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DOMINICAN REPUBLIC

SHELTER

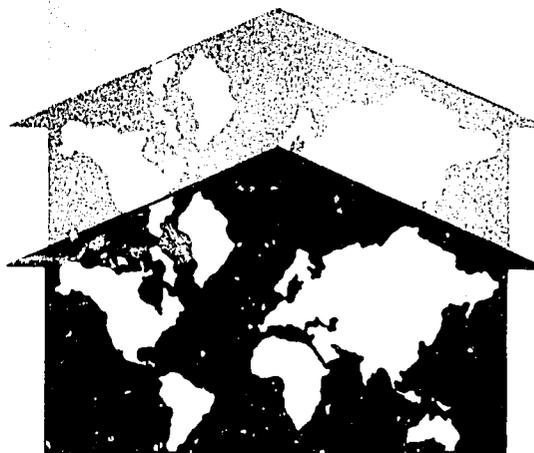
SECTOR

ASSESSMENT

VOLUME I

APRIL 1980

**AGENCY
FOR
INTERNATIONAL
DEVELOPMENT**



OFFICE OF HOUSING

DOMINICAN REPUBLIC
SHELTER SECTOR ASSESSMENT

VOLUME I

OFFICE OF HOUSING
AGENCY FOR INTERNATIONAL DEVELOPMENT
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FOREWORD

This study was conducted during 1980 by the Planning and Development Collaborative International (PADCO) under the auspices of the Office of Housing of the Agency for International Development and through funding provided by this Office. The purpose of this study was to develop information and make recommendations relating to the Shelter Sector of the Dominican Republic.

The study team was led by Mr. Joseph E. Arington, Vice President of PADCO. Mr. Lee Baker, Mr. Richard Burton and Ms. Marilyn Dawson of PADCO were other team members.

The findings and recommendations of the report have been reviewed in detail and discussed with representatives of the Government of the Dominican Republic. While the report results from close cooperation of the team and its counterparts, it is not to be interpreted as an official position of either the Government or the Agency for International Development.

We hope, however, that the Government of the Dominican Republic will find the report and its recommendations useful as it formulates and implements future shelter programs.

A handwritten signature in cursive script, reading "Peter Kimm". The signature is written in dark ink and is positioned above a horizontal line.

Peter M. Kimm
Director
Office of Housing

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COMMONLY USED ACRONYMS

BH	Banco Hipotecario (Mortgage Banks)
BID	Banco Interamericano de Desarrollo (Inter-American Development Bank)
BIRF	Banco Internacional de Reconstruccion y Fomento (International Bank of Reconstruction and Promotion)
BNV	Banco Nacional de la Vivienda (National Housing Bank)
CAASD	Corporacion de Acueducto y Alcantarillado de Santo Domingo (Santo Domingo Aqueduct and Sewage Company)
CAJA	Caja de Ahorros para Obreros y Monte de Piedad (Worker's Savings Bank)
CARE	Cooperativa Americana Remesa Exterior
CDE	Corporacion Dominicana de Electricidad (Dominican Electric Corporation)
CEA	Consejo Estatal del Azucar (State Sugar Board)
CELADE	Centro Latinoamericano de Demografia (Latinamerican Demographic Center)
CICV	Comision Inter-Institucion Para la Coordinacion de Programas de Viviendas
CENSERI	Centro de Servicios Rurales Integrados (Center for Integrated Rural Services)
CODETEL	Compania Dominicana de Telefonos (Dominican Telephone Company)
CODIA	Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores (Dominican College of Engineers, Architects and Land Surveyors)
CONAPOFA	Consejo Nacional de Poblacion y Familia (National Council for Population and Family)
CORDE	Corporacion Dominicana de Empresas Estatales (State Enterprise Corporation)
CRIES	Comprehensive Resource Inventory and Evaluation System
CRS	Catholic Relief Services

FDD	Fundacion Dominicana de Desarrollo (Dominican Development Foundation)
FEDOCOOP	Federacion Dominicana de Cooperativas (Credit Unions)
FIDE	Fondo de Inversiones para el Desarrollo Economico (Private Investment Funds)
FMI	Fondo Monetario Internacional (International Monetary Fund)
GODR	Gobierno de la Republica Dominicana (Government of the Dominican Republic)
IAD	Instituto de Agraria Dominicano (Dominican Agrarian Institute)
IDECCOOP	Instituto de Desarrollo y Credito Cooperativo (Cooperative Credit and Development Institute)
INAPA	Instituto Nacional de Agua Potable y Alcantarillados (National Institute of Potable Water and Sanitation)
INAVI	Instituto Nacional de Auxilios y Viviendas (Housing and Assistance Institute)
INDRHI	Instituto Nacional de Recursos Hidraulicos (National Hydraulic Resources Institute)
INVI	Instituto Nacional de la Vivienda (National Housing Institute)
LMD	Liga Municipal Dominicana (Dominican Municipal League)
ODC	Oficina de Desarrollo de la Comunidad (Office of Community Development)
ONAP	Oficina Nacional de Administracion de Personal (National Personnel Administration Office)
ONAPLAN	Oficina Nacional de Planificacion (National Planning Office)
ONAPRES	Oficina Nacional de Presupuesto (National Budget Office)
ONE	Oficina Nacional de Estadistica (National Statistics Office)

SAAP Asociaciones de Ahorros y Prestamo (Savings and Loan Associations)

SEEBAC Secretaria de Estado de Educacion, Bellas Artes y Cultos (Secretariat of State for Education, Fine Arts and Worship)

SEOPC Secretaria de Estado de Obras Publicas y Comunicaciones (Secretariat of State for Public Works and Communications)

SESPAS Sociedad Industrial Dominicana (Dominican Industrial Society)

OFFICIAL CURRENCY CONVERSION RATE

US\$1.00 = RD\$1.00

PARALLEL MARKET EXCHANGE RATE

Fluctuating daily but usually within a band of RD\$1.15-1.25 = US\$1.00

EXECUTIVE SUMMARY

A. THE COUNTRY SITUATION

1. Population and Employment

The Dominican Republic is a land constrained country having about 48,400 square kilometers. Population growth is already a major problem. The estimated population in 1979 was 5.4 million persons with a density of 112 persons per square kilometer -- higher than many other Latin American nations.

According to the USAID Mission in the Dominican Republic, the average annual national population growth rate is 2.5 percent. However, in urban areas, it averages between 5 and 6 percent. This urban growth rate has been exacerbated by a strong urban-rural migration following the apparent urban-rural differentials in general living conditions, income and employment opportunities. In the cities, the government is under pressure to meet the burgeoning demands for employment and for the delivery of basic essential services by the majority low income and marginal population. Growth is most noticeable and urban problems most serious in Santo Domingo (the capital) and Santiago. However, smaller cities are also increasing in size. Given the present scarcity of public funds, the commitment of external finance to other priorities and the emphasis of budgetary allocations to rural areas, new ways must be developed to more effectively plan and distribute the existing limited resources.

Increases in the urban labor force due to the rapid urban population growth have not as yet been matched by job creation and open unemployment is generally estimated at about 20 to 24 percent in the cities. Another estimated 25 percent of the urban labor force is underemployed and suffers from a correspondingly low income level. Over 40 percent of the employed individuals earn monthly incomes of less than RD\$100. Estimated monthly household income distribution for 1978 is shown below.

Monthly Household Income Distribution 1978

Income Ranges (RD\$)	Percentage of Households		
	Total	Urban	Rural
0-10	31.5	19.8	39.9
101-300	49.1	50.4	48.3
301-600	13.0	18.0	9.4
601+	6.4	11.8	2.4

Source: Banco Central, El Presupuesto de la Familia Dominicana, Ingreso y Consumo Familiar.

Health needs of the Dominican population are almost overwhelming. In 1977, an estimated 50 percent of the population living below the absolute poverty line suffered from malnutrition.¹ Improvements in life expectancy, infant mortality and other health indicators have not been nearly as rapid as overall economic conditions or as in countries with similar level of socioeconomic development.

Despite the important expansion of public and private education in the Dominican Republic in recent years, the overall coverage of the system is still relatively low: 20 percent of the population aged 10 to 30 years has had no instruction and only 50-60 percent of that group has some primary education. Retention rates in schools are extremely low. Non-formal education programs for adults and school dropouts are practically non-existent.

2. The Economy

One of the major characteristics of the Dominican economy is the preponderance of primary activities. Almost all export income is derived from primary activities, which in turn is used to finance imports and the accumulation of capital goods (machines and equipment) from the exterior. The limited diversification of exports has made the Dominican Republic extremely dependent on world markets. The value of exports remains quite unstable and exterior commerce is almost always in a state of flux.

The economy has also shown little ability to generate productive employment opportunities for the population. Specific incentives and programs have yet to be identified which can increase the labor intensity of production which is quite low. This has resulted in a large concentration of the economically active population in tertiary sector service activities as opposed to activities related directly with the production of capital goods. In quantitative terms, about 50 percent of the GDP is concentrated in the service sector and probably half of the economically active population.

The high concentration of industry and commerce in Santo Domingo and Santiago, which also characterizes the economy, has given rise to a spatial imbalance thus inhibiting a rational

¹ World Bank Mission on Social and Economic Development. Estimate based on the standard definition of poverty which is the lack of sufficient income for an adequate diet plus minimum non-food expenditures -- over one million people or 44 percent of the total population in 1977.

process of economic integration. This in turn has resulted in the existence of economically deprived regions. Among the worst off in this regard are the Southwest Region and the Northeast Region.

3. Country Goals

The government recently formulated a 3-year investment plan which could be the first step in the conformation of a national plan to guide its development. The lack of a national plan has been a serious constraint to the efficient allocation of public and private resources. In the cities, the government is under pressure to meet the burgeoning demands for employment and for the delivery of basic essential services by the majority low income and marginal population. Growth is most noticeable and urban problems most serious in Santo Domingo and Santiago. However, small cities are also increasing in size (see Statistical Annex; Tables I-29, I-30 and I-31 for size and annual growth rates).

The disastrous impact of Hurricane David in 1979 climaxed a trend of decelerating GDP growth begun in 1974. Reduced export earnings, slow growth of industrial production and construction activities, continued rising unemployment, declining domestic savings and the low bouyancy of the country's fiscal revenues combined with the deterioration of its stock of fixed capital were among the symptoms of the situation since that time. The government, through new policy measures already adopted, has defined objectives which are aimed at eliminating the structural factors which have blocked the sustained growth of the Dominican economy by addressing both the short term stabilization problems and the longer term concerns for socioeconomic development through a strategy which:

- reorients production towards exports;
- induces additional savings and improves allocation of the same;
- encourages the use of labor and other domestic inputs;
- channels increasingly scarce public resources into more cost effective uses.

This strategy has been incorporated in a 3-Year Plan for Public Investment (Plan Trienal de Inversiones Publicas, 1980-82) prepared by the National Planning Office (ONAPLAN). In accordance with the overall economic guidelines for the country's development, ONAPLAN has made an initial attempt to order and prioritize public sector projects and incorporate them within the annual budget of each respective entity.

B. HOUSING DEMAND AND POTENTIAL TARGET GROUPS

1. Housing Needs

There is clear agreement that housing is vastly inadequate and that there is an overwhelming need for more and better housing in the Dominican Republic.

The magnitude of sub-standard housing in rural areas has previously been estimated as high as 85 percent and urban deficits have ranged between 50 and 70 percent. While such estimates may not be out of order given the actual situation, they serve no useful purpose for project development. Based on the shelter and basic services indicators established and utilized by the Study Team, a more conservative estimation of housing deficit as of 1974 suggests that 54-64 percent of the rural population (288,285-341,640 households) lived in housing with extreme deficits as did 13-23 percent of the urban population (57,800-96,800 households). These groups should be given priority consideration in the design of solutions to upgrade existing housing.

The need to build housing to satisfy the demand brought about by new family formation is also clearly one of the most urgent. Should new families not be provided with housing, they will only aggravate the overcrowding and increase the marginal squatter settlements which have become characteristic of both urban and rural areas. In order to satisfy the estimated new housing demand due to new population growth -- urban and rural -- an annual average of some 32,900 units of new housing or shelter solutions must be constructed (29,300 urban units and 3,600 rural units).

