

PD-APP-102

12A 66706

AGENCY FOR INTERNATIONAL DEVELOPMENT  
PROJECT DATA SHEET

1. TRANSACTION CODE  
 A = Add  
 C = Change  
 D = Delete

Amendment Number  
1

DOCUMENT CODE  
3

COUNTRY/ENTITY  
ECUADOR

3. PROJECT NUMBER  
518-HG-007-518-0076

6. BUREAU/OFFICE  
LAC

5. PROJECT TITLE (maximum 40 characters)  
National Shelter Delivery System Program

7. ESTIMATED DATE OF OBLIGATION  
(Under "B" below, enter 1, 2, 3, or 4)

8. COSTS (\$000 OR EQUIVALENT \$1 = )

A. Initial FY 81 A B. Quarter 4 C. Final FY 81 91

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						
(Grant)	( )	( )	( )	( 1,500 )	( )	( 1,500 )
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S.						
1. HG	20,000		20,000	35,000		35,000
2.						
Host Country					12,900	12,900
Other Donors)						
TOTALS	20,000	12,900	41,000	36,500	12,900	49,400

9. SCHEDULE OF AID FUNDING (\$000)

A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) PSEP	723	867		1,000		500		1,500	
(2) HG	723	862			35,000				35,000
(3)									
(4)									
TOTALS				1,000	35,000	500		1,500	35,000

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)  
864 | 865

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BU	EGEN	COOP	TECH	PART
B. Amount					

13. PROJECT PURPOSE (maximum 480 characters)

To increase the supply of shelter affordable to the urban poor by: (a) promoting a greater involvement by the private sector in the production and financing of such shelter; (b) lowering the cost of private and public shelter programs; and (c) developing viable, self-sustaining systems to finance shelter and basic infrastructure.

14. SCHEDULED EVALUATIONS

Interim 08/91 | Final 03/92

15. SOURCE/ORIGIN OF GOODS AND SERVICES  
 000  941  Local  Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

17. APPROVED BY  
Signature: Frank [Signature]  
Title: USAID DIRECTOR  
Date Signed: 05/25/89

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION  
MM DD YY: 05/10/89

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## GLOSSARY of ACRONYMS

AME-INFODEM	Association of Municipalities of Ecuador/Municipal Development Institute	Asociación de Municipalidades Ecuatorianas/ Instituto de Fomento de Desarrollo Municipal
BCE	Central Bank of Ecuador	Banco Central del Ecuador
BEDE	Ecuadorian Development Bank	Banco de Desarrollo
BEV	Ecuadorian Housing Bank	Banco Ecuatoriano de la Vivienda
CHF	Cooperative Housing Foundation	Fundación para la Vivienda Cooperativa
COLAC	Latin American Confederation of Credit Unions	Confederación Latinoamericana de Cooperativas de Ahorro y Crédito
CONADE	National Planning Board	Consejo Nacional de Desarrollo
CUNA/WOCCU	Credit Union National Association/World Council of Credit Unions	Asociación Nacional de Cooperativas de Ahorro y Crédito/ Consejo Mundial de Cooperativas de Ahorro y Crédito
EMA-Q	Quito Municipal Sewerage Authority	Empresa Municipal de Alcantarillado de Quito
EMAP-Q	Quito Municipal Water Authority	Empresa Municipal de Agua Potable de Quito
ETAPA	Cuenca Municipal Water, Sewerage and Telephone Authority	Empresa Pública Municipal de Teléfonos, Agua Potable y Alcantarillado de Cuenca
FFH	Financial Fund for Housing	Fondo Financiero para la Vivienda
FODEM	Municipal Development Fund	Fondo de Desarrollo Municipal
FONADE	National Development Fund	Fondo Nacional de Desarrollo
GOE	Government of Ecuador	Gobierno del Ecuador
IEOS	Ecuadorian Institute of Sanitary Works	Instituto Ecuatoriano de Obras Sanitarias
IESS	Ecuadorian Social Security Institute	Instituto Ecuatoriano de Seguridad Social
IFE	Intermediary Financial Entity	Entidad Financiera Intermediaria
JNV	National Housing Board	Junta Nacional de Vivienda

## I. EXECUTIVE SUMMARY

This Project Paper Supplement for the National Shelter Delivery System Program (518-HG-007) responds directly to the issues and concerns raised by AID/W at the September, 1988 DAEC review of the Mission's request to amend the Program to finance an expanded infrastructure component. The Mission is not seeking HG authority beyond the level of \$35 million approved in FY 88. The \$10 million required to finance the infrastructure activity will be obtained by a reduction of \$5 million in HG authority previously allocated to finance other Program components.

On the basis of this revised PP Supplement, USAID/Ecuador is requesting LAC approval to amend the Program Implementation Agreement:

- to reflect the increase of \$5 million in HG funding that was authorized in September, 1988
- to authorize the use of HG advances by the Ecuadorian Development Bank (BEDE) to provide construction financing for municipal infrastructure projects; and,
- to expand the definition of eligible beneficiaries to include communities in which no less than 75% of the residents have incomes below the median.

Once signed, the amendment will enable the GOE to seek reimbursement for eligible infrastructure expenditures, and to negotiate the corresponding \$10 million HG loan as and when required, bringing total HG loans to \$20 million. No further borrowing on the remaining \$15 million in HG authority will be approved until there is significant, measurable progress toward use of market interest rates in the operation of the PFH.

In addition, following AID/W review of this PPS, the Mission will amend the Program technical assistance component to:

- authorize an increase of \$500,000 in grant funding for a total of \$1,500,000 to fund technical assistance and training in support of the broader policy reform and the institutional strengthening agendas of the project, and
- extend the Project Grant Agreement PACD, from 8/31/89 to 12/31/91, in order to meet the objectives of the TA plan.

### A. Background

The original design of HG-007 included a pilot urban upgrading component. The focus and the emphasis of the original Project Paper clearly was on the production and sale of new shelter by the private sector and on home improvement lending. Investments in infrastructure to upgrade existing settlements, while contemplated in that Project Paper, are mentioned briefly and not treated in any detail (see, for example, pages 35 and 48). Based on continuing studies of the shelter sector in Ecuador, the Mission has come to realize that upgrading deserves greater emphasis in the implementation of a national shelter delivery system in Ecuador.

There is both an urgent need and a real opportunity to support the self-help efforts of poor urban families to improve their living conditions in the growing number of spontaneous settlements on the periphery of cities in Ecuador by funding residential infrastructure projects in those municipalities willing to adopt cost recovery measures and to undertake other reforms to strengthen the financing and delivery of such services. A national shelter delivery system, such as that contemplated in HG-007, must respond to the need and to the opportunity.

In September, 1988, The Mission requested \$10 million in additional Housing Guaranty authority earmarked to finance the infrastructure investments of the supplemental project. At that time LAC authorized \$5 million and asked the Mission for additional information on the Program status and on the design of the supplemental project. In preparing this response to the Bureau's concerns, the Mission has decided not to seek authorization of the additional \$5 million to complete funding of the supplemental project, as requested in September, 1988. The decision is not based on a change in the projections of demand for Program resources. Rather, it reflects a more conservative approach to the management of those resources.

Current estimates still show a need for over \$30 million in HG financing for FFH discount of home improvement and new housing loans. However, the Mission and the BCE have agreed that Housing Guaranty funding for new housing and home improvements will be reduced from \$30 to \$25 million, freeing up the HG authority to complete the \$10 million required for infrastructure. This leaves \$15 million available to finance new private sector housing projects or home improvement activities beyond those already in process.

This reallocation is not intended to become definitive or inflexible. Rather, the BCE will re-evaluate use of FFH funds based on actual performance and new projections of demand. Adjustments will be made by the Bank as necessary in the normal course of its management of the FFH. Notwithstanding, the reallocation will not be used to proceed with HG borrowings for housing and home improvements in excess of \$10 million until there is significant, measurable progress toward use of market interest rates by the FFH.

#### B. DAEC Issues

The September, 1988 DAEC review of the PP supplement focused on key issues regarding the financial policies of the GOE and their impact on the Program's ability to lend long-term for housing projects; the ability of the municipal entities to recover the costs of infrastructure improvements and residential connections in terms of investment, maintenance and financial costs; and the development of a technical framework for the institutional strengthening of project entities to enable them to effectively carry out the Program. The DAEC review questioned the progress made to date in policy dialogue with the GOE, especially the capacity for sustaining a financial fund to meet the demand for long-term shelter financing given the current economic environment and interest rate subsidy issues. To address these concerns, the DAEC advised of the need for a clear set of objectives which could identify an approach to decreasing water tariff subsidies and concessional interest rates.

HG authority for the Program was increased by \$5 million. The results of the DAEC review, however, required the Mission to respond to the following major policy issues prior to signing a new or amended implementation agreement with the GOE, and before proceeding with any further borrowings under the original HG authority.

To fully address the policy issues identified during the DAEC, the Mission was asked to submit a detailed Program implementation plan for AID/W review that would include: 1) a revised policy agenda, including a report on progress to date and performance benchmarks; 2) a more complete policy agenda for the new municipal component of the Program, also including performance benchmarks; 3) an institutional development plan defining the roles and capabilities of the municipalities and utility authorities, and the technical assistance necessary for the success of this component; and, 4) an overall technical assistance plan for the Program, addressing both policy dialogue and institution building components.

The following summarizes the Mission's response to these DAEC issues as addressed in this revised Project Paper Supplement.

#### 1. Policy agenda

The Policy Agenda for Program 518-HG-007 will focus on three areas:

- financial policies of the FFH
- financial management of municipal infrastructure
- expanded private sector low-cost shelter programs

#### Financial Policies of the FFH

The FFH has become an important and valuable mechanism to facilitate and promote greater participation by the private sector in shelter programs affordable to the urban poor. Yet, this cannot be considered a complete success until the financial policies of the Fund are revised to prevent its decapitalization through the effect of inflation and to make investment in housing finance attractive to private capital. The President of the Monetary Board and other top public officials recognize and accept the need to avoid the erosion of the capital of the FFH through inflation. In fact, they see this as a small part of the larger problems faced by other institutions, such as the social security and savings and loan systems, which are also dependent on the creation of a viable long-term capital market. The World Bank and the IDB have raised the same concerns with the GOE.

At the moment, the overriding priority of the GOE economic team is to bring down inflation. Lower inflation, in their view, is the quickest way to achieve positive interest rates. On April 20, the Monetary Board approved a complete restructuring of the interest rates which it charges on its various lines of credit. The yield to the Financial Fund for Housing was increased by

50% from 18 to 27%. This is the rate charged by the FFH on its discounts. The lending rate to FFH beneficiaries for all activities - new housing, home improvements and infrastructure - was set at 32%, which approximates freely negotiated interest rates for private-sector housing loans in Ecuador today. The mutuales originated over \$4.0 million in housing loans at an average rate of 32% between January and March of this year. In the last twelve months, they have originated over \$13 million in housing loans at an average rate of 29%. The credit unions, which lend for shorter terms than the mutuales, originated nearly \$6 million in housing loans in 1988 at an average rate of 32%. Under these circumstances, requiring further increases in the rates charged by the FFH would produce the anomaly of making these loans more expensive than those of comparable maturity and purpose freely contracted under current market conditions.

The fact remains that the Monetary Board kept the FFH rates at 23%, well below market rates, for months after the increase in inflation demanded a change. A large part of the problem derives from the dependence on the Monetary Board to set the FFH (and other BCE discount line) rates, which makes it as much a political as a financial process. The issue is the process for setting rates and not the particular level of interest rates at a point in time. The Mission and LAC agreed during the Action Plan review that HG borrowings beyond the current \$10 million loan and the additional amount required to finance the infrastructure component of HG 007 will not be approved until there is significant, measurable progress toward use of market interest rates in the operations of the Financial Fund for Housing. Despite the recent increase in FFH rates, the Fund is still not driven by decisions made in the financial markets. As a condition to further HG borrowings, the Mission is seeking a decision by the Monetary Board to allow the financial markets to determine the interest rates for loans to be discounted with the FFH. Rather than dictating interest rates, as it does currently, the FFH would operate on spreads between market rates and its discount rates.

An early opportunity to implement such a decision would be provided by the acceptance of the portfolio of home improvement loans generated by the credit unions in the open markets. The Central Bank has initiated studies to develop a more sophisticated understanding of the issue and to initiate a dialogue with the private sector to try to form a consensus on the measures that could and should be adopted to create a viable long-term capital market in Ecuador. The timing of the decisions on new measures is critical since it bears on the process of HG borrowing. Decisions taken by December, 1989 will allow new borrowings to proceed normally without interrupting the flow of the Program.

#### Financial management of municipal infrastructure

The policy agenda of the infrastructure component of the Program has two major aspects. The first is central government guidance, primarily through the Economic Development Bank (BEDE), of an efficient system to finance urban infrastructure in Ecuador. The objective is to strengthen the capacity of BEDE and IEOS (the Sanitary Works Institute) to lead and advise municipalities

in the design and implementation of financially sound municipal infrastructure systems. Therefore, BEDE and IEOS need to employ criteria that require affordability and cost recovery issues to be addressed in project design. Design norms and standards need to be reviewed and revised to make them consistent with affordability and cost recovery criteria, and a better system of local socio-economic data collection than now exists needs to be designed by BEDE and IEOS and implemented by municipalities in order to verify affordability of project proposals. Both BEDE and IEOS need to be strengthened institutionally in order to augment their capacity to properly evaluate municipal infrastructure proposals, particularly for urban upgrading in low-income communities.

The second aspect of the policy agenda has to do with policies directly at the municipal level. The objective is to strengthen the financial self-sufficiency of municipal infrastructure agencies. These agencies will be made more self-sufficient with changes in management and operating practices within the agencies and changes in municipal tariff policies. The policies necessary for reform internal to the agencies are those that will lead to the capacity for financial planning on the basis of commercial standards; i.e., systems of inventory control, an inventory of fixed assets, and cost center accounting. The tariff reforms needed are of two dimensions; first, a restructuring of the formula guiding tariff formulation so that all relevant operating and maintenance costs are taken into consideration, but particularly an allowance for asset depreciation at constant costs so that the system can be replaced as it loses economic value, and an allowance for the costs of investment so that the costs of extending system service to new households and firms can be recuperated through tariffs; second, an increase in the frequency of tariff adjustment from a yearly to a quarterly or monthly automatic adjustment that is based on changes in costs from the previous billing period. Progress in this area will be demonstrated by:

- The adoption by BEDE of project evaluation criteria for infrastructure projects for urban communities, which stress the need for cost-efficient designs and for full recovery of investments. By establishing such procedures, BEDE's position as the principal GOE financier of municipal infrastructure development will be rationalized and strengthened.
- The adoption and diffusion by IEOS of technical and environmental standards that are appropriate for water and sanitation service extension in rapidly-growing urban communities.
- The acceptance and implementation by municipal infrastructure agencies of new technical standards for low-cost infrastructure design, reducing average investment per connection in peripheral urban communities to the range of US\$200 to US\$300, at current costs.
- The implementation of a restructured tariff formula for calculating the average cost of operating, maintaining, and expanding water and sewer services in urban areas, and an increase in the frequency of that adjustment. The restructured formula should include recovery of the portion of the capital investments that are not recovered directly

through connection charges to new users. The water authorities of Quito and Cuenca (EMAP-Q and ETAPA) have already adjusted tariff levels in 1989 to levels that are respectively 65 percent and 30 percent higher on average than 1988 levels.

The acceptance by the GOE Controller General of the system of cost accounting being developed by EMAP-Q and his suggestion that it would be suitable for all municipal infrastructure agencies. By providing systems for inventory control and cost center accounting, the new systems will greatly improve the municipal infrastructure agencies' ability to control costs and to calculate costs in a timely manner for tariff adjustments.

#### Expanded private sector low-cost shelter programs

The growing gap between the shelter needs of the urban poor and the response offered by the government and the private sector is being addressed through the efforts of the urban poor themselves in what is called the informal shelter sector. These spontaneous, largely unassisted efforts account for over 70% of the housing in urban areas in Ecuador. The informal shelter process is slow and costly, frequently requiring ten or more years to reach minimal levels of basic services and often characterized by problems of land titling. The Mission believes that private, non-governmental institutions can provide valuable support to the spontaneous efforts of the urban poor, helping them to achieve minimally acceptable conditions sooner and through a more orderly process. Key to this effort are housing cooperatives and credit unions which are already employed actively in responding to the shelter needs of the urban poor.

Housing cooperatives can become an important link between the informal shelter sector and the private construction, building materials, and banking industries by organizing the existing demand, which is enormous but scattered and random, and articulating that demand in the form of coherent proposals which are technically sound and viable from the perspective of private lenders. As they operate today, housing cooperatives serve largely as advocacy groups, gathering many families' individual expressions of need into request for help: asking city governments to give them water and sewer, clamoring for soft loans or donations, sending dozens of letters to charities and international aid organizations. Housing cooperatives are active today despite their shortcomings. They can do much to improve the links between AID's target group and Ecuador's formal private sector now. Those improved links are possible, are desirable, and will benefit both the families whose living conditions are improved and the private builders and bankers, who will be able to expand their markets and become relevant to the needs of a much broader proportion of Ecuador's families.

The Cooperative Housing Foundation visited Quito in April, 1989. CHF met with municipal authorities, officials of the Ministry of Social Welfare, important private sector leaders, and with a cross-section of community leaders and cooperative directors in Quito. The CHF visit confirmed the Mission's sense that with additional organization, assistance and training, cooperatives will become a more effective means of linking the formal private sector to the needs of the urban poor.

CHF has proposed to work closely with the Municipality of Quito to assist a limited number of existing cooperatives in preparing viable housing proposals for financing by private sector lenders. For example, CHF can help several of the cooperatives with infrastructure programs, focussing on two levels of effort. To speed and reduce the cost of home construction, CHF can help communities organize the distribution, sale, and financing of commonly-used construction materials, by private suppliers, in neighborhoods where a high rate of housing construction is under way.

Within the context of its involvement with private shelter finance institutions, the Mission will pursue a very promising lead with credit unions. As with the housing coops, the initiative to develop an expanded response to the shelter needs of the urban poor has come from the interested parties themselves, in this case from the Ecuadorian credit unions and from their U.S. counterpart, CUNA/WOCCU.

Credit unions make their loans at a market rate of interest. Their source of funds is members' own deposits, which they lend to members at higher rates than those they pay for deposits. A major constraint to the growth of the credit union system, particularly in terms of lending for shelter purposes, is their total dependence on members' savings to finance their loan portfolios. Credit unions are chartered under different legislation than that pertaining to the rest of the financial system and lack direct access to discount facilities in the Central Bank. This restricts their loans in amount and term to ensure adequate liquidity and reserves for their operations.

The principal obstacle to participation by credit unions in BCE windows, such as the FFH, is the strong perception of both the BCE and the Superintendency of Banks that a much more stringent and consistent oversight of the financial operations of credit unions is required. Currently, some are under the supervision of the Ministry of Social Welfare and others under the control of the Superintendency of Banks. There is general agreement (both in the credit union movement itself and among monetary authorities of the GOE) that the more suitable home for the credit unions is with the Superintendency, as long as the special nature and requirements of credit unions are taken into consideration in any realignment. The Superintendency of Banks has developed draft legislation to expand its jurisdiction to include all credit unions and is working on the regulatory requirements, such as accounting systems and external audits, which they would apply initially to the twenty largest credit unions. They expect to complete this process in 1989.

Given the demonstrated willingness and ability of credit unions to lend for shelter at market rates in Ecuador today, the Mission will support the joint initiative of the credit unions and CUNA/WOCCU to reach agreement with the GOE on measures which will lead to their direct participation in and access to the broader financial system of the country, with an immediate objective being that of access to the resources of the FFH.

The final products of the effort to support to the Ecuadorian credit unions will be:

- Implementation of measures to strengthen and expand government supervision of credit unions as a quid pro quo to granting them direct access to Central Bank discount facilities and especially the FFH.
- Improved and expanded credit union lending systems for basic shelter needs.

#### Relation of policy objectives to other Mission objectives

The proposed policy reforms in the financing of municipal infrastructure with its related institutional development program, and the provision of affordable infrastructure services to marginal, informal urban communities, is directly related to and will support the Mission's proposed urbanization strategy, to be presented in the second quarter of FY'90. A future program to be designed in support of the urbanization strategy would couple HG capital assistance principally for municipal water and sewer investments in unserved poor urban neighborhoods, with technical assistance provided for reforms in urban management. The project would provide financial management assistance and assistance to mayors for building local coalitions of municipal officials, private sector representatives, and neighborhood community leaders to collaborate in finding solutions and resources for low cost shelter and urban infrastructure.

#### 2. Infrastructure policy agenda

This issue is covered in the discussion of the overall Program policy agenda above.

#### 3. Institutional development plan

The roles of key institutions in the proposed supplemental project are summarized in Table 1.

#### Assessments of Institutional Capacity

##### Banco Central del Ecuador (BCE)

An assessment of the BCE's management of the Financial Fund for Housing (FFH) conducted in April 1989 by an independent senior housing finance consultant confirms that there are many advantages to having placed the FFH in the BCE. On the other hand, the evaluation also concluded that there are administrative difficulties affecting the efficient operation of the FFH. To rectify this situation, the BCE must take steps to strengthen the staffing of the FFH as well as to structure a continuing process of communication with the institutional clients of the Fund.

These administrative problems do not reflect a lack of interest in the FFH. The approved GOE monetary program for 1989 identifies credit to finance private housing construction as one of four priorities, together with agriculture, small business and non-traditional exports. Twenty-eight percent (28%) of the total Central Bank credit, or S/. 10 billion of their own funds,

Table 1

Institutional Roles in Supplemental Project

Institution/ Role

BCE (Central Bank)

1. Promote National Shelter Delivery System Program.
2. Manage all technical assistance grants for Program.
3. Manage Financial Fund for Housing (FFH) and receive loan packages for discounting from BEDE and private financial institutions.

Municipalities and Municipal Utilities

1. Initiate proposals to address infrastructure needs of informal settlements.
2. Design and contract infrastructure projects.
3. Operate and maintain water and sewer systems.

BEDE/IEOS

1. Manage and provide oversight for technical, environmental and financial aspects of the infrastructure projects.

BEDE (Ecuadorian Development Bank)

1. Act as Intermediate Financial Entity (IFE) for municipal infrastructure loans discounted through FFH.
2. Analyze technical and financial soundness of municipal infrastructure project proposals.
3. Provide construction and/or long-term financing to municipalities for projects.

IEOS (Ecuadorian Institute for Sanitary Works)

1. Set design standards for urban infrastructure projects.
2. With BEDE, review environmental soundness of project proposals.

has been allocated to provide construction financing for private housing projects. The intention is that the long-term loans to finance the purchase of the housing will come from the FFH. In addition, the GOE has deposited nearly \$4.5 million as counterpart funds in the FFH, well in excess of the one-to-three ratio required for the recent \$10 million HG loan. These are significant actions at a time of fiscal and monetary austerity.

The administrative problems of the FFH reflect the ambivalent attitude of the BCE toward activities which are not strictly central banking functions, such as the development banking function implicit in the various financial funds currently operating out of the BCE. The Bank's structure, its procedures and its staff can handle the discounting of loans by the FFH and all related paper work and accounting. There is no provision for those efforts which fall outside of this routine. All of the staff currently involved in the operation of the FFH have other duties and responsibilities. Aggressive pursuit of pending actions is often lacking. For example, there are innumerable cases when both builders and intermediate financial institutions have had to wait for months to receive a simple response from the BCE when they have inquired on the status of an application for FFH funding or any similar matter. There is no systematic, on-going contact among the parties and very little consultation of the clients by the BCE before decisions affecting the rules and procedures of the FFH are taken.

To address these problems, the BCE must put in place an advisory board with representation from potential FFH institutional clients and contract a full time manager for the Fund. The creation of this coordinating entity and the contracting of the full-time manager for the Fund, both under the BCE's oversight, will enable the Bank to count upon new capability to act aggressively on pending actions, draw upon inputs from the different public and private sector users to improve its current operational efficiency, and enhance its process of communication with the FFH's institutional clients.

#### BEDE, IEOS, MUNICIPALITIES

Initial infrastructure project proposals were submitted by EMAP-Q and EMA-Q in late 1988 for evaluation by BEDE and IEOS. The Mission has initiated the infrastructure component of the Supplemental Project with analyses of the situation in the cities of Quito and Cuenca. FFH funding for infrastructure may be made available to other cities willing to comply with the Program's policy agenda and eligibility criteria. The feasibility analysis is based on what the Mission has learned from these initial infrastructure projects. In turn the Mission has incorporated the results of the assessments into its technical assistance plan for the Program. The analysis is based on institutional and financial evaluations performed by two consultants from the ST/H WASH (Water and Sanitation for Health) Project.

The Mission believes that all of the institutions involved in the infrastructure component of the Supplemental Project have the capacity to implement the infrastructure investments and to manage the process of institutional change the Program requires of them. The Mission believes that this process of change is best managed as an iterative one, of "changing by doing".

The Program's activities are not new ones to any of the institutions, but the Program is requesting the institutions to work within relatively new parameters of cost recovery, technical design, and project affordability. Therefore the Mission believes that the most effective, enduring way for the institutions to learn the new process is by proposing a few projects, evaluating them, implementing them, and then evaluating the results in order to refine the process further through the subsequent project proposals and investments.

BEDE has a key leadership role in the municipal infrastructure component of the Supplemental Program. Its primary function will be leading and advising municipalities in the identification of feasible projects that reduce infrastructure deficits in low-income communities. The Mission will assist BEDE to improve project evaluation criteria and other project proposal requirements, which BEDE will use to evaluate projects for financing.

IEOS needs to use not one but a range of design standards and norms that take into account the different requirements for infrastructure in different community settings in which consumption levels vary with income and shelter quality. The Mission will provide technical assistance to IEOS, through consultants and training, to help it develop a range of appropriate standards and norms for these types of projects.

The municipal water and sewer companies of Quito and Cuenca, the cities in which the Mission will initiate the infrastructure component of the Supplemental Project, also need to focus on the implications of their project designs on financial feasibility. These companies have accepted this requirement and have already twice redesigned and resubmitted their project proposals to BEDE and IEOS for evaluation.

#### Financial Analysis

The institutions with a financial role in the Supplemental Program are the Development Bank of Ecuador (BEDE) and, at least initially, the Water Company of Quito (EMAP-Q), the Sewer Company of Quito (EMA-Q), and the Telephone, Water, and Sewer Company of Cuenca (ETAPA).

From the assessments by the WASH consultants of the financial capacity of the institutions participating as financial and administrative entities in the Supplemental Project, the Mission concludes that the Program is financially feasible. Each institution has some weakness in areas of financial management or financial policy, but none of great enough severity to impede the achievement of Program objectives.

The water and sewer companies were found to have inadequate accounting and inventory control systems, and therefore to be institutionally weak in the area of financial planning. Each of these areas of financial management is the subject of activities under the technical assistance program. Assistance will be provided in the areas of planning and management information systems, tariff policy, inventory management, financial and cost accounting, billing and collections, and debt management.

The WASH consultants contracted by the Mission made two specific observations about tariff policy in the two cities that are probably applicable to the rest of Ecuador's municipalities. First, that the majority of water users consume less than 60 cubic meters of water each month. Therefore, with smaller changes in tariff levels for households in the lower consumption ranges, proportionately larger increases in total revenues can be realized. For example, in Quito, the 72 percent of households that consume 60 or fewer cubic meters per month produce 31 percent of the company's tariff revenue, while the 9 percent of consumers who consume more than 60 cubic meters monthly produce 59 percent of the company's tariff revenue. In Cuenca, the 71 percent of households that consume 60 or fewer cubic meters monthly produce 19 percent of ETAPA's tariff revenue, while the 29 percent of households who consume more than 60 cubic meters monthly produce 81 percent of its tariff revenue. While some degree of cross-subsidization will continue to be justified for minimal consumers of water, the water companies will be unable to avoid raising tariffs in the lower consumption ranges in order to significantly raise tariff revenues and cost recovery.

The second observation made by the WASH team with respect to tariffs, is that it would be desirable for tariff adjustments to be made more automatically, gradually, and in more frequent intervals. The more frequent the adjustments, the more they can approximate changes in operating costs, and the less jolting they are to consumers.

Through its technical assistance program, the Mission will continue the analyses of proposed changes of tariff policies under consideration by the municipal water and sewer companies in order to achieve increased self-sufficiency with an equitable distribution of costs.

#### 4. Technical Assistance Plan

The proposed technical assistance plan is designed to support the accomplishment of the broader policy reform and institutional development objectives of the Program. The TA plan will also serve to put in motion a process through which mechanisms and activities developed as part of the Program can continue beyond the completion of the Program.

##### Housing finance policy development

The TA plan for the BCE/FFH will include funding for a series of policy studies and assessments to be carried out under a contract with one primary technical expert, supported by other short-term consultancies funded over the life-of-project. In addition, workshops and seminars to be organized and attended by top level GOE economic officials, as well as U.S., Ecuadorian and other monetary experts and economists, will be implemented in the first year of the project. It is intended that the results and conclusions of these studies and policy roundtable sessions will provide the analytical foundation, and current thinking and experience from other countries, to better enable the GOE to formulate its own coherent, equitable interest rate policy. The primary objective of this policy component is to maintain long-term capital integrity and strengthen market forces in the economy, particularly with respect to the operation of the FFH.

### Institutional strengthening of the FFH

The earlier institutional analysis of the FFH identified the need for the appointment of a full-time manager of the Fund and for the creation of an advisory board. These measures are necessary to improve the overall operation of the FFH. They will also provide critical support to the housing finance policy development process. The full-time manager will be available to coordinate the TA process within the BCE and with other participating institutions. He or she will also monitor pending actions and provide follow-up. The advisory board will provide an invaluable forum to debate issues, consider findings and recommendations and generally to build a consensus in support of the new policies.

Neither the full-time manager nor the advisory board per se will require funding under the grant. They will be supported by the grant-funded long-term advisor who has been serving under a PSC since August of 1987 at a total cost over three years of \$450,000. His expertise in the design of both new housing and home improvement programs affordable by the urban poor will complement that of the short-term advisors in housing finance and economics. The advisor has become a valuable link between the private sector banks and builders participating in the Program and the BCE staff managing the FFH. With these contacts he will be able to support the implementation of new lending instruments once approved.

### TA in support of the Infrastructure Component

The primary objective of the technical assistance plan for the municipal infrastructure program is to develop a capacity within national and local governments to analyze and address the need for the self-sustainability (i.e. full cost recovery) of municipal infrastructure systems. By means of a well coordinated and phased technical assistance plan, the following three key outputs will be achieved: 1) development of BEDE's and IEOS's capacity to lead and advise municipalities in the design and implementation of financially-sound infrastructure systems; 2) the strengthened financial self-sufficiency of municipal infrastructure agencies, beginning with those in Quito and Cuenca; and, 3) dissemination of the initial experiences of the Quito and Cuenca program to other municipalities in Ecuador, through workshops and seminars organized and carried out by the Association of Ecuadorian Municipalities (AME) and the Institute for Municipal Development (INFODEM), AME's technical services organization. The TA will be carried out through a buy-in to the S & T Bureau's WASH contract.

### Credit Unions/Housing Cooperatives

The Mission will support a program to assist the credit union system to (a) gain direct access to the resources available for shelter investment through the Financial Fund for Housing, and to (b) develop an improved, expanded credit union lending system for basic shelter needs. Assistance to the credit unions will be provided by the Credit Union National Association (CUNA) and the World Council of Credit Unions (WOCCU) through a Mission buy-in to the S&T specific support grant to CUNA. WOCCU/CUNA will work with Ecuadorian credit unions directly, and will also draw on the relevant

information and experience available from other credit union systems working with shelter finance as well as from its regional member organization, the Latin American Confederation of Credit Unions (COLAC). The effort will include also domestic and international training, seminars, and specialized technical assistance as needed.

Housing cooperatives are important to this Program because they are the main source of housing for low-income urban families today. Improving their performance and making them more reliable actors in the shelter sector has enormous benefits both for the direct beneficiaries, the families whose living conditions improve, and also for private lenders and builders who today cannot figure out a way to work with this huge and growing market.

The Cooperative Housing Foundation has proposed a program of technical assistance to address these opportunities for which the Mission will be requesting funding from the Administrator's set-aside for Private Provision of Social Services for a buy-in to the CHF specific support grant. CHF will present a definitive proposal which the Mission will present to PPC and LAC for consideration. Should funding from the Administrator's set-aside not be available, the Mission will examine alternatives, including a re-distribution of the grant funds attached to this Program.

