disbursement.

b. Cost Estimates

The cost estimates used for the project are based on sample designs for the facilities to be built and detailed equipment, materials and drug lists. (See Annex I). Standard cost factors for Bolivia were used to estimate the costs of construction and remodeling to be undertaken (Annex I). Costs for vehicles, equipment and other commodities are based on recent prices obtained for other AID-financed projects in Bolivia or on catalog prices currently in effect. Although most of this equipment and commodities will be purchased during the early implementation phases of the project, a small inflation factor has been included in the project budget tables to guard against cost increases which may occur between project design and completion of the procurement process.

3. Environmental Analysis

No adverse impacts are expected from the project on either the physical or human environment in the project areas. Where substantial construction activities are undertaken, such as in the case of Hospital Health Centers or warehouses, an environmental examination will be performed as part of the design work. On the other hand, the project is expected to have significant positive impacts on the physical and human environment through the introduction of environmental sanitation facilities in rural areas and through improved health standards among the rural target group. An Initial Environmental Examination (IEE), recommending a negative determinator is included in Annex I.

B. Social Soundness Analysis

1. Rural Social Organization - Overview

Currently, the social organization of rural Bolivia is best characterized as being in a state of flux. The once stable hierarchical system of social stratification based on the hacienda system and on feudalistic labor practices was seriously shaken by the reforms - agrarian, educational, and electoral - initiated by the Revolution of 1952. Many of the barriers that kept the mostly Indian (Quechua and Aymara) and Cholo populations effectively outside the mainstream of national life were broken giving them increased economic opportunities and social mobility. However, in a country that was one of the most traditional and least modernized of Latin America, the reform program has encountered monumental difficulties and its achievements have been very uneven. Nowhere is this more evident than in the distribution of health resources and services. The best and almost all health services are concentrated in the urban centers while the rural areas lack, in most cases, even the most rudimentary facilities. It has been estimated that the present national health system reaches sporadically only 15% of the rural population*. The status of rural health, in which Bolivia ranks as one of the worst in Latin America, illustrates the duality of Bolivian society. A Spanish-speaking urban-oriented minority constitutes the economic and social elite wielding overwhelming political and economic influence over a rural population which lacks means of effective participation in national affairs. "The result is a social and cultural dualism in which development processes affect only a narrow spectrum of the urban population and do not affect the larger rural population at all".**

The ultimate beneficiaries of the RHDS project will be the approximately 651,000 rural poor in three departments. The wide diversity found among the rural poor (ethnicity, language, ecological niche, degree of integration into the national mainstream and the like) make it difficult to draw generalizations. However, a typology which follows the level of health services (Hospital Health Center, Medical Post, Health Post, and Health Promotor) will permit making reasonable generalizations about different types of rural poor, and suggest strategies to be applied to each.

2. Summary of Rural Social Structure Typology ***

The first type of rural community corresponds to the rural town with population of 2,000 and over where the Hospital Health Centers will

* Bolivia Health Sector Assessment. US Mission to Bolivia.

** William J. McEwen. Changing Rural Society. Oxford University Press. 1975

*** For additional detail, see Annex G.

function (level III). These communities are the most assimilated into the national mainstream. The rural town is generally a provincial administrative and market center. They are made up of multiple ethnic groups and are stratified into loosely-defined classes. They experience considerable social and geographical mobility. The rural town inhabitant often engages in multiple economic activities and is generally open to modern medical practices. However, the lack or inefficiency of modern medical services forces him to rely on traditional practitioners and cures.

The second type of communities are villages of 500 to 2000 inhabitants where Medical and Health Posts will function (level II). These communities are for the most part ex-hacienda villages and, as such, have experienced radical changes as a result of agrarian reforms. They constitute an intermediate point between the rural town and the more isolated small rural communities. The persistence of some traditional forms of social organization along with new ones such as peasant unions and cooperatives make these communities complex ones. In most of them the social and economic changes are beginning to generate a system of social stratification not present in traditional communities. A new class of peasant entrepreneurs controls increasing wealth and power and the labor of other peasants. Health practices and beliefs reflect the changes in all aspects of the life of these communities. As in the rural town, they rely on traditional and modern services for their health care. However, the lack of modern health services contributes greatly to the prevalence of traditional medical practice and beliefs.

The third type of community is the least assimilated into the national mainstream. They range from 150 to 500 inhabitants and are made up of dispersed clusters of households over a wide area (level I). For the most part these communities were free Indian Villages and as such have been minimally affected by agrarian reform. They have retained traditional forms of social organization and generally are made up of an homogeneous ethnic group. In these communities modern medical services are virtually nonexistent. It is at this level that the RHDS project seeks to introduce fundamental changes through the organization of the communities and the establishment of a health committee which will recruit and pay a health promotor who will provide extensive health services to the community.

3. Nature of Benefits to Target Group

The area in which this project will focus presently includes approximately 335,000 families residing in rural communities. At present it is estimated that only 15% of the rural population is

reached by the national health system. However, although no data exists, it is generally accepted that most peasants in communities with less than 500 inhabitants are not reached at the present time by any of the health services of the MSW/PH. The project is designed to reach approximately 651,000 persons in the rural areas of the three departments. Through the outreach teams and the active participation of rural communities through health committees, and other organizations, an estimated 200,000 persons will have access for the first time to rudimentary curative services, access to well equipped Hospital Health Centers, and, more importantly, preventive medicine. It is estimated that as much as 75% of all diseases seen in outpatient clinics of the MSW/PH are at least partially reducible through preventive health, dental, and environmental sanitation programs.

The primary benefits to the target group over the long run are improved health status, reduction of mortality and morbidity rates, and longer life expectancy.

The social benefits to each level of community are described more fully in Annex G and will only be summarized here. In level three communities, effective health care will greatly contribute to the social and economic life of the rural town. It will reduce costs of health services which now can only be obtained by traveling to urban centers for those who are able to afford the expenses. To those unable to afford travel to urban centers, the Hospital Health Center will provide a welcome alternative to existing practicantes, pharmacists, and curanderos who often prescribe drugs in order to sell them rather than cure their patients. All of these alternative services end up costing much more than services which the Hospital Health Center will provide through the proposed rural health delivery system.

In communities at level two, the organization of health committees and the support of the health promotor will increase community cohesion and participation which in most of this type of communities is needed for other development programs. Health has the advantage over other community concerns in that it benefits everyone. Women will play a critical role in these communities.

In communities at level one of the system, the RHDS Project will reinforce traditional forms of mutual aid and organization while introducing modern health services and practices. It will also help

integrate these communities into the national mainstream through its services, information and referral systems.

On a national level, the RHDS Project is an important step in closing the gap between the urban and rural sectors of Bolivian society. Most rural areas will enjoy for the first time modern medical services and an improved health status.

4. Role of Women

As described more fully in Annex G and Section II. B of this PP, the project contemplates a significant role for women at all levels of the proposed rural health delivery system, especially at the direct service delivery levels (levels I, II and III). The majority of health service personnel at each of these levels is female. Not only will the number of jobs for these personnel be increased through the implementation of the project, but the working conditions and efficiency of those presently on the job will be substantially improved. In addition, training will be provided to these personnel which will enable them to benefit intellectually and professionally and, in the case of the health promoter, to become an influential and necessary part of the community.

Following the successful example of the Montero Rural Health Project, it is expected that in most cases where community health committees are organized through this project, women will be the principal organizers and participants in these committees. These committees, and the women who take part in them, will become catalysts for other community activities and increasing the social cohesion of their communities.

In addition to these important roles, women will be primary beneficiaries of the proposed rural health delivery system since the project will have a primary focus on maternal and child care. Women in rural areas bear a large part of the burden of the extremely poor health profile of Bolivia, where infant mortality is between 147 to 250 per 1,000 and maternal mortality is 480/100,000. By improving rural health conditions in general, and maternal and child health in particular, the project will have a significant impact on the standard of living of the rural women within the target group.

C. Economic Analysis

1. Macroeconomic Overview

The present section is a brief summary of the main aspects of the World Bank Economic Memorandum on Bolivia and GOB planning and operating documents.

Bolivia experienced a high sustained rate of growth during the period between 1970 and 1977. The main determinants of this have been political stability, better management of public institutions and of the economy, and the increase in hydrocarbons and tin prices. These have led to greatly increased confidence in the future of the Bolivian economy and have been the main factors in explaining expanded investment and foreign capital inflows.

Bolivia's external debt outstanding and disbursed at the end of 1976 amounted to US\$ 1 billion. Service on external debt amounted to 18.8% of exports of goods and non-factor services net of investment income abroad. Average terms of the external debt have worsened as 46% of the newly contracted public debt over the years 1975 and 1976 has been lent by commercial banks.

A more detailed analysis of the economic conditions in 1977 shows that in this year, despite a drop in the real economic growth rate to 4.8% compared to more than 6% in 1976, the balance for the year can be considered favorable.

The primary reasons for the slower growth rate can be attributed to a 3.2% decline in agriculture production, and a 14.7% fall in hydrocarbon output. However, other sectors continued with high rates of growth which helped to balance out the declines in agriculture and petroleum output. For example, La Paz gasoline sales, electric and cement consumption were up 8, 7, and 22% respectively, while mineral production and exports rate rose by 30%, due mainly to rapidly rising tin prices up 28% over 1976. Government spending continued at a rapid pace with a 23% increase slated for investment. Private investment also maintained a rapid pace for most of the year, with \$ 108 million in new investment prospects registered with the government investment institute (INI).

On the negative side, a number of problems began to surface in the latter part of 1977, which created some concern for the course of the economy in 1978. The rate of inflation was estimated to have risen to 17%, compared to about 10-12% in the 1975-1976 period. A rising money supply (up 37% in 1976 and 21% in 1977) and bank credit

(up 41% and 31% respectively) coupled with growing public sector deficits, occasional supply scarcities and labor scarcities were the apparent major reasons for the increasing inflation.

There was also concern with the balance of payments and foreign debt service situation. While there was an overall balance of payment surplus of \$ 7 million in 1977, this was appreciably below the \$ 61 million surplus in 1976. Also the current account deficit rose by 66%, to \$ 168 million compared to \$ 101 million in 1976. Imports increased by 15%, outdistancing exports, which rose by 13%, despite a 44% decline in the value of petroleum exports. The increased exports were due to a 28% increase in average tin prices, which raised the value of tin exports by 43% to \$ 327 million (CIF), some 47% of total exports.

The national elections held in July 1978, added to earlier and unfounded fears of devaluation and stimulated short-term borrowing at the end of the year. This resulted in a slight increase in the Central Bank's year end net foreign exchange reserves to \$ 216 million, equivalent to more than three months imports.

These trends plus additional problems continued into early 1978 and have put pressure on the balance of payments which may force the GOB to take measures to maintain a higher level of foreign exchange reserves. If expected wage increases occur, they will add to government spending already budgeted to increase by 19% in 1978, and to the government deficit. Unfortunately, new petroleum finds, expected to increase petroleum production and exports in 1978, have been smaller and are coming on stream more slowly than expected. Consequently, overall production is likely to remain at about the same level as 1977 and petroleum exports could decline further.

Tin production has also declined allegedly the result of labor troubles associated with the miners' union. Tin output was down nearly 129% in the first quarter of 1978 compared to the same period in 1977. Although tin prices continued to rise through January and February 1978, the announcement in March of possible Congressional Authorization of tin sales by the U.S. General Services Administration (GSA) precipitated a moderate decline in tin prices. The prices began to increase again in late April and May, however, and given the shortage of tin production world-wide, average tin prices for 1978 are still expected to be somewhat higher than for 1977.

To deal with a growing balance of payments problem, the GOB announced an effort to reduce government spending by 20% and a program to reduce the increase in the money supply and credit is underway.

As for the long-term prospects for the Bolivian economy, it can be said that the country is likely to sustain an annual GDP growth in the 5-6% range, and perhaps reach the higher rates considered as targets both in the long-term and in the short-term operational plans.

The favorable expectations existing for the Bolivian economy have improved its access to the international capital market. However, if the expansion of the external debt of relatively short maturity exceeds the pace reached during 1975-1976, debt service obligations could increase to the point where even relatively minor delay in the hydrocarbons program could result in external liquidity problems by the late 1970s or early 1980s.

2. Estimated Impact of the Projected Health Services

In this section, the estimated impact that the projected health services will have on the income of the rural workers will be presented. Due to the lack of information on the possible influence of the projected health services on the mortality rates, only the impact of those services on the income of the workers through the changes in the number of working days lost will be presented.

In Table 1, the estimates available on the number of days lost due to disease, with and without medical services are presented. The comparison of the total number of days lost without medical services presented in Table 1 with the information presented in Table 2 gives some confidence on the reliability of the data. It is also useful to mention that in the Bolivia Health Sector Assessment (p.102), it is stated that agricultural workers lose 107 days out of 320 available due to deficient health. The days lost due to disease can be reduced with appropriate health services. This means that by introducing health services, working days can be gained.

The next step is to transform the estimates of number of working days gained with the projected health services into estimates of income gains. However, before presenting these estimates, it is useful to consider the possible impact of under- and unemployment on the utilization of the working days saved by the health project. Economists frequently assume that the economic impact of the reduction of working days lost is likely to be null because of the assumed prevailing conditions of under- and unemployment. However, it is argued,* first, that un- and under-employment in developing countries - particularly in the rural areas - are likely to be small, and second, that even if un- and under-employment were high, improvements of working capacity due to better health are likely to reduce them.

* Correa, Hector, Population, Health, Nutrition and Development, Lexington, Mass. Lexington Books, 1975.

Table 1

EFFECT OF HEALTH SERVICES ON NUMBER OF
WORKING DAYS LOST PER YEAR BY RURAL WORKERS

	Without Medical Services	With Medical Services
Total number of days lost per year	49.67	13.09
Number of working days lost per year (assuming 240 working days) (1)	32.66	8.61
Percentage number of working days lost	13.60	3.59

(1) The following procedure was used to obtain the number of working days lost:

- a) From unpublished data of Frerichs and Becht for the rural population of the Montero area in Bolivia, it is estimated that each person loses an average of 10.95 work days per year. 99.33% of the patients in this population receives some form of qualified medical attention (auxiliaries, nurses, doctors 70%).
- b) Lic. Guillén of MSW/PH conducted a Delphi survey of doctors and nurses in La Paz. The elaboration of the results of this survey showed that persons with medical attention would lose 17.84 days due to disease and without attention the loss would be 67.65 days.
- c) The figures in the Table 1 were obtained expanding the results in (a) with the information in (b).