2. Priority Target Groups

The size of the existing priority target population has been conservatively estimated at 351,045-452,724 marginal households, representing 27-47 percent of the total households.

a. The urban target group. The urban target group represents about 25 percent of the total target population and 18 percent of the total urban population. It can be divided by house type as follows:

Composition of the Urban Target Group
1974

House Type	Number of Households	% of House Type Included in Target Group
Standard single family ²	13,900-41,700	5-15
Rustic	42,500-53,100	40-50
Provisional	1,300- 1,800	25-35
Unconventional uses	<u>100- 200</u>	5-15
TOTAL	57,800-96,800	

b. The rural target group. Seventy-five percent of the total target population live in rural areas. Fifty-nine percent of the rural population is considered marginal. The following table shows the distribution of the marginal rural target population by housing type.

Composition of the Rural Target Group
1974

House Type	Number of Households	% of House Type Included in Target Group
Standard single family	75,400- 96,900	40-50
Rustic	210,100-240,200	70-80
Provisional	2,000- 2,200	70-80
Unconventional uses	400- 500	50-60
Bateys	<u>2,100- 2,800</u>	30-40
TOTAL	290,000-342,600	

C. HOUSING INSTITUTIONS

The major sources of housing finance in the Dominican Republic now are the Asociaciones de Ahorros y Prestamo (SAAP), together with the National Housing Bank (BNV), the mortgage banks, the commercial banks and two public sector institutions: the Instituto Nacional de la Vivienda (INVI) and the Instituto de Auxilios y Viviendas (INAVI). The total portfolio of these institutions at the beginning of 1979 came to US\$320 million.

² The word "standard" as used here means separate units providing living quarters for one family and does not denote a house which meets some acceptable minimum standard. See Chapter II for full description.

The Savings and Loan system, comprising BNV and the SAAPs, now accounts for about 45 percent of housing finance. Commercial banks lend short-term, often only complementing lending by the more specialized institutions. The mortgage banks began operations in 1973 and are now responsible for about 20 percent of the loans outstanding in the sector. INVI and INAVI, which were created to finance and implement housing for low income groups and public sector employees, account for less than 15 percent of total housing loans and their portfolios have grown very little since 1975.

The institutions and entities that have primary responsibility for the provision of basic urban services are the Corporacion del Acueducto y Alcantarillado de Santo Domingo (CAASD), the Instituto Nacional de Aguas Potables and y Alcantarillado (INAPA), the Corporacion Dominicana de Electricidad (CDE), the Secretario del Estado de Obras Publicas y Comunicaciones (SEOPC), the municipal governments and the Liga Municipal Dominicana (LMD).

D. PROBLEMS AND CONSTRAINTS TO THE ADEQUATE PROVISION OF HOUSING

The principal constraints and problems which inhibit the supply of housing, particularly to low income and marginal households as well as their effective demand for such housing are summarized below together with their impacts.

1. Principal Constraints in the Supply of Shelter

a. Administrative/institutional constraints.

(i) Formal coordination mechanisms among housing finance institutions are not fully developed as yet.

(ii) Geographic inequities are perpetuated by the concentration of credit facilities and consequently housing production in Santo Domingo and to a lesser degree Santiago and the relatively limited availability of facilities elsewhere.

(iii) The current housing finance and production capacity of INVI is limited.

(iv) Effective ongoing systems of evaluation for each of the stages of construction or building process as well as an integrated information system on the home-building sector should be developed.

b. Technical constraints.

(i) Inadequate norms and standards exist for housing specifically geared to the needs and the capacity to pay of low income groups.

(ii) Limited formal mechanisms exist to promote applied research of labor intensive technologies, as well as the adoption of appropriate house and infrastructure design emphasizing the use of locally produced materials and traditional construction techniques.

c. General resources and basic services constraints.

(i) The capacity of public services is greatly overloaded in almost all urban areas.

(ii) Increases in the prices of urban land in the private market contributes to the problems of housing development programs, particularly for low income groups.

(iii) The property registration system is quite complicated and requires significant amounts of time and lengthy procedures for transfers of land and the issuing of titles.

(iv) The human resources capacity of the major housing institutions is not yet adequate to their assigned functions.

d. Financial resources constraints.

(i) Current and past inflation rates, together with the 12 percent interest rate ceiling for loans set by the national usury law, have resulted in negative real interest rates for depositors and investors in the savings and mortgage guaranteed bond system (cedulas hipotecarias) and a corresponding shortage in available housing funds.

(ii) The present system of housing finance tends to accumulate financial resources in entities serving housing markets for which total demand is relatively limited but does little to relieve the shortage of funds in the low income and marginal market where there is an increasing demand. It increases rather than decreases inequities in the distribution of capital, including the distribution of urban land ownership and access to capital markets.

(iii) The present pattern of financing also almost entirely neglects the latent demand for low income rental space. It, therefore, tends to worsen rather than improve the current availability of housing space for low income and marginal households.

(iv) High design standards and the heavily subsidized financing terms have resulted in both limited production and decapitalization of public housing resources while failing to meet the needs of the majority low income population.

(v) The informal financing system upon which low income and marginal households must depend heavily may help keep short-

run risks to both the lender and the borrower relatively low; but it probably increases rather than decreases the long-run economic, physical and social risks to which low income and marginal groups are likely to be exposed.

(vi) The present methods for financing urban infrastructure that is related directly to housing, together with weaknesses in the property tax system, result in deficit financing and inadequate levels of service in urban infrastructure.

(vii) Little consistent concerted effort has gone into the identification and implementation of credit programs for building materials for self-help construction programs.

e. Policy.

(i) No comprehensive housing policy or plan exists.

(ii) Specific government housing policy and plan directed to the needs and capacities of low income households (the majority population) has not as yet been developed.

2. Principal Constraints in the Demand for Shelter

a. Financial constraints.

(i) Very little, if any, low level short term financial credit is available on a continuing basis to low income groups to facilitate the gradual upgrading or construction of housing.

(ii) Despite recent policy reorientations, most of the principal housing finance institutions regard investments in low cost housing as extremely risky investments.

b. Social and cultural constraints. Despite limited individual small scale exceptions, successful experience with community organization is uneven.

c. Constraints on community and self-help efforts. Because access to both information and credit is very limited for low income and marginal households, their ability to participate in many of the decisions affecting their basic welfare is very limited.

E. RECOMMENDATIONS

Approximately 70 percent of the effective demand for new and improved urban housing in the Dominican Republic during the next five years will be from low income groups. In rural areas, low income groups will account for well over 90 percent of effective demand. Although these groups have a proven limited capacity to pay for housing, there have been few housing programs which they can afford on a non-subsidized basis. The vast majority of low

income urban households has been left to live in unplanned, often illegal, settlements with low levels of urban services. Rural families are even worse off in terms of relevant public support in the shelter sector.

A large number of public and private institutions exist to finance and construct housing and related services. They have a number of overlapping functions and inter-institutional coordination requires further development. Although the present administration is taking steps to alleviate some of these problems, national level policy planning for the sector is still at the initial stage. In the past, few of the institutions have met their housing targets, and fewer still have reached the lower income groups who constitute the major part of the effective demand.

The scarcity of financial resources for housing in recent years has exacerbated an already critical situation. There is a need to address the priority problems which exist because of conservative lending practices as well as the series of impediments which exist in housing production. These impediments include some difficulties in land acquisition, deficits in serviced land, limited production and utilization of local and traditional types of construction materials and a limited utilization of labor intensive construction solutions and techniques. The ability of existing programs to reach lower income families is also constrained by a series of implicit and explicit regulations and policies for new developments which require unaffordable minimum standards and by the difficulties in obtaining legal land tenure. A sufficient number of projects to meet the specific needs of low income groups has not generally been planned and prepared for financing. Currently, the institutional capacity of the principal institutions responsible for providing solutions for such groups requires strengthening. Efforts are now being made to correct such deficiencies.

1. Objectives

Four basic objectives are proposed for improving the effectiveness in the housing sector:

- To increase the levels of production of housing.
- To direct an increased number of housing programs to low income groups.
- To improve the efficiency of housing finance and delivery.
- To provide for integrated institutional development in carrying out the basic objectives stated above.

2. Basic Strategy

To accomplish the above objectives, the government should encourage full private sector participation in housing construction, sale and rental. Public resources should be focused on the provision of basic infrastructure and community facilities and on those low income sub-markets in which housing problems are the most urgent. To implement this strategy, some of the functions of the existing housing institutions will have to be realigned toward increased support for low income programs. In the past, coordination between housing sector institutions has been lacking. There is no effective national level planning for housing programs. The overall coordination of public and private sector planning for housing should be improved.

3. Specific Institutional Responsibilities Recommended

As an important part of the response of the GODR to the problems of the housing sector, a series of pilot projects are recommended for the improvement of existing low income marginal settlements and individual housing in the priority areas established by ONAPLAN for urban/regional integration and development. The recommendations made here for financing and organization are important for implementing that program. The upgrading/improvement program should be combined with other pilot efforts and assistance to develop and implement new minimum standard urban and rural settlements for low income households as well as low cost housing demonstration projects by the BNV and the savings and loan associations and other private sector entities. The policy, planning and programming for both pilot and ongoing housing efforts should be coordinated through the secretariat for housing which is proposed for establishment within INVI. This will be one of the major early responsibilities of that secretariat and INVI's newly emerging planning staff.

The Instituto Nacional de la Vivienda (INVI) should increase its current efforts to focus its activities increasingly on the implementation of physical works in urban improvement/upgrading projects and the initial urbanization for new low income settlements. It should withdraw gradually from the construction, rental and sale of middle income housing. This will avoid the problems associated with government management and financing of housing and encourage private sector participation in housing construction and finance. INVI should, however, stimulate private sector experiments in low income minimal housing and rental housing.

The Instituto Nacional de Auxilios y Viviendas (INAVI) should provide limited financing for public employees, particularly for lower income workers, to upgrade and rehabilitate housing. It should, in accordance with newly established policy withdraw from the direct financing and

construction of housing projects. However, consideration should be given to the investment of some government pension funds within the proposed housing and urban development fund.

The Banco Nacional de la Vivienda (BNV) should continue its role as the central agency of the savings and loan system. In addition to their present functions, the savings and loan associations could act as the administrator for loans in the improvement program and eventually act as mortgage originators for other institutions. Low cost pilot housing projects should be immediately undertaken, by BNV and the SAAPs.

CAASD, INAPA, SEOPC, LMD and the municipal governments should focus a larger share of their efforts on low income areas in coordination with improvement programs and new minimal housing solutions. Technical assistance to SEOPC in developing affordable norms and standards for new development is recommended as is assistance to LMD and the municipalities to upgrade their capacities.

The recently organized Comision Interinstitutional para la Coordinacion de Programas de Viviendas (CICV) established by INVI should be fully supported in its efforts to increase the effective sustained participation of private voluntary organizations in the shelter sector. These efforts will reinforce and continue the USAID and INVI post-hurricane strategy of reaching out into the rural areas with shelter assistance by enlisting the cooperation of Private Voluntary Organizations and their network of affiliated national and community organizations.

4. Proposed Financial Mechanisms and Lending Terms

A housing and urban development fund is recommended and should be studied further and established as soon as possible, perhaps with the Banco Nacional de Reservas (BNR) acting as fiduciary agent, under the policy guidance of the ONAPLAN. That fund is proposed for the financing of high-priority projects³ in housing and basic services. Conceptually, the fund would be financed in part by the government and in part with deposits and loans from autonomous public institutions in the housing sector (as well as through external financing). These institutions would be paid current rates of interest for the use of their funds. Possibly, in the case of the integrated improvement program, the savings and loan associations could be considered to

³ In establishing this fund, full advantage should be taken of the existing experience and facilities of the savings and loan associations in order to reduce the problems usually associated with government involvement in collections. Mechanisms should be studied and established which enable low income groups to become more accustomed to formal sector credit institutions.

serve as loan administrators to channel loans from beneficiaries back to the Housing and Urban Development Fund. Further study is clearly required concerning the Fund and its instruments.

A system of interest rates and terms is required which is responsive to the needs of lower income groups but which does not require subsidies from outside the housing sector. Preliminary interest rates of 12 percent have been utilized for the recommended improvement program to enable the use of resources from the autonomous public institutions and to encourage the eventual use of private capital to finance low income shelter. Preliminary analysis made for the improvement program suggests that significantly improved living conditions can be provided for low income groups, even with these higher rates.