#### Summary TA Plan

The total cost of grant-funded technical assistance and training, and its breakdown by major components is:

Housing Finance Policy Development	\$ 220,000
Strengthen FFH/other	485,000
Infrastructure	500,000
Credit Unions	<u>295,000</u>
TOTAL	\$1,500,000

#### C. Summary Financial Plan

The Mission estimates that the first FFH discounts of infrastructure investments will occur during the first quarter of FY 90, and the last discounts will occur during the second quarter of FY 92. Approximately 44% or US\$4.5 million, of the FFH infrastructure discounts are scheduled to occur during FY90, approximately 47 percent, or US\$4.8 million, of the discounts will occur during FY 91, and 9 percent or US\$0.9 million, will occur during the first two quarters of FY 92.

TABLE 2  
TOTAL PROGRAM OUTPUTS AND COSTS

<u>OUTPUTS</u>	<u>NO.</u>		<u>VALUE</u>	<u>COSTS (US\$000's)</u>			
	<u>TOTAL</u>	<u>PERCENT</u>		<u>DOWN PAYMENT</u>	<u>AMOUNT</u>	<u>FINANCED</u>	<u>PERCENT</u>
<u>SHELTER SOLUTION TYPE</u>	<u>UNITS</u>			<u>AMOUNT</u>			
New Housing Units	13,780	21	34,875	6,975	27,900	60	
Home Improvement Loans	10,000	16	10,000	0	10,000	20	
Urban Upgrading Loans	42,150	63	12,700	2,700	10,000	20	
<b>TOTALS</b>	<b>65,930</b>	<b>100</b>	<b>57,575</b>	<b>9,675</b>	<b>47,900</b>	<b>100</b>	

TABLE 3  
TOTAL PROGRAM FINANCING  
SOURCE/APPLICATION OF FUNDS  
(US\$000's)

<u>APPLICATION</u>		<u>SOURCE</u>				
<u>SHELTER SOLUTIONS</u>	<u>AMOUNT FINANCED</u>	<u>IFE</u>	<u>FFH</u>			<u>PERCENT</u>
			<u>GOE</u>	<u>AID</u>	<u>TOTAL</u>	
New Housing Units	27,900	2,900	7,000	18,000	25,000	56
Home Improvement Loans	10,000	0	3,000	7,000	10,000	22
Urban Upgrading Loans	10,000	0	0	10,000	10,000	22
<b>SUMMARY</b>		<b>IFE</b>	<b>GOE</b>	<b>AID</b>	<b>FFH</b>	
Total Financing	47,900	2,900	10,000	35,000	45,000	100
Percent (FFH)	n/a	n/a	23	77	100	n/a
Percent (Total)	100	6	21	73	( 94)	n/a

## II. BACKGROUND AND RATIONALE

### A. Background

Through Housing Guaranty projects 005 (Solanda) and 006 (Low Income Housing Project) AID has been successful in encouraging the Government of Ecuador (GOE) to reorient public housing programs to address the needs of the urban poor more effectively. GOE housing program per family costs are now lower, reflecting better policies, more efficient program designs and improved targeting of investments. The Ecuadorian Housing Board (JNV) and the Housing Bank (BEV) routinely carry out projects involving evolutionary housing designs, such as core houses, which were first tried out in Solanda. The BEV also has a nationwide home improvement lending program developed largely in the implementation of HG 006.

Despite these important improvements, limitations in the capacity of the BEV/JNV suggest that even with further, necessary reforms, the public housing programs will still only reach one-third of low-income households. The approval of Housing Guaranty project 007 in 1984 signaled a shift in A.I.D. shelter assistance to Ecuador from a narrow focus on the programs of the national housing agencies -- BEV/JNV -- to a broad concern for the overall performance of the sector, particularly in providing for the shelter needs of the urban poor. The objective, as the project name states, is to help create a national shelter delivery system.

In concept, the shelter delivery system contemplated in HG 007 is simple:

Create a discount window in the Central Bank, accessible to all of the banking system, public and private.

Provide financing on uniform terms and on a first-come, first-served basis for housing investments affordable to the urban poor, whether carried out by public or private institutions.

The window was placed in the Central Bank in order to move the exclusive locus of low-cost housing programs away from BEV/JNV and to encourage greater participation by other institutions, public and private, in seeking to address the shelter needs of the urban poor. The Financial Fund for Housing (FFH) was created by the Monetary Board in August, 1986.

The efficacy of the Financial Fund for Housing in stimulating the participation of private builders and banks in the low-cost housing market has been proven. Over 6,700 new housing units, with an average sales price of about \$2,200, are under construction by fourteen private builders and three housing coops. Six private financial institutions will handle 90% of the financing. The public Housing Bank (BEV) will handle the remaining 10%, to be provided largely to the three coops. Through the end of April, 1989, the FFH had disbursed \$3.6 million, all to private banks, to finance 1,400 home improvement and new housing loans.

## B. Rationale for Program Amendment

### 1. Need and opportunity to modify project emphasis

The original design of HG 007 included a pilot urban upgrading component. The focus and the emphasis of the original Project Paper clearly was on the production and sale of new shelter by the private sector and on home improvement lending. Investments in infrastructure to upgrade existing settlements, while contemplated in that Project Paper, are mentioned briefly and not treated in any detail (see, for example, pages 35 and 48). Based on continuing studies of the shelter sector in Ecuador, the Mission has come to realize that upgrading deserves greater emphasis in the implementation of a national shelter delivery system in Ecuador. Elected mayors have also expressed a strong desire to do something about the unattended needs in the growing number of spontaneous settlements in cities throughout the country.

Ecuador is rapidly becoming a predominantly urban country: its urban population has grown from less than 30 percent of the total in 1950 to slightly more than 50 percent at present. Estimates are that it will reach almost 60 percent by 1995. Urban growth in absolute terms is accelerating. It took 32 years, from 1950-82, for the urban population of Ecuador to grow by three million. In the next thirteen years, from 1982-95, the urban population will grow again by three million.

In 1950, there were only two large urban centers: Guayaquil with 250,000 people and Quito with 210,000. No other city had more than 50,000 inhabitants. By 1995, there will be 13 cities with more than 100,000 inhabitants. Cuenca will be larger than Guayaquil was in 1950. Machala and Portoviejo will be as large as Quito was then.

The basic housing and service needs of the urban population are not being met. Some 70 percent of urban families have had to arrange for their own housing through the informal sector, with resulting problems in land titling, quality of construction and access to basic infrastructure (notably water). Guayaquil has long been the prime example of rapid, spontaneous residential expansion in Ecuador. In 1950, "the suburbio" (as the area of spontaneous settlements in Guayaquil is called) already accounted for 15% of the city's population. The problem is spreading. According to municipal records, in 1982 there were 87 spontaneous settlements in Quito. By 1988, a study prepared for UNICEF put the number at 291, with a population of 660,000 of the total 1.2 million inhabitants of Quito. In Cuenca, the process is just beginning. The center city can no longer provide for the shelter needs of the poor. Housing is expanding rapidly along the roads leading out of the city. Outlying rural settlements are becoming semi-urban dormitory communities for workers employed in Cuenca. Some 60,000 workers commute to and from the city daily.

While the pattern and the intensity of the shelter problem varies from city to city, there is a common factor. Coverage of basic services -- water, sanitation and electricity -- is deteriorating. Water system coverage dropped from 63% to 57% of the population in Guayaquil, and from 84% to 70% in

Quito between 1982 and 1988. Cheap and plentiful petrodollars were used up to the early 80's to expand the infrastructure networks on a virtual grant basis. The collapse of the oil boom and of high prices for crude oil ended this process. Municipal tariffs on basic services had become badly distorted during the period of bonanza. Subsidized tariffs, which favor the mostly middle- and upper-income families connected to municipal water systems, make it impossible to finance the expansion of the systems. The poor, unserved by the limited existing systems, must buy their water from private vendors who sell from trucks at rates that can be as much as twenty-five times that charged to municipal water consumers.

Local officials, whose election depends more and more on voters living in the unserved, spontaneous settlements, have become active in trying to address this problem. Mayors, such as Rodrigo Paz of Quito, Jorge Piedra of Cuenca, Leonardo López of Santo Domingo, and Bolívar Castillo of Loja, are anxious to marshal all resources to improve their cities and provide services to their constituents. They are practical and understand that they must reform the approach to financing such services. For example, the water and sewer authorities in Quito and Cuenca have increased tariffs by 30 to 65%.

Thus there is both an urgent need and a real opportunity to support the self-help efforts of poor urban families to improve their living conditions in the growing number of spontaneous settlements on the periphery of cities in Ecuador by funding residential infrastructure projects in those municipalities willing to adopt cost recovery measures and to undertake other reforms to strengthen the financing and delivery of such services. A national shelter delivery system, such as that contemplated in HG 007, must respond to the need and to the opportunity.

## 2. Financing of the expanded infrastructure component.

In September, 1988, The Mission requested \$10 million in additional Housing Guaranty authority earmarked to finance the infrastructure investments of the supplemental project. At that time LAC authorized \$5 million and asked the Mission for additional information on the Program status and on the design of the supplemental project. In preparing this response to the Bureau's concerns, the Mission has decided not to seek authorization of the additional \$5 million to complete funding of the supplemental project, as requested in September, 1988. The decision is not based on a change in the projections of demand for Program resources. Rather, it reflects a more conservative approach to the management of those resources.

Current estimates still show a need for over \$30 million in HG financing for FFH discount of home improvement and new housing loans. However, the Mission and the BCE have agreed that Housing Guaranty funding for new housing and home improvements will be reduced from \$30 to \$25 million, freeing up the HG authority to complete the \$10 million required for infrastructure. This leaves \$15 million available to finance new private sector housing projects or home improvement activities beyond those already in process.

This reallocation is not intended to become definitive or inflexible. Rather, the BCE will re-evaluate use of FFH funds based on actual performance and new projections of demand. Adjustments will be made by the Bank as necessary in the normal course of its management of the FFH. Notwithstanding, the reallocation will not be used to proceed with HG borrowings for housing and home improvements in excess of \$10 million until there is significant, measurable progress toward use of market interest rates by the FFH.

The result of this new approach is that

- Participation in the FFH by private builders and banks is unaffected
- The infrastructure component is fully funded at \$10 million
- No additional HG authorization is required in FY 89

### III. REVISED PROGRAM DESCRIPTION

#### A. Program Goal and Purpose

##### 1. The Program Goal

The Goal of the National Shelter Delivery System Program remains unchanged from that enunciated at the time the project was initially authorized:

The goal of the Program is to improve the quality of life for low income families in urban areas throughout Ecuador by increasing their access to upgraded and new shelter options, financed by both public and private sector institutions.

##### 2. The Program Purpose

A restatement of the Purpose of the project is needed to reflect more accurately the focus of the National Shelter Delivery System Program:

The purpose of the Program is to increase the supply of shelter affordable to the urban poor by:

Promoting a greater involvement by the private sector in the production and financing of such shelter.

Lowering the cost of private and public shelter programs, primarily by focusing on those activities which support the self-help efforts of poor urban families to build and improve their own housing.

Developing viable, self-sustaining systems to finance shelter and basic infrastructure.

#### B. Program Policy Objectives

Action Plan Objective #10, "Improve Housing, Basic Services and Urban Growth Management", is an integral part of the Mission's development strategy for FY 90 and 91. The Action Plan states the Mission will accomplish this objective by focusing on three key areas of concern:

To improve, strengthen and expand the Financial Fund for Housing, with particular concern that it become a consistent, predictable and viable source of long-term finance to support activities in the housing sector.

To develop a capacity to analyze and address the need for improved financial management of municipal infrastructure, as well as to apply these concepts in two or three municipalities on a pilot basis.

To develop joint public/private shelter programs on a scale commensurate with need, primarily by focusing on those activities which support the informal shelter sector.

The Policy Agenda for Program 518-HG-007 will focus on three areas:

- financial policies of the FFH
- financial management of municipal infrastructure
- expanded private sector low-cost shelter programs

#### Financial Policies of the FFH

The FFH has become an important and valuable mechanism to facilitate and promote greater participation by the private sector in shelter programs affordable to the urban poor. Yet, this cannot be considered a complete success until the financial policies of the Fund are revised to prevent its decapitalization through the effect of inflation and to make investment in housing finance attractive to private capital. The President of the Monetary Board and other top public officials recognize and accept the need to avoid the erosion of the capital of the FFH through inflation. In fact, they see this as a small part of the larger problems faced by other institutions, such as the social security and savings and loan systems, which are also dependent on the creation of a viable long-term capital market. The World Bank and the IDB have raised the same concerns with the GOE.

At the moment, the overriding priority of the GOE economic team is to bring down inflation. Lower inflation, in their view, is the quickest way to achieve positive interest rates. On April 20, the Monetary Board approved a complete restructuring of the interest rates which it charges on its various lines of credit. The yield to the Financial Fund for Housing was increased by 50% from 18 to 27%. This is the rate charged by the FFH on its discounts. The lending rate to FFH beneficiaries for all activities - new housing, home improvements and infrastructure - was set at 32%, which approximates freely negotiated interest rates for private-sector housing loans in Ecuador today. The mutuales originated over \$4.0 million in housing loans at an average rate of 32% between January and March of this year. In the last twelve months, they have originated over \$13 million in housing loans at an average rate of 29%. The credit unions, which lend for shorter terms than the mutuales, originated nearly \$6 million in housing loans in 1988 at an average rate of 32%. Under these circumstances, requiring further increases in the rates charged by the FFH would produce the anomaly of making these loans more expensive than those of comparable maturity and purpose freely contracted under current market conditions.

The fact remains that the Monetary Board kept the FFH rates at 23%, well below market rates, for months after the increase in inflation demanded a change. A large part of the problem derives from the dependence on the Monetary Board to set the FFH (and other BCE discount line) rates, which makes it as much a political as a financial process. The issue is not the process for setting rates and not the particular level of interest rates at a point in time. The Mission and LAC agreed during the Action Plan review that HG borrowings beyond the current \$10 million loan and the additional amount required to finance the infrastructure component of HG 007 will not be approved until there is significant, measurable progress toward use of market

interest rates in the operations of the Financial Fund for Housing. Despite the recent increase in FFH rates, the Fund is still not driven by decisions made in the financial markets. As a condition to further HG borrowings, the Mission is seeking a decision by the Monetary Board to allow the financial markets to determine the interest rates for loans to be discounted with the FFH. Rather than dictating interest rates, as it does currently, the FFH would operate on spreads between market rates and its discount rates.

An early opportunity to implement such a decision would be provided by the acceptance of the portfolio of home improvement loans generated by the credit unions in the open markets. The Central Bank has initiated studies to develop a more sophisticated understanding of the issue and to initiate a dialogue with the private sector to try to form a consensus on the measures that could and should be adopted to create a viable long-term capital market in Ecuador. The timing of the decisions on new measures is critical since it bears on the process of HG borrowing. Decisions taken by December, 1989 will allow new borrowings to proceed normally without interrupting the flow of the Program.

#### Financial management of municipal infrastructure

The policy agenda of the infrastructure component of the Program has two major aspects. The first is central government guidance, primarily through the Economic Development Bank (BEDE), of an efficient system to finance urban infrastructure in Ecuador. The objective is to strengthen the capacity of BEDE and IEOS (the Sanitary Works Institute) to lead and advise municipalities in the design and implementation of financially sound municipal infrastructure systems. Therefore, BEDE and IEOS need to employ criteria that require affordability and cost recovery issues to be addressed in project design. Design norms and standards need to be reviewed and revised to make them consistent with affordability and cost recovery criteria, and a better system of local socio-economic data collection than now exists needs to be designed by BEDE and IEOS and implemented by municipalities in order to verify affordability of project proposals. Both BEDE and IEOS need to be strengthened institutionally in order to augment their capacity to properly evaluate municipal infrastructure proposals, particularly for urban upgrading in low-income communities.

The second aspect of the policy agenda has to do with policies directly at the municipal level. The objective is to strengthen the financial self-sufficiency of municipal infrastructure agencies. These agencies will be made more self-sufficient with changes in management and operating practices within the agencies and changes in municipal tariff policies. The policies necessary for reform internal to the agencies are those that will lead to the capacity for financial planning on the basis of commercial standards; i.e., systems of inventory control, an inventory of fixed assets, and cost center accounting. The tariff reforms needed are of two dimensions; first, a restructuring of the formula guiding tariff formulation so that all relevant operating and maintenance costs are taken into consideration, but particularly an allowance for asset depreciation at constant costs so that the system can be replaced as it loses economic value, and an allowance for the costs of investment so that the costs of extending system service to new households and

firms can be recuperated through tariffs; second, an increase in the frequency of tariff adjustment from a yearly to a quarterly or monthly automatic adjustment that is based on changes in costs from the previous billing period. Progress in this area will be demonstrated by:

- The adoption by BEDE of project evaluation criteria for infrastructure projects for urban communities, which stress the need for cost-efficient designs and for full recovery of investments. By establishing such procedures, BEDE's position as the principal GOE financier of municipal infrastructure development will be rationalized and strengthened.
- The adoption and diffusion by IEOS of technical and environmental standards that are appropriate for water and sanitation service extension in rapidly-growing urban communities.
- The acceptance and implementation by municipal infrastructure agencies of new technical standards for low-cost infrastructure design, reducing average investment per connection in peripheral urban communities to the range of US\$200 to US\$300, at current costs.
- The implementation of a restructured tariff formula for calculating the average cost of operating, maintaining, and expanding water and sewer services in urban areas, and an increase in the frequency of that adjustment. The restructured formula should include recovery of the portion of the capital investments that are not recovered directly through connection charges to new users. The water authorities of Quito and Cuenca (EMAP-Q and ETAPA) have already adjusted tariff levels in 1989 to levels that are respectively 65 percent and 30 percent higher on average than 1988 levels.
- The acceptance by the GOE Controller General of the system of cost accounting being developed by EMAP-Q and his suggestion that it would be suitable for all municipal infrastructure agencies. By providing systems for inventory control and cost center accounting, the new systems will greatly improve the municipal infrastructure agencies' ability to control costs and to calculate costs in a timely manner for tariff adjustments.

### 3. Expanded private sector low-cost shelter programs

The growing gap between the shelter needs of the urban poor and the response offered by the government and the private sector is being addressed through the efforts of the urban poor themselves in what is called the informal shelter sector. These spontaneous, largely unassisted efforts account for over 70% of the housing in urban areas in Ecuador. The informal shelter process is slow and costly, frequently requiring ten or more years to reach minimal levels of basic services and often characterized by problems of land titling.

The Mission believes that private, non-governmental institutions can provide valuable support to the spontaneous efforts of the urban poor, helping them to achieve acceptable shelter conditions sooner and through a more orderly process. Key to this effort are housing cooperatives and credit unions, both of which are already active in addressing the shelter needs of the urban poor. Housing cooperatives can become an important link between the informal shelter sector and the private construction, building materials, and banking industries by organizing the existing demand, which is enormous but scattered and random, and articulating that demand in the form of coherent proposals which are technically sound and viable from the perspective of private lenders. There are many housing coops today: the Ministry of Social Welfare, which issues their charters, has over 1,100 on its rolls today and is aware of many others that are still being formed. Their membership is comprised largely of lower-income families. There are exceptions, but the great bulk of families are in the \$/20-45,000 per month income range. In this respect, Ecuador is unusual; housing cooperatives in most Latin American countries are much more a middle-income phenomenon than a lower-income one.

The performance of these cooperatives in addressing the shelter needs of their members is mixed. Most acquire land, but they tend to have less success in securing basic infrastructure services, in part because they usually want to have it provided to them by the public sector. Thus, too, their record in securing credit has been poor: they have difficulty presenting the payment capacity of their membership and the guarantees they can offer in a way that is technically complete and satisfies a private banker that he can extend a reasonably safe loan. Housing cooperatives face important limitations, internal as well as external. They are poorly organized; members and director have received little training on the principles, organization and operations of cooperatives. With scarcely 30 professionals to look after 6,000 cooperatives of all kinds across the country, the Ministry of Social Welfare has very limited outreach. The eventual answer to this problem should come from the housing cooperatives themselves, as it has in other countries.

As they operate today, housing cooperatives serve largely as advocacy groups, gathering many families' individual expressions of need into request for help: asking city governments to give them water and sewer, clamoring for soft loans or donations, sending dozens of letters to charities and international aid organizations. To a degree, unrealistic expectations drive this behavior. More important, though, is a lack of technical and financial expertise to put together the elements a private builder or banker will look for in a proposal. This is so even though many of the coops have some or all of the most crucial ingredients, such as land which can serve to secure a loan. For example, dozens of cooperatives in Quito alone have acquired a site but have been unable to secure financing for infrastructure, even though the cost to repay a credit to install water and sewer are lower than the payments the families now make to a minimal amount of water from tank-trucks.

Housing cooperatives are active today despite their shortcomings. They can do much to improve the links between AID's target group and Ecuador's formal private sector now. Those improved links are possible, are desirable, and will benefit both the families whose living conditions are improved and the private builders and bankers, who will be able to expand their markets and become relevant to the needs of a much broader proportion of Ecuador's families.

The Cooperative Housing Foundation visited Quito in April, 1989. CHF met with municipal authorities, officials of the Ministry of Social Welfare, important private sector leaders, and with a cross-section of community leaders and cooperative directors in Quito. The CHF visit confirmed the Mission's sense that with additional organization, assistance and training, cooperatives will become a more effective means of linking the formal private sector to the needs of the urban poor. CHF has proposed to work closely with the Municipality of Quito to assist a limited number of existing cooperatives in preparing viable housing proposals for financing by private sector lenders. For example, CHF can help several of the cooperatives with infrastructure programs, focussing on two levels of effort. At a first level, it can help the community accelerate the process by determining income levels, willingness/ability to pay on the part of the coop members, and preparing in advance the technical and financial design of an infrastructure program by contracting the design process out to a private engineering firm, to present the municipal utility companies with a fully developed project.

With a further extension of the same approach CHF can help the community seek its own financing for the project from private lenders, without having to rely on the municipality for these functions. Private, for-profit infrastructure firms have said time and again that they can do projects faster, at lower costs, and at the same or better standards of quality as municipal projects. To join this kind of initiative in a supporting role to community's efforts to improve their neighborhood is very promising. To speed and reduce the cost of home construction, CHF can help communities organize the distribution, sale, and financing of commonly-used construction materials by private suppliers, in neighborhoods where a high rate of housing construction is under way. A further extension to this effort is linking housing cooperatives more directly with credit unions to provide direct financing, either for individual family credit needs or for larger, community projects.

As an additional benefit, after a time of close involvement in providing project-specific technical assistance to pilot housing cooperatives CHF will be able to make recommendations on the best approach for institutionalizing within the cooperative housing movement their own source of financial and technical services, based on the experiences of working with specific cooperatives in Quito.

Within the context of its involvement with private shelter finance institutions, the Mission will pursue a very promising lead with credit unions. As with the housing coops, the initiative to develop an expanded response to the shelter needs of the urban poor has come from the interested parties themselves, in this case from the Ecuadorian credit unions and from

their U.S. counterpart, CUNA/WOCCU. Credit unions are an important element among the financial institutions in Ecuador. There are well over 100 credit unions, with 650,000 members, and total savings of U.S. \$72 million (6/88). The average outstanding loan is \$180. Roughly 25% of the average portfolio is in housing loans. Unlike all other private financial institutions in Ecuador, the credit unions are primarily owned by (and provide services to) low income families.

Credit unions make their loans at a market rate of interest. Their source of funds is members' own deposits, which they lend to members at higher rates than those they pay for deposits. A major constraint to the growth of the credit union system, particularly in terms of lending for shelter purposes, is their total dependence on members' savings to finance their loan portfolios. Credit unions are chartered under different legislation than that pertaining to the rest of the financial system and lack direct access to discount facilities in the Central Bank. This restricts their loans in amount and term to ensure adequate liquidity and reserves for their operations.

The principal obstacle to participation by credit unions in BCE windows, such as the FFH, is the strong perception of both the BCE and the Superintendency of Banks that a much more stringent and consistent oversight of the financial operations of credit unions is required. Currently, some are under the supervision of the Ministry of Social Welfare and others under the control of the Superintendency of Banks. There is general agreement (both in the credit union movement itself and among monetary authorities of the GOE) that the more suitable home for the credit unions is with the Superintendency, as long as the special nature and requirements of credit unions are taken into consideration in any realignment. The Superintendency of Banks has developed draft legislation to expand its jurisdiction to include all credit unions and is working on the regulatory requirements, such as accounting systems and external audits, which they would apply initially to the twenty largest credit unions. They expect to complete this process in 1989.

Given the demonstrated willingness and ability of credit unions to lend for shelter at market rates in Ecuador today, the Mission will support the joint initiative of the credit unions and CUNA/WOCCU to reach agreement with the GOE on measures which will lead to their direct participation in and access to the broader financial system of the country, with an immediate objective being that of access to the resources of the FFH.

The final products of the effort to support to the Ecuadorian credit unions will be:

- Implementation of measures to strengthen and expand government supervision of credit unions as a quid pro quo to granting them direct access to Central Bank discount facilities and especially the FFH.
- Improved and expanded credit union lending systems for basic shelter needs.

#### 4. Relation of policy objectives to other Mission objectives

The proposed policy reforms in the financing of municipal infrastructure with its related institutional development program, and the provision of affordable infrastructure services to marginal, informal urban communities, is directly related to and will support the Mission's proposed urbanization strategy, to be presented in the second quarter of FY'90. A future program to be designed in support of the urbanization strategy would couple HG capital assistance principally for municipal water and sewer investments in unserved poor urban neighborhoods, with technical assistance provided for reforms in urban management. The project would provide financial management assistance and assistance to mayors for building local coalitions of municipal officials, private sector representatives, and neighborhood community leaders to collaborate in finding solutions and resources for low cost shelter and urban infrastructure.

#### C. Supplemental Project Description

##### 1. Supplemental Project Activities

Additional resources provided by the supplemental authorization will finance the extension of basic services to low-income neighborhoods in urban areas. While the range of urban services required in spontaneous residential neighborhoods is broad and includes not only water/sewage improvements but also improved access roads, public lighting, storm water management, and others, the supplemental activity will focus on the extension of potable water and sewerage systems to neighborhoods not currently served.

The emphasis on potable water reflects a sense of urgency on the part of municipalities to address a very basic and pressing need facing growing numbers of low-income urban families. The municipalities are also aware that important benefits can be achieved with a relatively low per-capita cost, which is essential if full cost recovery and the elimination of subsidized infrastructure services is to be achieved in a self-sustaining way for low-income urban communities.

The Loma de Puengasi project submitted by the water authority in Quito (EMAP-Q) is typical of the type of investment to be funded under the supplemental activity at the community or "barrio" level. Loma de Puengasi is an area containing about twenty separate communities, but it is being treated as one project by EMAP-Q. Information about the barrios is derived from a survey conducted by EMAP-Q in February 1989, sampling 610 households, or approximately 20 percent of its total population of approximately 12,000 persons.

Many of the families in Loma de Puengasi are employed in the construction sector. Family incomes range from S/ 28,000 to S/ 61,000 (US\$56 to US\$122), with income averaging S/ 34,000 per month (US\$68). By comparison, the April 1989 monthly median income is S/ 90,326 (US\$181). Residents are

typical of the large numbers of families who today cannot purchase even the least expensive house built by public and private developers in Ecuador. Nevertheless, houses built by themselves over a period of several years are in many cases much larger (though of less expensive materials) than those available from the developers.

Loma de Puengasi is about 20 minutes southeast of the center of Quito. The area was first settled in 1950. Each community has a different history and developed its shelter and community facilities in different ways. The largest section of Loma de Puengasi was developed when the original landowner, in order to retire a loan with a bank, sold the land in large parcels to individuals and to housing cooperatives. The parcels were sold with promises that the developer would furnish roads, water, and sewer service "as soon as he could work out the details".

One of the "details" not worked out at the time was legal title to the land. Since 1982, about 60 percent of the landowners have by now received proper title to their land. The Municipality of Quito is now helping to sort out tenure issues for the remainder of the landowners, as it is doing for many other communities in similar circumstances.

Previous municipal administrations were not willing to approve the extension to Loma de Puengasi of municipal water and sewer services. The community has solved the problem of not having potable water by obtaining water in other ways. About one-third of the barrio's residents currently obtain water from systems built by individual communities, which capture and store water from springs and distribute it by gravity feed through a PVC pipe network to public standpipes. About one-quarter obtain water from water vendors, one-quarter from rain collection, and the remainder of residents obtain water from springs, wells, or other sources. Approximately 36 percent of households are connected to some form of sewage disposal; the remainder dispose of their sewage through drainage ditches running alongside streets, eventually emptying into the municipality's sewage system.

Quito's current administration is anxious to find ways to assist Loma de Puengasi with its infrastructure problems as well as its other needs: including the need for schools and community facilities, and improved access roads to facilitate bus service. One such response will be the construction of potable water system to be financed under the supplemental activity of HG-007. As part of its water project in Loma de Puengasi, the Municipality of Quito, in keeping with both its own and the Mission's concern about the environmental soundness of the projects, will make available latrines to those residences without other environmentally-sound means of sewage disposal.

The cost of the Loma de Puengasi water project is estimated at S/618,947,600 (US\$1.24 million) in May 1989 prices, including designs, materials, labor, contingencies, management, and inspection costs. Construction is scheduled to start in June 1989. EMAP-Q estimates that the project will take six months from start of construction to completion.

The project has been designed to be consistent with the future development of neighborhood streets as well as parks and community facility areas. Approximately 3,005 residential connections will be made. The project is also designed to accommodate future population growth which will occur in the area, as several other neighborhoods are under development.

No unusual features need to be addressed in the system design. Rates of flow, slopes, sizes, and other factors are well within the normal range. EMAP-Q does not expect any difficulties with the subsequent operation or maintenance of the system. With few exceptions, all the elements for the project are manufactured in Ecuador and available on the local market.

EMAP-Q will carry out the project through its Construction Unit and through contracts with private construction companies. The Municipality's Public Works Inspection office will carry out on-site inspections, and BEDE will oversee the financial management of the project. Families will pay between 10 percent and 20 percent of the total project cost as a downpayment, which will be deposited with EMAP-Q before construction of the project begins and used as a source of construction financing. EMAP-Q and, if necessary, BEDE will provide the balance of the funds needed for construction financing.

Once the project is completed and water service is available to households, long-term financing will be provided to beneficiary households by EMAP-Q to pay for their connection cost. For the average-sized lot in Loma de Puengasi, this amounts to between \$318 and \$357. That amount, in turn, will be provided as a credit to each beneficiary, with a term of ten years, at an annual interest rate of 32 percent. This generates monthly payments of between \$8.86 and \$9.94 at today's exchange rates, or 13 percent to 14.6 percent of the average monthly income of the barrio's average family. In section B.2 of this PPS, the long-term financing options presented by EMAP-Q are discussed. Most of the payment alternatives are shown to be within households' stated willingness-to-pay for water connections.

EMAP-Q has developed several alternatives for long-term financing, so that households will be given a choice as to how they wish to finance the acquisition of their potable water connections. Each option has in common that the loan interest rate is 32 percent per year and that the household makes a down payment of at least ten percent of the project cost. EMAP-Q will provide long-term finance for up to ninety percent of the project cost. When necessary, EMAP-Q will also finance up to ten percent of the project cost with its own income from other sources, in order to make the project more affordable to some households. Households will be given choices of loan terms of five to ten years, with either constant monthly payments or payments that are discounted in the earlier years of the loan-term and that escalate at rates between 20 percent and 32 percent per year over the loan-term. Loan principal pre-payment will always be an option for any loan structure chosen.

Once BEDE has certified that the infrastructure improvements provided to the eligible communities have been completed and are in operation, it will present the project loan to the Central Bank for discount with the FFH.

## 2. Institutional Roles in the Supplemental Project

All of the public and private institutions currently involved in the National Shelter Delivery System Program described in the original Project Paper remain important to the Program. The supplemental project adds significantly to the institutional development objectives of the project through the participation of those entities which respond to the basic infrastructure needs of urban communities.

### CENTRAL BANK OF ECUADOR (BCE)

The main functions of the BCE as they relate to the project are: to promote/coordinate the National Shelter Delivery System Program and to administer the Financial Fund for Housing.