Table 2

ESTIMATED NUMBER OF WORKING DAYS LOST IN USA AND
SEVERAL LATIN AMERICAN COUNTRIES

(Circa 1958)

	Total (a)	Working Days (b)	100 (b)/240
Argentina (1)	11	7	3
Brazil (1)	32	21	8
Chile (1)	56	37	15
Colombia (1)	56	37	15
Ecuador (1)	105	69	29
Guatemala (1)	59	39	16
Mexico (1)	42	28	12
Peru (1)	23	15	6
Venezuela (1)	74	49	20
Uruguay (1)	11	7	3
USA about 1958 (1)	9	6	

Source: (1) Correa, Hector

Population, Health, Nutrition, and
Development

Lexington Books, 1975, Lexington, Mass.

The reason why it is stated that un- and under-employment are low, despite official data giving the opposite impression, is that in developing countries in general, and in Bolivia in particular, there is no unemployment insurance. As a consequence of this, unemployed persons are not able to obtain the resources need to cover any of their basic needs. Literally, they would starve to death if they did not work and earn some income. Since this is not the case, it appears that a more reasonable explanation of the existing conditions is that workers in Bolivia are employed in activities with very low returns. It should be added that, as a consequence of the meager level of subsistence of the workers, it is likely that they also have a very low capacity to work. This means that they are likely to be working at the full capacity permitted by their deficient nutritional and health conditions. From the observations above, it follows that all the workers are employed and they are working at the

full capacity available to them. This means that there is a special form of full employment.

Whether the conditions above exist or not, the reduction of work-days lost due to disease is not likely to reduce employment and as a consequence eliminate the possible economic effects of a health program. It is self-evident that this is the case for completely or partially self-employed persons, as is the case for a large proportion of the rural population. However, this is also the case for hired workers. The reason for this is that in the case of hired workers, a large proportion of the losses are paid by the employers, since at least part of the wages of sick workers have to be paid. This means that the employers will benefit from the improved health conditions of the workers. Profits will increase, and this will increase, rather than decrease, the incentives for employing workers.

It should be added that the Bolivia Health Sector Assessment (p. 114) also states it is unlikely that the increased working capacity of the rural workers generated by better health conditions will reduce rural employment.

In addition to the information about the number of days saved with the health project, information on the income of rural workers is needed to evaluate the economic impact of the health project. These data are presented in Table 3. The figures in column (a) of this Table are derived from the agricultural GNP and the estimates of the number of workers in agriculture, and will be used to estimate rural income per family. The reason for this is that this is the only available time series data that makes it possible to compare rural incomes over different period and to forecast rural income for the period to be covered by the health project. However, it is useful to observe that these figures are likely to overestimate the income per rural family. The reason for this is that they include the income of large farm owners that are likely to be urban dwellers. A comparison of the figures in column (a) of Table 3 with selected figures in the other columns shows that the former are about 25 per cent larger than the latter. For this reason, in the analysis below, two figures for income per rural family will be used: those in column (a) of Table 3, and those equal to 75 per cent of these figures. Finally, to estimate the workers income, it was assumed that each family has 2.09 workers.*

* This figure was obtained as follows: From the Ministry of Planning, Plan Nacional 1976-1980, p. 301, it is obtained that 42.0% was the total participation rate in 1975. In page 297 of the same reference, it is shown that 5,633,800 was the total population for the same year. This implies a labor force of 2,366,200. In the same reference, p. 302, it is indicated that 61.6% of the total labor force work in agriculture and other rural areas activities, i.e., 1,457,600. Since the total rural population in 1975 was 3,909,900 (Plan, p. 294), it follows that the participation rate was .3728. Since the average family is 5.6 (Mission estimate), it follows that 2.09 persons for family are in the labor force.

Table 3

COMPARISON OF ESTIMATES OF RURAL INCOME PER FAMILY

(Values in 1977 US\$)

Year	From Agricultural GNP (a)	San Juan Colony (b)	Okinawa Colonies (b)		
1970	692.7	3905.40	- 70.3		
1971	866.3	4339.40	- 76.4	481.0 (c)	694.70(d)
1972	866.2	5302.06	2785.7	756.9 (e)	
1973	928.2	6843.10	6148.8		
1974	967.9	7686.20	10820.0	915.0 (d)	
1975	998.1			564.8 (g)	
1976	936.8			391.0 (h)	1343.00(i)

Notes:

(a) Agricultural GNP series from World Bank: Economic Memorandum for Bolivia. Table 2.2

Labor force in agriculture series elaborated from AID Data Package, Table 10. (These data are used as basic term of reference.) Ministerio de Planificación: Plan Nacional de Desarrollo Económico y Social, 1976-1980, Vol. 1, Cuadro 70, pp. 167; Cuadro 6, p. 302. World Bank: Economic Memorandum for Bolivia, Table 1-6.

(b) Zuvekas, C.: Rural Income Distribution in Bolivia, Table 7, p. 51. US Department of Agriculture, General Working Document No. 2, July 1977 (Mimeo).

(c) Zuvekas, C.: op. cit. Table 6, p. 45 (data for 10 colonies, north Santa Cruz).

(d) Riordan, J.T.: An Assessment of the Target Region for USAID/ Bolivia's Agricultural Sector Loan II, Table 5, p. 9, AID/ Washington, July 1977, Mimeo, (data for all Bolivia).

- (e) Unpublished information provided by Oficina de Planificación Sectorial del Ministerio de Asuntos Campesinos y Agropecuarios (All Bolivia).
- (f) Fernández de Córdova, M.U.: La Economía del Campesino Altiplánico en 1976, p. 217. Instituto de Investigaciones Socio-Económicas. Universidad Católica de Bolivia. 1977 (Mimeo).
- (g) Mission Data Package, Table 53 E.
- (h) Riordan, J.T.: op. cit. Table 6, p. 13 (Chuquisaca, Tarija, Potosí).
- (i) Fernández de Córdova, M.U.: op. cit., p. 216 (Figures seem to include value of seeds, fertilizers, and other agricultural inputs.)

In Table 4, the effect of the health services on the yearly income of the rural workers is presented. There it is indicated that the introduction of the projected services is likely to increase yearly income per worker by almost 12 per cent.

The incomes cited in Table 3 vary widely. Further, none of them seems to be a specific estimate of rural incomes for the project provinces of La Paz, Santa Cruz and Potosí. Such data are necessary to the analyses of (a) the economic feasibility of the project as a whole and (b) the affordability of the project to members of the target group.

A search of available statistics did not disclose data on rural incomes in all three provinces, although some data dealing with incomes in Potosí province are available. Per capita income in Potosí is substantially below the national average and also below those in La Paz and Santa Cruz; per capita rural income is also thought to be lower in Potosí than in La Paz and Santa Cruz provinces. As a logical consequence of this, if analysis shows that the project is feasible and affordable in Potosí, then it should also be feasible and affordable for the project area as a whole. The following analysis, then is seen as a "worst case" or "most conservative" analysis.

Riordan (op. cit., Table E-2) presents estimates for incomes for rural farm households in Potosí in 1976-77, with time to market being the basis for several sub-estimates. "Market" here is defined as a regional marketing center, which is almost always a Level 3 Community having a Hospital Health Center (as described in Annex G, Social Soundness Analysis) or an even larger city having better medical facilities. According to Riordan, mean net household income in Potosí was found to be as follows (in dollars):

<u>Time to Market</u>		<u>Income</u>
T	1	\$521
1	T 3	347
3	T 6	157
T	6	180
TOTAL		\$253

Table 4

EFFECT OF HEALTH SERVICES ON YEARLY INCOME OF RURAL WORKERS

(Values in 1977 US\$)

	Income Projections	
	a (2)	b(=.75a)(2)
(1) Yearly income for rural workers in 1983 (1)	653.00	489.80
(2) Daily income per rural worker in 1983 (for 240 - 32.66 = 207.34 working days)	3.15	2.36
(3) Yearly income per rural worker with health services (for 240 - 8.61 = 231.69 working days)	729.82	546.80
(4) Percentage increase of yearly income with health services	11.60	11.60

Sources:

- (1) Forecast of the 1976 income in Table 3 (only on a per worker basis) with rate of growth used for 1976-1980 in Ministry of Planning and Coordination: Plan Nacional de Desarrollo Económico, 1976- 1980, Cuadro 76, p. 181; and of the 1976 labor force in agriculture with observed rate of growth between 73 and 76 in AID Data Package, Table 10. Year 1983 is the end of project.
- (2) Column a is based on Column (a) of Table 3, and Column b is 75 per cent of a.

Since most of the beneficiaries of this project are likely to be within two hours of a hospital health center, and since they are about 28 percent of the total rural population of the province, by extrapolation of the above data we can calculate that their mean net household income is probably about \$475 per year. As there are, on the average, an estimated 2.09 workers per family, the comparable per capita figure would be \$227.

Table 4 assumed that increased work days would result in a proportional increase in income. While this assumption may be warranted, a more conservative method of calculating increases in income would be to assume that all work days gained as a result of the project would be spent as hired labor on other farms. This is more conservative because such labor is currently valued at \$1.45 per day (Riordan, op. cit., Table D-1) in Potosi province, some 40 to 55 percent lower than the figure used in Table 4. At the \$1.45 daily rate, income increases of \$73 per worker (or \$152 per family) can be expected as a result of the project, an increase of 15.4 percent.

Thus, even in this "worst case" analysis, the project will involve a significant impact on the incomes of the participating rural population.

Some more precise analysis can be made comparing the economic returns of the investments in the health project with other investments in physical capital in the economy. This type of information is presented in Table 5 where it is shown that investments in physical capital needed to bring about an increment of 12 per cent of the income of the rural workers to be benefited with the health project would amount to approximately 45 to 60 million dollars, while the physical investment in this project amounts to only 5.8 million dollars under loan.

To complete this section, it should be observed that numerous benefits of the health project have not been included - due to lack of data - in the previous analysis. It was already observed that the benefits of reduced mortality are not considered above. Also the benefits due to reduced morbidity of the school age population are not taken into consideration. Finally, the benefits brought by the increased employment for services in health are not included in the previous calculations. As a consequence of these observations, it can be stated that the estimates presented above reflect only a relatively small part of the total economic benefits of the health project.

Table 5

COMPARISON OF FIXED CAPITAL AND HEALTH INVESTMENT
NEEDED TO PRODUCE INCOME GROWTH ORIGINATED BY PROJECT

(Values in 1977 US\$)

	Income Estimates	
	<u>a</u>	<u>b</u>
(1) Increment of income per worker (US\$ from Table 4, rows (1)-(3))	76.82	56.00
(2) Estimated number of benefited workers, 651,000 x .3728	242,693.00	242,693.00
(3) Total income increment (1) x (2)	18,643,676.00	13,833,501.00
(4) Estimated investment in fixed capital needed to produce income increment in (3)	60,233,061.00	44,685,167.00
(5) Investment in physical capital in health project that will produce income increment in (3)	5,800,000.00	5,800,000.00
(6) Percentage $100 \times (5) \div (4)$	9.63	12.98

Sources:

Row (2) Total number of persons that will benefit from project: Mission estimate. Participation rate estimated from data in Ministerio de Planeamiento y Coordinación. Plan Nacional de Desarrollo Económico y Social, 1976 - 1980, Tomo I, pp. 294, 297, 301, 302.

Row (4) Estimated using average of 1968 to 1975 marginal capital/output ratio evaluated from Ministerio de Planeamiento y Coordinación. Plan Nacional de Desarrollo Económico y Social, 1976 - 1980, Tomo I, Cuadro 12, p. 78.

3. Analysis of the Rural Families Capacity to Support the Health System

According to the Mission estimates, the rural families in the target area will be expected to pay \$35.90 per year for consultations, drugs, hospitalizations, etc. The objective of this section is to study whether such payment is within the economic capacities of those families.

In Table 6, it can be seen that the cost per family of this project falls well within their capacity to pay. Based on Table 4 income projections and the historical average of health expenditures as a percent of income, the project would actually lead to a decrease in health expenditures for the average rural family. Even in the "worst case" situation of Potosi, the increase in health expenditures would be only 31.7 percent of the increase in income.

TABLE 6

Affordability Analysis

	<u>Entire Project Area</u>	<u>Potosi "Worst Case"</u>
<u>a. Rural Household Income</u>	\$1,364.80	
(1) Without Project	\$1,364.80	\$475.00
(2) With Project	1,525.32	548.00
(3) Increase	160.52	73.00
<u>b. Health Expenditures ^{1/}</u>		
(1) Without Project	36.58	12.73
(2) With Project	35.90	35.90
(3) Increase	-0.68	23.17
<u>c. % Change in Income</u>	11.6%	15.4%
<u>d. % Change in Health</u>	1.8%	182.0%
<u>e. Change in Health Expenditures as Percent of Change in Income</u>	NA ^{2/}	31.7%

^{1/} Unpublished information provided by the Sectoral Planning Office, Ministry of Campesino Affairs and Agriculture, shows that in 1972 rural families used 2.68 percent of their income for health expenditures.

^{2/} Not Applicable. Project results in absolute decrease in health expenditures.

D. Administrative Feasibility

1. MSW/PH Organizational Structure

The MSW/PH is the primary agency responsible for GOB-provided health services in Bolivia and will be the implementing agency for this project. At the national level, the MSW/PH is divided into two operational units -- social welfare and public health. Each is headed by a Sub-Secretary. The Administration Unit is a third MSW/PH unit that is responsible to the Minister. A more detailed description of the organizational structure of the MSW/PH is included in Annex H.

2. Institutional Capacity of the MSW/PH to Carry-out the Project

a. National Level

A review of the administrative capabilities of the MSW/PH at the national level indicates that a number of important administrative barriers must be overcome if the RHDS project is to result in an efficient and effective rural health system. These barriers include lack of adequately trained personnel, lack of adequate facilities and equipment and limited budget resources. Administrative procedures and organization in procurement, planning and general services also need to be improved. In addition, the Ministry has traditionally had a largely urban orientation; most personnel and resources have been directed towards urban hospitals and delivery of urban health services. Its focus has also been almost entirely on curative, rather than preventive, services.