Upward revisions of the lending rates of the BN', INVI, INAVI and the private voluntary organizations to the 10-14 percent range (within today's overall interest rate structure) is recommended. This will reduce the threat of decapitalization which these institutions face. At the same time, the BNV and INVI should be assisted to initiate pilot efforts to finance lower standard programs to meet the needs of lower income groups. This interest rate structure will encourage private sector participation, both in direct housing finance and in the administration of loan collections. It will also bring Dominican interest structures more in line with international capital markets.

5. Additional Public Policy Measures Required

It is recommended that a more effective mobilization of the government owned urban land for housing be achieved through the gradual sale or transfer of land title to low income households as part of integrated upgrading of squatter settlements in strategic locations. Large scale land banking in advance of specific project requirements is not necessary at this time. Two specific important measures are recommended as more effective long run measures to mobilize the urban land market. An improved valorization system is recommended to finance urban infrastructure and a modest but important tax on the market value of urban land is recommended to reduce speculation and encourage more efficient land use.

It is urgently necessary to promote the expansion of the capacity of the construction industry and the availability and use of locally produced materials as well as labor intensive techniques in order to sustain expanded housing production.

6. Inter-institutional Coordination

The coordination of public and private sector planning for housing should be improved. The United Nations is already providing one senior level architect/advisor to assist INVI with internal planning. However, due to the importance and the

complexities, it is recommended that a secretariat for housing be established within the Instituto Nacional de la Vivienda (INVI) as soon as possible. The full-time technical staff group of the secretariat should be provided by INVI's emerging planning staff and technicians "seconded" from other entities.

Two task forces representative of relevant institutions should be associated with the secretariat -- one to coordinate housing finance and one to coordinate implementation of housing programs. The secretariat staff should be responsible for the analysis required for planning and coordinating the sector, formulating basic housing policies and preparing 5-year and annual plans for the sector with recommendations for the institutional financing and legal actions necessary to implement monitoring, coordination and evaluation in the sector.

7. Proposed Schedule for Implementing Recommendations

Table 1 shows proposed scheduling of recommended actions for the housing sector. Actions are listed according to their subject area and divided according to proposed immediate, intermediate and long term actions.

TABLE 1

Preliminary Outline of Proposed Actions

SUBJECT AREA	RECOMMENDATIONS		
	Immediate Action (beginning of period)	Short/Medium Range (1980-85)	Medium/Long Range (after 1985)
<ul style="list-style-type: none"> ● ESTABLISHMENT OF AN INSTITUTIONAL BASE FOR THE FORMULATION AND ADOPTION OF HOUSING POLICY 	<ul style="list-style-type: none"> ● Establishment of a secretariat for housing within INVI and task forces for finance and housing production. 	<ul style="list-style-type: none"> ● Annual revisions and improvement in housing policies and programs. Evaluation of housing programs and policies. Preparation of housing policies and plans for the period 1982-85. 	<ul style="list-style-type: none"> ● Continuous evaluation of housing programs and policies. Possible creation of a Ministry of Housing.
<ul style="list-style-type: none"> ● ESTABLISHMENT OF PERMANENT TECHNICAL STAFF GROUPS FOR HOUSING POLICY AND PROGRAMMING <p>(a) Housing programming group:</p> <ul style="list-style-type: none"> -- maintenance of housing information system. -- formulation of housing policy and programs, including financing program. -- dissemination of housing information. -- technical assistance to public and private entities in housing programming. 	<ul style="list-style-type: none"> ● Establishment of housing planning group. 	<ul style="list-style-type: none"> ● Initial analysis of housing demand and supply and identification of sub-markets. ● Identification of criteria and methods for establishing housing priorities in rational plans. ● Preparation of recommendations for initial elaboration of 1978-82 housing policy and financing program. 	<ul style="list-style-type: none"> ● Consider establishment of regional staff groups for housing programming linked with central group.

TABLE 1

Preliminary Outline of Proposed Actions

SUBJECT AREA	RECOMMENDATIONS		
	Immediate Action (beginning of period)	Short/Medium Range (1980-85)	Medium/Long Range (after 1985)
(b) Housing technology and materials group: -- research and experimentation with building materials and housing prototypes (but no large-scale housing construction). -- establishment and enforcement of standards for building materials. -- technical assistance to community groups.	<ul style="list-style-type: none"> ● Preparation of recommendations for initial elaboration of 2978-82 housing policy and financing program. 	<ul style="list-style-type: none"> ● Coordination of research on construction materials and technologies. 	
	<ul style="list-style-type: none"> ● Establishment of housing technology and materials group in INVI (possibly in SEOPC). Initiation of research and experimentation. 	<ul style="list-style-type: none"> ● Establishment and dissemination of standards for building materials and practices. Initial demonstration structures. Expanded capacity for technical assistance to community groups. 	<ul style="list-style-type: none"> ● Continuing update and enforcement of standards for building materials and practices. Continuing research and experimentation with building materials and housing prototypes.
	<ul style="list-style-type: none"> ● Initial studies of construction industry. 	<ul style="list-style-type: none"> ● Preparation of recommendations concerning the construction industry. Initial technical assistance to the construction industry. 	
<ul style="list-style-type: none"> ● HOUSING AND BASIC SERVICES AND FINANCE ENTITIES IN THE PUBLIC SECTOR 	<ul style="list-style-type: none"> ● Study and establishment of the Housing and Urban Development Fund. 	<ul style="list-style-type: none"> ● Initial operation of the Fund for financing the program of improvements and other priority projects (i.e. construction industry and construction materials industry). 	<ul style="list-style-type: none"> ● Concentration of INVI and sites and services and integrated upgrading of existing low income settlements in conjunction with BN and others.

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TABLE 1

Preliminary Outline of Proposed Actions

SUBJECT AREA	RECOMMENDATIONS		
	Immediate Action (beginning of period)	Short/Medium Range (1980-85)	Medium/Long Range (after 1985)
	<ul style="list-style-type: none"> ● Implementation of the 1st phase of the HIG pilot program. 	<ul style="list-style-type: none"> ● Retirement of the INVI from direct construction and adjudication of housing; concentration on the program of improvements; gradual sale of the rental stock of INVI and BN when in need of working capital. ● BNV begins the insurance of credit for families of low resources. Better access for these families to all programs. 	
<ul style="list-style-type: none"> ● HOUSING FINANCE ENTITIES AND HOUSEHOLDS IN THE PRIVATE SECTOR <p>(a) Collection and dissemination of housing information.</p>	<ul style="list-style-type: none"> ● Initiate establishment of housing information system in INVI. <ul style="list-style-type: none"> (a) develop housing information service in public sector to serve all public entities, private industry, community groups and households. (b) Encourage development of housing information services in private sector. 	<ul style="list-style-type: none"> ● Initial assistance to private sector to identify sub-markets, including low income and marginal sub-markets and estimate demand in each sub-market. ● Initial dissemination of information on housing finance services and support services available (dissemination to all income groups, including marginal households). 	<ul style="list-style-type: none"> ● Establishment of regular information dissemination services and permanent reference services for other public institutions, private industry, community groups and households.

TABLE 1

Preliminary Outline of Proposed Actions

SUBJECT AREA	RECOMMENDATIONS		
	Immediate Action (beginning of period)	Short/Medium Range (1980-85)	Medium/Long Range (after 1985)
(b) Technical assistance to low income and marginal households and community groups.		<ul style="list-style-type: none"> ● Analyze markets for financing services in private sector oriented to low income and marginal households. Determine need for international technical assistance and seed capital, if any. 	
(c) Support for the introduction of financing services oriented specifically to low income and marginal households.		<ul style="list-style-type: none"> ● Initiate support for the development of financing oriented to low income and marginal households in the private sector. Features may include: <ul style="list-style-type: none"> -- small short term loans. -- long term loans for low income and marginal households at commercial interest rates with progressively graduated monthly payments to reflect estimated increases in household incomes. -- land and improvements as security for long term and some short term loans. 	

TABLE 1

Preliminary Outline of Proposed Actions

SUBJECT AREA	RECOMMENDATIONS		
	Immediate Action (beginning of period)	Short/Medium Range (1980-85)	Medium/Long Range (after 1985)
<ul style="list-style-type: none"> ● COMPLEMENTARY ACTIONS TO SUPPORT THE FINANCING OF HOUSING (a) Administration of basic infrastructure. 		<ul style="list-style-type: none"> ● Establish lower infrastructure standards for low resource zones. Improve administration of CAASD and INAPA. Gradual increase of CASSD, INAPA, CDE tariffs up to more economic levels. 	<ul style="list-style-type: none"> ● Further improve coordination of infrastructure programs with urban and regional planning.
(b) Property tax.	<ul style="list-style-type: none"> ● Establish a tax on urban land. 	<ul style="list-style-type: none"> ● Establish valorization system and finance urban infrastructure through the system of valorization. Use of the system for priority urban areas of the country. 	<ul style="list-style-type: none"> ● Improve the impact of the tax through use of cadastral system. Broaden valorization to cover all urban areas.
(c) Municipal development.	<ul style="list-style-type: none"> ● Evaluate existing roles and capacities of LMD and the municipalities in financing and implementing basic essential urban services. 	<ul style="list-style-type: none"> ● Provide technical assistance to upgrade the capacity of LMD and the municipalities to finance, implement and assist basic essential urban services programming. 	<ul style="list-style-type: none"> ● Continuous implementation.

Chapter I

THE OVERALL CONTEXT FOR ACTION

A. COUNTRY SITUATION

1. Physical and Demographic Aspects

The Dominican Republic occupies the eastern two-thirds of the island of Hispanola; the western third forms the Republic of Haiti. The island is separated from Cuba on the west by the Windward Passage and from Puerto Rico on the east by the Mona Passage. To the north lies the Atlantic Ocean and to the south the Caribbean Sea.

The Dominican Republic is a land constrained country having about 48,400 square kilometers. Four mountain ranges dominate the western half of the country. The largest, the Cordillera Central, extends westward into Haiti and divides the island in half. The largest and most fertile agricultural region lies in the Cibao Valley in the north central part of the Republic. Numerous rivers form, mainly below the watershed of the Central range, and provide ready sources of water for irrigation and hydroelectric power. The remainder of the country is largely flat and fertile.

Given its varied topography, the country offers a diversity of climates. In the central mountain area, the mean temperature in January is 60°F while the capital city of Santo Domingo varies between 75°F in January to about 80°F in August. The principal cities in the Republic have a temperature variation of only 7°F during this 6-month period.

Agricultural lands represent about 22.4 percent of the total land area; cattle lands 21.6 percent; and forests and land reserves approximately 55.4 percent of the total area. The remainder consists of lakes and unusable lands.¹ The land soil conditions and the climate provide the country with many natural advantages for the development of external commerce as well as for the development of tourism. This latter potential is complemented with historic and cultural elements of undoubted attraction and potential. The subsoil resources, although not yet fully studied in any integrated and complete manner, also reflect a strong potential base for the sustenance of a more efficient and diversified productive structure than currently exists.

¹ OEA, Reconocimiento y Evaluacion de los Recursos Naturales de la Republica Dominicana, 1967.

Population growth in the Dominican Republic is already a major problem. The estimated population in 1979 was 5.4 million persons with a density of 112 persons per square kilometer -- higher than many other Latin American nations. Although current efforts are expected to result in a continuing decline in fertility and natural population growth, the population is expected to almost double between now and the end of the century. By the year 2075, a population of 15 million can be expected. This would represent an average density of over 600 persons per square kilometer of agricultural land and suggests the urgent need for agricultural development as well as the diversification of the economy.

According to USAID Mission sources in the Dominican Republic, the average annual national population growth rate is 2.5 percent. However, in urban areas, it averages between 5 and 6 percent (see Table I-3). This urban growth rate has been exacerbated by a strong urban-rural migration following the apparent urban-rural differentials in general living conditions, income and employment opportunities. Santo Domingo, the capital city, has been the main destination for migration and over the last 25 years has had an average annual population growth rate well in excess of 6 percent. The overall pattern of migration seems to suggest that the economic factors are the most important motive of migration. All of the eight provinces with cumulative net immigration are areas with relatively good non-agricultural employment opportunities, or represent agricultural areas with comparatively higher potential due to better ecological conditions or because of irrigation (see Table I-4).