The BCE has moved quickly to approve the changes in the operations of the FFH which were required to implement the proposed infrastructure component of HG-007. The Bank has agreed to accept loans made for urban upgrading programs in low-income neighborhoods. It has secured approval from the National Monetary Board for the required amendments to qualify the Ecuadorian Development Bank (BEDE) as an eligible intermediary, authorized to channel FFH resources to municipal programs.

### MUNICIPALITIES

Municipalities, as embodied in the direction provided by their respective elected mayoral officials, will play a role which is similar to that of the entrepreneur/developer in the private sector. That is, municipalities will be directly in touch with the needs and demands of their market and clientele--i.e. the residents of the spontaneous settlements-- and be in a position to identify constraints, recommend solutions and help generate the resources needed to meet the demand for services in the settlements.

Among the functions fulfilled by municipalities in Ecuador is the provision and regulation of water and sewerage services to their residents. This responsibility includes the planning, the design and construction of systems either directly through contracts with private providers, or through other GOE institutions, and the operation and maintenance of constructed water and sewer systems.

Quito and other large cities in Ecuador have autonomous water and sewer authorities to operate their infrastructure systems. Water/sewer authorities are found in twelve other municipalities in Ecuador, and five more are currently in the process of establishing water/sewer authorities. In the other 133 municipalities in Ecuador, water and sewer services are managed from a department within the municipality itself, usually with the direct management of local IEOS staff.

The Mission has found that the technical and managerial capabilities of municipalities to deliver adequate services to their residents varies greatly. Some are adequately equipped to deliver a minimum level of service to the communities, while others, especially smaller municipalities, are almost completely lacking in ability to plan and manage water and sewer services.

#### BEDE AND IEOS

In connection with the infrastructure projects to be financed under this supplemental authorization, BEDE and IEOS will review and evaluate the technical, environmental and financial soundness of the municipal proposals, and monitor and supervise project execution. As they strengthen and expand their ability in these areas, BEDE and IEOS will become better able to assist and guide municipalities in those aspects of project design in which they are most lacking in expertise.

BEDE is charged with the analysis of both the financial and technical soundness of projects submitted by the municipalities for discounting in the FFH. As the Intermediate Financial Entity (IFE) of the municipalities for accessing the supplemental program's resources, BEDE, in conjunction with IEOS, will ensure that project proposals are supported by adequate studies and that they are technically, environmentally, and financially sound and meet Program objectives.

For all water and sewer systems in the country, whether or not IEOS carries out the design and construction, it is the responsibility of IEOS to set technical standards and analyze the environmental soundness of each project. It is with regard to these two functions of standards-setting and environmental analysis that IEOS has a primary and important role under the supplemental project. An important indirect benefit of the Program will be increased institutional coordination and mutual support between IEOS and BEDE, which are the two GOE institutions having the greatest involvement in the design, finance and analysis of urban upgrading projects.

#### BEV/JNV

BEV and JNV are the principal public institutions in the shelter sector. At this point, however, the two institutions are only interested in activities or programs which they carry out directly. They do not or will not accept acting as the coordinating body for initiatives undertaken by other entities, public or private, in the shelter sector. The Mission reached this conclusion after numerous meetings over the last few months at which we encouraged BEV/JNV to assume a leadership role in the policy and institutional dialogue. Accordingly, BEV will participate as one more intermediate financial entity financing home improvements and projects developed by private builders activities which they started under HG-006. Since BEV received technical assistance in these areas under HG-006, no further TA will be required for them to carry out their part in the implementation of this Program.

Table 1 below summarizes the roles of the primary institutions involved in the infrastructure component of HG-007.

### 3. Outputs

The Program will finance approximately 13,780 low cost housing units through the FFH discount mechanism. This is calculated based on an average sales price per home of \$2,200 (discounted at \$1,810), with utilization of \$25 million in total HG authority and GOE counterpart financing (\$18 million AID, and \$7 million GOE).

Support for home improvement lending under the project, implemented primarily by credit unions and housing cooperatives participating in the FFH mechanism, will be provided through \$7 million in AID HG authority and \$3 million in GOE counterpart funds to finance approximately 10,000 home improvements. These home improvements are calculated at an average cost of \$1,000.

The project will provide \$10 million in HG authority to finance domiciliary connections and improvements in basic infrastructure services in potable water and sewerage systems for 42,150 low income families residing in the marginal urban areas of Quito and Cuenca. Average construction cost per residential connection will be \$300 and the average loan \$240.

### 4. End of Project Status

The following is the anticipated end-of-project-status (EOPS) in the major areas of institutional development and policy reform.

#### Financial Policies and Management of FFH

- Interest rates on loans discounted with the FFH to finance new housing, infrastructure and home improvement, are being freely determined in the financial markets.

Table 1

Institutional Roles in Supplemental Project

Institution/ Role

BCE (Central Bank)

1. Promote National Shelter Delivery System Program
2. Manage all technical assistance grants for Program.
3. Manage Financial Fund for Housing (FFH) and receive loan packages for discounting from BEDE and private financial institutions.

Municipalities and Municipal Utilities

1. Initiate proposals to address infrastructure needs of informal settlements.
2. Design and contract infrastructure projects.
3. Operate and maintain water and sewer systems.

BEDE/IEOS

1. Manage and provide oversight for technical, environmental and financial aspects of the infrastructure projects.

BEDE (Ecuadorian Development Bank)

1. Act as Intermediate Financial Entity (IFE) for municipal infrastructure loans discounted through FFH.
2. Analyze technical and financial soundness of municipal infrastructure project proposals.
3. Provide construction and/or long-term financing to municipalities for projects.

IEOS (Ecuadorian Institute for Sanitary Works)

1. Set design standards for urban infrastructure projects.
2. With BEDE, review environmental soundness of project proposals.

- The FFH has extended its market to a broad range of IFEs, including credit unions, and indirectly to housing cooperatives, and improved its efficiency as a discount window for low cost housing, infrastructure and home improvement projects for marginal urban areas.

Infrastructure Financing and Management of Municipal Water and Sewer Companies

- BEDE and IEOS have appropriate design standards and project review criteria in place, as well as trained staff, to promote and direct sound technical and self-financing municipal infrastructure projects.
- Within the municipal water and sewer companies of Quito and Cuenca (EMAP-Q, EMA-Q and ETAPA), recovery of operational, maintenance, and investment costs by the municipal companies is at or near full cost recovery; and new operational procedures and more efficient design standards reduce residential infrastructure project costs by up to 25% over the LOP.

Low Cost Shelter (Credit Unions/Housing Cooperatives)

- The FFH is being utilized by private sector IFE's, including credit unions, which are engaged actively in lending in support of the self-help housing efforts of urban low income families and communities.
- Housing cooperatives in Quito are serving as an effective link between the informal and formal private sector, facilitating access by the urban poor to credit, construction materials and serviced land.

5. Consolidated Program Financial Plan

TABLE 2  
TOTAL PROGRAM OUTPUTS AND COSTS

<u>SHELTER SOLUTION TYPE</u>	<u>OUTPUTS</u>		<u>VALUE</u>	<u>COSTS (US\$000's)</u>			
	<u>NO. TOTAL UNITS</u>	<u>PERCENT</u>		<u>DOWN PAYMENT AMOUNT</u>	<u>AMOUNT FINANCED</u>	<u>PERCENT</u>	
New Housing Units	13,780	21	34,875	6,975	27,900	60	
Home Improvement Loans	10,000	16	10,000	0	10,000	20	
Urban Upgrading Loans	42,150	63	12,700	2,700	10,000	20	
<b>TOTALS</b>	<b>65,930</b>	<b>100</b>	<b>57,575</b>	<b>9,675</b>	<b>47,900</b>	<b>100</b>	

TABLE 3  
TOTAL PROGRAM FINANCING  
SOURCE/APPLICATION OF FUNDS  
(US\$000's)

<u>APPLICATION</u>		<u>SOURCE</u>				
<u>SHELTER SOLUTIONS</u>	<u>AMOUNT FINANCED</u>	<u>IFE</u>	<u>FFH</u>			<u>PERCENT</u>
			<u>GOE</u>	<u>AID</u>	<u>TOTAL</u>	
New Housing Units	27,900	2,900	7,000	18,000	25,000	56
Home Improvement Loans	10,000	0	3,000	7,000	10,000	22
Urban Upgrading Loans	10,000	0	0	10,000	10,000	22
<u>SUMMARY</u>		<u>IFE</u>	<u>GOE</u>	<u>AID</u>	<u>FFH</u>	
Total Financing	47,900	2,900	10,000	35,000	45,000	100
Percent (FFH)	n/a	n/a	23	77	100	n/a
Percent (Total)	100	6	21	73	( 94)	n/a

#### IV. PROJECT SUMMARY ANALYSES

##### A. Institutional Analysis

This section covers the assessment of the administrative, technical, and financial capacities of the institutions involved in the infrastructure component of the Supplemental Program to carry-out project activities successfully. The institutions involved are: the Central Bank (BCE), the Development Bank of Ecuador (BEDE), the Ecuadorian Public Works Institute (IEOS), and the water and sewer agencies in Quito--EMAP-Q and EMA-Q-- and in Cuenca--ETAPA.

Initial infrastructure project proposals were submitted by EMAP-Q and EMA-Q in late 1988 for evaluation by BEDE and IEOS. This feasibility analysis is based in large part on what the Mission has learned from these initial activities, and in turn the Mission has incorporated the results of the assessments into its program of technical assistance for the Program. The analysis is based on institutional and financial evaluations performed by two consultants from the ST/H WASH (Water and Sanitation for Health) Project (Annex C).

##### Assessments of Institutional Capacity

##### Banco Central del Ecuador (BCE)

An assessment of the BCE's management of the Financial Fund for Housing (FFH) conducted in April, 1989 by an independent senior housing finance consultant confirms that there are many advantages to having placed the FFH in the BCE. On the other hand, the evaluation also concluded that there are administrative difficulties affecting the efficient operation of the FFH. To rectify this situation, the BCE must take steps to strengthen the staffing of the FFH as well as to structure a continuing process of communication with the institutional clients of the Fund.

These administrative problems do not reflect a lack of interest in the FFH. The approved GOE monetary program for 1989 identifies credit to finance private housing construction as one of four priorities, together with agriculture, small business and non-traditional exports. Twenty-eight percent (28%) of the total Central Bank credit, or S/. 10 billion of their own funds, has been allocated to provide construction financing for private housing projects. The intention is that the long-term loans to finance the purchase of the housing will come from the FFH. In addition, the GOE has deposited nearly \$4.5 million as counterpart funds in the FFH, well in excess of the one-to-three ratio required for the recent \$10 million HG loan. These are significant actions at a time of fiscal and monetary austerity.

The administrative problems of the FFH reflect the ambivalent attitude of the BCE toward activities which are not strictly central banking functions, such as the development banking function implicit in the various financial funds currently operating out of the BCE. The Bank's structure, its

procedures and its staff can handle the discounting of loans by the FFH and all related paper work and accounting. There is no provision for those efforts which fall outside of this routine. All of the staff currently involved in the operation of the FFH have other duties and responsibilities. Aggressive pursuit of pending actions is often lacking. For example, there are innumerable cases when both builders and intermediate financial institutions have had to wait for months to receive a simple response from the BCE when they have inquired on the status of an application for FFH funding or any similar matter. There is no systematic, on-going contact among the parties and very little consultation of the clients by the BCE before decisions affecting the rules and procedures of the FFH are taken.

To address these problems, the BCE must put in place an advisory board with representation from potential FFH institutional clients and contract a full-time manager for the Fund. The creation of this coordinating entity and the contracting of the full-time manager for the Fund, both under the BCE's oversight, will enable the Bank to count upon new capability to act aggressively on pending actions, draw upon inputs from the different public and private sector users to improve its current operational efficiency, and enhance its process of communication with the FFH's institutional clients.

#### BEDE

Since its inception, BEDE has been one of the primary GOE sources of finance for municipal development. It has over ten years experience in evaluating and financing municipal infrastructure projects. Of the total loans granted by BEDE since 1979, 16 percent have been granted for municipal water and sewer projects. Fully 50 percent of BEDE's total loan portfolio has been granted for municipal development projects including water and sewer projects, housing, roads, and communications.

Based on the institutional assessment of BEDE conducted by the WASH consultants, the Mission finds that BEDE has adequate technical capacity to evaluate municipal projects, a conclusion shared by the IBRD/IDB assessment of BEDE (attached as part of Annex C). Rather, the Mission has concluded that in BEDE's initial round of evaluation of projects, BEDE had not paid sufficient attention to the impact of the project's technical design on the affordability of the infrastructure solutions to project beneficiaries--low-income households. BEDE technical and financial staff had accepted the project proposals of EMAP-Q and EMA-Q without probing for the assumptions behind design decisions. For example, BEDE had not requested from the municipal agencies justifications for the design dimensions of the project proposals. The Mission found the submitted projects to be over-dimensioned, using pipe diameters, for example, significantly larger than necessary to serve the typical consumption levels of low-income households. This over-design in turn unnecessarily increases the per-connection cost of the project, making the project less feasible financially in the context of direct cost recovery from project beneficiaries. Furthermore, the household income data used to demonstrate community eligibility for HG-financing and to demonstrate ability-to-pay for service extensions were either defined over income ranges too broad to be useful for purposes of determining eligibility or were taken from income surveys for all of Quito's peripheral low-income communities, not the community for which the project was proposed.

Both BEDE and the municipal agencies accepted these observations. BEDE accepted the conclusion that it needed to take a more proactive role in managing the Program. It has already required EMAP-Q and EMA-Q to resubmit twice their project proposals, requesting additional information to be submitted on, for example, existing community facilities and household installations and further socio-economic data for proposed project beneficiaries. BEDE has recently convened technical working groups, with representatives from BEDE, IEOS, and the municipal infrastructure agencies, in order to clarify and accelerate the project evaluation process.

The Mission, through its technical assistance program, will support this process by providing consultants to work with both BEDE and the municipalities on the initial project proposals, in order to strengthen BEDE's capacity to develop more appropriate technical designs consistent with project affordability guidelines which will then be used for the rest of the Program.

### IEOS

Based on the WASH institutional assessment of IEOS, the Mission has concluded that, as in the case with BEDE, the problem with IEOS's evaluations of project proposals was not in their technical sufficiency but in their neglect to consider their financial impacts on project beneficiaries. The standards used by IEOS to evaluate the initial project submissions were inappropriate for low-income urban community infrastructure projects. IEOS did not adjust its design standards for these types of projects. For example, it used projected demand based on population growth figures of up to 30 years. With regard to sewage systems, acceptance of IEOS's norms generally lead to the choice of large-scale sewage collection systems, when more recent innovations have accepted smaller-scale, usually lower-cost sewage treatment collectors decentralized throughout the sewage system.

With respect to the environmental assessments, the WASH consultants concluded that IEOS has the appropriate knowledge to evaluate the environmental impact of projects in urban areas of Ecuador and that technical assistance in this area would be unnecessary.

The Mission, in its technical assistance program, will provide consultants and training to IEOS staff in order to develop a set of appropriate technical standards for water and sanitation projects in low-income communities, that take into account issues of affordability and cost recovery. IEOS has reviewed and accepted both the WASH consultants' assessment of its need to review and revise its technical design standards, and the Mission's proposal of technical assistance to support IEOS in the development of more appropriate standards.

### Municipal Water and Sewer Companies

Each of the three infrastructure agencies in Quito and Cuenca produced technically feasible project proposals. As with BEDE and IEOS, however, the municipalities had not considered adequately the impacts of their project designs on project affordability to low-income households. The Mission recommended to the water and sewer companies of Quito that they agree

to coordinate their project planning, to jointly identify communities and schedule project construction. As indicated in the "Agreement of Cooperation" presented in Annex C, both of the infrastructure companies accepted this recommendation and, along with redesign of the projects, will resubmit a schedule of projects for BEDE and IEOS review.

## 2. Recommended Institutional Strengthening

The Mission believes that all of the institutions involved in the infrastructure component of the Supplemental Project have the capacity to implement the infrastructure investments and to manage the process of institutional change the Program requires of them. The Mission believes that this process of change is best managed as an iterative one, of "changing by doing".

The Program's activities are not new ones to any of the institutions, but the Program is requesting the institutions to work within relatively new parameters of cost recovery, technical design, and project affordability. Therefore the Mission believes that the most effective, enduring way for the institutions to learn the new process is by proposing a few projects, evaluating them, implementing them, and then evaluating the results in order to refine the process further through the subsequent project proposals and investments.

BEDE has a key leadership role in the municipal infrastructure component of the Supplemental Program. Its primary function will be leading and advising municipalities in the identification of feasible projects that reduce infrastructure deficits in low-income communities. The Mission will assist BEDE to improve project evaluation criteria and other project proposal requirements, which BEDE will use to evaluate projects for financing.

IEOS needs to use not one but a range of design standards and norms that take into account the different requirements of infrastructure in different community settings in which consumption levels vary with income and shelter quality. The Mission will provide technical assistance to IEOS, through consultants and training, to help it develop a range of appropriate standards and norms for these types of projects.

The municipal water and sewer companies of Quito and Cuenca also need to focus on the implications of their project designs on financial feasibility. These companies have accepted this requirement and have already twice redesigned and resubmitted their project proposals to BEDE and IEOS for evaluation.

## B. Financial Analysis

The institutions with a financial role in the Supplemental Program are the Development Bank of Ecuador (BEDE), the Water Company of Quito (EMAP-Q), the Sewer Company of Quito (EMA-Q), and the Telephone, Water, and Sewer Company of Cuenca (ETAPA).

From the assessments by the WASH consultants of the financial capacity of the institutions participating as financial and administrative entities in the Supplemental Program--i.e. the Development Bank of Ecuador (BEDE) and the Quito and Cuenca water and sewer companies--the Mission concludes that the Program is financially feasible. Each institution has some weakness in areas of financial management or financial policy, but none of great enough severity to impede the achievement of Program objectives.

This section describes the financial aspects of the Supplemental Program, summarizing findings of financial assessments of the institutions, explaining project cost recovery proposals, and analyzing project affordability to beneficiary households. (A full description of the financial assessment of the municipal water and sewer companies are found in pp. 44-92 of the annexed WASH report). A financial analysis of BEDE by a World Bank/Interamerican Development Bank mission to Ecuador, carried out in March, is found in Annex C.

## 1. Institutional Financial Capacity

### The Development Bank of Ecuador (BEDE)

BEDE has since its inception been the primary GOE source of finance and technical assistance for urban water and sanitation infrastructure investments as well as for other loans for municipal development projects. BEDE is a central government financial entity created in 1976. It was created in order to finance economic development projects that would strengthen economically depressed areas and provide opportunities for economically disadvantaged persons. It is both a financial and a technical service organization. Its shareholders are the GOE and those GOE financial funds that contribute to BEDE, principally the National Development Fund (FONADE) and the Municipal Development Fund (FODEM). Its capital base consists of central government contributions, undistributed profits, and loan reflows. The authorized capital of BEDE is S/100 billion (US\$200 million) which has deteriorated in real terms since 1979 due to inflation. In March, BEDE began negotiations with the GOE for an increase in its GOE capital to S/500 billion (US\$1 billion) over the next eight years, beginning with a S/100 billion (US\$200 million) increase in 1989 or 1990.

In 1988 BEDE generated S/ 7 billion (US\$14 million) in earnings, granted new loans totalling S/11 billion (US\$22 million) and made loan disbursements totalling S/22 billion (US\$44 million). BEDE grants loans in two areas, "social infrastructure" and "economic infrastructure". Social infrastructure projects include urban roads, water and sewage systems, housing, education, health, and recreational facility projects. Economic infrastructure includes projects that directly support agriculture, fisheries, forestry, mining, manufacturing, electricity, communications, and transportation. In 1988, 94.2 percent of BEDE's new loans were in social infrastructure projects, and 5.8 percent were in economic infrastructure projects. More than 24 of BEDE's loans in social infrastructure in 1988 went to urban development projects; these loans totalling S/8.3 billion, represented 74.8 percent of BEDE's total portfolio in 1988. Loans for water and sewage projects amounted to S/ 5.8 billion (US\$ 11.6 million), or about 52.5 percent of its 1988 loans.

As part of its March 1989 joint mission, the IBRD/IDB conducted an institutional and financial analysis of BEDE (attached as part of Annex C). The overriding concern of the analysis is the increasing decapitalization that BEDE faces as result of its having charged negative interest rates over the period 1979-1988.

In real terms, BEDE has suffered a decline in its income since 1984; its real income in 1988 is less than its real income in 1980, due to the effects of high inflation and negative rates of interest. The weighted average interest rate charged by BEDE for its various classes of loans between 1979 and 1988 is 12.60 percent. Only 9.2 percent of its loans to municipalities have had interest rates above 15.1 percent; the maximum rate of interest charged for municipal projects has been 18 percent. BEDE's on-lending under the Supplemental Program, at a rate of 32 percent, will represent the highest interest rate BEDE has yet to charge for any loan.

Notwithstanding the erosion in the real value of BEDE's capital due to inflation, the development bank remains a solid, solvent financial institution capable of managing the finance of the infrastructure component of the Supplemental Project. In 1988, BEDE financed 80 percent of its operations from its own resources, allowing the bank to address its financial commitments adequately. The issue for BEDE thus is not its internal operation nor its ability to meet existing commitments, including the infrastructure projects under the Supplemental Project, but rather the magnitude of development finance needs for the country as a whole, for which BEDE's capital base is still insufficient, and for which it has requested an additional capital support from the GOE, as mentioned above. It is this greater national demand for development finance that will be addressed by the IBRD/IDB program.

The key recommendations of the IBRD/IDB mission are that BEDE must eliminate its policy of subsidizing projects through interest rates; and that BEDE be recapitalized by the GOE while changing the financial conditions that govern its operations, in order that it earn a return on investment that covers its operating and financial costs. These changes in BEDE's operating procedures, certainly consistent with the Mission's broader policy agenda on interest rates, are part of the policy agenda of the IBRD/IDB municipal development program which will provide technical assistance to BEDE.

#### The Municipal Water and Sewer Companies

Although municipal infrastructure agencies in Ecuador have separate management structures and financial status, they are in fact very dependent on decisions taken by their municipal leadership or Board of Directors. Their sources of income tend to be relatively volatile, reacting to the plans of their municipalities. In each evaluation of the water and sewer companies of Quito and Cuenca, the Mission has identified the need for improvements in financial procedures, particularly in the budgeting, inventory, and accounting practices of the companies.

Quito Water and Sewer Companies (EMAP-Q and EMA-Q)

The Quito Water Company, EMAP-Q, currently has 92,726 domestic water connections, which represents 94.8 percent of total connections (commercial and industrial connections amount to 4.2 percent of the total, and municipal and official connections 0.8 percent).

EMAP-Q has four main sources of income: water tariffs, municipal tax contributions, GOE and municipal transfers, and charges for new water connections. Of its 1988 income of \$5.8 million, tariff and new connection income represented 57 percent, municipal tax contributions 23 percent, and transfers the remaining 20 percent. Its 1988 income grew by 47 percent from its 1987 level. The net worth of EMAP-Q increased from \$2.6 million in 1986 to \$3.8 million in 1987, an increase of 45 percent.

The Quito Sewer Company, EMA-Q, has three major sources of income: municipal property tax contributions, GOE and municipal transfers, and special improvements charges for service connection. Its participation in municipal property taxes, at the rate of 5 per 1000 valuation, represented 38 percent of its 1988 income. GOE and municipal transfers, usually for specific investment projects, represented 32 percent of its 1988 income. Special improvements charges represented 12 percent of its 1988 income. The remaining 18 percent of 1988 income derived principally from income earned from EMA-Q's sewage and drainage pipe factory.

Operating, maintenance, and administrative costs have grown less rapidly than income, allowing EMA-Q to maintain an operating surplus over the last four years. In 1988, EMA-Q's operating surplus was \$220,428.

The Cuenca Telephone, Water, and Sewer Company (ETAPA)

Unlike Quito, Cuenca has only one infrastructure agency charged with the planning, design, construction, operation, and maintenance of water, sewage, and telephone systems in the city. It has long been considered the best-managed municipal infrastructure agency in the country.

ETAPA has 26,575 domestic water and sewer connections (95 percent of the total connections), 1,329 commercial and industrial connections (4.7 percent of the total), and 69 "special" connections (0.3 percent of the total).

In each of the most recent years for which ETAPA has had financial data prepared, 1985-1987, ETAPA has achieved an operating surplus and, except for a loss in 1985, also an overall surplus of total income over total costs. With its internal generation of funds, ETAPA has been able to internally finance a portion of its investments and to pay debt service. In 1988, 50 percent of its current income financed capital costs, still leaving current income to cover current expenditures.

Summary

The principal financial weaknesses of the municipal infrastructure agencies are their inadequate generation of internal revenues from tariffs and other charges, and their exposure to exchange-rate risk on dollar-denominated loans from the Interamerican Development Bank.

Own-source revenues from tariffs, betterment charges, and municipal tax contributions (in the case of the Quito Sewer Company) ranged between 30 percent and 50 percent of current income for the three infrastructure agencies. As shown in Table 4 below, these amounts cover from 41 percent to 59 percent of total (current plus capital) costs. If only current costs--costs of administration, operation, and maintenance--are considered, then, with the exception of the Water Company of Quito, the other two companies have operating surpluses.

Table 4

**OPERATING RATIOS FOR QUITO AND CUENCA  
WATER AND SEWER COMPANIES, MOST RECENT YEAR AVAILABLE  
(Thousands of Sucres)**

	<u>EMAP-Q</u> <u>(1988)</u>	<u>EMA-Q</u> <u>(1988)</u>	<u>ETAPA</u> <u>(1987)</u>
(A) Own Income	2,047,203	368,311	675,929
(B) Total Costs	3,916,153	620,025	1,646,126
(C) Current Costs	2,652,922	288,162	338,765
(D) Overall Coverage (A/B)	52%	59%	41%
(E) Current Cost Coverage (A/C)	77%	128%	200%

All three of the water and sewer companies received dollar-denominated loans from the Interamerican Development Bank in the late 1970s. Principal payments on those loans began in 1987 for ETAPA and in 1988 for EMA-Q and EMAP-Q. Servicing these loans has become a problem for the companies as a result of the large devaluations in the exchange rate over the last several years and would appear to be the primary cause of the need for large GOE transfers to cover capital costs. This is a cost which the water and sewer companies will need to continue to bear. In the last two years, when repayment of interest and principal on these IDB loans became burdensome, the GOE provided transfers to the municipalities to cover the debt service payments. EMAP-Q, EMA-Q, and ETAPA expect the GOE to continue to provide transfers to service this debt. In the absence of alternative actions by the GOE and/or the IDB to deal with this issue, the Mission assumes likewise. Using an analogy to US Government, IMF, and IBRD policy prescriptions to debt-burdened countries, the municipalities debt problem need not stand in the way of internal policy reforms to increase the internal generation of revenues, policy reforms to which each institution is firmly committed.

The water and sewer companies were found to have inadequate accounting and inventory control systems, and therefore to be institutionally weak in the area of financial planning. Each of these areas of financial management is the subject of activities under the technical assistance program. Assistance will be provided in the areas of planning and management information systems, tariff policy, inventory management, financial and cost accounting, billing and collections, and debt management.

## 2. Project Cost Recovery

### Tariff Policies

Municipal infrastructure authorities generally use two methods to recover costs of providing services: a charge for the capital cost of making a water or sewer connection, in Ecuador called a "contribucion por mejoras" or capital improvements contribution, and a tariff charge for consumption of water or sewer services through which, in the past, the infrastructure authority has recovered primarily the costs of operating and maintaining its infrastructure network and only minimally the capital investment in the overall system.

Water and sewer projects constructed using funds provided by the Supplemental Project will be borrowed with an interest rate of 32 percent. This rate is currently within the range of market rates in Ecuador for long-term housing finance. As part of the broader Program, and using the FFH for loan discounting, the infrastructure component will benefit as much as any other component of the Program from progress in the policy agenda with regard to finance and interest rates. But the Mission firmly believes that reforms in the area of tariff policies and structures will yield the most direct, widespread, and lasting improvement in the financial strength of the municipal water and sewer companies and in reduction in subsidies to consumers. Assistance in this area is a major component of the technical assistance plan.

Tariff reform and cost recovery generally are the most productive ways to achieve the Program's policy agenda in the area of municipal financial self-sustainability. Up to the early 1980's, water and sewer infrastructure coverage rates increased steadily in Ecuador. This increased extension of infrastructure was financed to a very large degree by transfers from GOE petroleum revenues to the municipalities, as grants or at highly-subsidized interest rates from GOE financial institutions such as BEDE. Ecuador's macroeconomic context no longer affords it the luxury of subsidizing development projects. Municipalities can no longer depend on transfers to meet their growing infrastructure needs, but must instead finance them directly and therefore focus on the recovery of capital costs. The communities to be served under the Supplemental Project are living evidence of the diminished ability in recent years of municipalities to maintain coverage of basic services, particularly for the urban poor. The municipalities have recognized this fact themselves, and the Mission has had a promising, fruitful dialogue with them on the need for reforms in financial management practices and in tariff policies so that they can finance the needed expansion of infrastructure systems.

Water tariffs in Quito and Cuenca are adjusted using a polynomial formula that provides an average tariff per cubic meter based on changes in underlying costs of collecting, treating, and distributing water. The formula is the following:

$$P_R = P_0 \frac{P_1 B_1}{B_0} + P_2 \frac{C_1}{C_0} + P_3 \frac{D_1}{D_0} + P_4 \frac{E_1}{E_0} + P_5 \frac{F_1}{F_0} + \dots + P_X \frac{X_1}{X_0}$$

where:  $P_R$  = average cost-in-force for cubic meter of water;  
 $P_0$  = average cost for cubic meter of water in prior period;  
 $P_1 - P_X$  = price weights for cost factors of, respectively, labor, electric energy, fuel oils, treatment chemicals, fixed asset depreciation, and consumer price index.

The designation of a " $P_X$ " coefficient in the formula is an indication that the municipal law allows for flexibility in adding cost factors to the tariff adjustment formula. In EMAP-Q's case, in its latest tariff adjustment, it has added an inflation adjustment factor as  $P_X$ . This is perhaps the most direct way in which the utility can keep its tariff income in line with inflation.

The other variable besides the consumer price index variable that is worth particular note is the cost adjustment factor for fixed asset depreciation. Although this cost factor has historically been a variable included in the tariff formula, EMAP-Q has not until now had adequate capacity to accurately calculate the value of its assets. With the addition of a financial analyst to its staff six months ago, and the financial programming she has achieved, EMAP-Q is now in a position to use fixed asset depreciation to recover its investment in the overall physical network of infrastructure throughout the whole city, whose value far exceeds the \$10 millions to be invested in neighborhood systems under the Supplemental Activity. EMAP-Q's financial projections for the period 1988-1998 show increases from fixed asset depreciation growing at an average of 98.6 percent annually. Nonetheless, the depreciation factor would still constitute only 4 percent of the total weighting of costs, in the tariff formula. Its weighting needs to be increased significantly and depreciation must be calculated at constant value in order to make it a significant source of investment cost recovery, an item that will be investigated through the Program's technical assistance to the municipalities.

The Supplemental Project will assist the municipal infrastructure authorities to develop and implement reforms leading to increased internal generation of funds both for investment purposes and for operating and maintaining the existing system, in a manner that recovers the real costs of extending and providing services. It is important not to lose sight of the fact that the much greater subsidy for infrastructure services is built into the tariff structure, which subsidizes middle and upper-income households, much greater than the use of a rate of interest of 32 percent to finance the extension of infrastructure services to the lowest-income customers in the

municipal system. By continuing to work with municipal counterparts on the need to reform their financial and tariff systems, the Mission believes that it has helped them to understand the relationship between system financial and tariff reform and the capacity to extend services to low-income communities.

Quito.- By current municipal ordinance, EMAP-Q is to adjust its tariff structure annually to keep tariff rates aligned with the company's operating costs. Applying the tariff formula in March 1988, EMAP-Q determined its average cost of water to be S/20.63 per cubic meter. This was the cost in force until early April 1989, when the cost of producing water was determined by the formula to be S/31.57, which is the average cost now in force.