The administrative deficiencies are a primary focus of the project at this level and, therefore, should pose no serious implementation problems. Funding will be available through the project for the equipment, training and technical assistance necessary for the effective implementation of the expanded rural health delivery system proposed. In fact, care has been taken in the design of the project's implementation schedule to concentrate on these administrative improvements at the initial stages of implementation so that the necessary base will exist to support the rural health system when expanded services begin to be provided in rural areas.

Of greater concern is the traditional urban/curative orientation of the Ministry. However, the MSW/PH has recently been increasingly aware of the need to expand its services in rural areas. Throughout the design of this project, as well as throughout the planning and implementation phases of the Montero Pilot Project, the MSW/PH has demonstrated both a commitment to and capability for implementation of rural health delivery services projects which focus on preventive as well as curative services. Indicative of this commitment have been

the several personal visits of the Minister to the Montero Project. The Montero Project has been able to introduce major reforms into the MSW/PH rural health system in a particular geographic area. The willingness of both the national and regional coordinators to assume the professional responsibility for implementing such changes can reasonably be projected to the broader target area of the RHDS project (Santa Cruz, Potosí, and La Paz). The MSW/PH has supported the Montero Project's introduction of several new types of para-medical personnel, including the Health Promoter, Rural Nurse Auxiliary II, and Social Work Auxiliary. The construction and logistics activities, as well as the administrative activities, that have been implemented in the Montero Project have also paved the way for extension of such activities as proposed in the RHDS Project.

b. Departmental (Unidad Sanitaria) Level

At present, the three departments to be covered by this project are served by four Unidades Sanitarias: one each in La Paz and Santa Cruz and two in Potosí. Of the two Unidades Sanitarias in Potosí (Potosí and Tupiza), the primary focus through the project will be the one located in Potosí; Tupiza will continue as one of the administrative Hospital Health Center zones of the rural health system of the Potosí Unidad Sanitaria.

Summary analyses of the three Unidades Sanitarias are included in Annex H . Although the strengths and weaknesses of these Unidades Sanitarias vary from department to department, many of the same administrative deficiencies noted in the national level analysis appear at this level as well, often in greater magnitude. These include lack of facilities, vehicles and equipment, management problems, insufficiently trained personnel, and past emphasis on urban services.

The RHDS project proposes to address these constraints in these three departments, as well as in the other Unidades Sanitarias in the country through the provision of equipment, training and technical assistance. Again, the focus of the early implementation stages of the project will be on making these improvements to adequately support the proposed rural health delivery system in each of the three project areas.

c. Coordination Mechanisms

i. Project Team

A critical aspect of the design of the RHDS project is the integration of those responsible for project implementation within the MSW/PH into the main Ministry organizational structure. Rather than establishing a separate unit within the Ministry to implement the expanded and improved rural health system, the RHDS Project Team will

be composed of regular members of Ministry units under the direction of the Sub-Secretary for Public Health. This organizational placement not only places the Project Team within the regular part of the Ministry responsible for health services, but also puts the Team high enough in the policy-making structure to facilitate the decisions and support needed for the implementation of the project. Although this may increase project implementation difficulties in the short-term due to the existing attitudes of MSW/PH technicians and policy-makers, in the long-run this approach will result in the institutionalization of the rural health services approach proposed by the project and a longer-lasting impact for the project. This arrangement will also facilitate coordination among the various MSW/PH and other offices at all levels of the system that will necessarily be involved in project implementation.

ii. National Level

At the national level, a RHDS Project Executive Committee will be established to assume responsibility for overall project management, including working-level coordination with counterparts in other Ministries and private groups at the national level. This Project Executive Committee will consist of the Sub-Secretary of Public Health, the Chief of the National Directorate of Public Health, Chief of Planning, Chief of Administration, and the Project Coordinator. There will also be an Inter-Ministerial Committee that includes representatives of the Ministry of Planning and the Ministry of Finance, as well as other appropriate ministries, in addition to representatives of the MSW/PH.

iii. Departmental Level (Unidad Sanitaria)

At the departmental level, a Departmental RHDS Project Executive Committee will be established to assume responsibility for project management in a particular Department. This Committee will also have the function of maintaining working-level coordination with counterparts in other agencies at the Departmental level. This Committee will be composed of the Head of the Unidad Sanitaria, the various Division Chiefs of the Unidad Sanitaria, the President of the Departmental Development Corporation, and other departmental leaders.

iv. Technical Inputs

The technical advisors at each level will work closely with the committee chairpersons, their direct counterparts as well as the committee membership. Although they do not have a formal decision-making role, the technical advisors do provide input both individually and at scheduled meetings. The national and departmental Project Coordinators will be responsible for drawing-up meeting agendas and distributing minutes to all Committee members and other Project Coordinators. These minutes will include topics discussed, issues raised,

decisions requiring actions and issues requiring further information.

Regularly scheduled seminars will serve as a coordinating mechanism by bringing together people working at the three project administrative levels (levels III, IV and V), administrative persons working in related sectors, and from rural health experts from other countries. Through formal presentations and discussions of experiences and objectives, these seminars will serve to orient and motivate project personnel, as well as generate support from and motivate other persons to act positively on project concepts. Workshops will serve a more direct training function and be equally important in Project coordination.

3. Contracting and Procurement

The project contemplates MSW/PH contracting for technical services, engineering services and construction, and commodity procurement. Through both the Montero Project and the AID-financed Rural Sanitation project, the Ministry will have gained much experience on these contracting and procurement activities and familiarity with the respective AID procedures. Therefore, no problem is foreseen in this area.

PART IV - FINANCIAL ANALYSIS

The estimated cost of activities financed under this program is \$20.6 million. The AID loan will provide \$10 million and the grant funds \$3.3 million. The target communities and the GOB will fund an estimated \$7.3 million composed of promoters' salaries and new salary requirements, travel and per diem expenses, maintenance and vehicle operating expenses, and office operating expenses, respectively.

The costs of constructing new health and medical posts will be paid for from the Village Development Program; therefore, these costs are not included in this project. There will also be a PL 480 Title III contribution during the life of the project-estimated value \$9 million for a national communicable disease control program, and a Title II contribution in foodstuffs under the regular program.

A. Burden on Beneficiaries

The beneficiaries of the program will be paying for the cost of services and drugs received. These costs and the resulting impact on the beneficiaries are discussed in detail in the economic analysis.

B. Recurrent Budget Analysis

As shown in the following table the GOB contribution to the project from the MSW/PH budget ranges from .27% to 4.31% of the MSW/PH budget in 1979 and 1983 respectively. When the program is fully operational in year five, it is estimated that new salaries and travel expenses will constitute about 90% of the annual recurrent expenditures needed to support the program. The purpose of this table is to show that only a small budget increase is needed to cover the recurrent cost requirements of the program. Thus there should be no undue hardship on the MSW/PH, and by extension the GOB itself.

Table 7

RELATION OF GOB CONTRIBUTION TO TOTAL MSW/PH BUDGET

(In US\$ 000) (1)

<u>Y e a r</u>	<u>Estimate MSW/PH Budget (2)</u>	<u>Annual GOB Contribution to Project (3)</u>	<u>Percent MSW/PH Budget</u>
1975	26,834	-	
1976	31,629	-	
1977	38,304	-	
1978	44,038	-	
1979	50,243	136	.27%
1980	62,300	294	.47%
1981	68,329	1,181	1.73%
1982	69,128	2,043	2.96%
1983	69,936	3,018	4.31%
1984	70,754	3,320	4.69%
1985	71,581	3,652	5.10%
1986	72,418	4,017	5.55%

(1) US\$ 1.00 = \$b 20.38

(2) 1975-1977 actual expenditures. 1978-1982 MSW/PH's projections. 1983-1986 average annual increase of 1.169% based on past years trend. Includes pensions to Chaco War veterans and widows; pensions and donations to civil servants, etc. under the social welfare programs and representing an average of 46% of total annual MSW/PH expenditures.

(3) 1984-1986 annual increase of 10% estimated, which is considered reasonable given GOB plans to expand rural health services.

Table 8

GOB REQUIREMENTS (RECURRENT COSTS)
(\$ 000)

	Annual Requirements 1/ New Travel & Total Salaries Perdiem 2/			Y e a r s					Total
	1	2	3	4	5	6			
<u>Personnel & Travel Expenses</u>									
<u>Service Level</u>	1.400	490	1.890			525	1.105	1.890	3.510
<u>Department Level</u>	147	20	167		42	84	167	167	460
<u>Central Level</u>	<u>261</u>	<u>55</u>	<u>316</u>	<u>126</u>	<u>195</u>	<u>284</u>	<u>316</u>	<u>316</u>	<u>1.247</u>
Subtotal	1.808	565	2.373	126	237	893	1.588	2.373	5.217
1/ At full operational level									
2/ For present and new personnel									
<u>Office Operating Expenses</u>									
		45		10	20	30	45	45	150
<u>Maintenance & Vehicle Operating Expenses</u>									
- Vehicles (Oper.exp.& repairs)		110			30	75	100	110	315
- Medical equipment (repairs)		30			5	15	20	30	70
- Buildings (repairs)		30						30	30
- Miscellaneous (repairs)		10			2	3	5	10	20
Subtotal				0	37	93	125	180	435
Totals				136	294	1.016	1.758	2.598	5.802
				===	===	=====	=====	=====	870 3/
3/ (15% inf & cont.)									6.672
									=====

Table 9

SUMMARY COST ESTIMATE AND FINANCIAL PLAN

(In US\$ 000)

	AID				B O L I V I A		
	Grant FX	FX	Loan LC	Total	Total	Commun- ities	GOB
Technical Assistance	3,180	240		240	3,270		
Rotating Drug Fund		1,400		1,400	1,400		
Human Resources and Training			980	980	980		
Information and Evaluation			480	480	480		
Construction			3,420	3,420	3,420		
Equipment		2,180	200	2,380	2,380		
Personnel and Travel						600*	5,215
Maintenance							435
Miscellaneous							150
Sub-Total	3,180	3,820	5,080	8,900	11,930	600	5,803
Inflation and Contingency	120			1,100	1,370		900
TOTAL	3,300	3,820	5,080	10,000	13,300	600	6,700

Rounded from details in following tables.

* Promoter salaries

C. Financial Plan

1. Aid Grant

Technical assistance (\$3.3 million including contingency of \$270,000): Approximately 33 work years of long-term technical assistance will be funded through grant monies.

2. Loan

a. Technical Assistance (\$240,000): Approximately 40 work months of short-term technical assistance will be funded through loan funds. (Note: In both cases (long- and short-term TA) the cost per person includes salary, overhead, international travel, per diem or housing allowance and other miscellaneous allowances and expenses).

b. Rotating Drug Fund (\$1.4 million): Drugs and expendable medical supplies will be purchased and provided to the Hospital Health Centers, Medical and Health Posts, and Promoters.

c. Training (\$980,000): These funds will pay for the local cost of training seminars and workshops at the service, departmental and central levels and include the cost of travel and per diem for GOB personnel and training materials and supplies. Funds are also provided for US or 3rd country long- and short-term training.

d. Construction (\$3.42 million): These funds will provide for new construction or remodeling of facilities as described in the detailed engineering cost estimates for construction (see Annex I).

e. Equipment (\$2.38 million): Funds will be provided to purchase vehicles, medical equipment, audio-visual equipment, 2 well-drilling rigs, and office equipment as described in the detailed equipment lists.

f. Information/Evaluation (\$480,000): Funds will be provided for special studies to evaluate the impact of this program plus to support the rural health information system to be established.

g. Inflation/Contingency (\$1.1 million): Funds to provide for unforeseen expenses and price increases over the life of the project.

3. GOB

a. Personnel and travel expenses (\$5.217 million): These costs include salary costs for new personnel to be employed under the project at the service, departmental and central levels, and travel and per diem expenses for both present and new personnel to be working

under the project.

b. Office operating expenses (\$150,000): These costs are estimates of the increased expenses to be incurred as new personnel are employed and include such items as utilities and office supplies.

c. Maintenance and vehicle operating expenses (\$435,000): These are new costs for vehicle operating and maintenance expenses as the Ministry's fleet of vehicles and motorcycles is increased; as additional medical equipment is purchased and routine maintenance repairs is needed; and as new buildings are constructed and routine maintenance is needed.

d. Inflation/Contingency (\$870,000): An inflation/contingency factor is included to cover unforeseen expenses and price increases over the life of the project.

Table 10
AID CONTRIBUTION
 (US\$ 000)

	SOURCE	PROJECT YEAR <u>1/</u>					LOAN TOTAL	GRANT TOTAL
		1	2	3	4	5		
Technical Assistance	(Loan)	60	30	150			240	
Technical Assistance <u>2/</u>	(Grant)	-	530	930	1,020	350		3,230
Rotating Drug Fund	(Loan)	-	350	700	350	-	1,400	
Training	(Loan)	250	400	130	100	100	980	
Construction	(Loan)	80	1,000	1,600	740	-	3,420	
Equipment	(Loan)	180	1,000	1,000	200	-	2,380	
Information and Evaluation	(Loan)	<u>30</u>	<u>230</u>	<u>-</u>	<u>220</u>	<u>-</u>	<u>480</u>	
Sub-Total		600	3,540	4,510	2,630	850	8,900	3,230
Inflation/Contingency							<u>1,100</u>	<u>70</u>
TOTAL							<u>10,000</u>	<u>3,300</u>

1/ Project years run from October to September of each calendar year; i.e. Project Year 1 is from October 1978 to September 1979 inclusive.

2/ Based on the forecasted disbursements of grant funds for long-term TA, the Mission would like to obligate \$800,000 in grant funds during late FY 1979.