The rapid population growth has resulted in a population that is young, with about 46 percent aged less than 15 years and approximately 40 percent of the female population of child-bearing age. Information based on birth and death registrations suggests crude rates of 35 and 5 per thousand, respectively, although these might be even higher. Mortality over recent years has been declining at an even faster rate than the birth rate (see Table I-1) which has kept the natural annual population growth rate at about 3 percent.

The economically active population in 1970 was approximately 1.2 million persons. The low participation rate (about 30 percent) is mainly the result of the young age structure of the population and the fact that only about 15 percent of the female population participated. Total participation in the labor force tends to be less in urban than in rural areas even while female participation is higher in the cities. The lower urban participation rates apparently result from generally higher family incomes and greater access to educational opportunities. Only about 10 percent of the work force is active in the industrial sector which accounts for about 30 percent of the GDP while almost 40 percent of the economically active population is engaged in agricultural activities which in turn accounts for only about 20 percent of GDP.

Increases in the urban labor force due to the rapid urban population growth have not as yet been matched by job creation and open unemployment is generally estimated at about 20 to 24 percent in the cities. Another estimated 25 percent of the labor force is underemployed and suffers from a correspondingly low income level. Part of the cause for this problem lies in the relatively low rate of job creation within the industrial sector which has been largely capital intensive and inward looking in nature. The incidence of unemployment is higher among the young (10-19 years) and in the female population (32 percent and 29 percent respectively).

Apparently, the employment situation has deteriorated since 1970. The Ministry of Labor estimates that only about 75,000 jobs were created in the formal sector between 1970 and 1978. This falls far below ILO² estimates of the need to create around 220,000 jobs to keep pace with the rapidly increasing labor force. While employment outside the formal sector may have created another 100,000 jobs, it still would have fallen far short of employment demand levels during the period.

Incomes are generally low for the employed (over 40 percent of the employed earn monthly incomes of less than RD\$100). The average income of the underemployed person working less than 40 hours per week is only about half the average income of the fully employed (over two-thirds of the underemployed earn monthly incomes of less than RD\$100 and over 40 percent less than RD\$50 per month).

Health needs of the Dominican population are almost overwhelming. In 1977, an estimated 50 percent of the population living below the poverty line suffered from malnutrition. Available information indicates the presence of endemic diseases caused by poor water, sanitation and nutrition. While official health statistics report rates of 15.2 per thousand for gastroenteritis and 1.7 per thousand for dysentery, the actual incidence is expected to be much higher.

According to a 1974 survey, infant mortality was almost 128 cases per thousand in rural areas as compared to about 74 per thousand in urban areas. The four leading causes of death in 1977 were senility and ill-defined causes; infectious and parasitic diseases; diseases of the circulatory system; and causes related to prenatal mortality. The improvements noted in the 1976-77 household survey suggest that the improvements in life expectancy, infant mortality and other health indicators

² Generacion de empleo productivo y crecimiento economico. El. Caso de la Republica Dominicana, Ginebra 1975. International Labor Organization (ILO).

have not been nearly as rapid as overall economic conditions or as in countries with a similar level of socioeconomic development.

Public health services, despite ample local literature on the need for preventive health care, are overwhelmingly oriented to curative services. Thus health services as well as the coverage of the Social Security System and its health services are overwhelmingly urban. Despite major studies and efforts to bring about decentralization and administrative reform, very few results have been forthcoming thus far. Those services that exist in rural areas suffer from the administrative shortcomings particularly from a lack of adequate supervision and staff training.

Despite the important expansion of public and private education in the Dominican Republic in recent years, the overall coverage of the system is still relatively low: 20 percent of the population aged 10 to 30 years has had no instruction and only 50 to 60 percent of that group has some primary education (see Table I-17). Retention rates in schools are extremely low. According to a 1974 survey, only 118 students out of each thousand students that enters primary school completes it within the regular period of six years. While some complete it with various repetitions, the total dropout rate per thousand totals 343. The situation is particularly critical in rural areas. In urban areas, regular graduation after six years of primary school attendance is a little over 21 percent, while in rural areas it is only about 7 percent. Even in Santo Domingo, over 20 percent of the labor force is either illiterate or has not completed primary school (see Table I-21). The overall adult literacy rate in the Dominican Republic is only about 68 percent which is comparatively low compared to other Latin American countries.

Non-formal education programs for adults and school dropouts are practically non-existent. Government programs reach no more than 50,000 persons and their results are not known. It has been estimated that only about 10 percent of the adults who could potentially benefit from non-formal education are being reached; seven out of ten urban and nine out of ten rural children who do not go beyond the first four years of primary school receive no informal education programs. Only about 10 percent of secondary school students benefit from technical and vocational education, although some progress in this area might be expected from the recently established National Institute for Technical and Professional Training (INFOTEP).

2. Major Aspects of the Economy

One of the major characteristics of the Dominican economy is the preponderance of primary activities. An extremely high percentage of the population depends on primary activities, particularly agriculture, which generates a considerable portion of GDP. Almost all export income is derived from primary

activities, which in turn is used to finance imports and the accumulation of capital goods (machines and equipment) from the exterior. The export of primary goods is mainly based on six products -- sugar, coffee, tobacco, ferro-nickel, bauxite and gold ore. These represented 92 percent of exports in 1978.

The resultant limited diversification of exports has made the Dominican Republic extremely dependent on world markets. The value of exports remains quite unstable and exterior commerce is almost always in a state of flux.

The coexistence of traditional manufacturing with modern dynamic import-substitution manufacturing is also characteristic of the Dominican economy. The traditional manufacturing sector is based on the processing of primary products such as sugar, tobacco, grains and foodstuffs and beverages in industries normally located outside of Santo Domingo. Import-substitution industries tend to be located within the capital and are largely based on the importation of primary materials. Significantly, these contribute little national aggregate value and are characterized by high ratios of capital to labor. Internal production of capital goods is quite limited, representing about 5 percent of total production. Limited processing and transformation takes place, and this is largely based on imported intermediate products.

Given the above, the economy has shown little ability to generate productive employment opportunities for the population. This has resulted in a large concentration of the economically active population in tertiary sector service activities as opposed to activities related directly with the production of capital goods. The 1970 census showed almost 24 percent of the population active in the service sector, with 36.5 percent in the primary sector while only about 10 percent was active in the secondary sector.³

This distortion has influenced investments which have concentrated on commercial and financial activities and on the provision of diverse services. In quantitative terms, about 50 percent of the GDP is concentrated in the service sector and probably half of the economically active population.

The high concentration of industry and commerce in Santo Domingo and Santiago, which also characterizes the economy, has given rise to a spatial imbalance thus inhibiting a rational process of economic integration. This in turn has resulted in the existence of economically deprived regions. Among the worst

³ Approximately 29 percent of the economically active population were engaged in "other" or unknown activities. Many are expected to be active in tertiary sector activities.

off in this regard are the Southwest Region and the Northeast Region. These two areas not only suffer from levels of economic development which are very inferior to that of the rest of the country, but are continually subject to the leakage of their internal human and financial resources which are captured by other more attractive regions.

The public sector of the Dominican economy is quite large and in terms of actual investment accounts for about one-third of the GDP. It is responsible for a significant part of exports and influences almost all of the types of internal economic activities.

With respect to private export activities, it is important to note that many of these are controlled by foreign companies (sugar, bauxite, ferro-nickel, gold ore, tourism, etc.) whose sizeable investments and advanced technology have permitted them to operate with greater efficiency than the national companies. National companies, in turn, have tended to orient their activities toward the internal markets such as agriculture, cattle-raising, food industries, finance and services which are not as productive nor dynamic as sectors of the national economy.

B. PRINCIPAL FACTORS AFFECTING HOUSING AND URBAN/REGIONAL DEVELOPMENT

1. The Government of the Dominican Republic (GODR)

a. Basic organization. The Dominican Republic is a representative democracy whose national powers are divided among independent executive, legislative and judicial branches (see Figure I.1).

The President (Chief of State and Head of Government) heads the executive branch of the government. He and the Vice President run for office on the same ticket and are elected by direct vote for 4-year terms. The President appoints his cabinet, promulgates laws and is Commander-in-Chief of the Armed Forces.

Legislative power is exercised by a bicameral Congress, a 27-member Senate and a 74-member Chamber of Deputies.

The highest court in the Dominican Republic is the Supreme Court of Justice which has sole jurisdiction over actions against the President and members of Congress and hears appeals from lower courts. Its nine members are elected by the Senate.

The Dominican Republic is divided into 26 provinces. The governor of each is appointed by the President.

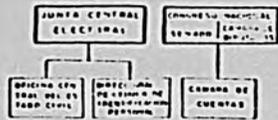
b. The GODR development plan. The Government of the Dominican Republic is the major domestic determinant of the

FIGURE I.1

ORGANIGRAMA DEL SECTOR PUBLICO

Legislative Power

PODER LEGISLATIVO



National Development



Executive Power



Judicial Power

PODER JUDICIAL



President's Technical Secretariat



Planning, National Statistics, National

National

President's Administrative Secretariat



National Budget

National Administration and Personnel

Public Health and Social Assistance

Attorney General

Finance

Foreign Relations

Interior & Police

Armed Forces

Agriculture

Labor

Sports & Recreation

Public Works & Comm. & Com.

Industry

Education Assistance



Municipal League

ORGANISMOS DESCENTRALIZADOS FUNCIONALMENTE

Port Authority

Central Bank

IAD

Social Security

CORDE

CAAS

Reserve Bank

Municipalities

INAPA

INVI

INAVI

BNV

CDE

nation's economic development influencing economic activities through the direct purchase of goods and services, its direct involvement in the productive processes (over 40 important industrial firms are controlled by CORDE, CEA accounts for two-thirds of the country's sugar production), farm and pricing policies, incentives legislation, financial intermediation, the provision of public services and of course through its monetary and fiscal policy.

The lack of a national plan to guide development in the Dominican Republic has been a serious constraint to the efficient allocation and utilization of both public and private resources thus far. The present administration is currently taking major steps to alleviate that situation and has identified policy objectives and guidelines to assist in reorienting the nation's economy while minimizing or eliminating the social, sectoral and regional inequalities and imbalances which currently exist and which have created severe problems for the country's development.

The disastrous impact of Hurrican David in August 1979 climaxed a trend of decelerating GDP growth begun in 1974. Reduced export earnings, slow growth of industrial production and construction activities, continued rising unemployment, declining domestic savings, and the low bouyancy of the country's fiscal revenues combined with the deterioration of its stock of fixed capital were characteristics of the economy during the late seventies. The government, through new policy measures already adopted, has defined objectives which are aimed at eliminating the structural factors which have blocked the sustained growth of the Dominican economy. The government intends to address both the short term stabilization problems and the longer term concerns for socioeconomic development through a strategy which:

- reorients production towards exports;
- induces additional savings and improves allocation of the same;
- encourages the use of labor and other domestic inputs;
- channels increasingly scarce public resources into more cost effective uses.

This strategy has been incorporated in a 3-Year Plan for Public Investment (Plan Trienal de Inversiones Publicas, 1980-82) prepared by the National Planning Office (ONAPLAN). In accordance with the overall economic guidelines for the country's development, ONAPLAN (together with policy makers, administrators and technicians of responsible public agencies) has made an initial attempt to order and prioritize public sector projects and incorporate them within the annual budget of each respective entity.

This initial attempt has been conceived with sufficient flexibility to permit it the revision and reformulation that are necessary over the Plan period. It represents a preliminary development framework to guide the execution of programs and projects by the major government institutions in 1980, as well as annual budget programming for 1980 and 1982. While the Plan Trienal does not detail the programming of all government investment over the period, it does seek to provide the basis for the continuous upgrading and development over subsequent years, adding in annually guidelines for the addition of government activities. Furthermore, during 1980, ONAPLAN expects to carry out urban/regional spatial allocation studies to provide guidelines for a more rational approach to public expenditures from a regional point of view.