The tariff structure of EMAP-Q is based on the increasing block model of tariffs: higher tariffs for higher levels of consumption. As of April 1989, the minimum tariff was S/20.63 per cubic meter for monthly water consumption in the range 1-15 cubic meters, and the maximum tariff was S/64.41 per cubic meter for monthly consumption in the highest consumption range of 1000 or more cubic meters. This tariff increase represents an average increase of 65 percent in tariff levels in Quito since the period March 1988 - March 1989.

EMAP-Q has a relatively high level of non-revenue water (water not billed, water lost to leakage, and water contributed at not charge to other governmental agencies) of 30 percent. EMAP-Q is taking several measures to reduce non-revenue water. Foremost among them is a substantial program of metering for water connections. Currently, 60 percent of EMAP-Q's water connections are metered. The company plans to add 27,000 metered connections to its system by March 1990, raising the coverage of metered connections from 60 to 85 percent. Increases in metered connections and a campaign of leak detection will reduce non-revenue water.

With both of these increases, and given the 65 percent tariff increase, the WASH consultants estimated that EMAP-Q's tariff income will increase by S/840 million (US\$ 1.7 million) per year, a 41 percent increase in tariff income over its 1988 level. Compared to an average annual increase of 48 percent in its operating costs over the last four years, this estimated increase in EMAP-Q's income is still short of the objective of full cost recovery. But the gap is closing.

The Quito Sewage Company, EMA-Q, does not currently receive income from tariffs charged to customers, but instead receives an allotment from municipal property tax revenue. EMA-Q expects its income from municipal property taxes to double in 1989, due to the property tax rate increase decreed by the municipality in 1989. EMA-Q is disturbed, however, by its lack of autonomy to generate revenues, and has requested a revision of the municipal ordinance to permit it to directly charge for sewage services through a tariff. It expects a decision on this request by June, 1989. If granted, EMA-Q will begin charging a service tariff in December, 1989 and will bill for service through the Quito electrical company, which currently has the most effective collection rate among municipal utilities in Quito.

Cuenca.- ETAPA has 26,575 domestic water and sewer connections (95 percent of the total connections), 1,329 commercial and industrial connections (4.7 percent of the total), and 69 "special" connections (0.3 percent of the total). As of January 1989, when a new tariff structure went into effect in Cuenca, the average cost of water is S/18 per cubic meter. Residential tariffs range from S/5.68 per cubic meter for monthly consumption in the lowest range of 1-20 cubic meters, to S/26.98 per cubic meter for monthly consumption greater than 200 cubic meters. Sewer service is billed with water service in Cuenca, at a rate indexed at 50 percent of the water bill. ETAPA has achieved an admirable rate of bill collection, increasing it from 60 percent in 1986 to 80 percent as of March 1989. ETAPA's new tariff structure is adjusted and applied automatically each month. The company has already achieved an increase in tariff income of 30 percent since January 1989 and expects tariff income to increase by 90 percent by the end of the year.

ETAPA has had a very active program of residential metering over the last several years that is worth describing. Currently 85 percent of Cuenca's residential water and sewer connection are metered. Those households without meters are billed a flat rate based on average consumption levels of metered connections in their neighborhoods, the same procedure used by EMAP-Q in Quito. Average residential consumption in Cuenca in 1988 was 64 cubic meters per month. Cuenca's high level of metered connections, vigorous program of leak detection, and gradual increased in tariff levels has led to reductions in average domestic water consumption over the last three years and thus higher returns on ETAPA's fixed assets.

Between 1986 and 1988, ETAPA increased dramatically the level of metered connections from 20 percent to 85 percent. With an 8.3 percent increase in water production, ETAPA has been able to add 23.4 percent more water connections. With greater accuracy in billing and increases in tariff levels--and thus greater customer awareness of consumption--average monthly consumption has declined by 17 percent between 1986 and 1988, from 77 cubic meters per connection per month to 64 cubic meters per connection per month. ETAPA expects that when it reaches its goal of 100 percent metered connections, and with further tariff increases, it will achieve even greater reductions in average consumption to approximately 50 cubic meters per connection per month. This in turn could lead to reevaluations of the necessity of adding primary system capacity to Cuenca's water network, leading to substantial savings in future borrowing levels and debt burdens.

Beyond these significant changes in municipal financial management practices, in Quito and Cuenca, attention will still need to be addressed at the national level to removing legislative ambiguities and putting into effect existing national legislation that gives municipalities the ability to recover costs for service improvements. Articles 407 and 411 in the Law of Municipal Regulations, which state that municipalities are prohibited from charging tariffs or user fees that are greater than the unit cost of operating and maintaining the service, are often cited as the major legal obstacle to investment cost recovery. There exist other laws, however, that offer legal avenues to capital cost recovery for municipal projects. One example is the

"Special Contribution for Improvements", Title VIII of the Law of Municipal Regulations, which authorizes municipal charges for investments in community public works. Another example is a stipulation in Article 411 in the same law that allows sewage authorities to charge service fees indexed to the user's consumption of water, a mechanism currently used only by ETAPA, the water and sewer authority in the city of Cuenca. These examples would seem to indicate that the policy agenda in this area is as much a matter of political will as of legislated obstacles.

In March 1989 IEOS submitted to CONADE, the National Planning Board, requests for changes in those articles such as those above in the national municipal law that govern municipal cost recovery for infrastructure services. The requested changes would allow water and sewer tariffs to recover not only operating and maintenance costs for service production, but also to charge for the recovery of investment (i.e., capital) costs. Combined with improved management practices within the municipal water and sewer companies, these legal changes will be the most effective, long-lasting manner in which to achieve real cost recovery for both operation and maintenance and system expansion of municipal infrastructure. The Mission's technical assistance program includes assistance to the GOE in studying how to change the municipal law to achieve real cost recovery for infrastructure, changes that the Quito and Cuenca water and sewer companies are committed to implement.

The WASH consultants contracted by the Mission made two specific observations about tariff policy in the two cities that are probably applicable to the rest of Ecuador's municipalities. First, that the majority of water users consume less than 60 cubic meters of water each month. Therefore, with smaller changes in tariff levels for households in the lower consumption ranges, proportionately larger increases in total revenues can be realized. For example, in Quito, the 72 percent of households that consume 60 or fewer cubic meters per month produce 31 percent of the company's tariff revenue, while the 9 percent of consumers who consume more than 60 cubic meters monthly produce 59 percent of the company's tariff revenue. In Cuenca, the 71 percent of households that consume 60 or fewer cubic meters monthly produce 19 percent of ETAPA's tariff revenue, while the 29 percent of households who consume more than 60 cubic meters monthly produce 81 percent of its tariff revenue. While some degree of cross-subsidization will continue to be justified for minimal consumers of water, the water companies will be unable to avoid raising tariffs in the lower consumption ranges in order to significantly raise tariff revenues and cost recovery.

World Health Organization standards for water tariffs stipulate that an acceptable tariff level for potable water is the equivalent of one day's monthly minimum salary for 20 cubic meters of water. Given a minimum monthly salary in Ecuador of S/22,000, the monthly charge for 20 cubic meters of water could be S/733, or S/37 per cubic meter in the consumption range 1-20 cubic meters. This is in fact the average charge in Quito under its new tariff structure that becomes effective in April 1989. The tariff for the smallest consumers in Cuenca, at an average of S/.5.68 per cubic meter for consumption below 20 cubic meters, is still substantially below that standard.

The second observation made by the WASH team with respect to tariffs, is that it would be desirable for tariff adjustments to be made more automatically, gradually, and in more frequent intervals. The more frequent the adjustments, the more they can approximate changes in operating costs, and the less jolting they are to consumers.

Through its technical assistance program, the Mission will continue the analyses of proposed changes of tariff policies under consideration by the municipal water and sewer companies in order to achieve increased self-sufficiency with an equitable distribution of costs.

### 3. Project Affordability

The Quito water and sewer authorities have submitted detailed project proposals for approximately US\$2.9 million worth of projects, or 28 percent of the projects they plan to discount through the FFH.

The average cost of a water connection among the 14 water projects submitted by EMAP-Q is S/ 198,552 (US\$397) per residential lot. The average cost of a sewer connection among the initial 6 sewer projects submitted by EMA-Q is S/ 204,816 (US\$410) per residential lot.

Community surveys conducted by EMAP-Q in the communities in Loma de Puengasi, which will be the first to receive water connections through this Supplemental Project, provide information on household income, current household expenditures on water consumption, and household willingness-to-pay for water connections. Those surveys indicate that average monthly household income, as of February 1989, is S/ 34,000 (US\$68); that the "average" household spends S/ 2,700 (US\$5.40) monthly on the 3 cubic meters of water it buys monthly; and that the "average" household is willing to spend S/ 3,000 (US\$6) monthly to finance a residential water connection. Information obtained by EMAP-Q from city-wide surveys of water prices from private water vendors indicate that the average monthly expenditure for water by families that obtain all their water from water vendors is approximately S/ 4,500 (US\$9.00) at S/ 863 per cubic meter. City-wide, therefore, unserved households are purchasing, on average, about 5 cubic meters of water per month at 28 times the unit cost of water provided by the municipal water authority.

EMAP-Q and EMA-Q have provided BEDE with detailed options for the long-term financing of the water and sewer connections to the beneficiary households. Both have developed financing options based on beneficiaries' stated payment capacity. Each option charges an interest rate of 32 percent on the total loan amount, which has a loan term of 10 years (120 monthly payments). Some of the financing options use annual payment escalation factors so that, in comparison to a standard amortization of the loan at constant monthly payments, monthly payments in the earlier years of the loan are discounted and then increase as the loan matures.

Both EMAP-Q and EMA-Q have indicated that they will provide long-term financing from their own resources for up to 10 percent of the project costs when necessary in order to make monthly payments affordable to beneficiaries.

The source of these funds will be income generated by the utilities from city-wide tariff or tax revenues, or other sources of internal revenue. With the 10 percent of the total project cost paid as a downpayment by the beneficiary households before project construction begins, and in some cases a 10 percent contribution made by the utilities, between 80 percent and 90 percent of the total project cost remains for long-term financing by the beneficiary households. Based on the average project costs per lot indicated above, this means between S/ 158,842 (US\$318) and S/ 178,697 (US\$357) will be left for long-term financing of water projects and between S/163,853 (US\$328) and S/ 184,335 (US\$369) will be left for long-term financing of sewer projects.

Both EMAP-Q and EMA-Q have developed options for long-term financing including at least one which is consistent with beneficiary capacity-to-pay as demonstrated by average expenditures for water from water vendors, which they calculate as S/4,500 (US\$9) per month. From this amount they deduct S/800 (US\$1.60), the amount they estimate households will spend on water consumption, leaving a monthly capacity-to-pay for long-term financing of a residential connection of S/3,700 (US\$6.40).

EMAP-Q has presented four financing alternatives. Each alternative is based on financing 90 percent of the project cost, i.e., no contribution from EMAP-Q for long-term financing. The amount financed is S/ 225,000 (US\$450), which reflects an average project cost greater than those in the first group of projects submitted to BEDE. The first alternative includes an annual payment escalation factor of 20 percent. The monthly payment during the first year is S/ 3,458 (US\$6.92) but rises to S/20,955 in the tenth year. The second alternative also includes an annual payment escalation, but in this case at 32 percent per year, so that monthly payments in the first year are S/ 2,615 (US\$5.23) but rise to S/ 31,815 in the tenth year. These first two options are within current average payment levels for existing water. A third alternative is a standard amortization with constant monthly payments over the loan term, with monthly payments of S/ 6,266 (US\$12.53). The fourth alternative uses inflation-indexed interest rates that are set each year and applied to principal payments that are equal in each year. EMAP-Q estimates that households using this alternative will pay S/ 8,444 (US\$16.89) monthly in the first year and S/ 2,444 monthly in the tenth year.

EMA-Q, the Quito Sewer Authority, has presented three financing alternatives, similar in structure to those of EMAP-Q. Each alternative is based on financing S/170,000 (US\$340) or 80 percent of the project cost. The first alternative includes an annual payment escalation of 7 percent. Monthly payments in the first year would be S/ 3,500 (US\$7) but would rise to S/12,187 in the tenth year. The second alternative, similar to the water authority's fourth alternative, would recuperate more of the interest charges in the early years of the loan, so that monthly payments would be S/ 5,187 (US\$10.37) during the first year but S/ 3,211 in the tenth year. The third alternative is a standard amortization with constant monthly payments of S/ 4,783 (US\$9.57).

Because project beneficiaries currently obtain water from other sources, the most appropriate manner in which to assess the feasibility of the project at the level of the beneficiary is to compare the costs of the project either to beneficiaries' current costs of obtaining water, or to their willingness-to-pay for water as stated directly by them in community surveys. The Mission has information on both items.

In order to make a useful comparison of the water and sewer projects' costs and beneficiary ability and willingness-to-pay, it is first necessary to make the following adjustment. The water and sewer connections are made to a residential lot, and the cost estimates prepared by the water and sewer authorities are based on costs per residential lot. The information the municipality has on income and on ability and willingness-to-pay are based on individual households. In the majority of the low-income barrios, lots are large, between 300 and 400 square meters each, and more than one household lives on each lot. City-wide, the average is 1.42 households per residential lot. The payment capacity per residential lot is therefore greater than household income. The capacity to pay for a water or sewer connection, therefore, should not be based on household income or ability/willingness-to-pay, but rather on household income per residential lot or ability/willingness-to-pay per residential lot or, alternatively, on a comparison of household income or ability/willingness-to-pay to project cost per household, not per residential lot. Because the water and sewer authorities have calculated monthly financing costs for the initial projects, it may be easier to make the comparison based on income or ability/willingness to pay per residential lot.

Using the data from EMAP-Q surveys in the 14 communities in Loma de Puengasi, average household income is calculated as S/34,000 (US\$68). With an average of 1.42 households per residential lot, this means average monthly household income per residential lot is S/48,280 (US\$96.56). The surveys also indicate that, on average, households are willing to spend S/3,000 (US\$6) per month for a residential water connection. On a per-residential-lot basis, this translates to a willingness-to-pay of S/ 4,260 (US\$8.52) per month, per lot. Two of the financing alternatives of EMAP-Q and all but the third financing alternative of EMA-Q are below this stated level of S/ 4,260 (US\$8.52).

Given these cost ranges and estimated household incomes and expenditure patterns, the Mission therefore concludes that project costs are generally within acceptable parameters of affordability for low-income beneficiaries. Nonetheless, both infrastructure agencies can reduce average project costs further still. The team of WASH consultants that came to Ecuador in February claim that average project costs in the range of US\$200 - US\$ 300 are feasible. With these levels of costs, monthly payments would fall to the range of US\$4.46 to US\$7.52, well within the current stated payment capacity of US\$8.52. This effort at further cost reduction will require the technical assistance being offered to the municipalities by the Mission. Nevertheless, the Mission feels confident that the municipalities are capable now to construct and discount initial projects with a total value of US\$400,000 within the next six to twelve months, with no additional technical assistance or redesign required. The remainder of the projects, with technical assistance inputs, will become acceptable technically and financially during the remainder of the Supplemental Project.

### C. Technical Analysis

The WASH consultants made a technical evaluation of the initial water and sewer project proposals prepared by EMAP-Q, EMA-Q, and ETAPA. This section is based on the evaluations of those initial project proposals and the consequent WASH recommendations. The Mission has reviewed the project proposal submissions in order to gain information for this PPS, but the Mission has not evaluated nor advised BEDE, IEOS, or the municipal infrastructure agencies on project design.

#### Quito Water Projects

The Water Company of Quito (EMAP-Q) prepared proposals for five low-income communities in Quito, with a total population greater than 120,000. The WASH consultants evaluated an initial project proposal prepared by EMAP-Q for the communities of Loma de Puenguasi, an area of 20,000 persons. The proposal includes information from a survey conducted by EMAP-Q in Loma de Puenguasi in February 1989 that covers approximately 60 percent of the neighborhoods to be served by the project.

The project's feasibility study was flawed by average household water consumption figures that were too high, particularly given the lack of sanitary facilities in 60 to 70 percent of the houses in the community. The project design assumed a household consumption of 250 liters per day per capita, the consumption norm used by EMAP-Q for all projects in Quito since 1976. This municipality-wide consumption norm is, as a rule, high even for middle-class neighborhoods in Latin America.

The WASH consultants also found project costs to be inflated by the use of pipes of large diameter for the secondary distribution network being constructed to bring water to the low-income communities. The minimum pipe diameter standard used in the Loma de Puenguasi project was 63 millimeters, even though it is now common to use pipes of 40 mm diameters for secondary distribution networks, and in fact smaller diameter pipes increase hydraulic pressure in the system. Furthermore, 85 percent of the pipes proposed for use in the distribution network were greater than 63 mm diameter.

The WASH consultants recommended redesign of the projects based on lower household consumption standards, reduced pipe diameter standards, installation of metered household connections, and a reexamination of the criteria used for assigning priorities to projects, all of the recommendations being made to achieve less costly, more feasible projects with a more rapid schedule of execution. As described below, EMAP-Q, as well as the other institutions involved in the Supplemental Project, accepted these recommendations and has redesigned its project proposals and resubmitted them to BEDE for evaluation.

#### Quito Sewer Projects

The Sewer Company of Quito (EMA-Q) presented to BEDE and IEOS for evaluation projects in 42 peripheral communities of Quito. The project documentation did not indicate the conditions of water supply in those communities. In IEOS's evaluation of these projects, it noted that six of the

communities do not yet have a potable water supply; in five others the existing water supply is in need of substantial improvements, and that in two others the majority of houses do not yet have toilets. In its evaluation, IEOS commented that it makes little sense to extend sewage facilities to houses that do not yet have a stable water supply or even sanitary facilities. EMA-Q had not coordinated with EMAP-Q in choosing communities for project financing.

Two of the forty-two project proposals of EMA-Q contained definitive designs: those for the communities of Hierba Buena and Santa Rosa. The average cost of residential sewage connections presented in the projects for these two communities were initially US\$440 and US\$464 respectively. The WASH consultants found these costs to be high for projects in low-income communities, and attributed the high costs principally to the fact that EMA-Q employed a system of combined sanitary and storm sewerage, which necessitates very large diameter sewerage pipes, between eight and twenty-four inches in diameter.

Another contributing factor to the excessive dimensions of projects for both water and sewage was the long demand horizon used for planning required capacity. Both EMA-Q and EMAP-Q chose project designs based on community demand over a twenty to thirty year horizon. The application of such long horizons, determined by projected increases in urban populations, leads to the use of large pipe diameters, and thus more costly pipes, in order to meet demands for water and sewage facilities twenty or thirty years hence. The use of demand horizons of ten years is more common and realistic for low-income community infrastructure projects; furthermore, the sewer proposals would be made more feasible financially if proposals for sanitary and storm system connections were prepared separately.

EMA-Q, like EMAP-Q, has resubmitted to BEDE redesigned project proposals for 16 Communities in Quito based on the initial requests from BEDE and IEOS for more information or changes in design.

#### Cuenca Water and Sewer Projects

The Telephone, Water, and Sewer Company of Cuenca (ETAPA) is the infrastructure agency in Cuenca. ETAPA is planning to submit 14 projects eligible for financing from the Financial Fund for Housing to BEDE. Two of the projects, in Quinta Chica and Elia Liut, are projects in the central section of Cuenca; the other twelve are in outlying communities within the metropolitan area of Cuenca.

The combined costs of the water and sewer projects in the two communities in central Cuenca, which will serve approximately 22,800 persons, ranged from US\$107 to US\$163 per residential lot. These costs are lower than those in Quito principally because the proposals include only sanitary sewage connections. Cuenca's sanitary and storm sewerage systems are separated in approximately 40 percent of the network.

The ETAPA projects in the outlying communities, projected to serve 17,450 persons, have higher average costs due to their greater distance from the city's existing network. These communities are on average fifteen kilometers outside the city limits of Cuenca. The average cost of these projects is US\$313.

The ETAPA projects use household consumption norms of 100 to 150 liters per capita per day, appropriate to the consumption levels of low-income communities.

The institutional, technical, and financial assessments have been valuable learning experiences for each institution involved in the proposed Supplemental Program. Each institution cooperated fully in the assessments and when presented with the results of the evaluations showed a great willingness to learn and incorporate past lessons into revising program procedures and project designs. Evidence of this responsiveness are the two "Resolutions of Understanding" and the "Agreement of Cooperation", all attached as part of Annex C, signed by the directors of EMAP-Q, EMA-Q, and other chief participants from the two Quito infrastructure agencies.

The resolution with respect to EMAP-Q states that, among other actions, EMAP-Q will reduce the consumption standard used for the projects from 250 liters per day per capita to 150 liters; that it will reduce the design demand horizon from 30 years to 10 years; that it will increase the length of closed loops in the system, thereby reducing the number of valves needed in the distribution network; and that whenever possible it will use multiple or duplex connections to reduce costs. The resolution also calls for improvements in the financial administration of EMAP-Q, and notes a number of actions EMAP-Q has already undertaken to improve its budget control, inventory control, and accounting systems, including the hiring of a financial adviser from the private banking sector and the contracting of an external financial auditing firm.

The resolution signed by the Deputy Director of EMA-Q states that EMA-Q will redesign all of its proposed projects with the objective of separating sanitary and storm systems, giving priority to the provision of sanitary sewage connections to project households; and that if for technical or overall financial considerations a combined sanitary and storm system is preferable, EMA-Q will charge project households only for their prorated use of the stormwater collection system.

The Agreement of Cooperation, signed by the General Managers of EMAP-Q and EMA-Q, acknowledges the necessity of joint planning of project proposals by the two agencies in Quito; calls for the convening of an interagency executive group from EMAP-Q and EMA-Q to jointly plan projects and determine technical and socio-economic parameters for each water and sewer project; and in cases where household ability-to-pay is limited, to give first priority to the installation of potable water systems, but only in those communities with access to some environmentally-sound system of sewage disposal.

BEDE has also reacted positively to the recommendations of the consultants, accepting the need to strengthen its role as the leader in the infrastructure component of the Supplemental Program and to develop project proposal criteria to be used by the municipal infrastructure agencies in submitting projects for financing.

Based on these agreements, and with the offer of technical assistance to the institutions, the Mission believes it has the basis to conclude that water and sewer projects can be constructed for per-capita costs within a range affordable to the Supplemental Project's low-income beneficiaries.

#### D. Environmental Analysis

The Initial Environmental Examination (IEE) for the HG-007 Program determined that the Program would not have significant impacts on the environment and gave the project a Negative Determination. Further review of the way the Program is now being implemented and is planned to be implemented in the future has led the Mission to determine that the Program falls within a category of activities (Categorical Exclusions) for which an Initial Environmental Examination, Environmental Assessment or Environmental Impact Statement is not required. Section 216.2 (c) (ii) of AID's Environmental Regulations states that such analyses are not required when "AID does not have knowledge of or control over, and the objective of AID in furnishing assistance does not require, either prior to approval of financing or prior to implementation of specific activities, knowledge of or control over, the details of the specific activities that have an effect on the physical and natural environment for which financing is provided by AID". The HG-007 Program falls within this category because under this Program AID does not approve separate subprojects prior to financing and has no knowledge of control over the details of the specific subprojects it is financing.

However, despite approval of the Mission's request for a Categorical Exclusion in Annex D, the Mission is cognizant that neighborhood water and sewerage projects can cause significant environmental impacts in their localized environments. Of particular concern is the need to assure that all projects involving expansions of water supply distribution systems take into account the adequacy of sewage disposal systems in the project area. A balance must be struck between the affordability of combined water and sewer projects and the necessity to protect the local environment and public health.

#### E. Social Soundness Analysis

The additional resources provided under this Supplemental Project will not introduce a new activity. Rather it will permit the Mission and the GOE to place further emphasis on one of the elements that has been part of the policy agenda since the Program was first developed. This section updates the Social Soundness Analysis contained in the original Project Paper, with further information on the status and need for infrastructure services in low-income neighborhoods.

Most low-income neighborhoods have been developed by the "informal sector" operating without official approvals or permits. The families that constitute these settlements resolve their need for houses by building their own: a compromise between what they want and what they can afford (but much more "house" for the cost than those of public programs or those of private sector).

The need for basic urban infrastructure services is much more difficult for low-income families to resolve, and the widespread deficiency in infrastructure, notably water and sewer, is one of the most pressing problems faced by Ecuador's cities today.

Other important urban services -transport, communications, social services, police vigilance- are also in short supply. For example, although over 72% of the families in Quito have some kind of electric connection, 42% of their connections are illegal and, in most cases, precarious and unsafe. Only 30% of the population enjoys the benefits of public lighting: greater convenience and greater security for the neighborhood.

In the summer of 1988, Deloitte, Haskins & Sells performed a study of financing for housing, infrastructure and services in twenty-four marginal neighborhoods in four major cities in Ecuador. The rates of water and sewer coverage in the neighborhoods studied are summarized in the following tables. It is noteworthy that in the largest cities coverage has dropped well below the percentage it once enjoyed, as municipalities have been unable to keep pace with rapid urban growth.

**TABLE 5**  
**POTABLE WATER PROVISION**  
**SELECTED LOW-INCOME NEIGHBORHOODS**

CITY	SOURCE		
	Piped from Public Water Supply	Tank Trucks	Well, Stream, Other*
Quito	19	62	19
Cuenca	58	-	42
Guayaquil	-	93	7
Sto. Domingo	17	3	80

\*Includes shallow springs and agricultural irrigation channels (acequias), which also serve as septic system for many families.

**TABLE 6**  
**WASTE DISPOSAL**  
**SELECTED LOW-INCOME NEIGHBORHOODS**

CITY	MEANS	
	Through Sanitary Sewer	Latrine or Other*
Quito	22	68
Cuenca	50	50
Guayaquil	17	83
Sto. Domingo	59	41

\*Includes depositing wastes in public streets and in agriculture irrigation channels (acequias), which serve some families as source of water for household use.

The high cost of trucked water is a very serious problem in marginal neighborhoods. The Quito Municipal Water Company (EMAP) has found that the average cost per cubic meter of trucked water in Quito is S/860, contrasted with S/ 31 for water from the municipal system. With a very modest average consumption of 5 m<sup>3</sup> per month, families must pay S/4,500 for their water. This represents 11% to 15% of the incomes of most of the families in these

neighborhoods, which, according to EMAP's March 1989 surveys, fall into the S/.30,000 to S/.40,000 per month range.

The above EMAP findings for March 1989 seem reasonable for city-wide Quito levels in low-income settlements. The July 1988 Deloitte, Haskins & Sells study found average family incomes of S/.30,000 per month in Lucha de los Pobres, which is one of Quito's older, more established settlements. The income levels in neighborhoods are not uniform, but the settlements which will be served under this supplemental program are those where most of the cities' lowest income residents live.

The Mission will focus on potable water and sewer improvements through this Program. The positive effects of providing water and sewer services are well known but bear repetition in the context of this section of the Project Paper Supplement.

Faster provision of basic utilities will benefit low-income urban families in many ways:

Families will pay substantially less for water than they do today. The direct cost benefits are quantified in greater detail in the Financial Analysis, (IV-B.2.)

Water of better quality that is subject to less handling and exposure will be a clear health benefit.

Regular water supplies open new economic opportunities: neighborhood laundries, cafeterias, etc.

Regular water supplies facilitate essential services: pharmacies, first-aid posts, fire stations, day-care centers, others.

Basic urban infrastructure is a service known to and understood by the families to whom it will be provided. It is a service which they want, for which they are willing to pay, and one which will have definite, positive effects on the quality of their lives.

Since upgrading programs are contemplated in the design of the original Program, few substantive changes are needed to undertake the additional activities. The key ones are the incorporation of BEDE (IEOS and the municipalities, which was addressed earlier) and a restatement of the Program's eligibility criteria.

As initially approved, the Program defined "eligibility" in the context of loans to individual beneficiary families. Application of eligibility criteria on a family-by-family basis is realistic for (a) purchasers of a new lot or housing unit (b) borrowers of home improvement loans.

The use of such criteria for urban upgrading efforts is not feasible, as spontaneous settlements are not homogeneous in their composition. It would be neither reasonable nor desirable to finance water and sewer for one family and deny it to a neighbor family because of income differences. For purposes of EG-funded investments in infrastructure, an "eligible community" will be one in which not less than 75% of the families have incomes below the median.

The distribution of low-income neighborhoods varies from city to city. Quito's programs are primarily directed at expansion areas on the existing periphery of the city. In Cuenca, by contrast, the main thrust of the Municipality's attention is on outlying areas beyond the immediate boundaries of the city. Low-income communities are located both in the city's center and in those outlying communities. In the city center, residential space has continued to be subdivided as it has been transformed from a middle-class to a lower-class mixed commercial/residential area with very high population densities. Housing quality has deteriorated and the existing infrastructure network has become inadequate to service the higher population density.

The outlying communities where services will be furnished are on average 15 kilometers outside of Cuenca's city limits but within its metropolitan area. These communities are well-integrated into Cuenca's economic activity, supplying almost all of the city's construction workers and at least one-third of its industrial workers. None has adequate water or sewer service from ETAPA's system. Service will be extended to these "satellite communities" to reduce their infrastructure deficits, to consolidate Cuenca's economic and residential areas, and to manage urban migration flows within its metropolitan area.

This activity will not worsen current problems. Some existing communities are provisional, located in dangerous, inappropriate or environmentally sensitive areas. The Municipality of Quito does not plan to grant permits to such neighborhoods and this Program will not finance activities that might contribute to the permanence of those settlements.

For the neighborhoods where water and sewer services will be furnished, clear titles are either in hand or in the process of being obtained by the families. The neighborhoods tend to be very stable. In many cases the groups which comprise them antedate the settlement itself, as the groups formed to address the need for land and have maintained their sense of group solidarity over time.

A reasonable concern is whether beneficiary families may resist paying for the neighborhood infrastructure systems to be financed. Municipal authorities, including the staff and directorate of the city utilities, do not think that this will be a problem. Their conviction stems from more than good-natured confidence in the communities. Participation is enthusiastic and sustained whenever the Municipality undertakes activities that will help the neighborhoods. Many communities are now saving funds to pay part of the cost of their systems, and the city is aware of a very real and strong determination on the part of the families to be included in the upgrading programs. And, of course, the utilities can deny water to neighborhoods that do not stay current on their payments.

There is also cohesion among the spontaneous settlements: they belong to several Associations of Barrios Populares that lobby their collective interests. They are well aware that any community that resists paying for its infrastructure will make things much harder for others that are seeking it, and there is a strong motivation to keep themselves in good standing with the municipality.

Of interest from a social as well as from a financial perspective is the emphasis this Program will give to credit unions and housing cooperatives. The active participation of women in such organizations in Ecuador reflects women's concerns about their neighborhoods and their willingness to give of their time and effort in the interest of their communities. Open membership has long been a standing policy of cooperative organizations, and both credit unions and housing cooperatives have a high proportion of female members. Women are well-represented, too, among the officers and professional employees of both kinds of cooperatives.

The Mission will support this positive situation by ensuring that the technical assistance to housing coops and credit unions addresses constraints to full participation by women in these important shelter institutions, looking not only at their access to the benefits available under the program (e.g. housing credit, improved infrastructure) but ensuring also their active involvement in the management of the institutions.

## V. TECHNICAL ASSISTANCE PLAN

The proposed technical assistance plan is designed to support the accomplishment of the broader policy reform and institutional development objectives of the Program. The TA plan will serve to put in motion a process through which mechanisms and activities developed as part of the Program can continue beyond the completion of the Program.

### A. TA plan for the BCE/FFH

The Mission proposes to exert strong influence in bringing about a consensus of opinion on the structure of interest rates in the Ecuadorian economy and their application to the FFH loan discount mechanism for low income housing, home improvements and infrastructure systems in marginal urban areas. Thus, a major thrust of the Program's TA plan is to support the BCE in its efforts to understand and overcome the constraints to the creation of a viable housing finance system in the context of variable and unpredictable inflation.

The TA plan will encompass the following:

#### 1. Housing finance policy development

Following a meeting in April of this year between the Mission and key members of the GOE economic team, including the President of the Monetary Board and the General Manager of the Central Bank, the BCE initiated a study to analyze the effect of inflation on long-term lending for housing and to recommend measures which would lead to the creation of a viable housing finance system. These measures would be directed primarily to the FFH. However, the BCE and the Monetary Board are interested in addressing the issue broadly. As such, the BCE has invited the social security and savings loan systems, as well the BEV, to participate in the study.