Table 12

TECHNICAL ASSISTANCE
DISBURSEMENT SCHEDULE
(US\$ 000)

	Fiscal Year ^{1/}						TOTAL
	1978	1979	1980	1981	1982	1983	
1. Long-Term Grant							
a. Team Leader - 12/79 - 9/83, 45 w/m, \$100,000 pa			85	100	100	90	375
b. Public Health Administrator Advisor 12/79 - 9/85, 45 w/m, \$ 100,000 pa			85	100	100	90	375
c. Human Resources Specialist 12/79 - 12/82, 36 w/m, \$ 100,000 pa			85	100	100	15	300
d. Information and Evaluation Specialist 3/80 - 3/83, 36 w/m, \$ 90,000 pa			50	90	90	40	270
e. Supply System Specialist 12/79 - 12/82 36 w/m, \$ 90,000 pa			75	90	90	15	270
f. Public Health Advisors (3) 12/79-9/83 58 w/m, 1/81 - 9/83, 64 w/m, \$ 270,000 pa			75	225	270	250	820
g. Public Health Administrators (3) 12/79-9/83 58 w/m, 1/81 - 9/83, 64 w/m, \$ 270,000 pa			75	225	270	250	820
Sub-Total	0	0	530	930	1,020	750	3,230
Inflation/Contingency							.70
Total Long Term							<u>3,300</u>
2. Short-Term Specialists Loan							
a. Procurement		30					
b. Construction		30					
c. Community Organization			6	30			
d. Medical Equipment Maintenance			6	30			
e. Special Studies Investigator			6	30			
f. Health Facilities Planner			6	30			
g. Vehicle Maintenance			6	30			
Total Short Term		60	30	150			<u>240</u>

^{1/} Fiscal years coincide with Project Years.

COST ESTIMATES

EQUIPMENT

	Unit Cost (US\$)	Total Number	Total Cost (US\$)
<u>Vehicles</u>			
Four wheel drive (small)	8,000	12	96,000
Four wheel drive (large - for ambulance)	10,000	51	510,000
5-7 ton trucks	17,500	2	35,000
3 ton trucks	10,600	3	31,800
3/4 ton trucks	8,000	16	128,000
Trail bikes	750	112	84,000
Bicycles	105	170	<u>17,850</u>
Total			902,650
Rounded			903,000
<u>Audio-Visual Equipment</u>			25,000
<u>Well Drilling Rigs</u>	115,000	2	230,000
Sub-Total			1,158,000
<u>Equipment for new and renovated buildings (Per Annex I)</u>			<u>1,222,000</u>
Total Equipment			<u>2,380,000</u>

PART V - IMPLEMENTATION PLAN

A. Schedule of Major Events

The following is a schedule of major events throughout the life of the project:

Calendar Year 1978

- | | | |
|-----------------------------|-----------|------|
| 1. Loan Submission to AID/W | July | 1978 |
| 2. AID/W approval | August | 1978 |
| 3. Project Agreement signed | September | 1978 |

Calendar Year 1979

- | | | |
|---|----------|------|
| 4. CP's Meet | January | 1979 |
| 5. ST/TA for Procurement and Construction Arrive | March | 1979 |
| 6. Construction Design IFB's and T.A. RFP's Issued | May | 1979 |
| 7. MSW/PH's National Rural Health Project Team Designated | June | 1979 |
| 8. Issue Contracts on Construction Design | July | 1979 |
| 9. Procurement Begun - IFB's Issued | July | 1979 |
| 10. First Evaluation | August | 1979 |
| 11. Issue IFB's for Construction | August | 1979 |
| 12. Technical Assistance Team Arrives (Team Leader, P.H. Human Resources Logistics System and Santa Cruz Departmental T.A. Advisors Arrive) | December | 1979 |
| 13. Definition of Training Curriculum and Program Norms | December | 1979 |
| 14. Procurement Contracts Awarded | December | 1979 |

Calendar Year 1980

- | | | |
|--|-----------|------|
| 15. Community Services Expansion Begun in Montero Sub-Departmental Area | January | 1980 |
| 16. Award Construction Contracts | February | 1980 |
| 17. Technical Assistance Advisors Arrive (I & E Specialist) | March | 1980 |
| 18. Construction Begins | April | 1980 |
| 19. MSW/PH's Three Departmental Rural Health Project Teams Designated - Initiate Orientation | June | 1980 |
| 20. First Supply Shipment Arrives | July | 1980 |
| 21. Second Evaluation | August | 1980 |
| 22. ST/TA Arrive (Comm.Organ.; Equipment Maintenance; Special Studies; Health Facilities Planner; Vehicle Maintenance) | September | 1980 |

Calendar Year 1981

- | | | |
|---|----------|------|
| 23. Departmental Technical Assistance Advisors Arrive (2 physicians; 2 administrators) Potosi and La Paz | January | 1981 |
| 24. Preliminary Program Community Site Study Initiated in 3 Sub-Departmental Areas (Samaipata; Pucarani; Direct Potosi) | February | 1981 |

- | | | |
|--|--------|------|
| 25. Initiate Training/Orientation of MSW/PH Sub-Departmental Program Personnel | | |
| 26. Initiate Services in the 4 Sub-Departmental Areas | May | 1981 |
| 27. Third Evaluation | June | 1981 |
| | August | 1981 |

Calendar Year 1982

- | | | |
|--|---------|------|
| 28. Initiate Services in Rural Communities | January | 1982 |
| 29. Initiate Services in 3 Sub-Departmental Areas (Charagua, Tupiza, Coroico) | January | 1982 |
| 30. Initiate Services in 4 Sub-Departmental Areas (Uyuni, Luribay, Direct La Paz, Direct Santa Cruz) | June | 1982 |
| 31. Fourth Evaluation | July | 1982 |

Calendar Year 1983

- | | | |
|--|---------|------|
| 32. Initiate Services in 4 Sub-Departmental Areas (Corocoro, Colquechaca, San Ignacio, Roboré) | January | 1983 |
| 33. Final Evaluation | July | 1983 |

B. Procurement and Disbursement Procedures

1. Procurement

Equipment and material procured with loan funds will have as their source and origin the countries included in AID Geographic Code 941 plus Bolivia, or, for those materials purchased within the limits applicable to the shelf procurement regulations described in AID Handbook 11, from countries included in Code 935. However, a source/origin waiver is requested in this document from code 000 to code 899 (free world) for the purchase of motor-cycles with loan funds, since trailbike type motorcycles are not available of U.S. origin and are considerably more expensive from U.S. sources. All applicable AID procurement regulations and procedures will be followed.

Technical assistance will be procured through RFP competitive bidding in the U.S. A single host-country contract will cover both short-term and long-term technical assistance. The long-term technical assistance will be grantfunded and restricted to U.S. origin. The short-term consultants will be loan funded and restricted to Code 941 origin.

Construction services will be loan funded and will be contracted locally by the MSW/PH through competitive bidding. Source and origin will be restricted to Code 941 countries. MSW/PH procedures will be followed and AID approvals will be required to ensure compliance with AID regulations.

2. Disbursements

No deviation from AID established procedures are anticipated for this project. Loan funded purchases of materials and equipment and short-term technical assistance from the United States or other authorized countries and grant-funded long-term technical assistance will be paid through standard letter of commitment - letter of credit procedures. Disbursements for local currency costs will be made from a U.S. Government owned RDO account held in the Central Bank of Bolivia.

C. Contracting Procedures and Schedule

A RFP for the technical assistance to be provided under this project will be completed and published by April, 1979. It will include a total of 297 work-months of services from eleven technicians including: a team leader, public health administrator, planning specialist, human resource specialist, supply specialist, three public health advisors, and three public health administration advisors. The team leader and public health administrator should arrive in late 1979 and the team should be completed in 1983.

Construction services will be contracted by the MSW/PH through competitive bidding. The number and nature of construction sub-projects will necessitate the use of construction and design technical assistance which is contemplated for mid-1979. IFB's for construction could then be issued in late 1979 with construction beginning in early 1980.

D. Project Approval Procedures

1. On completion of the RHDS Project Paper it will be reviewed by the Mission, amended, if necessary, and forwarded to AID/W for review in July 1978.

2. AID/W review and approval process will require approximately one month.

3. The Development Resources Office of AID/Bolivia will prepare a Project Agreement and obtain Mission clearances in August, 1978. The Project Agreement will be signed by the appropriate officials of the Ministry of Public Health and the Ministry of Finance in September, 1978. In the absence of any immediate action disapproving the Agreement by the GOB legislature, this will constitute the final approval.

E. USAID Monitoring Requirements

The project will be managed by a designated Project Manager in the Health and Humanitarian Assistance Division of the USAID/Bolivia Mission. The Project Manager will be responsible for monitoring the progress of inputs and activities and will work closely with project personnel in

the GOB Ministry of Social Welfare and Public Health to help solve any problems which arise; assure timely implementation of the project; and assure compliance with the terms and conditions of the Project Agreement.

A Mission Project Committee composed of the Project Manager and representatives of other Mission offices will review the status of the project monthly, identify potential problems in implementation, and determine appropriate solutions. The Project Committee will prepare a monthly project status report which will indicate progress and problems developing in the project.

The Development Resources Office will be responsible for drafting the provisions of the AID Loan Agreement and Implementation Letters and will monitor the project through the monthly project status report.

The Mission Office of the Controller will review all disbursement requests for conformity with AID regulations and will maintain financial records on the project.

PART VI - EVALUATION PLAN

The Rural Health Delivery Systems Project will be evaluated five times over the course of the five year life of the project. Four of the evaluations will be done by AID/Bolivia and MSW/PH personnel as directed by the Project Committee. An in-depth evaluation by outside consultants will be done in mid-1981 after the technical assistance team has been in-place for about one year. By this time project inputs will have arrived in significant quantities and progress towards achieving outputs can be expected in many areas. If any reprogramming of the project is necessary it should become possible by this time.

The initial evaluation will be done in August, 1979, approximately one year after project approval. The focus of this evaluation to be done by USAID/Bolivia staff will be on progress in obtaining project inputs and planning and actions by GOB and AID to facilitate timely implementation of the project. The evaluation should pin point delays and deficiencies which may hinder achievement of output targets.

The second project evaluation also to be done by GOB and local AID staff will be in August, 1980. By this time the first members of the technical assistance team should have arrived; some construction activities should have been started; commodities should have arrived; and the GOB should have progressed well on organizing, recruiting and training personnel. The focus of this evaluation will be on the adequacy of planned inputs to effect project output and purpose targets. Adequacy of the training component will be considered as a major question.

The in-depth project evaluation will be conducted in August, 1981 by outside consultants. Overall development of the project to meet the planned schedule will be considered. Health delivery system development will be assessed as to how well institutionalized the system is. The evaluation will determine how well supply and maintenance systems are functioning; how frequently and effectively the promotor and Auxiliary's I are supervised by higher level personnel; how effectively services are reaching the target rural population and to what extent preventive health practices are being adopted; how well the Community Health Committees are functioning; and how relevant training activities are to the delivery of rural services. This evaluation will provide the basis for a decision on planning or programming a new loan project for the expansion of the rural health delivery system to other areas of Bolivia.

The fourth evaluation is to be conducted by GOB and Mission personnel in mid-1982. The purpose of this evaluation will be to identify project components that are behind schedule and require action in order to be completed by the end of the project. A secondary focus will be on how well the project data/information gathering system is functioning and whether available statistics indicate improved health status in the project areas.

The final project evaluation will be held in mid-1983. This is planned as a routine Mission conducted evaluation to review how well the health delivery system is functioning in accordance with the system plan and to determine whether needed services are reaching the rural population.

The RHDS project incorporates a system for gathering and analyzing health statistics through biostatisticians technicians and auxiliaries located at the departmental, Hospital Health Center and rural health/medical post levels incorporated into a national information system. Health statistics compiled by this system can be used to compare end-of-project health status of the target group with baseline statistics from a pre-project study.

PART VII. CONDITIONS, COVENANTS, AND NEGOTIATION STATUS

A. Conditions Precedent to Disbursement

1. Prior to the first disbursement or to the issuance of documents pursuant to which disbursements will be made, the Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a. An opinion of the Attorney General of Bolivia or of other counsel acceptable to A.I.D. to the effect that the Project Agreement has been duly authorized and/or ratified by and executed on behalf of Bolivia and that it constitutes a valid and **legally binding obligation of Bolivia in accordance** with all of its terms; and
- b. A statement of the name of the person (s) authorized to act as Bolivia's representative under the Project Agreement and specimen signatures of such persons, duly certified as to their authenticity.

2. Prior to disbursement or issuance of documents pursuant to which disbursements will be made for other than technical assistance activities, the Borrower shall, except as AID may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID :

- a. A technical assistance plan which details the technical assistance to be financed by the Project, and specifies professional requirements, workscopes and timing of the arrival of the technicians to be funded under the project;
- b. A Financial Plan for the Project which details Bolivia's contribution during the life of the Project, which shall provide for staffing and budgeting increases for the Ministry

of Social Welfare and Public Health sufficient to meet its commitments under the Project;

- c. A detailed implementation and evaluation plan for the Project, which shall include a training plan for the major training activities to be carried out under the Project;
- d. A Service Delivery Plan which details the rural health service delivery system components, functions of each service level and personnel required to fulfill these functions;
- e. A plan for the maintenance of vehicles and equipment to be procured with Project funds;
- f. Evidence of establishing and naming members of a national drug procurement committee in the Ministry of Social Welfare and Public Health which will have responsibility for developing procurement plans, standards, policies and operational guidelines for the procurement, warehousing, distribution, financing and information components of the rural health supply system.

3. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documents under the Project Agreement, to finance any individual construction subproject, Bolivia shall furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a. Evidence of clear title to the land upon which construction is to take place;
- b. Final plans and specifications, bid documents, bid awards and contracts for construction for the individual subprojects; and
- c. A maintenance plan for the facilities to be constructed.

4. Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documentation under the project agreement, to finance procurement of medicines and medical supplies, Bolivia shall furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a. A plan for the procurement, receipt, storage and distribution to final user of medicines and medical supplies; and
- b. Evidence of the implementation of the plan.

B. Special Covenants

Except as A.I.D. may otherwise agree in writing, the Government of Bolivia will covenant:

1. To utilize all equipment and materials obtained with Loan funds only for the purposes of the Project during the life of the Project, and for similar purposes thereafter;

2. To provide budgetary support to the Ministry of Social Welfare and Public Health which is adequate to continue to operate and maintain the Rural Health Delivery System established under the Project.