The growth goals of the 3-year investment program are 6.7 percent for GDP, 6.1 percent for exports and the creation of 56,000 new jobs yearly. Imports are to be constrained to 21 percent of GDP. The primary focus of public expenditures is on agriculture, power, health, education and housing. The reorientation towards the social sectors aims at reducing the intensity and incidence of poverty through provision of incomes and services and at raising the productivity of those who have been chronically neglected. Investment in economic and social infrastructure which is consistent with these priorities has also been given high priority. The projected investment program by sector/institution for the period is shown in Table I-28.

The 1980 project investment program has been fully developed and represents commitments which result from previous investment programs as well as the present distribution of planning capacity among the agencies. Many of the allocations called for in the investment program will require improvements in planning in these areas as well as the identification of criteria to select out projects in sectors where a planning capacity already exists. Therefore, the projects which have been included in the first Plan Trienal can be classified into two categories: (1) real investment projects or those which respond to the investment concept of National Accounts; and (2) operating projects which support the first but do not represent additions of fixed capital (including programs for the formation and training of human resources, financing mechanisms, etc.). The anticipated breakdown of real investment and operating projects is shown in Table I-27.

While the investment program has not as yet been specified in terms of its territorial impact, the process of its preparation, prioritization and selection has involved rigorous evaluations based on overall regional development objectives. For this reason, the adoption of the Plan Trienal, which has a global-national character, has been complemented by an Operating Plan for 1980 in the Southwest region (the poorest region in the country) as well as a Rehabilitation Plan for the Southcentral zone (the area most affected by Hurricane David). These regional

plans form part of the planning exercise and are therefore focuses of the proposed investment program. Furthermore, the process now underway could provide a realistic mechanism for the efficient and effective comprehensive urban/regional development planning activities which have been given a high priority by the GODR.

2. Urban/Regional Planning: Functions and Strategies

By the mid-1980s, the urban population of the Dominican Republic will exceed the rural population. In the cities, the government is under pressure to meet the burgeoning demands for employment and for the delivery of basic essential services by the majority low income and marginal population. Growth is most noticeable and urban problems most serious in Santo Domingo (the capital) and Santiago.⁴ However, smaller cities are also increasing in size (see Vol. II, Tables II-29, II-30 and II-31). Given the present scarcity of public funds, the commitment of external finance to other priorities and the emphasis of budgetary allocations to rural areas, new ways must be developed to more effectively plan and distribute the existing limited resources.

The absence thus far of a national development plan which permits the efficient allocation of and utilization of resources and has been a contributing factor to the magnitude of poverty and the lack of improvements in the socioeconomic conditions of the poor. However, the current administration, although still engaged in defining and implementing a comprehensive economic policy, has clearly initiated an encouraging process for the planning and setting of government priorities to guide growth through the Plan Trienal. In this regard, one of the key objectives of that 3-year investment plan is to achieve greater socioeconomic integration of the national territory through the elimination of existing imbalances and the integration of the nation through urban/regional hierarchy in which the different regions and urban centers and their corresponding economic activities complement one another.

Government policy in regional development seeks to avoid the polarization of growth which has occurred previously by promoting the development of economically depressed areas through better utilization of both the human and natural resources of the country. These objectives have been reflected in a concrete manner in the Operating Plan for 1980 which for the Southwest region attempts to develop productive activities in lesser developed areas supported by the development of social and

⁴ The damage caused by Hurricane David and Tropical Storm Frederick have increased immigration dramatically in these cities and the development of new squatter settlements.

economic infrastructure which will lessen the disadvantages of location.

The activities of the government in the area most affected by Hurricane David and Tropical Storm Frederick also provide another indication of the government's attempt to remedy the social and economic problems which resulted while avoiding a worsening with respect to the potential region imbalances which might result from these natural disasters. The Rehabilitation Plan for the South-Central region (Peravia, San Cristobal and the National District)⁵ emphasizes the coordinated investment and action of the government at all levels in order to resolve the existing problems as rapidly as possible.

Other lesser developed regions are also receiving attention in the design of public sector economic policy. A regional development strategy plan⁶ for the Cibao region has just been finished which seeks to orient immediate actions necessary to upgrade the socioeconomic conditions of the population while improving basic essential infrastructure and providing for greater utilization of the natural resources of the region as well as protection of the environment. Specific programs and projects to reduce the imbalances between the Cibao region and the rest of the country are currently being developed. Other regional guideline plans have been developed for the northwest⁷ and for sub-area of the northcentral mountain and highlands (Plan Sierra). These efforts represent a new approach by the GODR to development planning and each is somewhat distinct in its makeup. However, it is clear that the GODR has begun a serious effort to decentralize the government apparatus for program planning and execution.

To implement this policy, the National Planning Board (ONAPLAN) has requested short term technical assistance to help rationalize regional planning initiatives that are already complete or now underway. The government has indicated its interest in: (1) identifying and strengthening secondary growth poles; and (2) seeking a greater role for municipal governments within regional development programs.

3. Land Tenure and Development

a. Land tenure. The present land tenure situation in the Dominican Republic reflects the very large land holdings which were assembled by the Trujillo family during the Trujillo

⁵ ONAPLAN, Secretariado Tecnico de la Presidencia, Plan Operativo de 1980 para la Region Suroeste, Enero 1980.

⁶ ONAPLAN, Plan Regional de Desarrollo del Cibao, Enero 1980.

⁷ Organizacion de los Estados Americanos, OEA, Plan de Accion para el Desarrollo Regional de la Linea Noroeste.

administration. At that time, most all of those holdings reverted or were transferred to the state making the government the largest land holder (approximately 28 percent of all arable lands). These lands are the patrimony of Bienes Nacionales or other specific government agencies. The largest of these holders are the Instituto de Agrario Dominicano (IAD) and the Consejo Estatal del Azucar (CEA).

Of the lands which are actually exploited (about 55 percent of the national area), about 74.3 percent are privately owned; 5.5 percent are rented and/or sublet; 17.9 percent of the total are occupied without titles; and 2.3 percent are taken in other forms. Private farmlands are distributed in a very unequal manner, with over 55 percent of private farmland owned by 1.6 percent of all landowners, while 13.1 percent of all private farmland is owned by 54.3 percent of all landowners. About 42 percent of all rural households (185,000 families) own farms ranging between one-half and five hectares; 52,000 families own farms of less than one-half hectare; and an estimated 110,000 families own no land at all.

The total land area presently under cultivation cannot be greatly increased. There are no new lands available for settlement by the rural population and as population pressures have increased, the rural poor have tended to undertake the cultivation of increasingly marginal lands as well as to invade government held properties. In some areas, the cultivation of inappropriate lands has already led to deforestation and erosion, etc.

In the marginal areas of the larger cities, the lack of land tenure is an increasing problem in that it limits access to formal credit and corresponding upgrading efforts. A very high percentage of the low income marginal households of Santo Domingo do not have any legal right to the land which they occupy. However, many of the lands occupied by low income squatter settlements in the peripheral areas of Santo Domingo and other cities throughout the Dominican Republic form part of the government holdings. The direction of Bienes Nacionales, the agency charged with the administration of government owned properties, has indicated its interest in transferring title to such properties to the actual low income residents if such activities were part of a comprehensive effort to upgrade the urban squatter settlements in an integrated manner and were coordinated with other programs to provide sites with minimal services and reception areas for the burgeoning marginal urban population.

The transfer process in the cases in which land is presently owned by other public agencies has been estimated to take 1.5 - 2 months although this time period, including possible legal recourses to third parties, could take considerably longer, especially for parcels held by the Consejo Estatal del Azucar (CEA) where a lack of clear land title as defined by the National

Land Tribunal seems to be prevalent since the Trujillo era. Despite potential problems, the relatively monolithic nature of the property holding pattern does tend to simplify land use change policy implementation.

The Constitution requires congressional approval for each government property transfer which exceeds RD\$20,000 in value which also can lengthen transfer times. More time would, of course, be required where expropriation is necessary for social good when a reluctance to negotiate by owners exists.

It is important to note that the defacto "land bank" which now exists in the Dominican Republic (which occurred because of the confiscation of the Trujillo properties) will become increasingly complicated as land is sold off to the private sector and as more publicly held land is allocated to housing or other public uses.

Chapter II

HOUSING AND BASIC SERVICES: CURRENT CONDITIONS AND FUTURE DEMAND

A. CHARACTERISTICS OF THE EXISTING HOUSING STOCK AND TARGET GROUPS

1. Indicative Characteristics of the Housing Stock

A survey which included characteristics of the housing stock was carried out by the Ministry of Health in 1974. At that time, there were 962,800 houses in the Dominican Republic, of which 428,900 were urban and 533,800 rural.¹ Households, by region and house type, are given in Table II-1. Regions established by the Ministry of Health are shown in Map II.1.

Approximately 30 percent of the units are rented with renters being most common in the urban areas. More than half of all renters paid less than \$10 per month in 1974 with rents being lowest in collective, rustic and provisional houses. These units tend to have fewer rooms and fewer services than other types.

Nationally, more than half of all homes have access to piped water. This includes 80 percent of the urban and 32 percent of the rural units. Those homes without access to piped water tend to be rustic or improvised. While there is some lack of waste disposal facilities among all major housing types, it is most pronounced among the rustic and provisional.

Electricity is found in 45 percent of all dwelling units, 79 percent of urban units and 18 percent of rural units. Even in urban areas, individual unit service deficits are most severe among rustic and provisional houses. Some standard single family units, however, also lack electricity -- 66 percent in rural areas and 11 percent in urban.

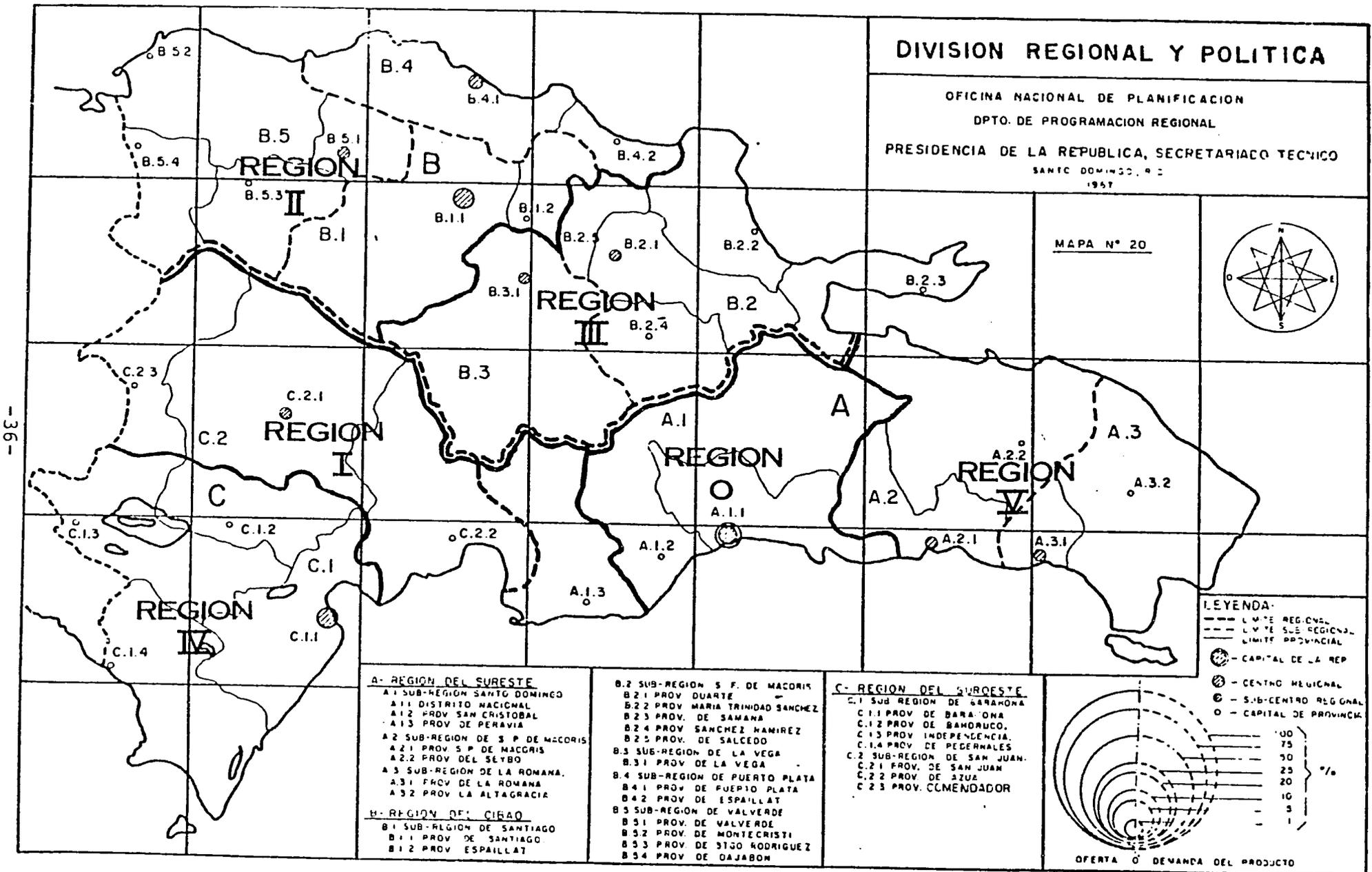
¹ Estudio de Poblacion y Salud, Encuesta 'Diagnos', June 1974. No attempt has been made to update the 1974 data to 1980. The purpose of this analysis is to provide an indicative, rather than quantitatively exact, picture of the various sub-groups of the target population based on housing types. Since housing production levels have been relatively low when compared to the demand over recent years, for present purposes it is assumed that the percentage of each housing market sub-group has remained roughly the same. This assumption is also the basis for future demand calculations in Section B.