Approximately twelve person months of short-term technical assistance as well as related training, funded with \$220,000 from the grant to the BCE, will be provided to support the housing finance policy development process initiated by the Bank. The short-term TA will be contracted with a single firm which would be expected to utilize both U.S. and Ecuadorian consultants. The firm will be asked to designate a chief of party who will assist in planning and coordinating the various short-term efforts. The major areas of assistance will be:

Defining the problem: How has inflation eroded the capital base of housing finance institutions in Ecuador? How have mortgage loan payments as a percent of current income behaved over time for a typical home buyer in Ecuador? How should this be factored in when considering the affordability of various housing options, particularly for lower-income families in Ecuador.

This effort will build on recent estimates of the volume of financing required to address overall shelter needs in Ecuador derived from the application by a local consulting firm of the AID Housing Needs Assessment Model. The idea is to estimate the effect of capital lost to inflation in reducing the percentage of overall shelter needs which can be addressed in Ecuador.

Designing a response: What is the appropriate housing loan instrument for Ecuador? Is it sufficient to adjust interest rates in response to fluctuations in inflation? Is some form of indexing of principal required? If so, which index would be most appropriate? How would indexing affect affordability?

This effort will benefit greatly from the experience of neighboring South American countries, including Bolivia, Chile, Colombia and Peru, which have all tried to confront the same issues. It will also build on work done recently for PRE/H on the design of mortgage instruments in inflationary environments.

Implementing the new policies: How can the new lending instruments be made available to the private sector so that they become market driven? What regulatory changes are needed? What fine-tuning is required before actually using the new instrument?

The questions obviously are meant to be illustrative, as are the following estimated levels of effort and cost:

	<u>Person/ months</u>	<u>Cost</u>
<u>Understanding the problem</u>	3	40,000
<u>Designing a response</u>	5	60,000
<u>Implementing the new policies</u>	8	100,000
<u>Related training and observation trips</u>	n/a	<u>20,000</u>
	<u>16 <sup>1/</sup></u>	<u>220,000</u>

<sup>1/</sup> Assumes an average cost per person month of short-term TA of \$12,500, assuming equal efforts by U.S. consultants at \$17,000 and Ecuadorian consultants at \$8,000 ( $(\$17,000 + \$8,000)/2$ )

2. Institutional strengthening of the FFH

The earlier institutional analysis of the FFH identified the need for the appointment of a full-time manager of the Fund and for the creation of an advisory board. These measures are necessary to improve the overall operation of the FFH. They will also provide critical support to the housing finance policy development process. The full-time manager will be available to coordinate the TA process within the BCE and with other participating institutions. He or she will also monitor pending actions and provide follow-up. The advisory board will provide an invaluable forum to debate issues, consider findings and recommendations and generally to build a consensus in support of the new policies.

Neither the full-time manager nor the advisory board per se will require funding under the grant. They will be supported by the grant-funded long-term advisor who has been serving under a PSC since August of 1987 at a total cost over three years of \$450,000. His expertise in the design of both new housing and home improvement programs affordable by the urban poor will complement that of the short-term advisors in housing finance and economics. The advisor has become a valuable link between the private sector banks and builders participating in the Program and the BCE staff managing the FFH. With these contacts he will be able to support the implementation of new lending instruments once approved.

The composite technical assistance package to the BCE/FFH thus looks as follows:

	<u>Person/ Months</u>	<u>Cost</u>
- <u>Short-term assistance</u>	16	200,000
- <u>Long-term advisor</u>	36	450,000
- <u>Related training</u>	n/a	20,000
- <u>Work completed as of April '89</u>	<u>n/a</u>	<u>35,000</u>
	52	\$705,000

B. TA in support of the Infrastructure Component

The primary objective of the technical assistance plan for the municipal infrastructure program is to develop a capacity within national and local governments to analyze and address the need for the self-sustainability (i.e. full cost recovery) of municipal infrastructure systems. By means of a well coordinated and phased technical assistance plan, the following three key outputs will be achieved: 1) development of BEDE's and IEOS's capacity to advise municipalities in the design and implementation of financially-sound infrastructure systems; 2) the strengthened financial self-sufficiency of

municipal infrastructure agencies, beginning with those in Quito and Cuenca; and, 3) dissemination of the initial experiences of the Quito and Cuenca program to other municipalities in Ecuador, through workshops and seminars organized and carried out by the Association of Ecuadorian Municipalities (AME) and the Institute for Municipal Development (INFODEM), AME's technical services organization.

The technical assistance plan for the infrastructure component will be carried out under a buy-in with WASH. The proposed WASH TA plan will have two major objectives: First is the development of an efficient system of finance for urban infrastructure development in Ecuador. Technical assistance in this area will serve to strengthen the capacity of BEDE to lead and advise municipalities in the design and implementation of financially sound municipal infrastructure systems. TA will also be provided through BEDE to assist IEOS in the development and implementation of environmental criteria for infrastructure projects submitted by the municipal entities. BEDE and IEOS will acquire the necessary skills and technical expertise needed to effectively implement municipal project criteria. The Program design and environmental criteria will directly address the affordability and cost recovery issues raised during the project design stage. Current design norms and standards will be reviewed and revised to make them consistent with the Program's affordability and cost recovery criteria. Technical assistance will also focus on the design of a socio-economic data collection system to be administered by BEDE and IEOS, and utilized at the municipality level as a management support tool for verifying the affordability of project proposals.

As a result of the TA program, both BEDE and IEOS will be strengthened institutionally by developing a capacity to establish environmental criteria, set design standards, and properly evaluate municipal infrastructure proposals, particularly for urban upgrading in low-income communities.

It is worth noting that the Mission is currently developing a new rural water and sanitation project that will build on achievements under a current project and in which IEOS is the GOE implementing agency. The project contemplates continued provision of technical assistance to IEOS. The Supplemental Project will be working with IEOS in one narrow area of its expertise and responsibility in the water/sewer sector in the country, i.e., technical standards-setting and environmental evaluation of water and sewer projects. As currently designed, the rural water and sanitation project will assist IEOS in its decentralization efforts, in the diffusion of a rural water-project technology developed with past assistance of AID, and with the implementation of a nationwide hygiene education campaign. The latter component should be of some benefit to the HG Supplemental Project. Otherwise, the two Mission programs have little overlap in their relation to IEOS, but will be complementary in strengthening IEOS' capacity to fulfill its national mandate in the water and sanitation sector.

The second objective of the infrastructure TA plan is to assist in developing policies that have a direct impact on strengthening the financial self-sufficiency of municipal infrastructure agencies. EMA, EMAP and ETAPA will become more self sufficient financially through improved management and operating practices within the agencies themselves, through changes in municipal legislation related to cost recovery, and by reforms in tariff policies.

Each of the technical assistance activities supports the policy agenda and the achievement of policy objectives. Each institution has made a firm commitment by means of actions already taken and planned, and in the areas in which institutional strengthening or training were identified as necessary during the project feasibility analysis. Technical assistance activities under the municipal infrastructure component of the Supplemental Project have been divided according to three phases of activities.

1. Improving Project Design and Evaluation Criteria (Phase I)

The objective of Phase I is, in "learning by doing" from an initial set of generally feasible water and sewer projects, to develop the capacity of BEDE, IEOS, and the municipalities to assess and execute the subsequent set of infrastructure projects that still require additional design revisions to make them more affordable to project beneficiaries. The Phase I technical assistance activity will consist of developing a procedures manual with BEDE and IEOS, that will include the eligibility criteria to be used by municipal infrastructure agencies in preparing infrastructure project proposals for BEDE, who in turn will submit them for financing through the Financial Fund for Housing.

Preparation of the procedures manual will include the design of a socio-economic survey instrument to improve on the one currently used by municipalities in low-income communities, in order to verify the ability and willingness of households to pay for the infrastructure projects; definition of basic design norms and standards to be used for the technical design of projects for low-income communities, and, once the manual is completed, the conduct of two to three seminars through AME to describe to municipalities other than Quito and Cuenca the project proposal eligibility criteria and procedures.

This activity is scheduled to begin in June 1989 and end in November 1989, and is estimated to cost approximately US\$70,000. Estimated levels of effort and cost are as follows:

	<u>Person Months</u>	<u>Cost</u>
Developing the Procedures Manual	1	17,000
Designing Socio-economic survey instruments	1.5	12,000
Defining design norms, standards, evaluation Criteria	1.5	25,500
Related Seminars	n/a	2,700
Trips	<u>n/a</u>	<u>12,800</u>
	4	70,000

## 2. Strengthening Municipal Financial Management (Phase II)

During the second phase, defined as the period from September 1989 to August 1990, the main technical assistance objective will be to develop in greater depth the design and evaluation criteria used by BEDE and IEOS for municipal infrastructure project proposals. The criteria will be based on interim evaluations of project proposals submitted in the first year. A second objective during this phase is to initiate the process of financial, technical, and administrative strengthening for the participating municipal infrastructure agencies.

Technical assistance will be provided to BEDE, IEOS, and the Quito and Cuenca municipal infrastructure agencies during this phase. The TA to IEOS will entail the development of appropriate design and environmental standards to apply to municipal infrastructure for low-income communities. These standards will be presented in a seminar conducted by AME-INFODEM for participants from Quito, Cuenca, and other municipalities. The TA to BEDE during this phase will consist of a mid-term assessment of BEDE's project evaluation process and the effectiveness of its procedures for evaluating municipal project proposals.

The municipal infrastructure agencies will receive the bulk of the technical assistance during this second phase. The TA to the municipalities will help them strengthen their financial management capacities. Activities will include analyses of tariff structures and recommendations for implementation of changes in municipal tariff formulation and municipal legislation; implementation of improved cost recovery practices within the infrastructure agencies; and implementation of improved internal cost accounting systems.

Carrying out some of these recommendations will entail site visits by personnel of the municipal agencies to exemplary infrastructure agencies in other parts of Latin America.

This phase of the technical assistance is estimated to cost approximately US\$240,000. Estimated levels of effort and cost are as follows:

	<u>Person/ Months</u>	<u>Cost</u>
Design with IEOS appropriate design standards	1.5	25,500
Implementing improved cost recovery Practices	2.0	25,500
Analyzing tariff cost recovery practices	7.5	73,500
Strengthening municipal financial management	4.0	59,000
Assesing BEDE's effectiveness in project evaluation through the use of modern techniques	3.5	46,000
Site Visits	n/a	9,000
Workshops	<u>n/a</u>	<u>2,000</u>
	18.5	240,000

### 3. Consolidating gains in Municipal Policy Reform (Phase III)

The objective of the third and last phase of technical assistance activities is to consolidate and "institutionalize" the new policies and reforms implemented during the earlier phases. Phase III TA will begin in November 1990 and end in December 1991. The Mission plans to execute this phase of the TA, but the decision on whether to fund it through the Supplemental Project grant or other sources will be made at a later date.

Activities will include assessments of the implementation of new design standards and environmental impact analysis by IEOS of the water and sewer projects, of BEDE's ongoing project evaluation process, and of the Quito and Cuenca municipal infrastructure agencies' implementation of new design standards and financial practices. Based on these evaluations early in the period, additional technical assistance and training required will be identified and provided. At the end of the period, AME-INFODEM will collaborate in disseminating this information to municipalities and institutions involved in municipal development, through seminars and workshops which cover the lessons learned in implementing infrastructure projects under the Supplemental Program.

An additional activity during Phase III of the infrastructure technical assistance plan will be a national-level seminar to involve the private finance sector in the financing of municipal infrastructure investments. Through the technical assistance and the achievement of the Program's policy agenda, the Mission expects that the financial practices of the municipal infrastructure agencies will be sufficient to allow private financial institutions to "underwrite" borrowings in the national capital market for infrastructure investments. Some technical assistance during this last phase of the effort will be oriented to the development of such financial underwriting criteria so that municipal agencies can gain access to private financial markets, further strengthening their financial self-sufficiency.

This phase is estimated to cost approximately US\$190,000. Estimated levels of effort and costs are as follows:

	<u>Person/ Months</u>	<u>Cost</u>
Evaluating BEDE's ongoing project evaluating process and Develop Operative techniques for the participant entities.	1.5	21,000
Evaluating impact of IEOS new desing and enviromental standards on project design and implementation.	2.5	29,000
Evaluation of cost recovery systems tariff restructuring, use of standards and financial practices at the municipal level.	8.0	118,000
Related workshops	<u>n/a</u>	<u>22,000</u>
	12	190.000

### C. Credit Unions

The Mission will support a program to assist the credit union system to (a) gain direct access to the resources available for shelter investment through the Financial Fund for Housing, and to (b) develop an improved, expanded credit union lending system for basic shelter needs. Assistance to the credit unions will be provided by the Credit Union National Association (CUNA) and the World Council of Credit Unions (WOCCU) through a Mission buy-in to the S&T specific support grant to CUNA. WOCCU/CUNA will work with Ecuadorian credit unions directly, and will also draw on the relevant information and experience available from other credit union systems working with shelter finance as well as from its regional member organization, the Latin American Confederation of Credit Unions (COLAC). The effort will include also domestic and international training, seminars, and specialized technical assistance as needed.

Credit unions in Ecuador are operating without subsidy or other government support and competing for resources in the financial markets. The Ecuadorian credit union system, however, currently lacks access on competitive terms to Central Bank housing finance resources. This greatly restricts the ability of credit unions to expand their housing lending to lower income people and to housing cooperatives. To address this constraint, the TA plan proposes a two-part program of assistance to the Ecuadorian credit union system:

- Design and implementation of measures to provide access by credit unions to the FFH.
- Design and implementation of an expanded housing lending effort by credit unions

#### 1. Access to FFH

Gaining access to the Financial Fund for Housing is the primary thrust of the credit union assistance program. Alternative approaches for gaining access will be examined by leaders and staff of participating organizations. The objective will be to reach a consensus among credit union organizations and GOE Monetary and banking supervision authorities regarding the most effective approach for credit unions to access the BCE/FFH discount loan resources. The alternatives currently under consideration include restructuring of the Cooperative Bank and direct qualification of individual credit unions, specifically the twenty larger ones with assets of over \$100,000.

This part of the credit union assistance program will consist of:

- Development of a credit union regulatory system acceptable to the GOE

Concern on the part of the BCE and the Superintendency of Banks about the lack of effective and consistent oversight of the financial operations of the credit unions is the principal obstacle to access by the credit unions to the FFH. As indicated earlier, the Superintendency is already taking steps to develop a satisfactory regulatory framework by,

- amending the Law of Cooperatives to clarify regulatory responsibilities
- designing accounting and credit requirements to be applied to credit unions.

The process proposed by CUNA/WOCCU would ensure participation by the credit unions in designing these reforms, while providing short-term consultants specialized in supervision of the credit unions to assist the Superintendency.

Key technical activities will include diagnostic studies of credit unions, and technical assistance on the design of a credit union regulatory process. The studies will be executed by the program coordinator and local consultants under the guidance of an advisory group comprised of credit union representatives/leaders. These leaders and key GOE official would also participate in an international training program of visits and consultations with credit union, regulatory and monetary authorities/organizations in Colombia, Costa Rica, Panama and the U.S. This activity will provide a framework for analyzing the results of the diagnostic studies and recommending an appropriate design for the credit union regulatory process. A series of consultation workshops and seminars would be held with credit union movement organizations and governmental authorities to review their findings and recommendations.

#### Specific assistance to key institutions

This component is proposed at the request of the Superintendency of Banks to address and resolve problems in two key cooperative financial institutions: the San Francisco de Asis credit union, and the Bank for Cooperatives. Resolution of these problems will have a direct bearing on the selection and development of the Central Bank access mechanism.

The Cooperative Bank has been intervened by the Superintendency of Banks, is technically insolvent and faces liquidation if its problems are not resolved. A possible approach to resolution of this problem is: (1) GOE approval of reorganization and appropriate financial guarantees; (2) USAID/E agreement to adjust the Bank's US.- dollar denominated loan; and/or (3) credit union movement agreement to recapitalize and restructure the Bank.

The San Francisco de Asis credit union is considered sound financially, but has been intervened recently for legal/administrative reasons. The credit union has 29% of total movement membership and 46% of total assets, and would be a key housing lender under the Program.

CUNA/WOCCU and COLAC will provide a team of consultants specialized in stabilization and recovery of troubled financial institutions to review the problems facing the two institutions and to develop with the Superintendency a viable work-out plan.

Success with one or both of these efforts will enhance the confidence of the Superintendency in their ability to supervise and regulate cooperative financed institutions. Combined with the design and implementation of a credit union regulatory process, as described above, the obstacles barring credit union access to the FFH will be overcome.

The expected cost of these two tasks is as follows:

<u>Credit union regulatory process design</u>	Person/Months	Costs
- short term assistance	7	90,000
- training	n/a	45,000
 <u>Assistance to specific institutions</u>		
- short term assistance	5	<u>55,000</u>
TOTAL	12	190,000

## 2. Expanded shelter lending

The second part of the program to assist credit unions would be funded and implemented only if the first is completed successfully as evidenced by a GOE decision making all or certain credit unions eligible to discount loans directly with the FFH. Until such time, funds would remain in the grant with the BCE. Once the second part is ready to start the funds would be used for a further buy-in to the CUNA specific support grant.

The effort will consist of:

- Developing systems and providing training to help credit unions meet the new regulatory requirements.
- Strengthening and expanding the ability of credit unions to lend for housing, particularly to lower-income members.

The first involves short-term assistance and training in areas such as, accounting and financial controls, financial reporting (the lack of reliable, timely data on credit unions comes up often as a complaint from GOE officials), examination procedures and general financial management. This assistance will ensure that the new credit union regulatory process is implemented successfully. It would be driven by the credit unions themselves, since one expected product is an installed capacity within the credit union movement to provide ongoing training in these areas.

The second effort seeks to standardize loan instruments and contracts, as well as loan underwriting procedures and norms, in use by the credit unions in their lending for housing. Such standardization will facilitate discounting of their loans with the FFH. It will also help individual credit unions to manage loan origination and recovery more efficiently and at less risk.

The estimated cost and levels of effort are:

<u>Implement regulatory requirements</u>		
-short-term assistance	5	\$ 60,000
<u>Strengthen credit unions housing lending activities</u>		
-short-term assistance	<u>3</u>	<u>45,000</u>
	8	\$105,000

The combined, two-part program to assist credit unions is as follows:

<u>Access to FFH</u>	<u>Person/month</u>	<u>Cost</u>
-Develop credit union regulatory process	7	135,000
-Assistance to specific institutions	<u>5</u>	<u>55,000</u>
Subtotal Part I	12	\$190,000
<u>Expended shelter lending</u>		
-Implement regulatory requirements	5	60,000
-Strengthen credit union housing lending activities	<u>3</u>	<u>45,000</u>
Subtotal Part II	8	\$105,000
Total	<u>20</u>	<u>\$295,000</u>

The proposed credit union program will lay the foundation for sustained growth and development of the credit union and governmental financial systems serving Ecuador's lower income population. The Program will significantly increase the volume and viability of housing solutions financed through credit unions. In addition, structural reforms supported by the Program may also benefit other key sectors of the Ecuadorian economy, by enabling credit unions to increase their financing of, for example, micro and small enterprises; small farm operations and agro-industries; and health and educational services.

**IMPLEMENTATION ACTIVITIES**

<b>Part I</b>	<b>Access to FFH</b>	<b>Timing*</b>
	<b>Credit Union Regulatory Process</b>	
	Project start-up	Q1
	Advisory team formation	Q1
	International training	Q1 - Q2
	Diagnostic studies	Q2 - Q3
	Dialogue / consultation work shops	Q2 - Q4
	Strategy presentation and approval	Q4
	Preparation and approval of systems development and training plans	Q4
	<b>Assistance to Troubled Institutions</b>	
	Team formation	Q1
	Consultant study	Q1
	Preparation of recommendation	Q1 - Q2
<b>Part II</b>	<b>Expanded Shelter Delivery</b>	
	-Regulatory Process Systems	Q4 - Q8
	-Credit system and training	Q4 - Q8

\*Implementation periods noted in quarters abbreviated as "Q" for an 8-quarter life of project.

**D. Housing Cooperatives**

Housing cooperatives are important to this Program because they are the main source of housing for low-income urban families today. Improving their performance and making them more reliable actors in the shelter sector has enormous benefits both for the direct beneficiaries, the families whose living conditions improve, and also for private lenders and builders who today cannot figure out a way to work with this huge and growing market.

The Cooperative Housing Foundation has proposed a program of technical assistance to address these opportunities for which the Mission is requesting funding from the Administrator's set-aside for Private Provision of Social Services for a buy-in to the CHF specific support grant. CHF will prepare a definitive proposal which the Mission will present to PPC and LAC for consideration. Should funding from the Administrator's set-aside not be available, the Mission will examine alternatives, including a re-distribution of the grant funds attached to this Program.

As described in the Social Soundness Analysis, the Mission will reach agreement with CUNA/WOCCU as well as CHF that they will consider the roles of women, not only as recipients of the benefits of improved shelter but also as participants with an active role in the oversight and management of credit unions and housing cooperatives. Both institutions have good experience with identifying and overcoming constraints to the full participation of women (e.g., legal restrictions to title and credit, traditional biases against the public exercise of authority by women), notably in CHF's current programs in Central America.

TABLE 7  
TECHNICAL ASSISTANCE PLAN

Summary Budget  
(U.S.\$)

<b>A. <u>BCE/FFH</u></b>		
1. Housing Finance Policy Development	\$220,090	
2. Institutional strengthening of the FFH	450,000	
3. TA completed as of April 1989	<u>35,000</u>	\$ 705,000
<b>B. <u>Infrastructure</u></b>		
1. Developing Project Design Criteria	70,000	
2. Strengthening Municipal Financial Management	240,000	
3. Consolidating gains	<u>190,000</u>	500,000
<b>C. <u>Credit Unions</u></b>		
1. Access to FFH	190,000	
2. Expanded shelter lending	<u>105,000</u>	<u>295,000</u>
		\$1,500,000

Table 8  
ISSUES / TA PLAN

<u>Issues Addressed by PPS</u>	<u>Technical Assistance Plan</u>
1. Policy Agenda	
- Market interest rates for FFH	-Housing Finance TA/ Policy studies, design of new lending mechanisms
- Infrastructure financing	-WASH TA/ Policy studies, water tariff reforms
- Private sector shelter programs	-WOCU TA/CHF TA/ Credit Union access to FFH, support to housing cooperatives
2. Institutional Strengthening	
- FFH Mechanism	-L-T Adviser, FFH Manager, Advisory Board
- BEDE/IEOS	-WASH TA/Procedures and project review standards
-Municipal Entities (Infrastructure)	-WASH TA/Operational improvement, cost efficiencies
- Cost Recovery	-WASH TA/Design standards, collection rates, tariff adjustment.

**Table 9**  
**PROCUREMENT PLAN FOR TA**  
**METHODS OF IMPLEMENTATION AND FINANCING**

<u>Item</u>	<u>Amount</u>		<u>Method of Payment</u>
1. <u>BCE/FFH</u>	\$450,000	L-T Advisor	BCE Grant Agreement* Direct contract
	\$220,000	Finance	BCE Grant Agreement
	\$ 35,000	Policy Agenda Completed	Direct contract BCE Grant Agreement
2. <u>Municipal Entity Institutional Strengthening</u>	\$500,000	BEDE/IEOS Municipal Entities	BCE Grant Agreement (\$190,000) WASH contract Buy-in to S&T Bureau
3. <u>Low Cost Housing</u>			
<u>Program Expansion</u>	\$295,000	Credit Unions	BCE Grant Agreement (\$105,000) WOCCU.CUNA grant Buy-in to S&T Bureau

\* The Project Grant Agreement with the BCE will require a PACD extension to allow for contracts under the PP Amendment. The current PACD is 8/31/89, which will be extended for the proposed LOP to 12/31/91.

## VI. FINANCIAL PLAN

### A. Infrastructure Component Financing

Funds borrowed under the supplemental authorization will flow to the Central Bank in the same way they do under earlier program authorizations. There is no requirement for additional counterpart funds from the GOE. As noted in the Financial Plan below, Ecuadorian contributions (both from GOE and from participating banks) to the proposed \$35 Million HG Program are 27% of the total value of loans to be financed.

Existing Program agreements provide for an advance of up to \$6 Million to the FFH. Part of that advance will be made available to BEDE to provide working capital for construction financing in an amount not to exceed three months' projected requirements for approved projects. A key element of each of the projects submitted by municipalities to the BEDE for approval is a project development plan. On approving a project, BEDE will also provide an advance to the municipalities for 25 to 30% of the expected project cost. As construction is completed and the water and/or sewer services become available to families residing in "eligible communities" <sup>1</sup>, BEDE will convert its financing on the projects to long-term loans to the municipalities (or their utility companies, depending on the city involved), and discount that long-term portfolio with the Central Bank, thus liquidating the HG advance. Terms of the discount operation will be parallel to those of the financing extended to the project beneficiaries, except that whereas families' and municipalities' payments to BEDE are made monthly, BEDE repays its Central Bank obligation semi-annually.

Residents of eligible communities themselves will also participate in providing for the financing of these activities. Communities where infrastructure projects will be developed make two contributions: through prior savings on the part of their members, they make downpayments which help cover up-front costs for the projects and reduce the amount of credit required to complete them. For the Quito and Cuenca water and sewer projects, these savings will represent 10 to 20% of project costs. In addition to their cash savings, communities contribute sizeable reductions in the costs of the projects by providing their own labor for the activities. In sewage projects this practice can lower the financing requirements by as much as another ten percent.

The municipalities of Quito and Cuenca have yet to submit to BEDE an official, definitive request for financing of the infrastructure project to be discounted through the FFH. At meetings between BEDE and the municipalities,

<sup>1</sup> "Eligible community" is defined as a community in which at least 75 percent of the community's families earn a monthly income less than the monthly median income.

the latter have stated that they have eligible investments in excess of US\$15 million, but Table 10 presents those projects of which the Mission is currently aware, specifically those which EMAP-Q, EMA-Q, ETAPA, have submitted for review by BEDE totalling US\$12.7 million, of which US\$10.0 million will be discounted through the FFH. These projects will provide 42,000 residential water and sewer connections serving 329,000 residents of low-income communities in Quito and Cuenca.

The Mission estimates that the first FFH discounts of infrastructure investments will occur during the first quarter of FY 90, and the last discounts will occur during the second quarter of FY 92. Approximately 44%, or US\$4.5 million, of the FFH infrastructure discounts are scheduled to occur during FY90, approximately 47 percent, or US\$4.8 million, of the discounts will occur during FY 91, and 9 percent or US\$0.9 million, will occur during the first two quarters of FY 92.

**B. Overall Program Financing**

**1. Allocation of HG Financing by Program component.**

In September, 1988, The Mission requested \$10 million in additional Housing Guaranty authority earmarked to finance the infrastructure investments of the supplemental project. At that time LAC authorized \$5 million and asked the Mission for additional information on the Program status and on the design of the supplemental project. In preparing this response to the Bureau's concerns, the Mission has decided not to seek authorization of the additional \$5 million to complete funding of the supplemental project, as requested in September, 1988. The decision is not based on a change in the projection of demand for Program resources. Rather, it reflects a more conservative approach to the management of those resources.

<u>OTHERS</u>	(US\$ MILLIONS)		
	<u>HG</u>	<u>GOE</u>	<u>Others</u>
New Housing	18.0	7.0	10.0
- Current	(10.0)	(3.0)	(5.0)
- Projected	( 8.0)	(4.0)	(5.0)
Home Improvements	7.0	3.0	-
- Current	-	(0.5)	(-)
- Projected	( 7.0)	(2.5)	(-)
Infrastructure	10.0	-	1.0
- Projected	<u>(10.0)</u>	<u>(-)</u>	<u>(1.0)</u>
<b>Total</b>	<b>35.0</b>	<b>10.0</b>	<b>11.0</b>

TABLE 10

ESTIMATED SCHEDULE FOR IMPLEMENTING WATER AND SEWER SYSTEM PROJECTS  
FOR PERIPHERAL SETTLEMENTS -QUITO AND CUENCA, ECUADOR.  
HG-007-SUPPLEMENTAL PROGRAM  
(S/. 000's and \$. 000's)

PROJECTS	COSTS x 1000	FY 1989		FY 1990				FY 1991				FY 1992		TOTALS x 1000	PEOPLE TO BE LOANS ATTE.
		III	IV	I	II	III	IV	I	II	III	IV	I	II		
1 QUITO SEWER S/	827344.0	0	0	124638.8	93955.2	101500.0	119000.0	25500.0	111500.0	94000.0	57250.0	0.0	0.0	827344.0	
1 TOTAL US\$	1654.7	0	0	249.3	187.9	203.0	238.0	251.0	223.0	188.0	114.5	0.0	0.0	1655.0	49366 6329
2 QUITO WATER S/	4317308.7	0	0	46956.2	181439.7	401267.7	595467.8	560787.7	670928.6	655928.6	568654.7	393714.2	142163.7	4317308.7	
2 TOTAL US\$	8634.6	0	0	93.9	362.9	802.5	1190.9	1321.6	1341.9	1311.9	1137.3	787.4	284.3	8635.0	215826 27670
3 CUENCA W S S/	1215356.2	0	0	121939.1	364953.1	424914.1	242725.0	60825.0	0.0	0.0	0.0	0.0	0.0	1215356.2	
3 TOTAL US\$	2430.7	0	0	243.9	729.9	849.8	485.5	121.7	0.0	0.0	0.0	0.0	0.0	2431.0	63593 8153
1+2+3 TOTAL S/	6360900.0	0	0	293500.0	640300.0	927000.0	957200.0	847100.0	782400.0	749900.0	625900.0	393700.0	142200.0	6360000.0	
1+2+3 TOTAL US\$	12700.0	0	0	600.0	1300.0	1900.0	1900.0	1700.0	1600.0	1500.0	1300.0	800.0	300.3	12700.0	
TOTAL LOANS S/	5088000.0	0	0	234800.0	512200.0	742200.0	765800.0	577700.0	625900.0	599900.0	500700.0	315000.0	113800.0	5088000.0	328786 42152
FFH DISC US\$	10000.0			500.0	1000.0	1500.0	1500.0	1400.0	1300.0	1200.0	1000.0	600.0	200.0	10000.0	
FISCAL YEAR INVEST US\$	10000.0		0	4500.0				4900.0				800.0		10000.0	

Current estimates still show a need for over \$30 million in HG financing for FFH discount of home improvement and new housing loans. However, the Mission and the BCE have agreed that Housing Guaranty funding for new housing and home improvements will be reduced from \$30 to \$25 million, freeing up the HG authority to complete the \$10 million required for infrastructure. This leaves \$15 million available to finance new private sector housing projects or home improvement activities beyond those already in process.

The proposed allocation will also shift the mix of new activities by both BEV and the private sector from new housing to home improvement lending. This reflects the objective of seeking greater support for the self-help housing efforts of the urban poor by promoting a greater participation in the Program by credit unions and housing cooperatives.

The combined effect of the limitation on BEV's role and of the greater emphasis on home improvements on the current and projected status of the FFH pipeline as of April, 1989 is as follows:

Table 11  
NO. OF LOANS & FFH FINANCING

<u>CATEGORY</u>	<u>STATUS IN</u> <u>April 1989</u>			<u>AFTER</u> <u>Re-Allocation</u>		
	<u>Units</u>	<u>%</u>	<u>FFH</u> <u>Financing</u>	<u>Units</u>	<u>%</u>	<u>FFH</u> <u>Financin</u>
<u>PRIVATE SECTOR</u>						
New housing	14,287	94	26.0	10,512	65	20.3
-current(A)	(6,067)			(6,067)		
-projected (E) <sup>1/</sup>	(8,220)			(4,445)		
Home improvement	910	6	0.5	4,700	35	4.7
-current (A)	(910)			(910)		
-projected (N/A)	(-)			(3,790)		
	<u>15,197</u>	<u>100</u>	<u>26.5</u>	<u>15,212</u>	<u>100</u>	<u>25.0</u>
<u>BEV/JNV</u>						
New housing	5,665	52	8.3	3,270	38	4.7
-current (B)	(1,575)			(1,575)		
-projected (B,C)	4,090			(1,695)		
Home improvement	5,200	48	5.2	5,300	62	5.3
-current(N/A)	(-)			(-)		
-projected (D)	(5,200)			(5,300)		
	<u>10,865</u>	<u>100</u>	<u>13.5</u>	<u>8,570</u>	<u>100</u>	<u>10.0</u>
<b>TOTAL</b>	<b>26,062</b>	<b>n/a</b>	<b>40.0</b>	<b>23,782</b>	<b>n/a</b>	<b>35.0</b>

<sup>1/</sup> Table 12, April, 1989 shows 9,480 new private sector housing units in category E. Since total projected HG financing exceeds available HG authority - \$31.7 versus \$30 million - the number of units was adjusted down to 8,220

This reallocation is not intended to become definitive or inflexible. Rather, the BCE will re-evaluate use of FFH funds based on actual performance and new projections of demand. Adjustments will be made by the Bank as necessary in the normal course of its management of the FFH. Notwithstanding, the reallocation will not be used to proceed with HG borrowings for housing and home improvements in excess of \$10 million until there is significant, measurable progress toward use of market interest rates by the FFH.