3. To conduct joint USAID/GOB annual reviews of the progress of the Project, and that after approximately two years of Project implementation to hold a review to measure Project progress against implementation targets established in the Implementation Plan in order to determine whether Project Funds (including those under the Loan and/or Grant) remaining uncommitted or undisbursed at that time could reasonably be expected to be utilized within the remainder of the disbursement period

C. Negotiating Status

The project has been reviewed with key decisionmakers and technical level personnel of the Ministry of Social Welfare and Public Health, of the Ministry of Planning and Coordination and of the Ministry of Finance. In addition, ten working commissions composed of technical personnel from these three Ministries provided initial project design documents which have been incorporated into this project paper. Given this prior collaboration and the GOB's express interest in improving rural health services, no problems are anticipated in signing the Project Agreement.

RURAL HEALTH
DELIVERY SYSTEM

PROJECT PAPER

ANNEXES

USAID/Bolivia



La Paz, julio 12 de 1978

Señor

Daniel A. Chaij
Director, a.i.
USAID/Bolivia
Presente

Señor Director:

Ref.: Solicitud de Ayuda Financiera Externa de A.I.D.
para la Expansión de Servicios de Salud al Area
rural.

El Gobierno de Bolivia a través del Ministerio de Previsión Social y Salud Pública (MSP/S) ha elaborado un proyecto para la expansión de servicios de salud a las zonas rurales del país. Se anticipa que este proyecto tendrá un impacto significativo en el nivel de salud de las comunidades rurales del país y más aún, el programa ayudará a desarrollar una capacidad institucional que permitirá al Ministerio de Previsión Social y Salud Pública ampliar en forma significativa sus actividades de salud rural en los años siguientes a la conclusión del proyecto propuesto. Además, este programa centrará las bases en cuanto a la prestación de servicios básicos de salud y organización comunitaria que el Gobierno llevará a cabo bajo el Seguro Social Campesino.

El programa a financiarse tendría dos objetivos principales:

PRIMERO: Mejorar en todo el territorio nacional la adecuación del sistema actual de prestación de servicios institucionales de salud a las necesidades sanitarias del sector rural, reforzando los establecimientos en los aspectos de recursos humanos, equipamiento, administración, infraestructura, transportes y mantenimiento;

SEGUNDO: Implantar el sistema de salud rural, en todo el país, para lograr un mejoramiento significativo en el nivel de salud.

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Que incluirá todos los aspectos antes mencionados y además introducirá servicios básicos a nivel de las comunidades rurales desarrollando para ello una amplia participación de la comunidad.

El proyecto permitirá ejecutar, las siguientes actividades:

NIVEL NACIONAL: Adecuación de los sistemas técnicos administrativos para la prestación de Servicios de Salud en áreas rurales, en cuanto a:

Construcciones (almacenes centrales), información y evaluación, suministros, capacitación de recursos humanos, y supervisión.

NIVEL REGIONAL: Adecuación de los sistemas regionales técnicos y administrativos para la prestación de Servicios de Salud en áreas rurales, en cuanto a:

Construcciones (almacenes regionales), información y evaluación, suministros, capacitación de recursos humanos, supervisión, transportes, y mantenimiento.

NIVEL RURAL: Adecuación de los Centros de Salud Hospital, de los Puestos Médicos y Puestos Sanitarios, en cuanto a:

Construcciones y refacciones, equipamiento, transportes, mantenimiento, suministros, capacitación de recursos humanos, información y evaluación, supervisión, prestación de servicios básicos de salud a las comunidades rurales con una efectiva participación de éstas.

Para respaldar el programa, el Gobierno de Bolivia contribuirá en la siguiente forma:

1. Suministrará fondos adicionales al Ministerio de Previsión Social y Salud Pública para cubrir los siguientes gastos:

a. Sueldos para el nuevo personal profesional, técnico y auxiliar que planeará, ejecutará, supervisará y evaluará las actividades de salud rural;

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- b. Viáticos fijos y ocasionales para este personal y el personal actual del MSP/CP comprometido en el proyecto;
 - c. Costos de mantenimiento y funcionamiento del equipo a adquirirse para el proyecto y de las edificaciones construidas mejoradas con fondos del proyecto para el equipo y las edificaciones existentes en el área del programa;
 - d. Costos de los materiales necesarios para las actividades de construcción y refacción de servicios de salud, en el área del programa no financiados por A.I.D..
2. Fomentar, adiestrar y supervisar a los participantes de la comunidad en la actividad programada.
 3. Crear nuevos cargos para-profesionales de personal auxiliar (Auxiliar de Enfermería, Auxiliar de Trabajo Social, y otros), necesarios para la implementación del programa.
 4. Utilizar el equipo a adquirirse para el programa con fines exclusivamente destinados al mismo.

El programa se llevará a cabo en un periodo de cinco años en todo el país, y su costo total se estima en US\$ 20.000.000, de los cuales el Gobierno de Bolivia contribuirá US\$ 6.700.000. Por lo tanto, se solicita un préstamo de US\$ 10.000.000 y una donación de US\$ 3.300.000 iniciales.

Con esta solicitud señor Director, considero que los criterios expuestos en su nota 2R-L-400-78 de 20 del pasado mes, de junio están cubiertos con carácter general.

Con este motivo, tengo el agrado de saludar a usted atentamente,

Mr. Luis Villegas

Tom. 200 1210 VILLEGAS GAYBARRON
Ministerio de Prevision Social y
Salud Publica

12 JUN 1978

PROJECT ACTIVITIES BY LEVEL

RURAL COMMUNITY (Level 1)

The following summary describes the desired situation at the end of the project period:

Population Coverage

Rural communities with 150-500 persons (average of 250).

Community Health Promoter shall contact 80% of assigned rural community population each month.

80% of accessible rural communities in target areas in 3 departments (Santa Cruz, La Paz, and Potosí) should have functioning Promoters.

Service Delivery

Personal Health Services -- rudimentary health care and first aid, maternal and child health, nutrition, immunizations, referrals and health education.

Environmental Health Services -- human waste disposal and water supply (hygiene education).

Human Resources

Community Health Committee (5-6 members) community leadership training (5-6 days) by Community Organizing Team supervised and coordinated by the Departmental Training Center.

1 Community Health Promoter for each Rural Community.

Promoter training (320 hours/8 weeks) at Hospital Health Center by staff of Departmental Training Center.

Mothers Club.

Traditional Mid-wives (1 or more).

RURAL COMMUNITY (Level 1) - ContinuedCommunity Organization

Community organization activities focusing on establishing a Community Health Committee which will be responsible for community personal and environmental health activities and that will recruit and pay the Promoter's salary and supplies.

A Community Organization Team consisting of social work auxiliaries trained at the Departmental Training Center will conduct community analysis and organize communities with assistance of Auxiliary Nurse I from respective Health/Medical Post, and Nurse Auxiliary II from respective Hospital Health Center.

Auxiliary Nurse I assists community in organizing Mothers Club for health and nutrition activities including supplementary feeding and nutrition education.

Environmental Health Technicians and Promoter assist community in latrine and water system construction, operation and maintenance.

Logistics

Promoter's kit: basic medicines and supplies. Regular logistic support provided through respective Health or Medical Post.

Service delivery manual.

Family folders record, referral forms, and other information forms.

Supplies and distribution for supplementary foods, latrines and water supply systems construction.

Promoter prepares monthly report on support systems which includes medicine and supply request and forwards to Auxiliary I.

Facilities

None at this level.

RURAL COMMUNITY (Level 1) - ContinuedAdministration

Each Health Post has responsibility for 3 Rural Communities, and each Medical Post has responsibility for 5 Rural Communities.

Supervision of Promoters by Rural Auxiliary Nurse I from Health/Medical Post. Promoter receives feedback from supervisor based on monthly service reports and direct observation. Community Health Committee is also involved in these periodic evaluations.

Promoter charges patients for services and medicines provided and treasurer of Community Health Committee handles this money. Promoter's monthly salary, the cost of restocking supplies and other community health activities are paid from fund consisting of money from charges for medicines and services and money collected by the Committee from the community.

Promoter receives technical support and supervision from Nutrition Auxiliary and Environmental Sanitation Technician, who are located at the respective Hospital Health Center.

Information and Evaluation

MWH conducts Health In Health Status Survey based on a sample of the target rural population.

Promoter completes family health (risk factor) survey for each family in rural community. This is basis for the family health record.

Monthly reports by Promoter providing service delivery data (types of services and basic diagnosis).

Monthly report on support systems by Promoter.

Planning

Promoter sets monthly activities objectives with supervisors and Community Health Committee.

HEALTH MEDICAL/POST (Level II)

Population Coverage

Communities with 500 to 3,000 population (average of 800).

Every designated Rural Community should have an adequate and accessible Health or Medical Post (standard is one hour travel time).

Service Delivery

Same as Rural Community, except basic health care instead of rudimentary health care.

Regular periodic visits by medical and technical staff from Hospital Health Center to provide more complex curative services, and to introduce additional prevention techniques.

Human Resources

1-2 Rural Auxiliary Nurses I for each Health Post or Medical Post. If population is less than 1,000 then 1 Rural Auxiliary Nurse with 1 Promoter. More than 1,000 then 2 Auxiliaries.

1 Physician in each Medical Post (serving obligatory rural year) with 1 Rural Auxiliary Nurse I.

Traditional midwives from area receive training at Hospital Health Center.

Other community personnel as in level I.

HEALTH/MEDICAL POST (Level II) - ContinuedCommunity Organization

Social Work Auxiliaries organize community to establish Community Health Committee. Rural Nurse Auxiliary I from Health/Medical Post, and Rural Auxiliary Nurse II from Hospital Health Center will also participate.

Community Health Committee Auxiliary I and Environmental Health Technician activities same as Level I, except that committee recruits and pays promoter when appropriate.

Logistics

Auxiliary's kits and Promoter's kits, medicines and supplies are provided through the Hospital Health Center.

Service delivery manuals and training materials for Rural Auxiliary I. Same forms as for Level I plus summary forms.

Mule or bicycle transportation for supervision activities of Rural Health Auxiliary I (motorcycle for physician at Medical Post).

Vehicle and equipment maintenance provided by designated Hospital Health Center.

Supplies and distribution for supplementary foods, latrines and water supply systems construction.

Auxiliary I prepares monthly medicine and supply request and forwards to Hospital Health Center.

Facilities and Equipment

4 to 6 room facility including living area, using existing Health/Medical Post facilities to extent possible.

Each Health/Medical Post will have required equipment.

Equipment maintenance provided by designated Hospital Health Center.

HEALTH/MEDICAL POST (Level II) - ContinuedAdministration

Each Health Post has operational responsibility for three Rural Communities (five for each medical post).

Supervision of Promoters by Auxiliary I and of Auxiliary I by Auxiliary II from Hospital Health Center (onsite visits every month). Monthly evaluation reports sent to director of Hospital Health Center.

Financial Administration: Auxiliary I and physician receive monthly salary at Hospital Health Center. Auxiliary I collects money for medicines and services provided at Health Post, and also collects money from Rural Communities. Physician serves same function at Medical Post. Auxiliary II transfers funds and medicine and supply requests to Hospital Health Center.

Adequate storage and distribution of drugs and supplies for Health/Medical Posts and for respective Rural Communities.

Periodic preventive maintenance for equipment and vehicles provided by Hospital Health Center.

Information and Evaluation

Auxiliary I collects same data as Promoter (i.e., Family Health Record, Services Delivery Report, Support Systems Status Report) on a monthly basis.

Auxiliary I collects vital statistics data from Family Health Records of both Health/Medical Post level and rural community level on a quarterly basis.

MSW/PH conducts Household Health Status Survey in Health/Medical Post towns in Rural Communities.

Planning

Auxiliary I and Promoter set activities objectives for Health Post in conjunction with Auxiliary II.

HOSPITAL HEALTH CENTER (Level III)

(Note: About one out of every 3-5 Hospital Health Centers will be assigned additional responsibilities that involve support services for the other 2-4 Centers. These services are indicated in the chart below with an asterisk.)

Population Coverage

Towns with 3,000 to 20,000 population (average of 6,000).

Eighty per cent of towns with this population in three departments should have a Hospital Health Center within the RHDS.

Every Health/Medical Post should have an accessible Hospital Health Center (standard: One to two hours travel time).

Attend the formal patient referrals from Health/Medical Posts or Rural Communities.

Service Delivery

Personal Health Services: Same as Level II, plus:

- high risk deliveries
- treat 3rd degree malnutrition
- laboratory services
- professional medical care
- basic and emergency surgery
- dental services
- ambulance service
- referrals to the departmental specialty hospitals

Human Resources

Rural Health Staff:

- 1-2 Rural Auxiliary Nurses II
- 1-2 Environmental Health Technicians
- 1 Social Work Auxiliary
- 1 Auxiliary Nutritionist

Administrative Staff:

- 1 Administrator (*2)
- 1 Biostatistician (*2)
- 1 Supplies Technician (*2)
- Vehicle/equipment maintenance staff*
- 1 Driver (*2)

Hospital staff will provide service support to Rural Health Project.

Departmental Training Center Staff provides training at Hospital Health Center for Health Promoters, Traditional Midwives, and rural teachers.

HOSPITAL HEALTH CENTER (Level III) - ContinuedCommunity Organization

Rural Health Auxiliary II works with Auxiliary I from Health/Medical Post and Social Work Auxiliaries in organizing the communities at levels I and II.

Social Work Auxiliaries conduct Community Analysis for each community at levels I and II.

Nutrition Auxiliary assisted by social work auxiliary organizes Mothers' Clubs for health and nutrition activities, including supplementary feeding and nutrition education.

Logistics

Required medicines and supplies stored at Hospital Health Center which also supplies Health/Medical Posts.

Designated Hospital Health Centers have larger storerooms to keep drugs and supplies for 3-5 Hospital Health Centers and their affiliates. Supply inventories are maintained for Levels I, II, and III.*

One motorcycle for Rural Health Auxiliary II.

Jeep transportation for medical supervision and ambulance service.

Truck for supplies and food.*

Vehicle and equipment maintenance.*

Facilities

Remodeling of existing facilities and construction of new facilities where necessary.

Construction of warehouse space, offices for administration and rural health staff, and meeting/training room.

Each Hospital Health Center will have a standard set of equipment.

At designated Hospital Health Centers construction of additional warehouse space, and workshops for maintenance staff.*

HOSPITAL HEALTH CENTER (Level III) - ContinuedAdministration

Five Health Posts and two Medical Posts assigned to each Hospital Health Center.

Rural Health Section will be established and the Administrative Section will be reinforced in addition to the existing Hospital Staff Division.