**TABLE II-2
HOUSING CHARACTERISTICS PROFILE OF
POTENTIAL TARGET GROUPS IN THE
DOMINICAN REPUBLIC**

ASPECT	TYPE OF HOUSING	"STANDARD" SINGLE FAMILY			RUSTIC			PROVISIONAL			OCCUPIED BUILDINGS CONSTRUCTED FOR OTHER THAN HOUSING PURPOSES			BATEY			
		TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	
NUMBER OF HOUSEHOLDS (000's)		493.4	273.1	215.3	406.4	106.2	300.2	7.9	5.1	2.8	2.1	1.2	0.9	7.2	0.2	7.0	
PERCENTAGE OF TOTAL HOUSEHOLDS (%)		51.2	28.9	22.3	42.2	11.0	31.2	0.8	0.5	0.3	0.2	0.1	0.1	0.7	0.0	0.7	
ESTIMATED LIVING SPACE (SQUARE METERS)																	
ESTIMATED CONSTRUCTION COST (RDS)																	
NUMBER OF ROOMS HOUSEHOLDS LIVING IN 2 OR LESS ROOMS	HOUSEHOLDS	112.0	48.6	63.4	224.4	52.5	171.9	5.3	3.0	2.3	1.0	0.6	0.4	5.8	0.2	5.6	
	%	100	43.4	56.6	100	23.4	76.6	100	56.6	43.4	100	60.0	40.0	100	3.4	96.6	
	RURAL	22.7	17.5	29.4	55.2	49.4	57.3	67.1	58.8	92.1	47.6	50.0	44.4	80.6	100.0	80.0	
WATER SUPPLY (HOUSEHOLDS OBTAINING WATER FROM TANK, WELL, RIVER OR OTHER NON-PIPED SOURCE)	HOUSEHOLDS	140.4	23.9	116.5	269.1	38.5	230.6	2.4	0.5	1.9	0.6	0.1	0.5	4.1	0.0	4.1	
	%	100	17.0	83.0	100	14.3	85.7	100	20.8	79.2	100	16.7	83.3	100	0.0	100.0	
	RURAL	28.5	8.6	54.1	66.2	36.3	78.8	30.4	9.8	67.9	28.6	8.3	55.6	56.9	0.0	58.6	
SANITARY FACILITIES (HOUSEHOLDS NOT HAVING FORMAL TOILET FACILITIES AS PART OF DWELLING UNIT)	HOUSEHOLDS	208.7	70.0	138.7	326.9	70.8	256.1	3.6	1.8	1.8	0.9	0.2	0.7	5.6	0.0	5.6	
	%	100	33.5	66.5	100	21.6	78.4	100	50.0	50.0	100	22.2	77.8	100	0.0	100.0	
	RURAL	42.2	25.2	64.4	80.0	66.7	85.3	45.6	35.3	64.3	42.9	16.7	77.8	77.8	0.0	80.0	
ELECTRICITY HOUSEHOLDS NOT SERVED BY ELECTRICITY	HOUSEHOLDS	171.3	29.8	141.5	337.3	54.0	283.3	4.5	1.7	2.8	0.8	0.1	0.7	N.A.			
	%	100	17.4	82.6	100	16.0	84.0	100	37.8	62.2	100	12.5	87.5				
	RURAL	34.7	10.7	65.7	83.0	50.8	94.4	57.0	33.3	100.0	38.1	8.3	77.8				
DWELLING UNIT BUILDING MATERIALS	FLOORS	HOUSEHOLDS	34.5	3.6	30.9	215.2	28.6	186.6	4.1	2.0	2.1	0.2	0.0	0.2	0.4	0.0	0.4
		%	100	10.4	89.6	100	13.3	86.7	100	48.8	51.2	100	0.0	100.0	100	0.0	100.0
		RURAL	7.0	1.3	14.4	53.0	26.9	82.5	51.9	39.2	75.0	9.5	0.0	22.2	5.6	0.0	5.7
	EXTERIOR WALLS	HOUSEHOLDS	104.7	27.9	76.8	260.2	51.4	208.8	2.1	0.5	1.6	0.6	0.0	0.6	0.2	0.0	0.2
		%	100	26.6	73.4	100	19.8	80.2	100	23.8	76.2	100	0.0	100.0	100	0.0	100.0
		RURAL	21.2	10.0	35.7	64.0	48.4	59.6	26.6	9.3	57.1	28.6	0.0	66.7	2.8	0.0	2.9
	ROOF	HOUSEHOLDS	49.6	13.1	36.5	248.4	53.3	195.1	3.3	1.1	2.2	0.4	0.0	0.4	0.2	0.0	0.2
		%	100	26.4	73.6	100	21.5	78.5	100	33.3	66.7	100	0.0	100.0	100	0.0	100.0
		RURAL	10.1	4.7	17.0	61.1	50.2	65.0	41.8	21.6	78.6	19.0	0.0	44.4	2.3	0.0	2.3
TENURE OF DWELLING UNIT	DWELLING UNIT OWNER-OCCUPIED	HOUSEHOLDS	330.3	165.4	164.9	334.9	74.1	260.8	5.0	2.3	2.1	1.3	0.5	0.8	N.A. (BATEY BY DEFINITION BELONGS TO THE SUGAR MILLS WHICH CONSTRUCT THEM)		
		%	100	50.1	49.9	100	22.1	77.9	100	58.0	42.0	100	38.5	61.5			
		RURAL	66.9	59.5	75.6	82.4	59.3	86.9	63.3	56.9	75.0	61.9	41.7	38.9			
	DWELLING UNIT RENTED	HOUSEHOLDS	117.3	98.7	18.6	40.0	26.8	13.2	1.5	1.5	0.0	0.6	0.5	0.1	N.A. (BATEY BY DEFINITION BELONGS TO THE SUGAR MILLS WHICH CONSTRUCT THEM)		
		%	100	84.1	15.9	100	67.0	33.0	100	100	0.0	100.0	33.3	66.7			
		RURAL	23.8	35.5	7.4	9.8	25.2	4.4	19.0	29.4	0.0	28.6	41.7	11.1			

FOOTNOTE, TABLE II-2:

The number of households classified according to "Tenure of Dwelling Unit" does not equal the total "Number of Households (000's)" shown in the table's first row due to the fact that in addition to the possible responses of "owner-occupied" and "rental," the "Diagnos" Survey also included the tenure categories of: (1) "other types of tenure" including those dwelling units occupied gratis by a third party on permission of their owners; and (2) households who were ignorant of their tenure or would not respond to the question.



REGIONALIZATION

— HEALTH MINISTRY
 - - - - - ONAPLAN

In urban areas, 67 percent of rustic, 34 percent of provisional and 31 percent of standard single family homes do not have bathrooms. Bathrooms are present in 57 percent of the urban units and 20 percent of the rural. Where bathrooms do exist, they are usually used by a single household.

The housing stock can be divided into nine types. The seven most prevalent are described here.²

a. Standard single family houses. These are separate units including chalets, bungalows, houses with common walls and other similar types of units, including the row house common among moderate income families, providing living quarters for one family.

Standard single family houses are the most common type of dwelling unit in the Dominican Republic. There are, however, more rustic houses in rural areas. In 1974, there were 493,400 standard single family houses (51 percent of total). There were 278,100 urban units (65 percent of total urban units) and 215,300 rural units (40 percent of the total rural units).

b. Rustic houses. Rustic houses are the second most common type of house in the Dominican Republic. They are generally located in rural areas and constructed of natural materials locally available (such as palm leaves, cane, yagua, wood, tejamanil or other vegetable materials). Life expectancy is from several months to 10 years, although at times they last much longer. It is the typical, traditional house in the rural zones.

The Health Department survey counted 406,000 rustic units, of which 106,300 (26 percent) were urban and 300,100 (74 percent) were rural.

Rustic houses account for 42 percent of the housing stock: 25 percent of the urban housing stock and 56 percent of the rural housing stock.

c. Provisional housing. Provisional houses are generally located on the outskirts of cities. They are constructed of waste or discarded materials and are not permanent. Their layout is generally unplanned and each serves as a home for one or more families. This is also called marginal housing and constitutes what is commonly called "belts of misery" around the cities.

² The categories "hotels/pensions" and "institutions" are not included.

The Ministry of Health survey counted 7,900 provisional houses in 1974; 5,100 were urban (65 percent) and 2,800 were rural (35 percent). Provisional housing is only 1 percent of the national housing stock -- rural and urban -- but its characteristics indicate that it houses the poorest of the poor and is rapidly growing through the production of the informal sector.

d. Apartments. Apartments are defined as complete, independent homes composed of one or more rooms, a kitchen or kitchenette and bathroom located in a building of two or more floors and that share certain areas and services such as halls, incinerators, elevators and stairs. They are the best serviced units, housing middle and upper income households, and represent only two-tenths of one percent of the housing stock.

e. Occupied buildings constructed for purposes other than housing. This category includes housing in permanent and non-permanent buildings that were not constructed for or adapted to serve as living units but were being used as such at the time of the survey in 1974, including stables, granaries, factories, garages, warehouses and similar structures.

It accounts for two-tenths of one percent of the housing units in the country, totaling 2,100 living solutions (1,200 are urban and 900 are rural). This group probably includes some of the poorest of the poor and people who prefer to live in such quarters. In any case, because the group is so small, programming suggestions are not made for it. Residents of such buildings could, however, participate in the new housing programs recommended.

f. Bateys. These units are generally found on sugar plantations and are made of wood with zinc or asbestos roofs and floors of "caliche" (piedra caliza). They usually form a barracks-like structure with two fronts facing in opposite directions and a wall between. Each structure contains about 20 units made up of a bedroom and a living room. Many have electricity and may share two or three common toilets. Nearby streams or rivers also serve as bathrooms. The kitchen consists of an oven located in the yard and shared by two or three households.

Since bateys belong to the owners of the sugar plantations (some public, some private) and since they are only seven-tenths

³ An estimated 10,000 units per year are being produced by the informal sector in Santo Domingo -- the large majority of them provisional. The PADCO-Borrell study in 1978 suggests that current numbers of provisional units are much greater than the 1978 national figure.

of one percent of the housing stock, specific program recommendations are not made for them.

g. Other collective housing. This is a residual category consisting of collective housing arrangements other than hotels, pensions and other guest houses, institutions such as jails, school dormitories, hospitals, clinics, religious congregations and barracks. (Pensions and guest houses must have four or more rooms to receive paying guests.) Of 15,200 units, 15,100 are urban.

Judging by physical housing conditions, some residents of these units are in the target group. Residents of these units could participate in the new housing programs.