TABLE 12  
STATUS OF FFH PROJECT PIPELINE

AS OF AUGUST, 1988  
(Table IV of PPS presented in August)

PROJECT CATEGORY	NUMBER DEVELOPERS	NUMBER UNITS	VALUE OF SHELTER	HG PORTION OF FFH DISCOUNTS
(US\$ MILLIONS)				
A	13	7,210	16.4	\$ 9.4
B	7	3,066	4.9	2.8
C	JNV	1,775	4.4	2.5
D	BEV	3,000	1.8	1.8
E	<u>16</u>	<u>10,728</u>	<u>26.0</u>	<u>14.9</u>
TOTAL	36	25,779	53.5	31.4

AS OF APRIL, 1989

A	13	6,067	14.5	9.8
B	7	3,880	4.1	2.8
C	JNV	1,775	3.6	2.4
D	BEV	5,200	5.2	3.9
E	<u>17</u>	<u>9,480</u>	<u>19.0</u>	<u>12.8</u>
	37	26,402	46.4	31.7

CATEGORY A: Projects of private developers financing long term credits through private financial institutions. All projects are built or under construction. Some have been sold to beneficiaries, others are in active sales now.

CATEGORY B: Projects of private developers financing long-term credits through the BEV.

CATEGORY C: Projects eligible for the FFH under development by the JNV, for financing long-term costs through the BEV.

CATEGORY D: Home improvement loans being made to beneficiary families by the BEV, scheduled for discounting with the FFH.

CATEGORY E: Projects under development by private builders. Most of these will be financed through private financial institutions. Developers have incurred expenses in land acquisition, preparation of plans and designs, and obtention of municipal approvals, with the intent of submitting the projects for FFH discount.

## VII. Implementaton Plan

### A. Implementation Schedule

#### 1. Program implementation

The Mission requests LAC approval to amend the Program Implementation Agreement, which was signed originally on January 15, 1986. The amendment will:

- increase HG funding by \$5 million to a new total of \$35 million, based on the HG authorization signed in September, 1988.
- authorize the use of HG advances by BEDE to provide construction financing for municipal infrastructure projects.
- expand the definition of eligible beneficiaries to include communities in which no less than 75% of the residents have income below the median.

The amendment will be negotiated and signed within thirty days after LAC approval to proceed, or approximately by July, 1989. Once signed, the amendment will enable the GOE to seek reimbursement for eligible infrastructure expenditures, and to negotiate the corresponding \$10 million HG loan as and when required, bringing total HG loans to \$20 million. No further borrowing on the remaining \$15 million in HG authority will be approved until there is significant, measurable progress toward use of market interest rates in the operation of the FFH.

In addition, following AID/W review of this PPS, the Mission will amend the Program technical assistance component to:

- authorize an increase of \$500,000 in grant funding for a total of \$1,500,000 to fund technical assistance and training in support of the broader policy reform and the institutional strengthening agendas of the project, and
- extend the Project Grant Agreement PACD, from 8/31/89 to 12/31/91, in order to meet the objectives of the TA plan.

The grant project authorization amendment will be signed immediately after LAC approval of the PPS. The Central Bank Grant Agreement amendment will be negotiated and signed concurrently with the HG Agreement, or approximately by July, 1989.

#### 2. Policy and institutional benchmarks

Table 13 shows the expected dates by which key events which demonstrate progress on the policy and institutional agenda will occur. These dates will be used by the Mission to monitor the timely and effective achievement of the Program goal and purpose.

TABLE 13  
PROGRAM AND POLICY IMPLEMENTATION

	QUARTER / FISCAL YEAR							
	3Q/89	4Q/89	1Q/90	2Q/90	3Q/90	4Q/90	1Q/91	2Q/91
<b>1. Program Implementation</b>								
• <b>Completed:</b>								
-IA signed (Jan. 1986)								
-1st. HG Loan (\$10 million).								---*
• <b>Projected:</b>								
-IA amended.								-----*
-Grant Agreement amended.								-----*
-2nd HG loan for infrastructure (\$10 million).								-----*
-Mid-term Program evaluation.								-----*
-3rd HG loan 1/.								-----*
-Grant PACD (TQ/92).								-----*
-Last HG disbursement (2Q/92).								-----*
-Program Closeout (3Q/92).								-----*
<b>2. Policy Implementation (Benchmarks)</b>								
• <b>Housing Finance:</b>								
-FFH Executive Director and FFH Advisory Board in place.								-----*
-Significant progress on interest rates if housing component to continue.								-----*
• <b>Credit Unions:</b>								
-Credit Unions authorized access to FFH.								-----*
• <b>Municipalities/Infrastructure:</b>								
-Approval by GOE Controller General of cost accounting system for public enterprises, developed by EMAP-Q. Enhanced financial management capacity.								-----*
-Quito Municipal Council approval of new water tariff structure. Significant progress in recovery of costs and investments.								-----*
-IEOS/BEDE implementation of revised technical and environmental standards for urban water and sanitation projects. Enhanced ability to guide and direct new infrastructure projects under new lower-cost standards.								-----*
-Quito Municipal Council approval of a sewer tariff, shift from total dependence on municipal taxes.								-----*

1/ Assuming GOE meets requirement of significant interest rate policy changes.

## B. Evaluation and Audit

### 1. Evaluations

The Mission plans to conduct an evaluation on the HG-007 Program in July - Aug., 1990. The objectives of this evaluation will be: (1) to assess the Central Bank's administration of the Program; (2) to evaluate the effectiveness of procedures for operation of the FFH; (3) make recommendations for improvement in FFH operations; and (4) assess the progress of BEDE and IEOS in developing procedures, standards for the evaluation and approval of infrastructure projects, and the municipal entities in terms of cost efficiencies and cost recovery of investment and other costs. A final evaluation of the HG-007 Program will be conducted in March of 1992.

This evaluation will assess the overall, final Program progress towards meeting the objective of increasing the supply of low cost housing and other shelter services in Ecuador. Other factors to be assessed will include:

- The effectiveness of the FFH mechanism in involving the private sector in housing finance;
- The effectiveness of BEDE in administering loans to municipalities (including its technical capabilities as well its management capabilities);
- The impact of infrastructure projects on health and socio-economic conditions in informal neighborhoods;
- The full cost recovery by project Municipalities;
- The effectiveness of AID's policy dialogue in changing GOE policies and regulations regarding interest rates and water tariffs, and other cost recovery requirements.

### 2. Certification of End Use/Audit

#### End Use

The municipal utility companies will prepare feasibility studies for the projects that will be financed under this Program. In addition to technical, environmental and financial feasibility, projects must meet the test of eligibility for end users. Projects will be assessed on the basis of their socio-economic eligibility. Based on this information, the municipality must certify that the neighborhood for the infrastructure upgrade is, in fact, comprised of low income families who are eligible for assistance under the Program. BEDE will confirm the accuracy of the representations received from the municipality and will certify their accuracy to the Central Bank. BEDE will present to AID a copy of its certification.

As stages of infrastructure projects are completed, BEDE will confirm

that all investments have been made as programmed for eligible neighborhoods in accordance with the approved project design. The Central Bank will monitor BEDE performance, including undertaking periodic field checks to confirm the accuracy of financial reports. AID will further confirm through periodic field inspections and evaluations that project resources have been invested in the production of eligible expenditures.

#### Audit

The Implementation Agreement for HG-007 states that the Central Bank shall maintain, in accordance with generally accepted accounting principles, books and records relating to the Program and the loan. It further states that the Central Bank shall, until the loan is fully repaid, "arrange to have such books and records audited annually by independent auditors in accordance with generally accepted auditing standards. Such audit shall provide segregated accounting and comments regarding the loan and shall be submitted to AID annually". AID will review annual audits to ensure their compliance with the IA.

**ANNEX A**  
**PROGRAM LOGICAL FRAMEWORK**

LOGICAL FRAMEWORK

Project Title & Number: National Shelter Delivery System Project Paper Supplement (518-HG-007)  
(518-0076)

Life of Project:  
From FY 86 to FY 92  
Total US Funding: HG\$35m, DG\$1.5m  
Date Prepared: May 25, 1989

NARRATIVE	OBJECTIVE VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Goal: The broader objective to which this project contributes:</u></p> <p>To improve the quality of life for low income families in urban areas throughout Ecuador by increasing their access to upgraded and new shelter options, financed by both public and private sector institutions.</p>	<p><u>Measures of Goal Achievements:</u></p> <p>A substantial increase in access to upgraded and new shelter solutions by low income urban populations as a result of the project as evidenced by the percentage of families living on land to which they have legal title and with access to potable water, sewage and electricity.</p>	<p>Periodic census data and BCE, BEDE, BEV and Municipal Enterprise records on tenancy of land and coverage of basic infrastructure services.</p>	<p><u>Concerning long term value of Program/project:</u></p> <p>Policies regarding housing programs are reformed to provide for lending at market rates of interest and to redirect a large share of investment to financing basic services and home improvements.</p>

NARRATIVE	OBJECTIVE VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<u>Purpose:</u>	<u>Conditions that will indicate purpose has been achieved:</u> <u>End of project status</u>		<u>Affecting purpose-to-goal links</u>
<p>To increase the supply of housing and urban services available to and affordable by low income urban families by (a) promoting a greater involvement by the private sector in the production and financing of such shelter, (b) lowering the cost of private and public shelter programs, primarily by focusing on those activities which support the self-help efforts of poor urban families to build and improve their own housing, and (c) developing viable, self-sustaining systems to finance shelter and basic infrastructure.</p>	<ol style="list-style-type: none"> <li>1. Private banks, savings and loan associations and credit unions are engaged in lending to families within the poorer half of the urban income distribution.</li> <li>2. Private builders, suppliers of construction materials and professionals (engineers, architects) are marketing products oriented to and affordable by the same families.</li> <li>3. Housing cooperatives became financially and technically stronger and were sophisticated.</li> <li>4. Lending for shelter and basic infrastructure is driven by freely negotiated interest rates and is not dependent on public subsidies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Annual reports and financial statements of private financial institutions. Program records.</li> <li>2. Annual reports and other documents describing activities of respective firms. Program records.</li> <li>3. End of project evaluation of status of housing coops in Quito.</li> <li>4. Same as 1., above.</li> </ol>	<ol style="list-style-type: none"> <li>1. Private lenders overcome the real or perceived risk of higher loan delinquencies away from the urban poor.</li> <li>2. Recognition by private sector of the existence of a viable market away from lower income urban families.</li> <li>3. Housing cooperatives serve as a link between self-help housing efforts of the urban poor and the financing and products offered by the private sector.</li> <li>4. Market driven lending leads to an increase in financing available to meet the basic shelter needs of the urban poor.</li> <li>5. Overall- Private sector efforts lead to an increase in the supply of financing and affordable shelter for the urban poor.</li> </ol>

<u>NARRATIVE</u>	<u>OBJECTIVE VERIFIABLE INDICATORS</u>	<u>MEANS OF VERIFICATION</u>	<u>IMPORTANT ASSUMPTIONS</u>
<u>Outputs:</u> <u>Policy/Institutional:</u>	<u>Magnitude of Outputs necessary and sufficient to achieve purpose</u>		<u>Affecting output-to-purpose link Assumptions:</u>
1. Policy dialogue has brought about consensus on achieving market or near market rates and maintaining the capital value of low income housing and home improvement and infrastructure loans.	1. FFH's interest rates for new housing, home improvement, and infrastructure loans are market driven.	1. EMA, EMAP and ETAPA records. FFH/BCE records and project audits.	1. GOE carries out necessary policy changes for interest and tariffs
2. TA plan carried out to strengthen financial and institutional capabilities of municipal infrastructure agencies	2. Tariff formula implemented allowing for full or near full coverage costs; new operational procedures and design standards reduce design costs by up to 25%.	2. EMA, EMAP and ETAPA records. FFH/BCE records and project audits.	2. Tariff and other financial reforms increase the ability of municipal infrastructure agencies to meet the basic service needs of growing urban populations.
3. Obstacles overcome, allowing credit unions to discount loans with FFH.	3. FFH mechanism accessed by credit unions and for \$ 5 million in home improvement loans.	3. FFH/BCE records.	3. Access by credit unions to FFH leads to expanded shelter lending for the urban poor.
<u>Physical / Financial</u>			
1. New or improved housing	1. 13,780 new housing units financed at a cost of \$27.9 million; 10,000 home improvements financed at a cost of \$10 million.	FFH/BCE records.	
2. Water and sewer services in marginal urban neighborhoods	2. 42,150 families served by new water and/or sewer hook-ups financed at a cost of \$10 million.	2. EMA, EMAP and ETAPA records. FFH/BCE records.	

NARRATIVE	OBJECTIVE VERIFIABLE INDICATORS		MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	Indicators		Program records	
<u>Long-term financing</u>	<u>HG</u>	<u>Other</u>		
New housing	\$ 18.0	\$ 9.9		
Home Improvements	7.0	3.0		
Infrastructure	<u>10.0</u>	<u>-</u>		
TOTAL	\$ 35.0	\$12.9		
<u>Technical Assistance</u>				
Housing Finance	220,000			
Strengthen FFH	485,000			
Infrastructure	500,000			
Credit Unions	295,000			
Total TA	<u>1,500,000</u>			

(0252E)

**ANNEX B**

**FINANCIAL FUND FOR HOUSING PIPELINE PROJECTIONS**

CUADRO N° 3

SOLUCIONES HABITACIONALES PROGRAMADAS PARA FINANCIAMIENTO DEL FONDO FINANCIERO PARA LA VIVIENDA

(FFVSUMIA.MK?)

ABRIL 10-89

(Programas de Mejoramiento Habitacional, Lotes con Servicios y viviendas nuevas, terminadas o en construcción)

TOTALES ----- >> 7,642 6,916,285 6,235,123 16,506,113 12,379,585

NO. ENTIDAD FINANCIERA LOCALIDAD NOMBRE DEL PROYECTO PROMOTOR	NO. SOLUC. INTERMEDIARIA	PRESTAMO PROMEDIO (sucres) (x1000)	TOTAL DE PRESTAMOS (sucres) (x1000)	% DESC. DESC.	DESCUENTO FFV (sucres) (x1000)	TIPO CAMBIO	DESCUENTO FFV (us\$)	PORCION % DE DESCUENTOS (us\$)		
<b>SUBTOTAL SECTOR PUBLICO</b>		1,575	912,150		821,835		1,040,616	1,380,462		
1 D.E.V. Sto. Domingo	Coop.Chiquilpe	Coop.Chiquilpe	98	550	52,900	90.0	48,510	446.5	108,645	81,484
2 D.E.V. Quito	Coop.Ejerc.Ncnal.	Coop.Ejerc.Ncnal.	855	550	470,250	90.0	423,225	446.5	947,872	710,904
3 D.E.V. Loja	Coop.Union Lojana	Coop.Union Lojana	192	550	105,600	90.0	95,040	446.5	212,856	159,642
4 D.E.V. Quevedo	Los Angeles	Eduardo Falla	134	900	120,600	90.0	108,540	446.5	243,091	182,318
5 D.E.V. Esmeraldas	Sihabitat	Sihabitat	296	550	162,800	90.0	146,520	446.5	328,152	246,114
<b>SUBTOTAL SECTOR PRIVADO</b>		6,067	6,005,135		5,413,288		14,665,497		10,999,123	
1 Dco. de Prestamos Quito	San Jose	Tecnivisa	250	1,500	375,000	90.0	337,500	446.5	755,879	566,909
2 Dco. del Pacifico Manta	Paola III	J. Cevallos	34	700	23,800	95.0	22,610	446.5	50,638	37,979
3 Dco. del Progreso Milagro	Rosa Maria I.	Lister Andrade	250	900	225,000	90.0	202,500	446.5	453,527	340,146
4 FILANBANCO Guayaquil	Las Orquideas	Agricola Acuarela	350	1,200	420,000	90.0	378,000	446.5	846,585	634,938
5 FILANBANCO Guayaquil	Las Orquideas	Innob. Elenita	520	1,200	624,000	90.0	561,600	446.5	1,257,783	943,337
6 FILANBANCO Guayaquil	Las Orquideas	Innob. Analia	510	1,200	612,000	90.0	550,800	446.5	1,233,595	925,196
7 FILANBANCO Guayaquil	Los Rosales	Const. FEDARCO	300	900	270,000	90.0	243,000	146	1,664,384	1,248,288
8 Fin. Manabi Portoviejo	Mejoramiento Habit.	Coop. 15 de Abril	907	105	95,235	97.0	92,378	146	632,726	474,544
9 La Previsora Guayaquil	Ebanos (Los Vergelaz)	Douglas Maccliff	72	1,200	86,400	90.0	77,760	446.5	174,155	130,616
10 La Previsora Quito	Eden del Valle	PILARES	77	800	61,600	90.0	55,440	446.5	124,166	93,124
11 Mut. El Oro Machala	Mejoramiento Habit.	Mut. El Oro	27	300	8,100	100.0	8,100	446.5	18,141	13,606
12 Mut. Guayaquil Guayaquil	Las Orquideas	Innob. Esperanza	818	1,200	981,600	90.0	883,440	446.5	1,978,589	1,483,942
13 Mut. Guayaquil Guayaquil	Las Orquideas	Agricola Acuarela	1,057	1,200	1,268,400	90.0	1,141,560	446.5	2,556,695	1,917,516
14 Mut. Guayaquil Guayaquil	Montebello II	PAVID - ETIHAR	595	1,200	714,000	90.0	642,600	446.5	1,439,194	1,079,395
15 Mut. Guayaquil Guayaquil	Montebello I.	PAVID - ETIHAR	306	650	200,000	90.0	180,000	146	1,479,452	1,109,589

SOLUCIONES HABITACIONALES PROGRAMADAS PARA FINANCIAMIENTO DEL FONDO FINANCIERO PARA LA VIVIENDA

(FFVSUM18.WK?)

10-ABR-89

(Proyectos, con terrenos y gestionando financiamiento, de ejecución inmediata o cercana)

TOTALES -----)) 8,978 5,693,000 5,416,680 12,131,422 9,098,567

NO. INTERMEDIARIA	ENTIDAD FINANCIERA LOCALIDAD	NOMBRE DEL PROYECTO	PROMOTOR	NO. SOLUC.	PRESTAMO PROMEDIO (sucres) x1000	TOTAL DE PRESTAMOS (sucres) x1000	% DESC.	DESCUENTO FFV (sucres) x1000	TIPO CAMBIO	DESCUENTO FFV (us\$)	PORCION HS (us\$)
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SUBTOTAL SECTOR PUBLICO 8,105 4,997,700 4,775,910 10,696,327 8,022,245

1	D.E.V.	Nacional	Mej. Habitacional	D.E.V.	5,200	500	2,600,000	100.0	2,600,000	446.5	5,823,068	4,367,301
2	D.E.V.	Sto. Domingo	Coop. Brisas/Colorado	Coop. Brisas/Color	296	550	162,800	90.0	146,520	446.5	328,152	246,114
3	D.E.V.	Latacunga	Asoc. Prof. Vasconez	Asoc. P. Vasconez	103	400	41,200	100.0	41,200	446.5	92,273	69,205
4	D.E.V.	Latacunga	Bethlenitas	Edgar Quevedo	118	1,000	118,000	90.0	106,200	446.5	237,850	178,387
5	D.E.V.	Ibarra	Coop. Zoila Galarraga	M. Larrea	150	550	82,500	90.0	74,250	446.5	166,293	124,720
6	D.E.V.	Quito	Eden del Valle II	Vivienpopular	252	1,100	277,200	95.0	263,340	446.5	589,787	442,340
7	D.E.V.	Ibarra	El Retorno	M. Larrea	28	1,000	28,000	90.0	25,200	446.5	56,439	42,329
8	D.E.V.	Manta	Paola VI	Jose Cevallos	158	1,000	158,000	90.0	142,200	446.5	318,477	238,858
9	D.E.V.	Prog. Ncnal.	Prog. Ncnal. Ptaus.	Privados	1800	850	1,530,000	90.0	1,377,000	446.5	3,083,927	2,312,990

SUBTOTAL SECTOR PRIVADO 873 695,300 640,770 1,435,095 1,076,321

1	Mut. El Oro	Machala	Primavera	Carlos Bello	21	900	18,900	90.0	17,010	446.5	38,096	28,572
2	Mut. Manabí	Portoviejo	Jardines del Valle	Cesar Arroyo	150	1,000	150,000	90.0	135,000	446.5	302,352	226,764
3	Banco Pichincha	Latacunga	Coop. Vasconez Cuví	Coop. Vasconez C.	500	600	300,000	95.0	285,000	446.5	638,298	478,723
4	Banco Pichincha	Latacunga	Coop. UNE	Coop. UNE	42	1,200	50,400	90.0	45,360	446.5	101,590	76,193
5	Banco Bolivariano	La Mana	La Mana	Enrique Chicaiza	160	1,100	176,000	90.0	158,400	446.5	354,759	266,069

Fuente: Proyecciones elaboradas por el Promotor del FFV  
 Elaboración: Dirección de Desarrollo de Proyectos  
 Subgerencia de Crédito Externo al Sector Privado

CUADRO N° 4-A

SOLUCIONES HABITACIONALES PROGRAMADAS PARA EL FINANCIAMIENTO DEL FONDO FINANCIERO PARA VIVE.  
PROYECTOS CON TERRENO EN ETAPA INICIAL DE DESARROLLO

10-ABR-89

NO. ENTIDAD FINANCIERA INTERMEDIARIA	LOCALIDAD	NOMBRE DEL PROYECTO	PROMOTOR	NO. SOLUC.	PRESTAMO PROMEDIO (sucres) x1000	TOTAL DE PRESTAMOS (sucres) x1000	% DESC.	DESCUENTO FFV (sucres) x1000	TIPO CAMBIO	DESCUENTO FFV. (us\$)	PORCION MS (us\$)
PROYECTOS CON TERRENO EN ETAPA INICIAL DE DESARROLLO (NO INCLUIDOS EN LOS TOTALES DE ESTE CUADRO)											
1	Quito	Asoc. IERAC	Asoc. IERAC				90.0	0	446.5	0	0
2	Quito	Asoc. Parlamento	Asoc. Parlamento				90.0	0	446.5	0	0
3	Quito	Caupicho	Grupo TLH	4,000	1,100	4,400,000	90.0	3,960,000	446.5	8,868,981	6,451,736
4	Tonsupa	Club Pacifico	Club Pacifico	30			90.0	0	446.5	0	0
5	Quito	Coop. Buenaventura	Coop. Buenaventur	1,900	600	1,140,000	90.0	1,026,000	446.5	2,297,872	1,723,484
6	Conocoto	Coop. Quitunbe	Coop. Quitunbe	60			90.0	0	446.5	0	0
7	El Carmen	Coop. Union Popular	Coop. Union Popular				90.0	0	446.5	0	0
8	Quito	Coop. Alfredo Perez	Coop. Alfredo Pare	250	1,100	275,000	90.0	247,500	446.5	554,311	415,733
9	Quito	Coop. Manuel Cordova	Coop. Manuel Cor-do	500	1,000	500,000	90.0	450,000	446.5	1,007,839	755,879
10	Sto. Domingo	Coop. Prov. Unidas	Coop. Prov. Unidas	180			90.0	0	446.5	0	0
11	Quito	Coop. Pueblo-Pueblo	Coop. Pueblo-Pueblo				90.0	0	446.5	0	0
12	Quito	Gonzalez Suarez		200			90.0	0	446.5	0	0
13	Esmeraldas	La Florida	Hilton Estupinan	208			90.0	0	446.5	0	0
14	Sto. Domingo	Los Anturios	Carlos Becdach	2,800			90.0	0	446.5	0	0
15	Quito	Programa Municipal	Construc. Privados	1,704			90.0	0	446.5	0	0
16	Quito	Programa Municipal	Construc. Privados	700			90.0	0	446.5	0	0
17	Quito	Programa Municipal	Construc. Privados	20,000			90.0	0	446.5	0	0
18	Sto. Domingo	Prog. Rodas	Fco. Moscoso	120			90.0	0	446.5	0	0
19 Banco Guayaquil	Quito	LA Morenita	Jorge Vega	1,200			90.0	0	446.5	0	0
20 Banco Andes	Quito	Coop. FAE	Coop. FAE	150	1,100	165,000	90.0	148,500	446.5	332,587	249,440
21 Banco Pachincha	Quito	Coop. Mercedes Ayala	Coop. Mercedes Aya	50			90.0	0	446.5	0	0
22 Bco. Amazonas	Guayaquil	Cimas de Sanaes	Coop. Paz y Amor				90.0	0	446.5	0	0
23 Bco. Azuay	Guayaquil	Los Rosales II	Const. FEDARCO				90.0	0	446.5	0	0
24 La Previsora	Quito	El Balcon	Gonzalo Figueroa	900			90.0	0	446.5	0	0
25 La Previsora	Machala	Machala I	CUVICA	80			90.0	0	446.5	0	0
26 La Previsora	Manta	Valdivia	Figueroa	200			90.0	0	446.5	0	0
27 Mut. Benalcázar	Quito	C. Lucha de los Pobres		650			90.0	0	446.5	0	0
28 D.E.V.	Latacunga	Asoc. Razon Barba	Asoc. Razon Barba	62			90.0	0	446.5	0	0
29 D.E.V.	Loja	Coop. 8 de Diciembre	C. 8 de Diciembre	130			90.0	0	446.5	0	0
30 D.E.V.	Quito	Coop. Orange	Coop. Orange				90.0	0	446.5	0	0
31 D.E.V.	Loja	Coop. Pio Jaramillo	C. Pio Jaramillo	250			90.0	0	446.5	0	0
32 D.E.V.	Quito	Coop. La Internacional	Coop. La Internacional				90.0	0	446.5	0	0
33 D.E.V.	Quito	Coop. Musculos/Rieles	Coop. Musculos y Rieles				90.0	0	446.5	0	0
34 D.E.V.	Quito	Coop. Patrimonio Pop.	Coop. Patrimonio Pop.				90.0	0	446.5	0	0
35 D.E.V.	Baule	Coop. Voluntad Dios	Coop. Voluntad Dios				90.0	0	446.5	0	0
1 BEV		Charasol I	JNV	100	900	90,000	90.0	81,000	446.5	181,411	136,058
2 BEV		El Salto	JNV	20	900	18,000	90.0	16,200	446.5	36,292	27,212
3 BEV		Illinizas II	JNV	100	900	90,000	90.0	81,000	446.5	181,411	136,058
4 BEV		I. Constituyente	JNV	290	900	261,000	90.0	234,900	446.5	526,092	394,569
5 BEV		La Pradera II	JNV	160	900	144,000	90.0	129,600	446.5	290,258	217,693
6 BEV		La Tebaida	JNV	100	900	90,000	90.0	81,000	446.5	181,411	136,058
7 BEV		Los Geranios	JNV	290	900	261,000	90.0	234,900	446.5	526,092	394,569
8 BEV	Marcelino M	Los Parques	SAISC	200	650	130,000	95.0	123,500	446.5	276,596	207,447
9 BEV		Los Trigales II	JNV	90	900	81,000	90.0	72,900	446.5	163,270	122,452
10 BEV	Marcelino M	Mejoramiento Urbano	SAISC	1,000	100	100,000	100.0	100,000	446.5	223,964	167,973
11 BEV		Motupe	JNV	400	900	360,000	90.0	324,000	446.5	725,644	544,233
12 BEV		Palmeras IV	JNV	30	900	27,000	90.0	24,300	446.5	54,423	40,817
13 BEV		Ruachacha	JNV	120	900	108,000	90.0	97,200	446.5	217,693	163,270

La cotización del dólar de intervención al 10-ABR-89 es S/. 446,50

Fuente: Proyecciones elaboradas por el Promotor del FFV

Elaboración: Dirección de Desarrollo de Proyectos  
SUBGERENCIA DE CREDITO EXTERNO AL SECTOR PRIVADO

92

SOLUCIONES HABITACIONALES PROGRAMADAS PARA FINANCIAMIENTO DEL FONDO FINANCIERO PARA LA VIVIENDA

(FFVSUNIC.WK?)

ABR.10-89

Nota: Proyectos y préstamos a financiarse a través del Banco Ecuatoriano de la Vivienda (BEV).

Además de la JNV, promotores privados también están desarrollando proyectos con financiamiento del BEV.

TOTALES >> 5,975 3,312,800 3,111,520 6,968,690 5,226,517

NO. INTERMEDIARIA	ENTIDAD FINANCIERA	LOCALIDAD	NOMBRE DEL PROYECTO	PROMOTOR	NO. SOLUC.	PRESTAMO PROMEDIO (sucres) (x1000)	TOTAL BE PRESTAMOS (sucres) (x1000)	Z DESC. (%)	DESCUENTO FFV (sucres) (x1000)	TIPO CAMBIO	DESCUENTO FFV (us\$)	PORCIÓN HG (us\$)
1	BEV	Caiceta	Caiceta Ponce	JNV	159	1,000	159,000	90.0	143,100	446.5	320,493	240,370
2	BEV	Cuenca	Bosque Monzy I.	JNV	489	1,000	489,000	90.0	440,100	446.5	985,656	739,250
3	BEV	El Carmen	Atenas II	JNV	62	1,000	62,000	90.0	55,800	446.5	124,972	93,729
4	BEV	Gualaquiza	Gualaquiza II	JNV	7	1,000	7,000	90.0	6,300	446.5	14,110	10,582
5	BEV	Guaranda	Los Trigales	JNV	143	1,000	143,000	90.0	128,700	446.5	288,242	216,181
6	BEV	Guayaquil	Esteros III	JNV	102	1,200	122,400	90.0	110,160	446.5	246,719	185,039
7	BEV	Jipijapa	Margarita Ponce	JNV	148	1,000	148,000	90.0	133,200	446.5	298,320	223,740
8	BEV	Latacunga	Las Fuentes	JNV	21	1,000	21,000	90.0	18,900	446.5	42,329	31,747
9	BEV	Latacunga	Los Nevados	JNV	42	1,000	42,000	90.0	37,800	446.5	84,658	63,494
10	BEV	Loja	Los Geranios	JNV	238	1,000	238,000	90.0	214,200	446.5	479,731	359,798
11	BEV	Macara	Macara I	JNV	9	1,000	9,000	90.0	8,100	446.5	18,141	13,606
12	BEV	Marcelino M	Los Parques	SAISC	200	1,000	200,000	90.0	180,000	446.5	403,135	302,352
13	BEV	Marcelino M	Urban Infraestructura	SAISC	1,000	100	100,000	100.0	100,000	446.5	223,964	167,973
14	BEV	Otavalo	Los Lagos	JNV	13	1,000	13,000	90.0	11,700	446.5	26,204	19,653
15	BEV	Portoviejo	Los Tamarindos IIIB	JNV	94	1,000	94,000	90.0	84,600	446.5	189,474	142,105
16	BEV	Quito	Los Andes	JNV	63	1,200	75,600	90.0	68,940	446.5	152,385	114,289
17	BEV	Quito	Turubamba Bajo	JNV	24	1,200	28,800	90.0	25,920	446.5	58,052	43,539
18	BEV	Sto. Domingo	Rosales II	JNV	16	1,000	16,000	90.0	14,400	446.5	32,251	24,188
19	BEV	Tulcan	Ponce Enriquez	JNV	125	1,000	125,000	90.0	112,500	446.5	251,960	188,970
20	BEV	Varias	Mejoramiento Habit.	BEV	3,000	400	1,200,000	100.0	1,200,000	446.5	2,687,570	2,015,677
21	BEV	Zamora	Yanzatza	JNV	20	1,000	20,000	90.0	18,000	446.5	40,314	30,235

La cotización del dólar de Intervención al 10-ABR-89 es S/. 446.50

Fuente: Proyecciones elaboradas por el Promotor del FFV

Elaboración: Dirección de Desarrollo de Proyectos

Subgerencia de Crédito Externo al Sector Privado

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CUADRO N° 5-A

SOLUCIONES HABITACIONALES PROGRAMADAS PARA FINANCIAMIENTO DEL FONDO FINANCIERO PARA LA VIVIENDA (FFVSUNID.WK?)