The Medical Director is responsible for all three sections.

Administrative staff provides administrative support to Rural Health Project at Levels I, II, and III, and to Hospital Staff.

Supervision of Rural Nurse Auxiliary I and Physician by Hospital Health Center's Auxiliary II and medical staff (Auxiliary II visits each Post monthly; physician visits each Post every 3 months).

Medical Director and Auxiliary II review evaluation reports for each Auxiliary I and Promoter.

Monthly visits by Departmental staff to provide technical assistance and supervision.

Information and Evaluation

Aggregate and analyze monthly service delivery reports from Promoters and Auxiliary I.

Evaluation of service delivery based on planning objectives (norms) for each level.

Aggregate and analyze vital statistics data.

Aggregate and analyze data on supplies and equipment consumption and status.

Follow-up studies of referrals from Levels I and II to level III, and from level III to level IV.

Review and update Community Analysis.

Planning

Set activities objectives for Levels I, II, and III, consulting the objectives set by personnel at Levels I and II.

*Program geographic expansion of Rural Communities, and Health/Medical Posts if the target numbers have not been reached.

*Program new types of services with Departmental level.

*Determine resource requirements for levels I, II, and III. Also determine need for hospital beds expansion.

DEPARTMENTAL LEVEL (UNIDAD SANITARIA) (LEVEL IV)Population Coverage

Target area comprises 80 per cent of accessible (43.8%) rural population in three departments (La Paz - 245,635; Santa Cruz - 245,662; and Potosí - 184,705).

In the target areas, 80 per cent of the accessible rural population should be served by Levels I, II, and III modules.

Service Delivery

Rural health services are not directly provided.

(Note: The Departmental Hospital, which are the responsibility of the MOW/PH, should have the capability of providing specialty services to patients referred by the RHDS).

Provide services of drilling rig and support of water systems and latrine construction in the target area.

Human Resources

Departmental Rural Health Project Team consisting of a Project Coordinator with staff from the respective technical divisions who will have responsibility for the following speciality areas:

- Health services
- Human resources
- Facilities and equipment
- Community development
- Administration
- Information and evaluation
- Planning

(Note: One person may be responsible for more than one area. The project Coordinator will most likely be responsible for Health Services in addition to the coordinator role.)

Departmental Training Center directed by a Nurse Educator. Prepares the following types of personnel:

- Rural Nurse Auxiliaries I and II
- Social Work Auxiliaries
- Environmental Sanitation Technicians
- Nutrition Auxiliaries
- Physicians in their rural year
- Health Promoters (at Hospital Health Ctr.)
- Traditional Midwives (at Hosp. Health Ctr.)
- Rural Teachers (at Hospital Health Ctr.)

This Training Center provides formal courses, continuing education, reorientation courses for personnel already in the field, and orientation courses. Reinforce administrative staff for the following areas: administration, warehousing, maintenance and accounting.

DEPARTMENTAL LEVEL (UNIDAD SANITARIA) (Level IV) - ContinuedCommunity Organization

Reviews community organization status reports from Levels I, II, and III.

Program community organization activities including expansion to new areas.

Financial administration for Community Leadership Training.

Conduct Community organization course for staff of Levels II-IV.

Logistics

Departmental medicines warehousing system for vaccines, food-stuffs, supplies, medical, environmental sanitation and audiovisual equipment, equipment control and maintenance, facility maintenance and drilling rig control and maintenance.

Supplies inventory and distribution system to meet the needs of Level I, II, and III.

Transportation system using two jeeps and a large truck.

Distribution and reproduction of training materials and forms needed by the departmental and lower levels.

Facilities

Departmental warehouse constructed with administrative offices and maintenance workshops.

Departmental Training Center (new construction, expansion, or remodeling depending on the department's existing facilities).

Departmental Health Office (Unidad Sanitaria) remodeling as required and necessary office equipment.

DEPARTMENTAL LEVEL (UNIDAD SANITARIA) (Level IV) - Continued

<u>Administration</u>	<u>Information and Evaluation</u>	<u>Planning</u>
Rural Health Project Coordinator has responsibility for administering project at departmental level.	Aggregate and analyze monthly reports on services delivered throughout the department.	Set activity objectives for department based on objectives set at each of the three lower levels, and the norms established by the MSW/PH at the national level.
Dept. Rural Health Project Team provides technical support and supervision to Hospital Health Centers (monthly visits).	Aggregate and analyze vital statistics.	Program geographic expansion of project based on Hospital Health Center input according to MSW/PH norms.
Administration of funds from the sale of drugs by the Promoters and Nurse Auxiliaries I, including collection of funds and purchase of replacement drugs and supplies.	Analyze service delivery evaluations done by Hospital Health Centers.	Program new types of services as deemed necessary, based on Hospital Health Center input according to MSW/PH norms.
Personnel payment system managed at departmental level. Checks or cash distributed to Hospital Health Centers to pay staff of Hospital Health Center and Health/Medical Posts and Rural Communities.	Epidemiologic surveillance (communicable diseases).	Resource allocation, including Hospital Health Center bed expansion, based in input from Hospital Health Center according to MSW/PH norms.
Departmental Training Center receives technical support and supervision from the MSW/PH School of Public Health.	Follow-up studies of referrals from level II to level III. Review follow-up studies done by Hospital Health Center.	
	Aggregate information from Community Analysis.	
	Aggregate data on drugs and supplies consumption, and equipment and facilities status.	
	Conduct cost studies and other special studies and analysis in conjunction with national level efforts.	

NATIONAL LEVEL (MHW/PH) (Level V)Population Coverage

691,000 people (in rural target area) directly benefit from services delivered.

Another 2,546,207 people indirectly benefit, from the administrative and technical reforms, (rest of rural population in the country).

Service Delivery

Develop norms and protocols for service delivery at all levels.

Human Resources

National Rural Health Project Team consisting of a Project coordinator and specialists from the respective technical divisions who will have responsibilities for the following areas:

- Health services
- Human resources
- Facilities and equipment
- Community development
- Administration
- Information and evaluation
- Planning

(Note: At this level there will be different persons assigned to each area, and they will dedicate 60 per cent of their time to the project.)

School of Public Health:

- Orientation and skills courses for Medical Directors of Hospital Health Centers and Departmental-level staff. These courses focus on how to operate that RHDS activities for which people being trained are responsible.
- Formal courses for support personnel including administration, warehousing accountants, laboratory analysis, vehicle and equipment maintenance, biostatistics, planning and training.
- Formal public health programs for medical directors of Hospital Health Centers and Departmental level physicians.
- International public health and administration fellowships for rural health staff.
- Strengthened public health programs for university students in medicine and allied health fields.

NATIONAL LEVEL (MSW/PH) (Level V) - ContinuedCommunity Organization

Develop norms for community organization.

Supervise regional and sub-regional programming of community organization activities.

Allocate community organization resources.

Review community organization status reports.

Review and evaluate community organization strategy.

Logistics

National purchasing and warehousing system for medicines, vaccines, supplies, medical, environmental sanitation and audio-visual equipment and facility, and equipment maintenance.

Transportation system using jeeps and large trucks.

Printing and distribution of the training materials and forms needed by all levels.

Supplies, inventory and distribution system to meet the needs of the departmental levels.

Facilities

National warehouse with administrative and environmental sanitation offices and maintenance workshops and equipment.

Remodeling of the National School of Public Health, and provision of necessary equipment.

Provision of necessary office equipment for selected MSW/PH offices.

I. NATIONAL LEVEL (MSW/PH) (Level V) - ContinuedAdministration

Establish Rural Health Team.

Rural Health Coordinator has responsibility for administering project at the national level.

Rural Health Team reports directly to the MSW/PH Under-Secretary for Public Health.

Delegation of certain administrative and support functions to the Departmental and Hospital Health Center levels.

National level provides technical support and supervision to the departmental Rural Health Teams.

The School of Public Health provides technical support and supervision to the departmental training centers.

Information and Evaluation

Develop and manage an information system with the following data elements:

- demographic
- health status and vital statistics
- epidemiologic surveillance
- service delivery
- costs
- resources

Conduct Household Survey (a sample of the target population) of the RHUs.

Conduct periodic inventories of facilities and analyses of drug and supply use.

Develop and implement evaluation methodologies in line with project objectives.

Conduct cost studies and other special studies and analyses.

Planning

Develop overall program objectives and norms by type of service and productivity.

Develop objectives and targets for both geographic and service expansion with the input of the Department level.

Develop targets for resource allocation.

Conduct impact analyses and economic terms.

Coordinate MSW/PH planning with the planning of other appropriate sectors.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project: _____
From FY 1972 to FY 1983
Total U.S. Funding: \$13,000,000
Date Prepared: 1/7/78

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Project Title & Number: Rural Health Delivery Systems 111-0800

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To improve the health status of the rural poor of Bolivia.</p>	<p>Measures of Goal Achievement:</p> <ul style="list-style-type: none"> - 10% reduction in infant mortality. - 5 yr. increase in life expectancy. - 50% reduction in tuberculous mortality. - 10% reduction in morbidity from measles, polio, diphtheria, tetanus and whooping cough. 	<p>Pre and post-project household health surveys.</p>	<p>Assumptions for achieving goal targets:</p> <p>Local availability of preventive services and basic curative services will improve health status.</p>

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project: _____
From FY 1978 to FY 1983
Total U.S. Funding \$ 13,000,000
Date Prepared: 6/24/78

Project Title & Number: Rural Health Delivery System 411-0400

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p> <p>To extend, improve and support health services to the rural poor in order to improve the health status of the rural population of the three target departments of La Paz, Potosí and Santa Cruz and to introduce administrative and technical reforms into the MCH/PH to facilitate health services delivery to rural areas.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status</p> <ul style="list-style-type: none"> - 100% rural people covered by PHHC program satisfied with availability and quality of services. - Adequate transportation coverage of 600,000 rural residents. - Community Health Promoters spend 1 day a week in tasks and promotional activities. - Community Health Promoters attend an average of 60 consultations per month. 	<p>Evaluation survey.</p> <p>Project records.</p> <p>Community visits/interviews.</p> <p>Project records.</p>	<p>Assumptions for achieving purpose:</p> <p>Personnel training is adequate to motivate and provide technical expertise for personnel to fulfill duties.</p>

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project: _____
From FY 1978 to FY 1983
Total U.S. Funding: \$15,000,000
Date Prepared: _____

Project Title & Number: Rural Health Delivery System 11-0814

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs:		Assumptions for achieving outputs:
1. Community Health Promoters (CHP) providing rudimentary health care and first aid; health education; and promoting environmental sanitation in villages of 150-500 population.	- 700 communities of 150-500 population have community health promoters.	- New/old records. - Records of Health Posts and Medical Posts. - Monthly reports by CHP's.	- GCH's commitment to project remains high. - Communities respond positively to project and form committees.
2. Community Health Committees organized to recruit and pay CHP's and coordinate and assist with other community health-related activities.	- 700 communities of 150-500 population have Community Health Committees.	- Records of Health and Medical Posts. - Monthly reports by CHP's.	- Personnel trained accept rural assignments.
3. Health/Medical Posts functioning in communities of 500-3,000 population providing basic health care; having Rural Nurse Auxiliary I's (RNA-I) providing these services and supervising 3-5 CHP's; and having physicians stationed at the Medical Posts.	- 200 Health/Medical Posts functioning and staffed by: 1-RNA-I and 1-CHP; 1-RNA-I's; or 1-RNA-I and 1 medical intern. - RNA-I's visit each CHP on average of once per month.	- MHW/PH records. - Monthly reports by Health/Medical Posts. - Monthly reports by CHP's. - Hospital Health Center records.	
4. Community Health Committees organized to select RNA-I's and administer Health/Medical Posts.	- 200 Community Health Committees organized to support Health/Medical Posts.	- Health/Medical Post reports.	
5. Hospital Health Centers in towns of 3-20,000 population provide professional medical care, routine surgery, dental and laboratory services; backstop and administer other Health/Medical Posts within 2 hrs. access; and train CHP's and RNA-I's.	- 17 Hospital Health Centers providing hospital services and staffed by 1-2 RNA-I's, 1-2 Environmental Health Technicians, 1 social work auxiliary, and 1 auxiliary nutritionist. - 12 Hospital Health Centers will have additional personnel to provide support services to other HHC's. - At least 1 visit/mon. to each Health/Medical Post by personnel from Hospital Health Center. - At least 1 visit/6 mon. to each CHP by personnel from Hospital Health Center.	- MHW/PH records. - Hospital Health Center records and reports. - Health/Medical Post reports. - CHP reports.	

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project: _____
From FY 1978 to FY 1983
Total U.S. Funding \$13,000,000
Date Prepared: _____

Project Title & Number: Rural Health Delivery System 511-048

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Outputs:</p> <p>6. Departmental <u>Unidades Sanitarias</u> in the three target Departments create Rural Health Project teams to supervise and assist administration and development of CHP-Health/Medical Post-Hospital Health Center system.</p> <p>7. MSW/IN RIDS Project Team aids in monitoring and administering the project at the national level while decentralizing much of administration to <u>Unidades Sanitarias</u> level.</p>	<p>Magnitude of Outputs:</p> <ul style="list-style-type: none"> - 4 Departmental <u>Unidades Sanitarias</u> have functioning Rural Health Project teams. - Efficient and adequate system of procurement and supply operated by MSW/IN RIDS Project team. 	<ul style="list-style-type: none"> - <u>Unidades Sanitarias</u> records. - Rural Health Project team reports. - MSW/IN RIDS Project team records and reports. 	<p>Assumptions for achieving outputs:</p>

**PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK**

ANNEX E

Life of Project: _____
From FY 1978 to FY 1983
Total U.S. Funding \$ 13,000,000
Date Prepared: 12/28/78

AID 1020-20 (7-71)
SUPPLEMENT I

Project Title & Number: Rural Health Delivery System 111-0000

Page 5

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
<p>1. Training</p> <p>a) Fellowships in Public Health and Health Administration.</p> <p>b) Training of Community Health Promoters.</p> <p>c) Training of Rural Nurse Auxiliary-I's; Rural Nurse Auxiliary-II's; Environmental Health Technicians; Social Work Auxiliaries; Nutritionist Auxiliaries.</p> <p>d) Community Health Committees organized and trained.</p>	<ul style="list-style-type: none"> - 40 Participants receive advanced training abroad by end of project. - 700 PH's trained in 8 week courses at Hospital Health Center. - 10 INA-I's trained. - 10 INA-II's trained. - 50 Social Work auxiliaries trained. - 10 Nutrition Auxiliaries - Environmental Sanitation Technician Trained. - 10 Administration Support personnel trained. - 60 Biostatistician technicians trained. - 40 Lab. Technicians trained. - 500 MSW/PH staff will be trained in 50 refresher courses. - 780 Community Health Committees of a total of 3100 members receive 5-day leadership training courses. - 780 rural teachers trained. - 780 Community leaders trained. 	<ul style="list-style-type: none"> - AID records. - Hospital Health Center records. - Departmental Training Center Record. - MSW/PH School of Public Health Record. - MSW/PH records. 	<ul style="list-style-type: none"> - AID and MSW/PH provide inputs on timely basis.
<p>2. Technical Assistance</p>	<ul style="list-style-type: none"> - 16 work years of long-term Advisors at National MSW/PH level - 16 work years of long-term Advisors at Departmental U.S. Level. - 40 person-months of short term advisor assistance. 	<ul style="list-style-type: none"> - AID records. 	