2. Potential Target Groups

It is possible to identify broad basic needs which low income groups have in common regarding the deficit of essential infrastructure services and housing supply. However, project identification and development, in order to be effective, must be based on specific needs, capacities and priorities of each of the existing target groups or sub-housing markets. The purpose of this section is to describe these sub-housing markets or target groups which together make up the marginal population in the Dominican Republic. Indicators have been developed in order to provide an idea of the relative magnitude of the potential priority target population. These are based on limited access to services and housing conditions which are presumed to indicate marginality. The indicators are:

- Dwelling units of less than three rooms.
- Lack of "formal" toilet facilities as part of the dwelling unit.
- Obtaining water from a tank, well, river or other non-piped source.
- Lack of Electricity.
- Houses built of non-formal materials.
- Exterior walls of non-formal materials.
- Roofs of non-formal materials.
- Earth floors.

The target group has been broken down based on identifiable housing sub-groups and urban or rural location. Santo Domingo is included in the national analysis and discussed in more detail in Section C.

The size of the target population has been estimated within a range which is based on the values of the various indicators in Table II-2, "Profile of the Potential Target Groups." There are 351,045-452,724 marginal households, representing 27-47 percent of the total households.

Preliminary program recommendations are made based on subgroup characteristics.

a. The urban target group. The urban target group represents about 25 percent of the total target population and 18 percent of the total urban population. It can be divided by house type as follows:

Composition of the Urban Target Group
1974

House Type	Number of Households	% of House Type Included in Target Group
Standard single family	13,900-41,700	5-15
Rustic	42,500-53,100	40-50
Provisional	1,300- 1,800	25-35
Unconventional uses	<u>100- 200</u>	5-15
TOTAL	57,800-96,800	

(i) Urban standard single family homes -- Standard single family homes in urban areas represent 29 percent of the country's houses. Five to 15 percent of these houses can be characterized as marginal based on the range of selected indicators. It is estimated that this group is within the poorest 20 percent of the urban population and earns less than \$100 per month according to 1976-77 Central Bank figures.⁴ Urban single family homes account for 36 percent of the urban target group and 9 percent of the total target group. Of all urban standard single family homes:

- 18 percent have less than three rooms (48,600); average household size is 4.8.
- 25 percent lack formal toilet facilities as part of the dwelling unit (70,000).
- 9 percent do not have piped water (23,900).
- 11 percent do not have electricity (29,800).

⁴ See Table II-1, "Distribution of Monthly Household Income."

- 10 percent have exterior walls of palm, tejamanil or another non-formal material (27,900).
- 5 percent have roofs of informal materials such as cane or yagya (13,100).
- 1 percent have earth floors (3,600)

Sixty percent of the households surveyed said that their unit was owner occupied and 35 percent said that they rented.⁵ Rent was less than RD\$10 per month for 28 percent of the rental units and between RD\$10 and RD\$20 for another 27 percent.

Priority actions recommended for this target group include loans for sanitary facilities, home improvement and expansion and secure tenure for squatters and renters.

(ii) Urban rustic houses -- Urban rustic homes represent 11 percent of the total national housing stock, 11 percent of the national target group and 62 percent of the urban target group. The limited services and type of construction materials indicate that 40-50 percent of this group is marginal. Estimated to be below the 30th income percentile, incomes are below RD\$135.

The percentage of urban rustic homes included in the target group is based on the following characteristics:

- 49 percent have less than three rooms (52,500); average number of persons per household is 4.3.
- 67 percent lack formal toilet facilities as part of the dwelling unit (70,800).
- 36 percent do not have piped water (39,500).
- 51 percent lack electricity (54,000).
- 48 percent have exterior walls of palm, tejamanil or other non-formal materials (51,400).
- 50 percent (53,300) have roofs of non-formal materials.
- 27 percent (28,600) have earth floors.

Priority actions recommended for this group include the provision of water and sanitation facilities, home improvement loans and secure land tenure.

⁵ The owner occupied group includes squatters.

(iii) Urban provisional units -- Urban provisional units make up only 1 percent of the national housing stock. The marginal population includes 25-35 percent of these units accounting for two-tenths of one percent of the urban target population. These households are estimated to be in the lowest 20 percent of the income distribution earning less than RD\$100 per month.

This calculation is based on the following service access and housing conditions:

- 59 percent have less than three rooms (3,000).
- 35 percent do not have formal toilet facilities as part of the housing unit (1,800).
- 10 percent do not use piped water (500).
- 33 percent do not have electricity (1,700).
- 10 percent have exterior walls of palm, tejamanil or other non-formal materials (500).
- 22 percent have roofs of cane, yagua or other non-formal materials (1,100).
- 39 percent have earth floors (2,000).

Twenty-nine percent of urban provisional units are rented. It is likely that squatters live in some of the ones that are not rented. In 1974, rent paid on 46 percent of the rented units was less than RD\$10.

Priority actions include the provision of secure tenure and basic urban infrastructure and services.

b. The rural target group. Seventy-five percent of the total target population live in rural areas. Fifty-nine percent of the rural population is considered marginal. The following table shows the distribution of the marginal rural population by housing type.

Composition of the Rural Target Group
1974

House Type	Number of Households	% of House Type Included in Target Group
Standard single family	75,400- 96,900	40-50
Rustic	210,100-240,200	70-80
Provisional	2,000- 2,200	70-80
Unconventional uses	400- 500	50-60
Bateys	<u>2,100- 2,800</u>	30-40
TOTAL	290,000-342,600	

(i) Rural standard single family homes -- Twenty-two percent of the national housing stock is rural standard single family homes. Forty to 50 percent of these units house part of the target population. Twenty-seven percent of the rural target population and 20 percent of the total target population is in this group. Forty to 50 percent of rural standard single family homes are marginal. They fall below the 40th percentile of the rural income distribution indicating incomes of below RD\$100.

Of all rural standard single family houses:

- 29 percent have two or less rooms (63,400); the average household size is 4.7.
- 64 percent have no formal toilet facilities as part of the dwelling unit (137,800).
- 54 percent lack piped water (116,500).
- 66 percent do not have electricity (141,500).
- 36 percent have exterior walls of non-formal materials (76,800).
- 17 percent have roofs of cane, yagua or another non-formal material (36,500).
- 14 percent have earth floors (30,900).

Seventy-seven percent of households said that they owned the unit they occupied. Another 16 percent said that they were renters. In 1974, more than one-third of the renters paid less than RD\$10 per month.

Priority actions recommended, based on the data available for this group, include the provision of electricity, sanitary facilities, piped water and home improvement loans.

(ii) Rural rustic homes -- Rural rustic homes account for 31 percent of the national housing stock: 71 percent of the rural target population and 54 percent of the total target population. Based on the selected indicators, 70-80 percent of all rural rustic houses can be considered marginal. This group is below the 50th income percentile which is RD\$125 in rural areas.

Of all rural rustic homes:

- 57 percent have less than three rooms (171,900); average number of persons per household is 4.6.
- 85 percent do not have formal toilet facilities in the dwelling unit (265,100).
- 77 percent use non-piped sources of water (230,600).
- 94 percent of the dwelling units are not served by electricity (283,300).
- 70 percent have exterior walls of non-formal materials (208,800).
- 65 percent have roofs of non-formal materials (195,130).
- 85 percent have earth floors (186,600).
- Less than 5 percent are rented.

Priority actions recommended for this group would improve access to services such as piped water, waste disposal and electricity as well as providing for home expansion and improvement.

(iii) Rural provisional houses -- Rural provisional houses are relatively few in number, making up less than 1 percent of the housing stock and the target population. Seventy to 80 percent of them are marginal based on the selected indicators. Incomes are below the 50th percentile of the rural income distribution, or below RD\$125.

The percentage of urban rustic homes included in the target group is based on the following characteristics:

- 82 percent have less than three rooms (22,916) and none have more than three rooms; average family size is 4.8.

- At least 64 percent do not have formal toilet facilities as part of the dwelling unit.⁶
- 69 percent rely on un piped sources of water.
- None of the units has electricity.
- 57 percent have exterior walls of non-permanent materials (1,600).
- 79 percent have roofs of non-permanent materials (2,200).
- 75 percent have dirt floors (2,100).

Twenty-one percent of the units are rented with 88 percent renting for less than RD\$10 per month in 1974.

Priority actions recommended are the provision of basic services and upgrading.

c. Target groups in Santo Domingo

The population of Santo Domingo was 1,044,979 in 1977, accounting for 44 percent of the total urban population. (For relative size and recent growth rates of all urban centers, see Statistical Annex Tables I-29, 30, 31.) Nearly three-fourths of the families (137,000) are marginal -- suffering from basic social, economic and physical deficiencies. Detailed data on this low income population is available from an urban sector study conducted by PADCO, Inc. and Borrell Associates in 1978.⁷ Based on the information in that study, the target group can be divided into five sub-groups based on housing characteristics. These sub-groups, their size and their relation to the total marginal population and the population of the city are given in Table II-3. Income distribution among the various sub-groups is shown in Table II-4.

(i) Cuarterias and traspacios -- Thirty-four percent of the marginal families in Santo Domingo live in cuarterias and traspacios. These units are the largest category of low income housing stock. Cuarterias are rows of attached units usually of one or two rooms. Traspacios are small dwelling units

⁶ For 34 percent of the units, there is no data. The 2 percent that do have bathrooms do not have running water.

⁷ "Estudio Sobre el Desarrollo Urbano de Santo Domingo," PADCO, Inc. and Borrell Associates, Interamerican Development Bank, Santo Domingo, 1978.

constructed in the back of other houses. Cuarterias and traspatios are generally located near the center of the city and have one or two rooms per family. The physical condition of the houses vary; block walls and zinc roofs are common. Cuarterias generally contain 20 or more household units. They occupy 9 percent of the urban residential area and have average densities of 464 persons per hectare. The following shows the poor service conditions in the cuarterias and traspatios.

- Physical infrastructure

- Although piped water networks exist in the areas of the cuarterias and traspatios, most obtain water from public faucets or buy it from neighbors or from water vendors.

- Systems of sanitary waste disposal are lacking in 66 percent of the units.

- Electricity is available although there are occasional blackouts. Many do not pay for this service.

- Fifty percent do not have trash collection.

- Social facilities

- Eighty-five percent must leave their barrios to get health services.

- Public primary schools are nearby, but their capacity is low and more are being built.

Recommended actions. Most of those living in cuarterias are renters and do not have any incentive to improve a home that does not belong to them. Any improvements made to the units may result in rent increases beyond their ability to pay. Additional study is required to determine the feasibility of providing incentives to owners to upgrade their properties as well as the types of new economic rental units which might be developed by the private sector to meet the effective demand for such space. The provision of markets, community centers and green areas is suggested.

(ii) Settlements with access -- Marginal settlements with and without access are generally large areas of spontaneously developed illegally or legally occupied land. The layout of blocks as well as plots within blocks is irregular. These units are located in the urban periphery between the city and settlements with poor access (see Section iii). Houses with roofs of zinc, wood walls and cement floors are most common although some walls are of concrete block. The average house size is 40 m² and the average value approximately RD\$1,600. They occupy 8 percent of the urban residential area with an average density of 349 people per hectare. Marginal settlements with

various degrees of access are growing rapidly and are likely to absorb most of the growth in the marginal population.

- Physical infrastructure

- Water is bought in the neighborhood or obtained from a public faucet.

- About 50 percent have informal electricity connections for which they pay a neighbor who has a formal connection.

- Trash is generally thrown in the streets.

- Very few have sanitary waste disposal.

- Social facilities

- Poor health is in part due to poor environmental sanitation and lack of trash collection. Thirty to 40 percent of the families interviewed had one or more illnesses at the time of the survey. Public hospitals and health centers are located some distance away.

- No public schools are located near the settlements in the marginal zones to the east and west. More than half of the residents pay to attend private institutions. Between 5 and 25 percent of the heads of families in the various areas surveyed were illiterate.

- Recreational facilities are scarce or non-existent.

Seventy percent of residents surveyed in the western section of Santo Domingo reported owning their houses as did 53 percent in the north. Eighteen percent of the "owners" in the west are illegal occupants of their lots. Illegal occupation is even more prevalent in the east.

Recommended actions. Primary schools and neighborhood health centers are needed in addition to potable water, improvement of streets, assistance in acquiring secure land tenure, improved trash collection and community facilities.