ABR-10-89

Nota: Proyectos y préstamos a financiarse a través del Banco de Desarrollo del Ecuador BEDE, durante 1989-1991.  
Estos proyectos se desarrollarán a través de los Municipios.

TOTALES <--> 42,152 7,100,073 7,100,073 15,901,620 11,926,215

NO. ENTIDAD FINANCIERA INTERMEDIARIA	LOCALIDAD	NOMBRE DEL PROYECTO	PROMOTOR	NO. SOLUC.	PRESTAMO PROMEDIO (sucres) (x1000)	TOTAL DE PRESTAMOS (sucres) (x1000)	% DESC.	DESCUENTO FFV (sucres) (x1000)	TIPO CAMBIO	DESCUENTO FFV (us\$)	PORCION HG (us\$)
1 BEDE	Quito	Mej. Urbano (agua)	EMAP.Q.	27,670	182.8	5,058,076	100.0	5,058,076	446.5	11,328,278	8,496,208
2 BEDE	Quito	Mej.Urbano (alcant.)	EMA.Q	6,329	130.7	827,200	100.0	827,200	446.5	1,852,632	1,389,474
3 BEDE	Cuenca	Mej.Urb.(agua-alcant)	ETAPA Cuenca	8,153	149.0	1,214,797	100.0	1,214,797	446.5	2,720,710	2,040,532

La cotización del dólar de intervención al 10-ABR-89 es S/. 446.50

Fuente: Proyecciones elaboradas por el Promotor del FFV

Elaboración: Dirección de Desarrollo de Proyectos  
Subgerencia de Crédito Externo al Sector Privado

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ANNEX C

DOCUMENTS RELATED TO INFRASTRUCTURE ACTIVITY

DOCUMENT 1:

Municipal Resolutions of  
Understanding and Accords

DOCUMENT 2:

IBRD/IDB Institutional and  
Financial Analysis of BEDE

RESOLUCION DE ENTENDIMIENTO

En la reunión sostenida el 2 de marzo de 1.989, presidida por el señor Ing. Patricio Ribadeneira, Gerente General de EMAP\_Q, con los señores Ing. Rodrigo Salvador, Director Técnico; Econ. Elsa de Mana, Asesor Financiera; Ing. Marco Gutiérrez, Jefe de diseño; Ing. Jorge Ramírez, Jefe de Diseño Sanitario; Ing. Rafael Chambers, Jefe de la Unidad de Proyectos Emergentes; Lcdo. Rodrigo Eozo, Proyectos Emergentes y los señores Consultores Ing. Luis Pereira y Econ. Jorge Infante como Asesores de Wash/Proyect, contratados por la AID. Se establece por parte de estos últimos las siguientes recomendaciones respecto de nuevos parámetros de diseño y de gestión financiera de la EMAP-Q, con el fin de conseguir el abaratamiento de los proyectos y ponerlos al alcance de los moradores de los barrios marginales de ingresos bajos.

I.- ASPECTOS TECNICOS.-

Considerando los planteamientos hechos por el Consultor Ing. Pereira al grupo técnico de la EMAP\_Q resuelven ponerse de acuerdo en los siguientes puntos:

1.- Dotación per cápita.-

La Empresa revisará los estudios pitométricos y de demanda realizados en los barrios populares de la ciudad, a fin de aplicar la proyección de éstos a los diseños de los barrios marginales, estableciéndose un promedio de alrededor de 150 litros hab/día. En la proyección de la demanda se tomará en cuenta el costo del agua a efecto de la elasticidad del consumo respecto al precio.

2.- Densidad poblacional.-

Se hará un análisis de los requerimientos de agua para diferentes períodos de diseño tomando en cuenta las siguientes particularidades.

- El período actual de diseño está programado para 30 años, debiendo realizarse reajustes para períodos menores preferentemente a 10 años, dependiendo de los análisis económicos-financieros y de dificultad de construcción, revisando estos períodos hasta alcanzar la optimización técnica y económica. Como consecuencia se dará una reducción de los diámetros de las tuberías originalmente propuestos.

3.- Red de distribución y accesorios.-

Se hará una revisión de los diseños procurando ampliar la longitud de los circuitos a cerrarse, lo que dará como consecuencia una disminución del número de válvulas a instalarse en la red de distribución.

De igual manera en las redes de distribución de diámetros pequeños, se colocará bocas de fuego en lugar de hidrantes lo que producirá un abaratamiento del proyecto.

#### 4.- Conexiones Múltiples.-

En los pasajes, escalinatas y calles estrechas se instalarán conexiones duplex y múltiples, evitando de esta forma la instalación de la red produciendo como consecuencia un menor costo del proyecto.

## II.- ASPECTOS ADMINISTRATIVOS-FINANCIEROS.-

El Ing. Patricio Ribadeneira explicó el programa de fortalecimiento institucional que está llevando a cabo en la empresa con énfasis en el área administrativa-financiera. Se refirió al estudio de la estructura administrativa para adecuar a los objetivos de institución, a la estructura del área financiera en particular y a la necesidad de capacitación del personal en diferentes aspectos.

- 1.- Indicó que el plan, actualmente en ejecución, se ha iniciado enfocando los siguientes puntos:
  - Contratación de la Econ. Elsa Romo-Leroux de Mena como Asesora Financiera.
  - Establecimiento del sistema de control presupuestario.
  - Control de inventarios y depuración de los mismos.
  - Depuración de la cartera.
  - Cambio del sistema contable hacia una contabilidad empresarial.
  - Contratación de auditoría externa, invitando para esto a un concurso de ofertas a firmas altamente calificadas.
- 2.- Por otra parte, el señor Gerente llamó la atención sobre ciertos aspectos de fundamental importancia para mejorar la gestión empresarial de EMAP-Q. Uno de ellos se refiere a la revisión de Ordenanzas, que no tienen concordancia con la situación actual del país, ni con las características del desenvolvimiento de la ciudad, con el fin de recomendar los cambios respectivos o la supresión de las mismas.

Otro punto tiene relación con la necesidad de actualización de la tasa de interés sobre facturas a crédito y sobre cartera en mora.
- 3.- El Gerente General y los personeros del área financiera explicaron la necesidad de cooperación técnica para la capacitación del personal e implantación de los siguientes programas de fortalecimiento institucional:
  - Contabilidad financiera y de costos.
  - Administración de presupuestos.
  - Administración de inventarios.
  - Depuración de catastros de usuarios.
  - Administración comercial
  - Implementación de sistemas de computación y Sistema de Información Gerencial.

De igual forma, se enfocó la necesidad de financiamiento de Soft-Ware para el área financiera y técnica, incluyendo el desarrollo operativo de sistemas de agua.

- 4.- El Econ. Jorge Infante, Consultor de Wash, hizo referencia a los aspectos contables de la empresa que aparecen como puntos críticos, recomendando la implantación de una contabilidad de costos.

Manifestó concordar con el cambio a una contabilidad empresarial, relevando el hecho de poder en este caso, obtener indicadores de gestión que permitan el análisis de la administración y de las decisiones gerenciales.

Indicó también su preocupación por la existencia de ordenanzas que pudieran evitar la actualización necesaria de las tarifas o la fija ción adecuada de las mismas, no solo en relación con la recupera - ción de los costos, sino a la autosuficiencia financiera de la empre - sa en el tiempo.

De igual forma, el Consultor manifestó su apoyo al plan de capacitación de la Empresa, expresando que la preocupación respecto de la asistencia financiera para este fin será presentada como recomendación a A.I.D.



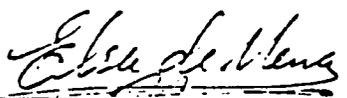
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Ing. Patricio Ribadeneira  
GERENTE GENERAL EMAP-Q



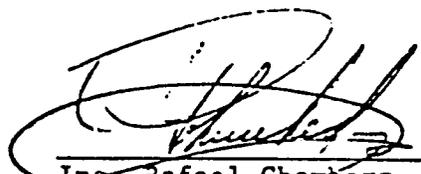
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Ing. Rodrigo Salvador  
DIRECTOR TECNICO •



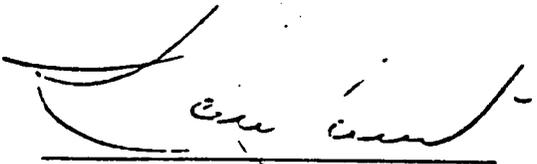
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Sr. Elsa de Mena  
ASESORA FINANCIERA



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Ing. Rafael Chambers  
JEFE DE LA UNIDAD DE PRO  
YECTOS URGENTES



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Ing. Luis Pereira  
ASESOR DE LA WASH/proyect



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Econ. Jorge Infante  
ASESOR DE LA Wash/Proyect

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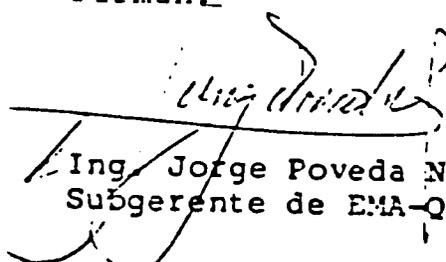
## RESOLUCION DE ENTENDIMIENTO

En reunión efectuada en la ciudad de Quito, Ecuador, el día 2 de marzo de 1989, en la que estuvieron presentes el Ingeniero Jorge Poveda N., Subgerente de la Empresa Municipal de Alcantarillado de Quito (EMA-Q) y el Ingeniero Luis Renato Pereira, Consultor de Wash/Project a solicitud de USAID/EQUADOR, se llegó a los siguientes acuerdos con base en las recomendaciones del consultor:

1. EMA-Q revisará todos los diseños que se han efectuado para los barrios objeto del programa, con el fin de analizar la posibilidad de en cada barrio utilizar la solución de alcantarillado sanitario, con el fin de reducir los costos de las obras y por consiguiente ampliando los beneficios del programa con el mismo dinero.
2. EMA-Q adoptará la solución de alcantarillado combinado, únicamente en aquellos barrios del programa en que por razones técnicas se justifique, pero se deberá tener en cuenta, en estos casos, que a la población beneficiada se le cobrará el monto que su capacidad de pago lo permita y la diferencia con el costo total se prorrateará en el resto de la ciudad mediante el sistema de cobro que se tenga en vigencia, esto en razón a que los beneficios del drenaje pluvial no solo son directos al barrio objeto de las obras, sino indirectamente a otros barrios o áreas de la ciudad.

Quito, Ecuador a 2 de marzo de 1989.

Firman:

  
Ing. Jorge Poveda N.  
Subgerente de EMA-Q

  
Ing. Luis Renato Pereira  
Consultor de WASH/Project

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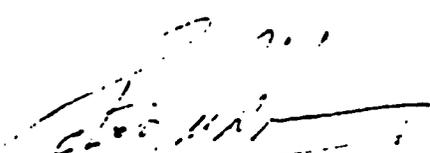
## ACUERDO DE COOPERACION

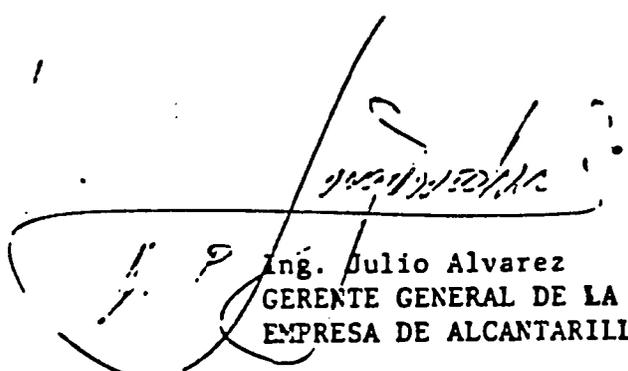
Los Gerentes de las Empresas Municipales de Agua Potable y Alcantarillado Ing. Patricio Ribadeneira e Ing. Julio Alvarez respectivamente, considerando la urgente necesidad que representa la dotación de servicios básicos a los barrios marginados de bajos ingresos - resuelven:

Conformar un grupo ejecutivo interdisciplinario de las empresas - que se encargarán de la planificación y coordinación global de los proyectos determinando los parámetros técnicos y socio-económicos de cada sector.

De la investigación del ingreso se establecerá la capacidad de pago mensual de las familias, y sobre esta base se dará prioridad al abastecimiento de agua, una vez que la capacidad de pago no permita la dotación de los dos servicios simultáneamente.

Quito, a 3 de marzo de 1989

  
Ing. Patricio Ribadeneira  
GERENTE GENERAL DE EMAP-Q

  
Ing. Julio Alvarez  
GERENTE GENERAL DE LA  
EMPRESA DE ALCANTARILLADO

A N E X O

ANÁLISIS INSTITUCIONAL Y FINANCIERO DEL BEDE

BANCO DE DESARROLLO DEL ECUADOR (BEDE)

INFORME INSTITUCIONAL Y FINANCIERO

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2. Estructura Orgánica .	1
3. Personal	3
4. Fuente de Recursos	5
5. Políticas de Crédito	5
6. Problemas del BEDE como Institución	6
7. Conclusiones y Recomendaciones	17

Quito, marzo 10 de 1989

## 1. Naturaleza y Objetivos

- 1.01 El Banco de Desarrollo del Ecuador (BEDE) es una institución de carácter autónomo, creada mediante Decreto Supremo No. 774 publicado en el Registro Oficial No. 183 del 30 de septiembre de 1976. Su Ley Estatutaria establece que el objetivo fundamental de la Institución es el de financiar la ejecución de proyectos y programas prioritarios del Sector Público que se relacionen con el desarrollo socio-económico planificado del país, entre los que se incluyen obras y servicios de organismos gubernamentales, tales como Ministerios, Municipios, Consejos Provinciales, etc.
- 1.02 De acuerdo a la legislación vigente, y en particular su Ley Estatutaria, el BEDE tiene las siguientes funciones:
- Financiar programas, proyectos, obras y servicios del Sector Público y asegurar su ejecución mediante mecanismos de supervisión y seguimiento.
  - Coordinar su acción crediticia con la política monetaria, fiscal y de desarrollo económico del país.
  - Participar en la provisión de los aportes locales, en calidad de préstamos, para la ejecución de proyectos financiados con recursos externos.
  - Administrar los recursos del Fondo Nacional de Cultura (FONCULTURA) y otros fondos de terceros, a través de convenios.
  - Impulsar el desarrollo del sector productivo privado, mediante el financiamiento de programas y proyectos con recursos obtenidos del mismo sector.

## 2. Estructura Orgánica

- 2.01 Son organismos del BEDE, la Junta de Accionistas (de la cual estatutariamente el Estado Ecuatoriano debe ser propietario de por lo menos el 51% de las acciones), el Directorio y la Comisión Ejecutiva.
- 2.02 La Junta de Accionistas está presidida por el Ministro de Finanzas o por su delegado, el Subsecretario de Crédito Público, sesionando anualmente a los fines de:
- Conocer la situación administrativa y financiera del BEDE.

- Aprobar los balances de pérdidas y ganancias y la asignación y/o distribución de utilidades.
- Resolver sobre los aumentos de capital que proponga el Directorio.
- Designar al Auditor General del BEDE.

2.03 El Directorio, encargado de dirigir la estructura orgánica y funcional, la política institucional y crediticias de la entidad, está constituido por los siguientes miembros:

- El representante del Presidente de la República, quien preside el Directorio.
- El Ministro de Finanzas o su delegado
- El Gerente General del Banco Central del Ecuador o el Subgerente General.
- El Secretario General de Planificación del CONADE o su representante.
- Un representante de los organismos regionales de desarrollo, nombrado por la Junta de Accionistas por un período de un año.
- Un representante de los organismos seccionales, ya sean Municipalidades o Consejos Provinciales, alternativamente nombrados por la Junta de Accionistas para cada período anual.

2.04 La Comisión Ejecutiva, con funciones de dictar las normas operacionales y procedimientos internos del BEDE de conformidad con las políticas aprobadas por el Directorio, está integrada por los siguientes tres miembros:

- El Ministro de Finanzas o su delegado, quien preside la Comisión.
- El Gerente General del BEDE o su alterno, el Subgerente General.
- Un representante designado anualmente por el Directorio; elegido entre sus miembros, o su alterno designado en la misma forma.

2.05 Dentro de su estructura orgánica, el BEDE está presidido por su Gerente General quien ejerce la representación legal de la institución y de quien depende la gestión administrativa de la entidad. A la Gerencia General reportan las Subgerencias General y cuatro Gerencias (Técnica, de Sucursales, de Operaciones y Administrativa), las que a su vez se subdividen en subgerencias de áreas y direcciones. Es de hacer notar que en

enero de 1989 el BEDF sufrió una reestructuración general, en donde básicamente se redujeron las 9 gerencias existentes anteriormente, al número de 4 indicado. (Ver organigrama en Apéndice No. 1).

2.06 Además de estas gerencias, se encuentran las siguientes dependencias que trabajan en relación directa con la Gerencia General, la Subgerencia General y la Junta de Accionistas: Auditoría Interna, Asesoría Jurídica, Asesoría Gerencia General, Secretaría General y Asesoría de Planificación.

3. Personal

3.01 A continuación se presenta un cuadro mostrando el personal relevante por categoría y distribución de especialidades de la Gerencia Técnica, por ser esta la unidad probablemente involucrada en la evaluación, supervisión y de cooperación técnica de los proyectos del Programa propuesto:

Gerencia Técnica  
Personal por Categorías y Especialidades

	<u>Profesio- nales</u>	<u>Técnicos</u>	<u>Administrativo</u>	<u>Total</u>
Subgerencia de C.T. y Programación	1	-	1	2
Subgerencia de Evaluación de Proyectos	1	-	1	2
Dirección Fondo Desarrollo Sector Informal	4	-	-	4
Dirección de Promoción y Difusión	5	-	-	5
Dirección de Cooperación Técnica	7	1	-	8
Dirección de Evaluación Económica, Financiera y Social	6	-	-	6
Dirección de Evaluación Técnica	6	-	-	6
Pool de Secretarías	-	-	9	9
<b>Total</b>	<b>30</b>	<b>1</b>	<b>11</b>	<b>42</b>

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3.02 Como puede observarse del cuadro anterior, la Gerencia Técnica cuenta actualmente con 30 profesionales, conformada por 14 economistas, 9 ingenieros, 4 arquitectos, 2 administradores de empresa y 1 abogado. Si bien esta estructura parecería contener un buen grupo de profesionales, no se ha podido evaluar, sin embargo, sus antecedentes académicos, experiencia profesional y capacidad técnica; no obstante ello, se ha observado que en la evaluación de proyectos, la Dirección correspondiente ha tenido como práctica que el análisis económico, financiero y social, sea hecho por una misma persona, situación que creemos debería separarse en dos áreas de revisión separadas: económica y social por un lado, y financiero por otro. De igual forma, se estima necesario una evaluación más profunda sobre la estructura de la Gerencia Técnica en función de los cuadros profesionales y técnicos existentes, orientada a satisfacer las necesidades del Programa que se propone financiar.

3.03 Adicionalmente, se verificó la estructura organizacional de la Subgerencia de Crédito, dependiente de la Gerencia de Operaciones, la cual mostró la siguiente distribución:

Subgerencia de Crédito  
Personal por Categorías y Especialidades

	<u>Profesionales</u>	<u>Técnicos</u>	<u>Administrativos</u>	<u>Total</u>
Subgerencia de Crédito	1	-	1	2
Dirección de Cartera	4	4	-	8
Dirección de Supervisión	8	-	-	8
Dirección de Operaciones Bancarias	7	3	-	10
Pool de Secretarías	-	-	6	6
<b>Total</b>	<b>20</b>	<b>7</b>	<b>7</b>	<b>34</b>

3.04 El grupo de 27 técnicos y profesionales de esta Subgerencia está conformado por: 8 ingenieros, 7 economistas, 4 administradores de empresas, 1 arquitecto, 4 contadores a nivel técnico, 1 técnico en estadísticas y banca, un tecnólogo bancario, y un técnico en informática. Consideramos que, además de la revisión de la organización y capacidad de este grupo de trabajo, especial interés reviste la Dirección de Cartera que, debido a circunstancias que se explican más adelante, deberá jugar un rol más activo en el control de los créditos del BEDE.

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4. Fuente de Recursos

4.01 Estatutariamente, las fuentes de recursos del BEDE son las siguientes:

- Los aportes de capital de los accionistas
- Los provenientes de la participación por los ingresos petroleros establecidos en diferentes decretos y resoluciones.
- Los ingresos asignados al Fondo Nacional de Desarrollo (FONADE) y al Fondo de Desarrollo Municipal (FODEM), para el financiamiento de proyectos reembolsables que, en virtud de la Ley Estatutaria, pasaron a constituir recursos de capitalización del BEDE.
- Las utilidades de las operaciones
- Los ingresos que se obtuvieren por cualquier otro concepto.

5. Políticas de Crédito

5.01 La base de financiamiento de proyectos del BEDE se fundamenta en su clasificación de "prioritario" por la entidad, la que a su vez necesita de la ratificación de la misma por el CONADE, de conformidad con los planes económicos y de desarrollo del país.

5.02 En consecuencia, los créditos se orientan hacia programas, proyectos, obras y servicios del sector público ecuatoriano, dentro de los siguientes sectores económicos:

- Infraestructura social: que comprende aspectos como educación, ciencia y cultura, salud, vivienda, agua potable y alcantarillado, desarrollo urbano, infraestructura deportiva, etc.
- Infraestructura económica: abarcando proyectos de apoyo a la agricultura, silvicultura y pesca, manufactura, energía eléctrica, vialidad y terminales, comunicaciones, minería, transporte, almacenamiento y comercialización, turismo, etc.
- Proyectos de Desarrollo Múltiple: que comprenden actividades de los sectores antes indicados y que generalmente son financiados con créditos internacionales, para los cuales el BEDE financia los recursos de contrapartida local.

5.03 Pueden ser sujetos de crédito del BEDE las siguientes entidades del Sector Público ecuatoriano:

- Gobierno Nacional: Ministerios y entidades adscritas
- Entidades de Régimen Seccional: Consejos Provinciales, Municipalidades y Empresas Municipales.
- Entidades Autónomas
- Empresas Públicas y otras.

5.04 Las condiciones financieras de los créditos otorgados por el BEDE se han caracterizado por ser blandos, con fundamento en

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y ubicación geográfica de los beneficiarios. En base a esta sectorización, las tasas de interés varían del 9% al 20%, con períodos de hasta cuatro años de gracia y plazos de amortización que oscilan entre uno y quince años.

De esta forma, es así como los sujetos de crédito se han categorizado en 6 niveles (de la letra A a la F), abarcando con todos ellos a las municipalidades y consejos provinciales, y ubicando entre los tres primeros a las otras entidades del sector público involucrado, tales como el Estado e instituciones autónomas, empresas municipales de Quito y Guayaquil, instituciones financieras, CEDEGE, PREDESUR, CREA, CRM, INCRAE, INGALA, etc. (Ver Apéndices Nos. 2 al 5).

A título de ejemplo, podemos citar que dentro de estos niveles y para los sectores de agua potable, saneamiento, salud y educación, las tasas de interés de los créditos varían entre un 10% y un 12%, mientras que para proyectos de infraestructura y equipo del sector de asistencia, rehabilitación y bienestar social, como así también los proyectos de desarrollo rural integral, la tasa es fija y del 9%, independientemente del nivel del beneficiario.

Para proyectos de vivienda de interés social y sistemas de comercialización y almacenamiento, las tasas fijadas son del 14% y 15% respectivamente, cuando para equipos de mataderos y camales, hidrocarburos y minería, energía, comunicaciones, etc., la tasa de interés es fija y oscila entre el 16% y 18% (Para detalles, ver Apéndices Nos. 6 al 9).

De igual forma, los plazos y períodos de gracia han sido determinados en función del sector económico de que se trate (Ver Apéndices Nos. 10 al 13).

## 6. Problemas del BEDE como Institución

6.01 En los últimos años, el BEDE ha sido una entidad pública de crédito que, si bien ha cumplido en cierta forma con sus fines y objetivos, ha descuidado factores tan importantes como la viabilidad técnica, económica y financiera de los proyectos por ellos mismos financiados.

Las actuales autoridades están interesadas en cambiar la orientación y rol del BEDE en este sentido, lo cual fundamenta en parte en considerar a este organismo como ejecutor del Programa que se propone financiar.

6.02 Otro de los factores de vital importancia en la historia de esta institución, ha sido la erosión a través del tiempo que ha sufrido el BEDE en su capacidad financiera y, consecuentemente, en sus posibilidades de otorgar créditos que en términos reales garanticen su funcionamiento autónomo como tal. En los siguientes párrafos se pretende dar una idea más clara sobre este problema.

6.03 Los efectos del proceso inflacionario de los últimos años sobre los recursos que administra el BEDE, ha sido el factor principal al que hacíamos referencia anteriormente. En este sentido, y a fin de poder cuantificar los efectos del referido proceso sobre estos recursos, se procedió a deflectar una serie de los principales indicadores financieros de esta entidad, de manera de poder contar con cifras en términos tanto reales como corrientes.

A tal efecto, se utilizó el deflactor implícito del Producto Interno Bruto, consignado en las cuentas nacionales que publica el Banco Central del Ecuador; se tomó como año base a 1979, por tratarse del año en el cual inicia las operaciones el BEDE, lo que permitirá visualizar el deterioro de los recursos a partir de ese año.

#### Deflaciones Anuales

<u>Años</u>	<u>Deflactor Del PIB ( p.c)</u>	<u>Incremento Anual (%)</u>
1979	100.0	-
1980	119.5	19.5
1981	136.6	14.4
1982	161.0	17.8
1983	223.3	38.7
1984	310.8	39.2
1985	406.9	30.9
1986	491.0	20.7
1987	677.6	38.0
1988	1.050.8	55.1

#### 6.04 Estado de Fuentes y Usos de Fondos

Si se comparan las cifras contenidos en los Apéndices Nos. 14 y 15, se observa que la tendencia de las cifras expresadas en términos reales se invierte respecto a aquellas consignadas en términos nominales.

A continuación se analiza el comportamiento de cada uno de los principales rubros de los Estados de Fuentes y Usos de Fondos ejecutados desde 1979 hasta 1988.

a. Ingresos (Fuentes de Fondos)

El total de ingresos, expresados en términos nominales, presentan un constante crecimiento desde 1979 a 1987, pasando de 2.922,4 a 40.478.6 millones de sucres en esos años y decreciendo a 37.178.3 millones de sucres en 1988.

En términos reales, se aprecia un gran deterioro ya que desde 1984, se da un constante decrecimiento, llegando al punto de que los valores alcanzados en 1988 son inferiores a los de 1980.

Por ello se puede afirmar que la capacidad de compra de los recursos del BEDE, ha disminuído a través del tiempo; es así, que cada sucre de 1980 tenía una real capacidad de compra de 84 centavos de 1979, llegando en 1988, a la relación de 10 centavos por sucre.

Situación similar es la del rubro Recursos Propios. A continuación se detalla lo ocurrido con cada uno de sus componentes.

Saldo Inicial

Entendido como aquellos valores que ".....están constituidos por excedentes de años anteriores que se contabilizan al iniciar cada ejercicio, se integran por los efectivos de caja y bancos....." <sup>1/</sup>, en consecuencia, por definición, se hacen diferentes del resto de ingresos. Estos se constituyen en apreciables reservas de fondos y son los que mayor peso relativo tienen respecto del total a partir de 1984, tal como se observa en el anexo No. 16.

En 1986 y 1987, el saldo inicial presenta en términos corrientes, tasas negativas de crecimiento a consecuencia de una mayor demanda de recursos por una parte, y por otra, a circunstancias que afectaron a otros ingresos, específicamente a los provenientes de las rentas petroleras. Este rubro, en términos reales presenta tasas negativas de crecimiento a partir de 1985.

Aportes de Capital

Constituidos por la participación de ingresos petroleros, el pago de las acciones de capital, los créditos contingentes legalizados, los créditos contingentes pagados y otros ingresos.

En los primeros años de actividad del BEDE, los aportes de capital fueron la principal fuente de fondos, llegando a representar el 40.2 por ciento del total de ingresos en 1983 (Apéndice No. 16).

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<sup>1/</sup> Manual de Presupuesto por Programas BEDE-CONADE 1987.

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Expresados en términos reales, éstos presentan una tendencia a la baja a partir de 1984, llegando a determinar una tasa negativa de crecimiento para 1987 de 66.0 por ciento respecto del año anterior, tal como se observa en el anexo No. 18. Esto se explica por la reducción de las recaudaciones de los ingresos provenientes de la renta petrolera, los mismos que constituyen los aportes de capital que más peso relativo tienen respecto del total.

La situación anotada se torna crítica en 1986 y 1987, años en los cuales se produce una merma considerable de los ingresos a causa primero del decremento de los precios internacionales del crudo ecuatoriano en 1986 y por la paralización y reducción de la exportación en 1987, como consecuencia del terremoto de marzo de ese mismo año; estos imprevistos de carácter coyuntural afectaron a todos los partícipes de la renta petrolera.

Cabe anotar que en 1986, se produce un decremento inferior al de 1987 en los aportes de capital, en razón de que en este año se legalizaron créditos contingentes, los mismos que sumaron el 49.2% del total, distorsionando la real situación de los ingresos, ya que incrementaron la cartera vigente pero que, de ninguna manera, se constituyeron en ingresos monetarios.

#### Ingresos Operativos

En términos corrientes estos ingresos presentan una tendencia a crecer, incremento que está en relación directa con el crecimiento del volumen de desembolsos con cargo a préstamos e inversiones inmobiliarias, pues estos están constituidos mayoritariamente por los intereses y comisiones operacionales y, en menor medida, por la renta de las inversiones mobiliarias.

En definitiva, éstos representan el precio cobrado por la utilización del dinero del BEDE, el mismo que en el tiempo ha sufrido un deterioro en términos reales, pues las tasas de interés cobradas por el BEDE son inferiores a las tasas de crecimiento de la inflación, tal como podemos observar en las tasas de crecimiento de las series deflactadas. Este punto será estudiado con mayor detenimiento más adelante.

#### Recuperación de Capital

Rubro conformado principalmente por la amortización de préstamos y la recuperación de las inversiones mobiliarias. En el período analizado, éste último es el que tiene un mayor peso relativo respecto del total, en tanto que la recuperación de los préstamos va adquiriendo una mayor importancia en el transcurso del tiempo.

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Esta situación se explica por cuanto, por una parte, la recuperación de las inversiones mobiliarias es más dinámica en el tiempo, y por otra, en razón de que para las operaciones del BEDE rigen períodos de gracia, lo que hace que la recuperación con cargo a estas operaciones se posterguen a un mayor plazo. Para aseverar lo dicho, se ha relacionado anualmente el volumen de las recuperaciones respecto del total de desembolsos; de ahí se desprende que especialmente en los últimos cuatro años, las recuperaciones no llegan a representar ni el 20 por ciento respecto de los desembolsos, situación que se observa en el cuadro siguiente:

Amortización Préstamos y Desembolsos

<u>Años</u>	<u>Z.</u>
1979	28.6
1980	84.0
1981	22.6
1982	15.1
1983	27.2
1984	33.3
1985	17.5
1986	18.7
1987	12.8
1988	14.7

Empréstitos

Recién en 1987 se observa guarismos en el estado de fuentes y usos, debido a que el BEDE para ese año ya enfrenta problemas de liquidez y, para poder dar seguridad a la atención de los requerimientos de los prestatarios en el corto plazo, el BEDE emitió bonos por 5.000.0 y 8.000.0 millones de sucres en 1987 y 1988 respectivamente, los mismos que representan 737.9 y 761.7 millones de sucres de 1979 para esos mismos años.

b. Egresos (Uso de Fondos)

El principal componente de los usos y que responde a la naturaleza de las operaciones y los objetivos institucionales, son los desembolsos monetarios que con cargo a los préstamos aprobados el BEDE realiza año a año. Sin embargo, desde 1980 a 1984 los gastos que mayor peso relativo tuvieron respecto del total de los egresos, fueron los correspondientes al financiamiento del programa de inversiones financieras, situación que se explica por cuanto en esos años el BEDE tuvo una mayor disponibilidad de recursos que le obligaba a invertir en valores fiduciarios, en lugar de mantener los recursos de manera improductiva.