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project:
From FY 1978 to FY 1983
Total U.S. Funding \$13,000,000
Date Prepared: _____

Project Title & Number: Rural Health Delivery System 11-801

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Implementation Target (Type and Quantity)		Assumptions for providing inputs:
3. <u>Construction and Remodeling</u>			
a) <u>Health/Medical Posts.</u>	- Upgrading/remodeling of 60 facilities.	- MSW/IM Records and evaluation inspections.	
b) <u>Hospital Health Centers.</u>	- Construction of 2 new Centers. - Construct 10 Hospital Health Center Warehouses.	- MSW/IM and AID records.	
c) <u>Unidad Sanitaria facilities construction.</u>	- Construction/remodeling of Unidad Sanitaria administrative offices, warehouses, maintenance shops, and training centers in 3 Departments.	- AID and MSW/IM records. - Inspection.	
d) <u>National MSW/IM warehouse construction.</u>	- Construction of warehouse with administrative offices and maintenance workshops.	- AID and MSW/IM records. - Inspection.	
e) <u>Remodeling of National School of Public Health.</u>	- Remodeling of National School of Public Health.	- AID and MSW/IM records. - Inspection.	
f) <u>Rural Water Systems.</u>	- 80 wells for rural water supply.	- MSW/IM records.	
4. <u>Equipment & Supplies for:</u>			
a) <u>health/medical posts (H/MP).</u>	- Basic set of equipment, medicines & supplies for H/MP and aligned Rural Community.	- MSW/IM records. - AID records.	
b) <u>hospital health center (HHC).</u>	- Basic set of equipment for HHC. - Stock of medicines & supplies for HHC, H/MP and rural community.	- AID and MSW/IM records. - Inspection.	
c) <u>Unidad Sanitaria warehouse and administrative offices.</u>	- Basic set of required equipment.	- AID and MSW/IM records. - Inspection.	

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX E
Life of Project: _____
From FY 1978 to FY 1983
Total U.S. Funding \$13,000,000
Date Prepared: _____

Project Title & Number: Rural Health Delivery System 111-0484

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	1. Production Target (Type and Quantity)		Assumptions for providing inputs:
d) National MSW/PH warehouse.	- Required set of equipment and supplies stock.	- AID and MSW/PH records. - Inspection.	
e) MSW/PH School of Public Health and Departmental Training Centers.	- Required training supplies & equipment.	- Inspection. - AID and MSW/PH records.	
f) Transportation vehicles.	- 170 bicycles - 112 motorcycles - 21 Jeep/land runners - 63 trucks - Adequate spare parts for maintenance.	- AID records. - Inspection.	
g) Supplemental feeding program.	- 70% of participating communities have active supplemental feeding program.	- MSW/PH records.	
h) Environmental sanitation.	- Equipment for 80 latrines. - Equipment for 80 water supply systems.	- Inspection. - MSW/PH records.	

D R A F T

PROJECT AUTHORIZATION AND REQUEST FOR AUTHORIZATION
OF FUNDS

Name of Country: Bolivia
Name of Project: Rural Health Delivery Systems
Project Number : 511-0483

Pursuant to Part I, Chapter 1, Section 104 of the Foreign Assistance Act of 1961, as amended, and in furtherance of the Alliance for Progress, I hereby authorize a loan in an amount not to exceed Ten Million United States Dollars (\$10,000,000) (the "Loan") to the Republic of Bolivia ("Bolivia") to assist in financing certain foreign exchange and local currency costs of goods and services for the project (the "Project") which consists of the financing of: construction and renovation of rural health facilities - health and medical posts, training centers, warehouses and maintenance facilities and hospital health centers; equipping these health facilities; training rural health service delivery personnel and upgrading the training of current medical and para-medical personnel; renovation of national, departmental and local health system support facilities; and provision of technical assistance to support these activities.

I approve the total level of A.I.D. appropriated funding for the grant-funded technical assistance portion of the Project of not to exceed Three Million Three Hundred Thousand United States Dollars (\$3,300,000) (the "Grant"), which will be incrementally funded during the period FY 1979 through FY 1982 subject to satisfactory compliance with Congressional notification requirements and the availability of funds in accordance with A.I.D. allotment procedures. Subject to these conditions, I approve obligation of the initial increment of the Grant in an amount of \$800,000 in FY 1979 and subsequent increments thereafter.

I hereby authorize the negotiation and execution of the Project Agreement by the officer to whom such authority has been delegated in accordance with essential terms, covenants and major conditions together with such other terms and conditions as A.I.D. may deem appropriate.

1. Interest Rate and Terms of Repayment (Loan)

Bolivia shall repay the Loan to A.I.D. in United States Dollars within thirty (30) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years. Bolivia shall pay to A.I.D. in United States Dollars interest from the date of first disbursement of the Loan at the rate of (a) two percent

(2%) per annum during the first ten (10) years, and (b) three percent (3%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon.

2. Source and Origin of Goods and Services (Loan)

Except as A.I.D. may otherwise agree in writing, and except for ocean shipping, goods and services financed by the Loan shall have their source and origin in countries included in A.I.D. Geographic Code 941 or in Bolivia.

Ocean shipping financed under the Loan shall be procured in any eligible source country except Bolivia.

3. Source and Origin of Goods and Services (Grant)

Except as A.I.D. may otherwise agree in writing, goods and services financed by the Grant shall have their source and origin in countries included in A.I.D. Geographic Code 000.

4. Conditions Precedent to Initial Disbursement

Except as A.I.D. may otherwise agree in writing, prior to the first disbursement or to the issuance of documents pursuant to which disbursement will be made, Bolivia will furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a) An opinion of the Attorney General of Bolivia or of other counsel acceptable to A.I.D. to the effect that the Project Agreement has been duly authorized and/or ratified by and executed on behalf of Bolivia and that it constitutes a valid and legal binding obligation of Bolivia in accordance with all of its terms; and
- b) A statement of the name of the person(s) authorized to act as Bolivia's representative under the Project Agreement and specimen signatures of such persons, duly certified as to their authenticity.

5. Conditions Precedent to Disbursement for Other Than Technical Assistance

Prior to any disbursement or the issuance of any commitment documents under the Project Agreement to finance other than technical assistance, Bolivia shall furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a) A technical assistance plan which details the technical assistance to be financed by the Project, and specifies professional requirements, workscopes and timing of the arrival of the technicians to be funded under the project;
 - b) A Financial Plan for the Project which details Bolivia's contribution during the life of the Project, which shall provide for staffing and budgetary increases for the Ministry of Social Welfare and Public Health sufficient to meet its commitments under the Project;
 - c) A detailed implementation and evaluation plan for the Project, which shall include a training plan for the major training activities to be carried out under the Project;
 - d) A Service Delivery Plan which details the rural health service delivery system components, functions of each service level and personnel required to fulfill these functions;
 - e) A plan for the maintenance of vehicles and equipment to be procured with Project funds;
 - f) Evidence of establishing and naming members of a national drug procurement committee in the Ministry of Social Welfare and Public Health which will have responsibility for developing procurement plans, standards, policies and operational guidelines for the procurement, warehousing, distribution, financing and information components of the rural health supply system.
6. Conditions Precedent to Disbursement for Any Individual Construction Subproject

Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documents under the Project Agreement, to finance any individual construction subproject, Bolivia shall furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- a) Evidence of clear title to the land upon which construction is to take place;
- b) Final plans and specifications, bid documents, bid awards and contracts for construction for the individual subprojects; and

- c) A maintenance plan for the facilities to be constructed.

Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any commitment documentation under the project agreement, to finance procurement of medicines and medical supplies, Bolivia shall furnish to A.I.D. in form and substance satisfactory to A.I.D.: (a) a plan for the procurement, receipt, storage, and distribution to final user of medicines and medical supplies; and (b) evidence of the implementation of the plan.

8. Special Covenants

Except as A.I.D. may otherwise agree in writing, Bolivia will covenant:

- a) To utilize all equipment and materials obtained with Loan funds only for the purposes of the Project during the life of the Project, and for similar purposes thereafter;
- b) To provide budgetary support to the Ministry of Social Welfare and Public Health which is adequate to continue to operate and maintain the Rural Health Delivery System established under the Project.
- c) To review with A.I.D. annually the progress of the Project; approximately two years from the date of the Loan Agreement a review shall be held to measure such progress against the targets established in the Project Implementation Plan with a view to determining whether funds remaining uncommitted or undisbursed under the Loan at the time could reasonably be expected to be utilized within the remainder or the disbursement period.

9. Waivers

Motorcycles purchased financed by A.I.D. for the Project under the Loan shall have their source and origin in countries included in A.I.D. Geographic Code 899 (free world).

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

ANNEX 1
Part II
Page 1 of 5

ENVIRONMENTAL THRESHOLD DECISION

Location : Bolivia
Project Title : Rural Health Delivery Services Project
Funding : \$10.0 million (loan); \$3.3 million (grant)
Life of Project : 5 years

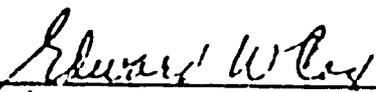
Mission Recommendation:

Based on the Initial Environmental Examination, the Mission has concluded that the project will not have a significant effect on the human environment and therefore recommends a Negative Determination.

The Latin America and the Caribbean Bureau's Development Assistance Executive Committee has reviewed the Initial Environmental Examination for this project and concurs in the Mission's recommendation for a Negative Determination.

AA/LAC Decision:

Pursuant to the authority vested in the Assistant Administrator for Latin America and the Caribbean under Title 22, Part 216.4a, Environmental Procedures, and based upon the above recommendation, I hereby determine that the proposed project is not an action which will have a significant effect on the human environment, and therefore, is not an action for which an Environmental Impact Statement or an Environmental Assessment will be required.


Assistant Administrator/for
Latin America and the Caribbean


Date

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Bolivia, specifically the Departments of La Paz, Santa Cruz and Potosí.

Project Title : Rural Health Delivery System

Funding : Section 104 (Health and Population)
\$10,000,000

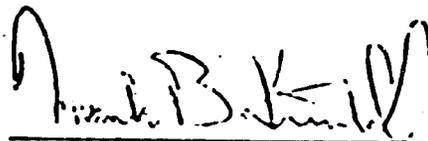
Life of Project : Five years (FY 1978 - 1983)

IEE Prepared by : G.G. Hoover, Acting Chief, Engineering and Transportation Division

Date : July 7, 1978

Environmental Action Recommended : Negative Determination

Concurrence :



Frank B. Kimball
Mission Director, USAID/Bolivia

Date: July 7, 1978

**I. Examination of Nature, Scope, and Magnitude
of Environmental Impacts**

A. Description of Project

The proposed project will finance the implementation of an expanded rural health delivery system in 3 departments of Bolivia and the upgrading of the administrative and personnel training capability of the Ministry of Social Welfare and Public Health (MSW/PH) at the national and departmental levels. The project will entail technical assistance; procurement of equipment, materials and drugs; training of health personnel; construction and/or remodeling of rural health/medical posts and a small number of rural hospital health centers; and an information and evaluation system.

B. Identification and Evaluation of Environmental Impacts

No adverse impacts are expected from the project on either the physical or human environment in the project areas. Where substantial construction activities are undertaken, such as in the case of hospital health centers or warehouses, an environmental examination will be performed as part of the design work. The project is expected to have significant positive impacts on the physical and human environment through the introduction of environmental sanitation facilities in rural areas and through improved health standards among the rural target group.

The following presents a brief analysis of the expected environmental impacts of the project.

a. Land Use

No change expected.

1) Changing the Character of the Land: No changes are expected since construction will take place inside communities, where sites are expected to be already available.

2) Altering Natural Defenses: No foreseeable consequences.

3) Foreclosing Important Uses: None expected.

- 4) Jeopardizing Man or His Works: None expected
- 5) Other Factors Concerning Land Use: None.

b. Water Quality

In so far as water for domestic uses is concerned, any effects on water quality as the result of this project will be positive.

1) Other Water Quality Effects

With the introduction of latrines, the bacterial and viral contamination of surface waters will be reduced. There will be contamination of the ground water within a 15 meter radius of the latrines. Where it may be necessary to dig water wells for these villages, these wells will be sited outside of the influence range of these latrines. No other physical or chemical changes in water quality can be ascertained.

c. Atmospheric

No significant adverse changes expected:

- 1) Air Additives: The provision of latrines will tend to reduce bacterial and viral contaminants from the dust of the air.
- 2) Air Pollution: No foreseeable consequences.
- 3) Noise Pollution: No foreseeable consequences.

d. Natural Resources

No changes except as follows:

1) Diversion or Altered Uses of Water

The diversion of water will consist in certain cases, in the diversion of small amounts of water from surface sources for drinking purposes. It is expected that this will have no significant effects on the normal uses of rivers and streams.

2) Irreversible or Inefficient Commitment of Resources

There are none anticipated in the project design.

e. Cultural

Any changes in cultural patterns will be beneficial.

- 1) Altering Physical Symbols: No changes expected.
- 2) Changes in Population: No changes expected.

f. Socio-Economic

1) Changes in Economic/Employment Patterns

Changes in the general economic situation should be the increasing of disposable income for the entire rural population served by the project. Farmers will be able to devote more time, land and other inputs to the production of marketable crops, as the result of better health and a reduced rate of absenteeism. No changes in employment patterns are expected, except that the individual farmer may devote more of his time to increasing production.

2) Changes in Population

None.

3) Changes in Cultural Patterns

No major changes in cultural patterns are expected.

g. Health

By the very nature of this project, any effects on the health of the population will be of a positive nature by reducing the incidence of gastroenteric and communicable diseases, improving nutrition, and reducing overall infant and maternal morbidity and mortality.

1) Changing a Natural Environment

None.

2) Eliminating an Ecosystem Element

None.

II. Recommendation for Environmental Action

A negative determination is recommended.

RURAL HEALTH DELIVERY SYSTEMS 511-0465
STATUTORY CHECKLIST

I. COUNTRY CHECKLIST

A. GENERAL CRITERIA FOR COUNTRY

1. FAA Sec.116. Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in consistent pattern of gross violations of internationally recognized human rights? Yes

2. FAA Sec.481. Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotic drug and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully? No

3. FAA Sec.620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement? Yes

4. FAA Sec.620(c). If assistance is to government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government? No

5. FAA Sec.620(e) (1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? No
6. FAA Sec.620(f); App.Sec.108. Is recipient country a Communist country? Will assistance be provided to the Socialist Republic of Vietnam, Cambodia, Laos, Cuba, Uganda, Mozambique or Angola? No
7. FAA Sec.620(i). Is recipient country in any way involved in (a) subversion of, or military aggression against, the United States or any country receiving U.S. assistance, or (b) the planning of such subversion or aggression? No
8. FAA Sec.620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction, by mob action, of U.S. property? No
9. FAA Sec.620(1). If the country has failed to institute the investment guaranty program for the specific risks of expropriation, inconvertibility or confiscation, has the AID Administrator within the past year considered denying assistance to such government for this reason? Bolivia has instituted the investment guaranty program.

10. FAA Sec.620(c); Fishermen's Protective Act, Sec.5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters,
- a. has any deduction required by Fishermen's Protective Act been made?
- b. has complete denial of assistance been considered by AID Administrator?
11. FAA Sec.620(d); App.Sec.503. (a) is the government of the recipient country in default on interest or principal of any AID loan to the country? (b) is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act Appropriated Funds, unless debt was earlier disputed, or appropriate steps taken to cure default?
12. FAA Sec.620(e). What percentage of country budget is for military expenditures? How much of foreign exchange resources spent on military equipment? How much spent for the purchase of sophisticated weapons systems? (Consideration of these points is to be coordinated with the Bureau for Program and Policy Coordination, Regional Coordinators and Military Assistance Staff (PPC/RC)).
13. FAA Sec.620(f). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?

Bolivia has taken no such actions.

No.

The CY 1978 Budget for military purposes represents approximately 17% of total budgeted expenditures of the GOB.

No

14. FAA Sec.620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? **Bolivia is not in arrears.**
15. FAA Sec.620A. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism? **No**
16. FAA Sec.666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA? **No**
17. FAA Sec.669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after August 3, 1977 although not a "nuclear-weapon State" under the non-proliferation treaty? **No**
18. FAA Sec.901. Has the country denied its citizens the right or opportunity to emigrate? **No**

B. FUNDING CRITERIA FOR COUNTRY**1. Development Assistance Country Criteria**

a. FAA Sec.102(c), (d). Have criteria been established, and taken into account, to assess commitment and progress of country in effectively involving the poor in development, on such indexes as: (1) small-farm labor intensive agriculture, (2) reduced infant mortality, (3) population growth, (4) equality of income distribution, and (5) unemployment.

Yes

b. FAA Sec.104(d)(1). If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development and assistance to urban poor?

Yes

c. FAA Sec.201(b) (5), (7) & (8); Sec.208; 211(a)(4), (7). Describe extent to which country is:

(1) Making appropriate efforts to increase food production and improve means for food storage and distribution.

Bolivia is making appropriate efforts with respect to food production, storage, and distribution. AID Loan 511-T-042, 511-T-050, 511-T-052, 511-T-053, 511-T-056, 511-T-060 and the Bolivia PL-480 Title II Agreement contribute to these efforts.

(2) Creating a favorable climate for foreign and domestic private enterprise and investment.

The GOB program emphasizes creation of a favorable climate for selected foreign and domestic private enterprise and investment. It is seeking special exemption within the Andean Economic Market for certain investments.

- (3) Increasing the public's role in the developmental process. The GOB continues to take an active role in the development process and in so doing, to increase popular participation.
- (4) (a) Allocating available budgetary resources to development. The GOB appears to be allocating as much as it is able to development.
- (b) Diverting such resources for unnecessary military expenditure and intervention in affairs of other free and independent nations. The GOB is not interfering in the affairs of other free and independent nations.
- (5) Making economic, social, and political reforms such as tax collection improvements and changes in land tenure arrangements, and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise. The GOB is making these efforts.
- (6) Otherwise responding to the vital economic, political, and social concerns of its people, and demonstrating a clear determination to take effective self-help measures. The GOB appears to be doing this in an increasingly effective manner.
- d. FAA Sec.201(b), 211(a). Is the country among the 20 countries in which development assistance loans may be made in this fiscal year, or among the 40 in which development assistance grants (other than for self-help projects) may be made? Yes
- e. FAA Sec.115. Will country be furnished, in same fiscal year, either security supporting assistance, or Middle East peace funds? If so, has Congress specifically authorized such use of funds, or is assistance for population programs, humanitarian aid through international organizations, or regional programs? No

2. Security Supporting Assistance
Country Criteria

- a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights? Is program in accordance with policy of this Section? N.A.
- b. FAA Sec. 531. Is the Assistance to be furnished to a friendly country, organization, or body eligible to receive assistance? N.A.
- c. FAA Sec. 531(c)(2). Will assistance under the Southern African Special Requirements Fund be provided to Mozambique, Angola, Tanzania, or Zambia? If so, has the President determined (and reported to the Congress) that such assistance will further U.S. foreign policy interests? N.A.
- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N.A.
- e. App. Sec. 113. Will security assistance be provided for the purpose of aiding directly the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? N.A.

II. PROJECT CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1. App. Unnumbered; FAA Sec.653(b)

(a) Describe how Committees on appropriations of Senate and House have been or will be notified concerning the project;

(b) Is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure plus 10%)?

Committees will be notified using special Congressional notification.

2. FAA Sec.611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

Such planning has taken place and cost estimates made.

3. FAA Sec.611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

Ratification of loan agreement by GOB will follow shortly after signature. This has been the experience in the past and is expected given the degree of MPH/SW commitment to this project.

4. FAA Sec.611(b); App.Sec.101. If for water or water-related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?

N.A.

5. FAA Sec.611(c). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project? Yes
6. FAA Sec.209, 619. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multilateral organizations or plans to the maximum extent appropriate? No.
7. FAA Sec.601(a); and Sec.201 (2) for development plans. Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. (c) The project will encourage development of Community Health Committees.
8. FAA Sec.601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise). The Project will utilize private U.S. technical consultants in the grant portion and will involve purchase of equipment from U.S. suppliers.

9. FAA Sec.612(b); Sec.636(h).
Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.
- Bolivia will contribute over 29% of project costs and will assume continuing costs for operation of health delivery system.
10. FAA Sec.612(d). Does the U.S. own excess foreign currency and, if so, what arrangements have been made for its release?
- The U.S. does not own excess foreign currency in Bolivia.
11. ISA 14. Are any FAA funds for FY 78 being used in this Project to construct, operate, maintain, or supply fuel for, any nuclear powerplant under an agreement for cooperation between the U.S. and any other country?
- No.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec.102(c); Sec.111; Sec.281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

Project is specifically designed to provide health services in rural areas, utilize para-technician health personnel, and integrate the rural population into the national health service delivery system.

Project will promote the development of Community Health Committees to finance village health promoters and address village health problems.

b. FAA Sec.103, 103A, 104, 105, 106, 107. Is assistance being made available: (include only applicable paragraph -- e.g., a, b, etc.-- which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source).

- | | | |
|-----|--|--|
| (1) | (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers; | N.A. |
| (2) | (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor; | The entire focus of the project is towards providing low-cost health services to the rural poor, with special emphasis on preventive health services. The system would lend itself to providing family planning services if the Government of Bolivia decides to institute such a program. |
| (3) | (105) for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development; | N.A. |
| (4) | (106) for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is: | N.A. |

- (a) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;
- (b) to help alleviate energy problems;
- (c) research into, and evaluation of, economic development processes and techniques;
- (d) reconstruction after natural or manmade disaster;
- (e) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;
- (f) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

- (5) (107) by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries. N.A.

c. FAA Sec.110(a); Sec.205(e).
Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

Bolivia has agreed to provide over 29% of the costs of the project as reflected in the agreed project budget.

d. FAA Sec.110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?

N.A.

e. FAA Sec.207; Sec.113. Extent to which assistance reflects appropriate emphasis on: (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

(1) Project will promote formation of Community Health Committees to address community health problems.

(3) Project will train community health promoters, rural health auxiliaries, and community health committee members.

(4) Entire focus of project is on meeting health needs in rural areas.

(6) Mother-child health activities will be promoted by the health services delivery system. Project will provide equal opportunity to women for training, leadership, and jobs in community health committees, as community promoters, and as rural health auxiliary.

f. FAA Sec.251(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.

Project is based on plans developed in the MFA/SCA of the government of Bolivia. It will encourage local participation in the development process by training and promoting Community Health Committees.

- g. FAA Sec.201(b) (2)-(4) and - (8); Sec.201(e); Sec.211(a) (1)-(3) and - (8). Does the activity give reasonable promise of contributing to the development; of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?
- Yes.
- h. FAA Sec.201(b)(6); Sec.211(a)(5), (6). Information and conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U.S. balance-of-payments position.
- U.S. suppliers and contractors will be eligible to supply commodities and services for the project.
2. Development Assistance Project Criteria (Loans only)
- a. FAA Sec.201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within U.S.
- No other financing sources are available.
- b. FAA Sec.201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U.S.) of lending and relending terms of the loan.
- Lending terms are legal under U.S. and Bolivian law. Loan is within the debt-carrying capacity of Bolivia.

- c. FAA Sec.201(4). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds \$100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner? Yes
- d. FAA Sec.201(r). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development? Yes
- e. FAA Sec.202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources? Approximately \$7.0 million will be spent on procurement from private sources.
- f. FAA Sec.202(a). If assistance is for any productive enterprise which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan? N.A.
3. Project Criteria Solely for Security Supporting Assistance
- a. FAA Sec.531. How will this assistance support promote economic or political stability? N.A.

b. FAA Sec.533(c)(1). Will assistance under the Southern African Special Requirements Fund be used for military, guerrilla, or paramilitary activities?

N.A.

4. Additional Criteria for Alliance for Progress

(Note: Alliance for Progress projects should add the following two items to a project checklist).

a. FAA Sec.251(b)(1), -(3). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the economic or political integration of Latin America?

Yes. Integration effect is minimal.

b. FAA Sec.251(b)(c); 251(b). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES", the Permanent Executive Committee of the OAS) in its annual review of national development activities?

Yes

III. STANDARD ITEM CHECKLIST

A. PROCUREMENT

1. FAA Sec.602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed?

Yes. Loan agreement and implementation procedures will so provide.

2. FAA Sec.604(a). Will all commodity procurement financed be from the U.S. except as otherwise determined by the President or under delegation from him?

Yes

3. FAA Sec.604(a). If the cooperating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the U.S. on commodities financed? Bolivia does not so discriminate.
4. FAA Sec.504(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? N.A.
5. FAA Sec.608(a). Will U.S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items? Yes.
6. MMA Sec.901(b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. Yes. Loan agreement will so provide.
7. FAA Sec.621. If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as general and professional and other services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.

8. International Air Transport. Fair Competitive Practices Act, 1974

If air transportation of persons or property is financed on grant basis, will provision be made that U.S.-flag carriers will be utilized to the extent such service is available?

Yes

B. CONSTRUCTION

1. FAA Sec.601(d). If a capital (e.g., construction) project, are engineering and professional services of US firms and their affiliates to be used to the maximum extent consistent with the national interest?

Yes

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

Yes

3. FAA Sec.620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million?

Yes

C. OTHER RESTRICTIONS

1. FAA Sec.201(g). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?

Yes

2. FAA Sec.301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?

N.A.

3. FAA Sec.620(h). Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U.S.? Yes
4. FAA Sec.636(1). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U.S. or guaranty of such transactions? Yes
5. Will arrangements preclude use of financing:
- a. FAA Sec.414. to pay for performance of abortions or to motivate or coerce persons to practice abortions, to pay for performance of involuntary sterilization, or to coerce or provide financial incentive to any person to practice sterilization. Yes.
- b. FAA Sec.630(g). to compensate owners for expropriated nationalized property? Yes
- c. FAA Sec.660. to finance police training or other law enforcement assistance, except for narcotics programs? Yes
- d. FAA Sec.662. for CIA activities. Yes
- e. App. Sec.103. to pay pensions, etc., for military personnel? Yes
- f. App. Sec.106. to pay U.N. assessments? Yes
- g. App. Sec.107. to carry out provisions of FAA Sections 209(d) and 251(h)? (transfer to multilateral organization for lending). Yes

ANNEX 2

CERTIFICATION PURSUANT TO SECTION 611 (c) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I hereby certify to the Administrator of the Agency for International Development that to the best of my knowledge and belief the Republic of Bolivia possesses both the financial and human resources to effectively maintain and utilize the project to be undertaken pursuant to the terms of the A. I. D. loan proposed in this paper between the Government of Bolivia and the United States of America for improvement of the health facilities of the Republic of Bolivia with emphasis on coverage of health services to rural areas of the country. In so certifying I have taken into account the maintenance and utilization of projects in the Republic of Bolivia previously financed or assisted by the United States, and I have more particularly taken into account the demonstrated capability of the Republic of Bolivia to effectively utilize development projects of this nature.

July 5, 1975
Date:

Frank B. Kimball
Frank B. Kimball
Director
A.I.D. Mission to the
Republic of Bolivia.