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Fenómeno contrario es el que ocurre a partir de 1985, año en el que los desembolsos representan ya el 65.8 por ciento del total de egresos; desde entonces la mayor parte de los recursos debieron estar orientados a cubrir los compromisos adquiridos por el BEDE y por la creciente demanda de los mismos por parte de los prestatarios.

Esta tendencia se ve reflejada en el porcentaje que representan los desembolsos respecto de lo que se podría denominar "Ingreso Neto de Recursos Propios" constituidos por el "Total de Recursos Propios" menos el "Saldo Inicial", ya que ésta se constituye en el "Saldo Final" del ejercicio anterior. Esta relación nos permite afirmar que estos recursos han sido suficientes para financiar el programa de desembolsos. A partir de 1985, esta imagen de suficiencia va deteriorándose, llegando los desembolsos a ser en 1987 el 80.8 por ciento de estos ingresos netos. Esta relación es mayor si no se incluyen a este total los empréstitos; así en este año llegaría al 99.1 por ciento. En 1988 la relación supera el 100 por ciento; es decir, estos recursos ya no son suficientes para satisfacer los desembolsos y de no ser por los empréstitos, los desembolsos serían el 154.7 por ciento de estos ingresos, situación que se aprecia en el siguiente cuadro:

Relación Entre Desembolsos e Ingresos Netos  
de Recursos Propios

<u>Años</u>	<u>Z</u>
1979	47.3
1980	34.5
1981	30.4
1982	29.7
1983	24.7
1984	27.4
1985	68.2
1986	72.1
1987	80.8
1988	101.2

Dentro de los egresos, otro rubro que ha tenido significativa importancia es el de "Inversiones Financieras", especialmente hasta el año 1984. Esto se explica por la situación de liquidez que el BEDE enfrentaba, lo que hasta cierto punto obligó a la compra de títulos-valores, a efectos de proteger su capital. Estas inversiones presentan un descenso paulatino, llegando en 1987 a representar el 1.8 por ciento del total del gasto, en contraposición con su peso relativo en años anteriores; como ejemplo, el 61.4 por ciento en 1983, tal como se desprende del Apéndice No. 16. \*

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Al observar la composición de los usos, las partidas que menor incidencia tienen son las de "Inversiones en Activos Fijos", "Gastos Administrativos", etc., pero es necesario destacar que en 1987 ya se comienza a realizar pagos por conceptos de intereses, comisiones y amortizaciones de la emisión de valores mobiliarios, teniendo un considerable incremento para 1988, llegando a representar el 8.4 por ciento del total de los egresos.

### 6.05 Cartera Vigente

Por los volúmenes que presenta la cartera vigente del BEDE puede considerarse a este un indicador de la buena situación financiera, especialmente con proyección al futuro, tanto por el monto de los recursos por recuperar, cuanto porque el mecanismo que permite la recuperación de las inversiones del BEDE resulta una garantía de ello; prueba de lo afirmado es lo insignificante que resulta ver el valor de la cartera vencida respecto a la cartera vigente, la misma que desde 1981 no llega a representar el uno por ciento en relación a la segunda.

El crecimiento de la cartera vigente en términos corrientes presenta tasas de crecimiento altas, llegando en 1985 y 1987 a superar el 50 por ciento anual, tal como se observa en el cuadro siguiente:

	<u>Estado de la Cartera</u>								
	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
% Cartera vencida respecto de cartera vigente	4.50	1.00	0.70	0.60	0.60	0.10	0.10	0.07	0.10
Tasa de crecimiento de cartera vigente PN (1)	41.0	35.5	39.2	30.3	24.2	53.7	12.0	50.7	35.0
Tasa de crecimiento de cartera vigente PC (2)	18.0	18.5	16.2	-6.0	-10.8	17.4	26.1	9.2	-12.9

- (1) Precios nominales  
 (2) Precios corrientes

Por otro lado, se observa que el nivel porcentual de la cartera vencida es prácticamente nulo, situación atípica que por los valores dados es el resultado de la absorción de los préstamos por el Estado Ecuatoriano frente a la incapacidad de repago de los acreedores del BEDE.

La situación anotada difiere al analizar el comportamiento de la cartera expresada en términos reales, llegando a presentar tasas de crecimiento negativas en los años 1983, 1984 y 1988. En términos absolutos la cartera de 1988 habría llegado a valores similares a los logrados en 1981 expresados en términos constantes.

En términos reales la cartera del BEDE creció en apenas un 94.9% entre 1979 y 1988, frente a una tasa de 1.948.3 por ciento de los valores expresados en términos corrientes.

Por otro lado, se observa que el nivel porcentual de la cartera vencida es prácticamente nulo, situación atípica que por los valores dados es el resultado de la absorción de los préstamos por el Estado Ecuatoriano frente a la incapacidad de repago de los acreedores del BEDE.

#### 6.06 Balances de Situación

Al observar los balances de situación del BEDE ejecutados desde 1979 a 1988, se puede observar que al igual que los otros indicadores aquí analizados, los rubros que componen las diferentes cuentas también han sufrido un notable deterioro al deflactar estas series.

El total del activo en términos corrientes tiene un incremento del orden del 1.506.3 por ciento entre 1979 y 1987, es decir se habría incrementado en 15 veces, pero el mismo rubro en sucres de 1979 ha crecido en un 52.9 por ciento, lo que significa que ni siquiera se ha duplicado.

Al observar los Apéndices Nos. 21 y 22 se puede apreciar que el "Capital y Reservas" consignados en términos corrientes, presentan un notable crecimiento en todos los años, habiendo representado 15.6 veces en 1988 respecto al saldo de 1979. En términos reales la tendencia a crecer se puede apreciar decrecimientos constantes llegando en 1988 a cifras inferiores a las de 1980.

6.07 Condiciones Financieras del BEDE

Las condiciones financieras que rigen las operaciones del BEDE han sido preferenciales a lo largo del tiempo en que ha desarrollado su actividad, puesto que las tasas de interés cobradas en sus préstamos han estado por debajo de las tasas de interés real y tampoco han tenido modificaciones acordes con la dinámica de la variación del índice de precios. En el siguiente cuadro se observa el comportamiento que han tenido las tasas de interés cobradas por el BEDE y el incremento del deflactor utilizado en el presente análisis.

Comportamiento de Tasas de Interés

Años	% Tasas de Interés BEDE (1)	Incremento Anual Deflactor Implicito PIB (2)
1979	9.6	-
1980	10.3	19.5
1981	10.6	14.4
1982	12.8	17.8
1983	13.0	38.7
1984	14.7	39.2
1985	14.9	30.9
1986	12.4	20.7
1987	12.3	38.0
1988	12.6	55.1

(1) Tasa de interés anual promedio ponderada

(2) Base 100, año 1979

Como podemos advertir en todos los años de la serie histórica, las tasas de interés cobradas por el BEDE son inferiores a los incrementos anuales de los precios del Producto Interno Bruto, lo que significa que los recursos de esta institución han tenido una permanente erosión ya que ni siquiera se ha recuperado su valor real.

Tal como se observa en el Apéndice No. 26, del total del crédito otorgado al 31 de diciembre de 1988, el 80.8 por ciento ha sido concedido a tasas de interés de hasta 15.0 por ciento y sólo un 19.2 por ciento se contiene en el rango que va del 15.1 al 20.0 por ciento.

Por sectores, la mayoría de recursos se ha colocado en el sector de infraestructura social, esto es, el 62.8 por ciento del total aprobado hasta 1988; en lo que tiene que ver a tasas de interés en el rango del 10.1 al 15.0 por ciento se encuentra el 45.1 por ciento del crédito que corresponde a este mismo sector. De igual manera este sector concentra el 54.5 por ciento del total del crédito en tasas de interés que van hasta el 15.0 por ciento.

Esta tendencia responde a la estructura de las tasas de interés vigentes, la misma que privilegia tanto a cierto tipo de entidad -municipios y consejos provinciales- como a determinados sectores económicos.

Del total del crédito otorgado a las municipalidades sólo el 9.2 por ciento tiene tasas de interés superiores al 15.1 por ciento; de los consejos provinciales, el 18.5 por ciento; y, del Estado Ecuatoriano el 21.6 por ciento de sus créditos.

En el cuadro siguiente se observa en qué magnitud las tasas de interés cobradas por el BEDE, fueron inferiores a las tasas de crecimiento del deflactor implícito del PIB, lo que permite visualizar el deterioro que sufrió el capital del BEDE en términos reales.

Tasas de Interés Vs. Tasas de Crecimiento

Años	Tasas Interés Promedio Ponderada BEDE	% Tasa Interés Promedio Deflactor PIB
1980	10.3	89.3
1981	10.6	35.8
1982	12.8	39.1
1983	13.0	197.7
1984	14.7	166.7
1985	14.9	107.4
1986	12.4	66.9
1987	12.3	208.9
1988	12.6	337.3

Se puede inferir que para que el BEDE pueda recuperar el valor adquisitivo de sus recursos, perdido a causa del proceso inflacionario, debe fijar tasas de interés superiores o iguales a las tasas determinadas por el mercado. Así, en 1988 la tasa de interés promedio ponderada llegó a representar una cuarta parte del porcentaje que debió cobrar para no descapitalizarse.

Creemos que la política de tasas de interés del BEDE para el Programa propuesto debe guardar relación con la política económica del país, al mismo tiempo de mantener la armonía adecuada con las políticas del BIRF y BID en este sentido, pues su actividad tiene que ver con variables macro económicas, con el costo de oportunidad del dinero, etc.

Si comparamos las tasas de interés ponderadas cobradas por el BEDE y aquellas que rigen al sistema financiero nacional, podemos advertir grandes diferencias, especialmente a partir del año 1983; esta situación se explica por la disparidad de tasas de interés de la Institución, las mismas que tienen un universo bastante amplio en el que se advierten diferencias de hasta once puntos porcentuales, dependiendo de la zona geográfica, la entidad prestataria y la actividad económica, situación que se desprende del Apéndice No. 28.

De igual forma el BEDE mantiene en la actualidad tasas de interés inferiores a las cobradas por otras instituciones financieras del sector público; así en el BEDE la tasa más baja es del 9 por ciento y la máxima del 20.0 por ciento. Para citar unos ejemplos detallamos las cobradas por otras instituciones:

-Fondo Nacional de Preinversión (FONAPRE): El 100 por ciento de la tasa de interés legal vigente, esto es, el 23.0 por ciento.

-Banco Ecuatoriano de la Vivienda (BEV): Según el plazo; tasas que van desde el 22.2 por ciento al 26.2 por ciento, siendo reajustables en nueve puntos porcentuales anual indexado.

-Corporación Financiera Nacional (CFN):

- a. Con recursos externos línea BID 225/IC-EC: 19 puntos porcentuales sobre la tasa pasiva promedio ponderada, pagada por los cinco bancos de mayor capacidad y reservas del país.
- b. Con recursos de la CFN: el 40.0 por ciento sobre saldos de principal pendientes de pago.
- c. Crédito FOPINAR: 22.0 por ciento sobre saldos pendientes de pago.
- d. Crédito FOPEX: 1) Corto Plazo: pre-post embarque, 23.0 por ciento sobre saldos; ii) Largo Plazo: recursos de la CFN: 23.0 por ciento; bonos de fomento: 23.0 por ciento; BIRF 32.0 por ciento; AID 32.0 por ciento.

-Banco Nacional de Fomento: Con recursos externos, el 32.0 por ciento; con recursos internos el 23.0 y 28.0 por ciento

La diferencia es aún mayor si comparamos la tasa de interés promedio ponderada del BEDE, cobrada desde 1979 hasta 1988, pues ésta se ubica en el 12.60 por ciento.

7. Conclusiones y Recomendaciones

En consideración al alcance y propósito de esta Misión de Orientación, los datos contenidos en este informe son meramente preliminares y se basan en la información obtenida de algunas reuniones mantenidas con funcionarios del BEDE y en la documentación entregada a la Misión por los mismos.

Con fundamento en este análisis preliminar, podemos sintetizar los resultados con las siguientes conclusiones y recomendaciones:

- 7.01 El BEDE ha sido una institución que, además de su función como banco de desarrollo, ha satisfecho en el pasado metas y ambiciones políticas del Gobierno. En este sentido, de ser esta entidad financiera la ejecutora y administradora de los recursos externos del Programa propuesto, debería contar con la independencia institucional para aprobar proyectos y dar créditos en función de la economía y planes de desarrollo del país y en armonía con los términos y condiciones que establezcan las entidades prestamistas, conjuntamente con su reglamentación.
- 7.02 Como consecuencia de las tasas de interés negativas aplicadas por el BEDE a sus préstamos, esta institución ha enfrentado una creciente descapitalización en los últimos años que se podría traducir en una situación de iliquidez.
- 7.03 El BEDE tiene una creciente demanda de recursos frente a un incremento menor de sus principales ingresos, originado en la designación de los ingresos de la renta petrolera y los provenientes de la recuperación y de la renta de sus inversiones.
- 7.04 El capital del BEDE sufre una constante erosión en el tiempo, puesto que la tasa de interés que cobra por la utilización de sus recursos es inferior a la tasa de crecimiento de la inflación, aún más a la del deflactor utilizado en este documento. Más aún, las condiciones financieras que rigen las operaciones del BEDE deben considerarse como blandas y específicamente sus tasas de interés subsidiadas, puesto que como se observa, éstas no recuperan ni siquiera el poder adquisitivo de la moneda, peor aún constituyen en términos reales un cobro por el dinero prestado. En este sentido la actitud paternalista del BEDE en lo relativo a las tasas de interés subsidiadas de los créditos debería desaparecer. El Programa tendría que distinguir entre lo que corresponde a "subsidio" y tasas de interés.
- 7.05 Para paliar la situación financiera actual del BEDE, se considera necesario un proceso de capitalización del mismo; se hace necesario además, una revisión de las condiciones financieras que rigen sus operaciones a fin de asegurar una rentabilidad que le permita cubrir su costo de capital y los gastos de financiamiento.

- 7.06 De considerarse al BEDE como organismo ejecutor del Programa, se estima recomendable la ejecución de una "evaluación institucional y financiera" de esta entidad, la cual, una vez que se tenga el dimensionamiento del financiamiento, debería incluir recomendaciones sobre los ajustes requeridos en su estructura organizacional (tal vez gradual) y financiera con especial atención en las áreas de evaluación y supervisión de proyectos, crédito, contabilidad, auditoría, presupuesto, cartera, etc. De esta evaluación podrían surgir recomendaciones sobre los aspectos institucionales y financieros que el BEDE pudiera necesitar como organismo ejecutor en sus diferentes áreas y serviría, además, para definir más adecuadamente las necesidades del Programa. Al respecto, una cooperación técnica de corta duración podría satisfacer las necesidades planteadas.
- 7.07 A fin de salvaguardar una clara función financiera al BEDE, se considera importante que el Programa establezca la responsabilidad del Estado Ecuatoriano de absorber las pérdidas sobre los diferenciales cambiarios que se produzcan en los desembolsos. En este sentido, sería necesario establecer claramente el o los mecanismos de transferencias de los fondos del Banco Central del Ecuador al BEDE.

ANNEX D  
CATEGORICAL EXCLUSION

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON DC 20523

LAC-IEE-88-51

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Ecuador  
Project Title : National Shelter Delivery System Program  
Project Number : 518-HG-007  
Funding : \$40 million (L), \$1 million (G)  
Life of Project : 7 years  
IEE Prepared by : Jane Stanley  
USAID/Quito  
Recommended Threshold Decision : Categorical Exclusion  
Bureau Threshold Decision : Concur with Recommendation  
Comments : None  
Copy to : Frank Almaguer, Director  
USAID/Quito  
Copy to : Jane Stanley, USAID/Quito  
Copy to : Mark Silverman, LAC/DR/SA,  
Copy to : Howard Clark, REMS/SA  
Copy to : IEE File

James Hester Date SEP 29 1988

James S. Hester  
Chief Environmental Officer  
Bureau for Latin America  
and the Caribbean

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ANNEX 8

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Ecuador  
Project Title and Number : National Shelter Delivery System Program,  
518-HG-007  
Funding: : \$40,000,000 (L), \$1,000,000 (G)  
Life of Project : 7 years  
Request Prepared by : Jane Stanley, USAID/Ecuador  
Recommended Threshold Decision : Categorical Exclusion  
Bureau Threshold Decision: :

Signed: \_\_\_\_\_

*Frank Almaguer*  
Frank Almaguer  
Mission Director

Date : \_\_\_\_\_

SEP. 13 1988

Approved: \_\_\_\_\_

James S. Hester  
Chief Environmental Officer  
Bureau for Latin America  
and the Caribbean

Date : \_\_\_\_\_

## NATIONAL SHELTER DELIVERY SYSTEM PROGRAM

518-HG-007

### A. Description of Program

The National Shelter Delivery System Program was designed to increase the supply of low-income housing and other shelter services by assisting the GOE to implement the shelter component of its National Development Program. This program was initiated in 1984 and the first \$10 million in Housing Guaranty (HG) authority provided under this program was targeted at providing low cost housing and home improvement loans to low income families. This \$10 million amendment to the HG authority will guaranty the financing of other shelter services, in particular, water and sewerage services.

Under this amendment, various municipalities within Ecuador will design water and sewerage projects and submit them to the Ecuadorian Development Bank (BEDE) for approval. Before BEDE approves a project, it conducts an assessment of project feasibility that includes an analysis of the project's environmental impacts. Once BEDE approves a project for financing, it requests loan funds from the Central Bank's Financial Fund for Housing (FFH). The FFH's loan funds are comprised of GOE budgetary resources and loans provided by U.S. investors that are backed by the U.S. Treasury under the HG authority for this program.

CBE will recover loan funds from BEDE. BEDE will recuperate funds from municipalities, who will in turn recover costs from beneficiaries. The Mission's role in the program will be that of monitoring overall program progress. The Mission will not be involved in the design or the approval of individual projects.

### B. Potential Environmental Impacts/Plans for Mitigation

While the Mission will not be involved in the details of project design, it is aware that water and sewerage projects do have a potential for creating significant positive and negative environmental impacts. Of major concern in the implementation of this program are:

- The need to assure that all projects involving expansions of water supply distribution systems take into account the adequacy of sewage disposal systems in the project area and ensure that necessary improvements to the sewage disposal system are completed concurrently with the new water distribution system.
- The scarcity of water in both Quito and Guayaquil. While both cities are undertaking large projects to expand their source of supply, assurances must be made that there is adequate water for system expansion. One way to avoid this problem is to schedule construction in neighborhoods that already have separate sources of water supply, such as nearby springs, earlier in the program as is proposed in Quito. (In this case we would need to confirm that the water is potable).

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- The capacity of municipal sewerage collection system to handle the additional volume of wastes.

Because the Mission is concerned about the potential environmental impacts of projects to be financed under this program, it will make a thorough review of BEDE's loan approval procedures to ensure that its environmental assessment procedures are adequate. If the Mission determines that BEDE's procedures are inadequate, it will provide BEDE with assistance to set up and implement improved environmental assessment criteria and procedures. The Mission will assess BEDE's procedures prior to amending the Implementation Agreement for this additional \$10 million in HG authority.

C. Justification for Categorical Exclusion

Section 216.2 (c) (ii) of AID's Environmental Regulations states that Initial Environmental Examinations, Environmental Assessments and Environmental Impact Statements are not required when "AID does not have knowledge of or control over, and the objective of AID in furnishing assistance does not require, either prior to approval of financing or prior to implementation of specific activities, knowledge of or control over, the details of the specific activities that have an effect on the physical and natural environment for which financing is provided by AID". The HG-007 program falls within this category because under this program AID does not approve separate subprojects prior to financing and has no knowledge of control over the details of the specific subprojects it is financing.

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ANNEX F

TERMS OF REFERENCE FOR TECHNICAL ASSISTANCE ACTIVITIES

F

**TECHNICAL ASSISTANCE PLAN**  
**FOR THE MUNICIPAL SECTOR OF POTABLE WATER AND SEWERAGE SERVICES**  
**AND TECHNICAL AND FINANCIAL AGENTS INVOLVED IN**  
**THE HG-007 SUPPLEMENTAL PROGRAM**

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ARTICLE I:

TITLE:

TECHNICAL ASSISTANCE PLAN FOR THE MUNICIPAL  
SECTOR OF POTABLE WATER AND SEWERAGE SERVICES;  
AND FOR TECHNICAL AND FINANCIAL AGENTS INVOLVED  
IN THE HG-007 SUPPLEMENTAL PROGRAM

ARTICLE II:

BACKGROUND:

The U.S. Agency for International Development in Ecuador (USAID/Ecuador) and the Regional Housing and Urban Development Office for South America (RHUDO/SA) will provide assistance to local governments through the development of the current Supplemental Program to the National Shelter Delivery System Program (NSDS), 518-HG-007.

The original NSDS program is based on the Financial Fund for Housing (FFH), created through an agreement with the Government of Ecuador (GOE) with U.S. private resources with AID'S guaranty. The FFH works as a discount window in the Central Bank of Ecuador (BCE), which manages lending resources and those destined as technical assistance for the performance of the FFH. These lending resources have provided financing to beneficiaries of housing construction projects for low-income urban families.

Based on continuous studies of the shelter sector of the country, USAID/Ecuador and RHUDO/SA have concluded and recognized that the improvement of peripheral low-income human settlements deserves special emphasis in the implementation of the National Shelter Delivery System (NSDS). Accordingly, the funds authorized by AID for the Supplemental Program will be destined exclusively to the financing of residential services of potable water and sewerage for low-income communities.

The principal institutions involved in the Supplemental Program will be the Central Bank of Ecuador (BCE), which manages the FFH, to which eligible shelter and infrastructure projects are presented by eligible financial institutions (EFI) for discounting; the Development Bank of Ecuador (BEDE), which will provide financing and technical assistance to municipalities for infrastructure projects and will act as an EFI with access to the FFH; the Institute of Sanitary Works (IEOS) which sets standards and analyzes environmental impacts for all water and sewer systems and constructs and manages water and sewer systems in rural areas and small municipalities; the Municipalities and their utility companies, at least initially only those of Quito and Cuenca, which will construct and manage the upgrading projects in their

comunities; and finally commercial banks and/or other financial institutions which may be interested in financing the infrastructure projects for low-income households.

The Supplemental Program will also add grant resources to the existing HG-007 grant for technical assistance, in order to support the achievement of the Supplemental Program's policy agenda with the involved institutions. The first phase of TA will start with activities that will strengthen the evaluation of the initial projects by the involved institutions. The second and third phases of the TA will be applied to the strengthening of technical, operating, administrative and financial systems within the municipal infrastructure agencies and thus contribute to increasing their financial self-sufficiency.

ARTICLE III: OBJECTIVES:

To increase the financial self-sufficiency of municipal infrastructure agencies. Assistance will be provided to support these agencies in the implementation of a series of actions that will lead to greater levels of operations, maintenance, and investment cost recovery, including increases in the generation of own-source income, operating cost reduction, and the use of more appropriate technologies and standards.

USAID/Ecuador and RHUDO/SA have determined that to achieve the planned objective, three activities are fundamental:

- 1) Institutional strengthening of BEDE and IEOS's capability to advise municipalities in the appropriate design, implementation, and administration of affordable infrastructure systems.
- 2) Strengthening of the technical and financial management capabilities of municipal infrastructure agencies that participate in the Program.
- 3) Diffusion of the experiences obtained through the Program to other municipalities through the Association of Ecuadorian Municipalities (AME) and its associated Institute for Municipal Development (INFODEM).

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ARTICLE IV:      TERMS OF REFERENCE:

A. Global Tasks:

The Contractor's tasks shall include but not be limited to the following activities: identify and recommend to USAID/Ecuador and RHUDO/SA local and foreign consultants expert in the themes to be developed; design and manage workshops and seminars; and identify locales for site visits inside and outside of Ecuador in Latin America, manage their content, and manage the logistical arrangements for the site visits. The Contractor shall also prepare for and deliver to USAID/Ecuador a monthly financial status report on the use of contract funds, showing both monthly and to-date use and obligation of contract funds.

The Contractor shall identify a Project Coordinator who shall serve as the point of contact during the life of the contract with BEDE and USAID/Ecuador. The Project Coordinator shall suggest a detailed work plan which may be revised as the Program progresses.

Each event or defined activity shall be agreed upon in advance and shall require the approval of USAID/Ecuador before its initiation. When required by USAID/Ecuador, activities shall require the delivery of reports consisting of recommendations stating the steps necessary to implement in the subsequent phase to give continuity to the TA process and to the institutional strengthening process.

B. First Phase Tasks

The objectives of the first phase consist of the development of an infrastructure project proposal procedures manual, which will include eligibility criteria for municipalities that wish to participate in the Program; a project evaluation manual that will assist BEDE to apply technical, socio-economic, and financial evaluation procedures to the infrastructure project proposals; and the evaluation of an initial set of infrastructure projects.

The following activities shall therefore be developed:

- a)            Development of a socio-economic survey instrument that will assist BEDE to evaluate the ability-to-pay of the proposed beneficiary families.
- b)            Development of eligibility criteria that will assist BEDE to define the eligibility of municipalities for Program funding.

- c) Assistance to BEDE and the municipal infrastructure agencies in the application of the above procedures and criteria to an initial set of infrastructure investment projects.
- d) Collaboration in the design of workshops with the Association of Ecuadorian Municipalities (AME) and the Institute for Municipal Development (INFODEM).

The workshops shall deal with two principal subjects:

- The procedures of conducting a survey and the socio-economic evaluation of projects, using the socio-economic survey instrument developed as described above.
- The financial and technical implications derived from the application of the procedures and criteria developed as described above.

1. First Phase Term of Performance and Deliverables

USAID/Ecuador estimates that the completion of tasks under the first phase will require a level of effort of 105 days. These tasks shall be accomplished within the following period:

Starting date: June 1989  
Termination date: November 1989.

The following deliverables shall be provided to BEDE and USAID/Ecuador:

- a) A procedures manual which describes the techniques, criteria, and procedures for socio-economic evaluation of projects and which defines the criteria for municipal eligibility for Program funding.
- b) An instructions manual that will assist BEDE to apply the municipal eligibility.
- c) A procedures manual for the technical socio-economic and financial evaluation of projects.

- d) An evaluation of the municipal submission of infrastructure projects and their technical and financial evaluation by BEDE and IEOS, for an initial set of infrastructure projects.

### C. Second Phase Tasks

The objectives to be attained in the second phase of the Program are to strengthen BEDE, IEOS, and municipal infrastructure agency procedures development initiated during the first phase; to disseminate the lessons learned during the first phase; and to initiate a process of financial and institutional strengthening of the municipal infrastructure agencies which participate in the process. Two tasks are strategic to this process:

- 1) The development by BEDE and IEOS of detailed procedures of design and evaluation of infrastructure investment projects.
- 2) The initiation of a process of strengthening of the financial, administrative, and operating systems of the participating municipal infrastructure agencies.

Accordingly, the following activities shall be developed through the participation of consultants, and the organization of seminars, workshops, and site visits:

#### a) For IEOS:

- 1) Evaluation of its technical, administrative, and legal capability to manage the application of appropriate technical design and environmental norms for the design of infrastructure projects for low-income communities.
- 2) Development and dissemination of appropriate design and environmental standards that are balanced by considerations of infrastructure project affordability in low-income communities.

#### b) For BEDE:

- 1) Mid-course evaluation of: its socio-economic survey instrument, its eligibility criteria for the communities served, and its evaluation of the initial set of infrastructure projects from the first phase.

- 2) Recommendations for the refinement of BEDE and IEOS project procedures.
- 3) Training of relevant BEDE, IEOS, AME-INFODEM, and municipal infrastructure agency staff in the application of the revised project proposal and evaluation procedures and criteria.

c) For the Participating Municipal Infrastructure Agencies (EMAP-Q, EMA-Q, and ETAPA)

The following activities are oriented to the strengthening of the financial, technical, administrative, and operating areas of the municipal infrastructure agencies:

- 1) Evaluation and development of recommendations on required modifications in technical, financial, and operating systems internal to municipal infrastructure agencies in order to achieve full or near-full cost recovery of operating, maintenance, and investment costs.
- 2) Assistance to municipal infrastructure agencies in the application of recommended cost recovery measures.
- 3) Evaluation of the infrastructure agencies' accounting systems and procedures, and recommendations for the implementation of accounting systems that will contribute to the strengthening of their administrative and financial management.
- 4) Evaluation of the infrastructure agencies' inventory, billing, and collection systems, and recommendations for the implementation of inventory, billing and collection systems that will contribute to the achievement of the agencies' cost recovery goals.
- 5) Training of staff of participating municipal infrastructure agencies, through the organization of courses and site visits, in order to reinforce the implementation of recommended systems for improved cost recovery. Such training shall be conducted with the collaboration of AME-INFODEM, in order to make said training available to other municipalities in Ecuador.

1. Term of Performance and Deliverables

The activities of the second phase shall be developed in a period of 14 months, starting o/a January 1990 and ending o/a February 1991. USAID/Ecuador estimates that a level of effort of 288 will be required to complete tasks under the second phase of the Program. During this time the following products shall be delivered to BEDE and USAID/Ecuador:

- a) A manual containing the criteria, parameters, and recommendations for the application and management of technical design and environmental standards for water and sewerage projects for low-income communities.
- b) A manual that will allow BEDE to apply the project evaluation procedures and municipal eligibility criteria to projects submitted for funding through the Supplemental Program.
- c) A technical, economic, and financial evaluation of infrastructure projects presented by the municipal infrastructure agencies of Quito and Cuenca that has applied BEDE and IEOS's methodologies and procedures.
- d) A manual containing the recommendations for procedures of cost recovery, including recommended systems of accounting, inventory control, billing and collections, and other financial management topics.

D. Third Phase Tasks

The objective of the third phase of the TA Program is to consolidate the implementation of new operating procedures within the involved institutions.

Therefore, the following activities shall occur:

- a) Evaluation of IEOS's implementation of revised technical design and environmental standards and of its evaluations of the environmental impacts of Supplemental Program-funded projects.

- b) Evaluation of BEDE's application of new project evaluation procedures and criteria, and its end-of-project institutional capacity to assess municipal infrastructure projects and to advise municipalities on municipal development investments.
- c) Evaluations of the success of implementation of new operating and management procedures within the municipal infrastructure agencies, and recommendations for additional changes required to consolidate cost recovery system achievements.
- d) Initiation of a national dialogue, through seminars or workshops, on the implications of the processes of organizational change implemented by the Supplemental Program, particularly with respect to greater involvement of the private sector in public infrastructure finance.
- f) Continued support to AME-INFODEM in the preparation of seminars, workshops, and other events whose themes shall be related to the following:
  - Socioeconomic, technical and financial procedures and evaluation techniques for municipal infrastructure projects.
  - Municipal infrastructure agency financial management and operations management systems.
  - Operations, maintenance, and investment cost recovery for municipal infrastructure services.
  - Municipal infrastructure tariff policy.

1. Term of Performance and Deliverables

The activities of the third phase shall be performed during Fiscal Year 1991. USAID/Ecuador estimates that a level of effort of 156 days will be required to complete tasks under the third phase. The following products shall be delivered to BEDE and USAID/Ecuador:

- a) A manual containing the recommendations for the continuation of the application of revised technical design and environmental standards.

- b) An evaluation of BEDE, IEOS, and the Quito and Cuenca infrastructure agencies, evaluating the success of their implementation of new operating procedures, and recommendations on how to continue the strengthening of the financial self-sufficiency of the municipal infrastructure agencies and the institutional development of BEDE and IEOS with regard to their advisory role in municipal development.
  
- c) A strategy paper on how to significantly increase the role of the private financial sector in the field of public infrastructure finance, and how to create a role for a national development institution such as BEDE in developing financial underwriting criteria for private sector finance of public infrastructure.

**ARTICLE V: RELATIONSHIPS AND RESPONSIBILITIES:**

The Contractor shall perform its activities under the supervision of officials designated by BEDE; USAID/Ecuador management of the contract shall be managed by the Regional Housing and Urban Development Office for South America (RHUDO/SA).

BEDE shall be the GOE institution in charge of providing all the necessary information so that the contractors can develop the activities under this plan.

**ARTICLE VI: EXECUTION TERMS:**

To develop these activities, the Contractor(s) in charge of its implementation shall plan its actions and its required resources during the scheduled term of June 1989 through December 1991.

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