(iii) Settlements without access -- In form and limited availability of services, settlements without access are similar to marginal settlements with access (ii); however, access by vehicle is difficult if not impossible. They are located on the outskirts of the city between the river and the marginal settlements with access. The house type is provisional; walls are made of wood or less durable materials. The growth of these settlements is rapid. At present, they occupy 6 percent of the urban residential area and the average population density is 504 persons per hectare. The average house size is less than 40m² costing about RD\$1,400.

- Physical infrastructure

- Water is expensive because it must be transported from distant sources over poor roads.

- There is no trash collection. It is disposed of in the streets and in vacant lots.

- Houses that have electricity connections share with those that do not. Connections are limited because of the poor access.

- Sanitary systems of waste disposal are almost completely lacking.

- Social facilities

- There are almost no health centers to serve this population. Twenty-five to 30 percent of families had at least one illness at the time of the survey.

- Public schools are scarce in these areas and 49 percent of the families had at least one illiterate member.

- There are not many community or sports clubs and opportunities for recreation are limited.

Most of the houses are owned by the occupants although illegal occupation ranges from 7 to 85 percent among the various neighborhoods.

Recommended actions. Improvements in road conditions to increase access and make trash collection possible are recommended for this group. Health centers, facilities for community activities and potable water are also needed. Programs to provide secure land tenure and sites and services to absorb new growth are important for squatters.

(iv) Isolated settlements -- Isolated marginal settlements or "pockets of poverty" are relatively small areas in an urban area that are used for another purpose such as industry, commerce and other types of housing. The land, public or private, is generally illegally occupied and is frequently located on lands with steep slopes considered previously unuseable. These settlements can be found in all parts of the city and account for 12 percent of the marginal population. Provisional type houses are constructed from waste materials.

Isolated settlements occupy 5 percent of urban residential land. Density is 388 persons per hectare.

Other isolated settlements consist of just one building occupied by a group of marginal families surrounded by higher income groups or other land uses. There are 160 such families. In some cases, these settlements have extended onto adjacent vacant land where small houses, usually of wood, have been constructed. Most of these areas are in the old part of the city. They take advantage of the services offered in the rest of the neighborhood.

- Physical infrastructure

- Surrounded by serviced areas, these settlements have easy access to water.

- While there are sanitary waste disposal networks, it is almost impossible for the marginal units to get connections.

- There are neighborhood dumps for trash.

- Electrical connections are informal, dangerous and subject to blackouts.

- Social facilities

- There are no social facilities and people must leave their neighborhoods for health and education services.

Recommended actions. Sites and services programs are recommended for these groups. Most are squatting in areas not intended for housing.

(v) Settlements with minimum services, improved settlements and areas in transition -- The 19,677 families in these groups make up 14 percent of the marginal families in Santo Domingo. The houses are larger, better located and better constructed than the previously mentioned groups. Tenure has been formalized and services improved. The most common building materials are wood, zinc roofing and floors of mosaic tiles on blocks. Settlements with minimum services are government planned sites and services schemes. Serviced plots are provided and families build their own houses in accordance with their financial capabilities. Average house size is 60m² and average cost is about RD\$4,110. These 13,220 families account for 10 percent of the marginal population.

Improved settlements are of the types discussed above with varying degrees of access. They have obtained services from the government. These areas contain 5,920 families. The average house size is 70m² and the cost averages RD\$4,790.

The third sub-group is settlements that are in the process of socioeconomic transformation. These neighborhoods are a mix of low income families who originally occupied the areas as

isolated marginal settlements and middle and upper middle class families who over time have begun to displace the poor. This phenomena is due to the location of the land near principal commercial areas and roads. Only a small percentage of the target population -- 540 households -- lives in these areas. Their homes average 64m² and cost about RD\$2,500.

- Physical infrastructure

- Eighty percent of those living in settlements with minimum infrastructure and in improved settlements have normal connections to the water, sewage and electricity systems.

- Sixty-five percent in transitional areas have piped water and 20 percent have electricity and sewerage service.

- Social facilities

- There are few health centers to serve this population.

- There are public and private primary and secondary schools but no facilities for vocational training.

Recommended actions. In these groups, emphasis should be placed on optimizing the use of available services and increasing access to social and physical services where necessary.

B. HOUSING DEMAND PROJECTIONS

There is clear agreement that housing in the Dominican Republic is vastly inadequate and that there is an overwhelming need for more and better housing. The Diagnos survey mentioned earlier in this chapter provides the most thorough and recent picture of the existing housing stock and has been utilized for the purpose of making preliminary evaluation of the magnitude of the existing housing deficiencies which form a part of demand, together with the anticipated needs due to new household formation.

Given the paucity of existing data, this evaluation should be regarded as purely indicative. A more thorough study including such factors as replacement due to obsolescence and multiple-family household (overcrowding) should eventually be carried out in order to project housing needs more accurately.

The analysis of the conditions of the existing housing stock and potential target groups or housing sub-markets carried out in the previous section is based on a broader concept of shelter which includes not only the housing characteristics themselves, but also the available basic services such as water, sanitation and electricity. An effective housing policy is concerned with

maximizing the consumption of these shelter services for the appropriate target groups -- the sub-markets for housing.

The magnitude of sub-standard housing in rural areas has previously been estimated as high as 85 percent and urban deficits have ranged between 50 and 70 percent. While such estimates may not be out of order given the actual situation, they serve no useful purpose. They do not provide adequate guidance for programs and projects designed to upgrade the existing housing stock. Therefore, the shelter and basic services indicators established in the previous section have been utilized to make a much more conservative estimation of housing deficit as of 1974. Accordingly, it is suggested that in 1974, 54-64 percent of the rural population (288,285-341,640 households) lived in housing with extreme deficits as did 13-23 percent of the urban population (62,787-111,084 households). These groups should be given priority consideration in the design of solutions to upgrade existing housing. No attempt has been made to bring those gross deficit figures up to 1980. As mentioned earlier, they are provided only for the purpose of giving an extremely conservative idea of the order of magnitude of deficit housing in the country.

The need to build housing to satisfy the demand brought about by new family formation is clearly one of the most urgent. Most existing families already have a place to live although inadequate. However, should new families not be provided with housing, they will only aggravate the overcrowding and increase the marginal squatter settlements which have become characteristic of both urban and rural areas. Table II-5 shows the estimated population growth -- urban and rural -- projected through 1990. It is based on an overall population growth of 2.9 percent; urban at 5.3 annually and rural at .8 percent annually. In order to satisfy this need, an annual average of some 32,900 units of new housing or shelter solutions must be constructed -- 29,300 urban units and 3,600 rural units.⁸

The approximate breakdown of this demand for new units in terms of low, middle and upper income groups for the periods 1980-85 and 1986 and 1990 is shown below.

⁸ No percentage has been given in these figures to provide for housing taken out of stock for reasons such as obsolescence, conversion, change of land use, etc. Nor have the housing units destroyed by Hurricane David in 1979 been included. In the provinces of Peravia and San Cristobal, some 45,000 houses were affected in one way or another. Many have been replaced or rebuilt and reconstruction efforts are still in operation.

Estimated Housing Demand by Income Group

Income Group Monthly 1977	% of Households 1977*	Estimated Demand 1980-85	Estimated Demand 1985-90	Estimated Demand 1980-90
0-100	31.5	51,845	65,580	117,425
101-300	49.1	80,815	102,230	183,045
301-600	13.0	21,395	27,070	48,465
600+	6.4	10,535	13,320	23,855
TOTAL**		164,590	208,200	372,790

* Source: Central Bank Family Income and Expenditure Survey.

**Source: Table II-5.

Finally, Table II-6 shows the magnitude of the housing problem confronting many groups in Santo Domingo given their projected population growth between 1977 and 1990.

C. OVERVIEW OF THE DOMINICAN CONSTRUCTION SECTOR

The construction industry in the Dominican Republic is involved in all facets of the construction process. Activities range from the construction of major residential projects through civil works such as dams, ports and highways to specialized engineering tasks such as drilling and dredging. Many government, semi-autonomous, private and informal entities play an important role in this process. Table II-7 presents the various sector's investment in construction during the period 1974-78.

1. Government and Semi-Autonomous Sectoral Regulation of the Construction Industry

While almost all Dominican government and semi-autonomous agencies make at least small investments to the construction sector,⁹ only a few are concerned with construction sector policy and development. The Ministry of Public Works registers and pre-qualifies potential contractors for GODR civil works projects and is presently in the process (in conjunction with the Urban Planning Office of the Municipality of Santo Domingo) of revising and formulating new norms and standards for construction and site

⁹ See Section 12 on "Construction in the 1978 Revista Dominicana de Economía."

development. The Ministry of Labor determines the minimum daily wage to be paid the trades which comprise the construction industry and also sets policy concerning adequate working conditions of employment. The Ministry of Finance and the Central Bank regulate local banking practices and the setting of interest rates. They also determine policies with respect to borrowing from international lenders. Finally, the Ministry of Commerce and Industry regulates import policy and the domestic building materials industry. It also oversees the price control mechanisms associated with the domestic production of building materials.

2. Influence of Construction Sector on Dominican Economy

Historically, the construction sector has made a significant contribution to the Dominican economy. According to the Central Bank publication, "National Accounts," construction has accounted on the average for 6.4 percent of GDP during the period 1970-78. For the public sector alone, residential construction accounted for 17.2 percent of total construction during 1972-77.¹⁰

It was also estimated by the National Statistics Office that for the period August 1977 to January 1978 construction employed approximately 7.5 percent of all total formal sector employment.

3. Residential Construction Methods

Presently in the Dominican Republic, an outdated 1956 Construction and Subdivision Law (Law No. 675, Sobre Urbanizacion, Ornato Publico y Construcciones) still legally regulates the construction industry. Recently, however, a department of Public Works (Norms, Regulations and Systems) has begun to review all norms and standards which apply to the construction industry. It is hoped that this process will lead to a new set of realistic development norms and standards which will adequately serve all segments of the Dominican population. At the same time, the Urban Planning Department of the Municipality of Santo Domingo is in the process of rationalizing its submission process for approval of residential subdivisions.

High construction design standards predominate in the Dominican Republic formal residential construction sector. As a result, construction costs are high. This overdesign is based mainly on the fear of hurricanes which have ravaged the island from time to time. The damage caused by the recent Hurricane David will do little to change this attitude. Up to the present,

¹⁰ Contained in a monthly publication of the National Budget Office.

there has been little discussion of performance standards for different building materials. Material performance standards would permit cost savings to be achieved without sacrificing structural stability.

Formal residential construction relies almost entirely on either concrete block or reinforced concrete wall construction with a reinforced concrete slab roof. The scarcity of domestic timber caused by a recent government ban on the cutting of trees has resulted in the importation of all lumber used in the construction industry. The resulting cost increases have severely restricted the use of wood frame wall construction and wooden roof trusses.

In the past, informal residential construction has usually taken two forms: (1) wood frame construction sided with either wooden boards or native materials (palm, tejamanil, etc.) and roofed with either used zinc panels or native materials (cane, yagua, etc.); or (2) constructed completely of waste or native materials. Over the past several years, however, the costliness of wood and the depletion of native materials around most urban areas has caused a shift in informal construction to concrete block and zinc roofing material. This fact is also noted in the number of wood to concrete block home improvements observed in Santo Domingo's peripheral low income areas.

Due to their high initial cost and present GODR emphasis on labor-intensive construction methods, prefabrication methods and systems have not made many inroads into the Dominican construction sector.

4. Building Cost Components

In the Dominican Republic, the distribution of building costs between labor, materials and profit for residential construction varies greatly for the public and private sectors. Historically, the public sector breaks down into approximately 55-65 percent materials, 30-40 percent labor and about 5 percent profit. On the other hand, the breakdown for the private sector is about 55 percent materials, 25 percent labor and about 20 percent profit. Table II-8 gives a more detailed description of these breakdowns for residential construction as well as for the entire sector.

Reinforced concrete and concrete block walls tend to be the costliest building components of formal sector residential development. These two components represent from 25-30 percent of total building costs. The electrical and sanitary installations add another 20-25 percent to construction costs. The terminations (windows, doors, floors, plastering and painting) contribute approximately 25 percent.

5. Building Materials

A large majority of the building materials used locally in residential construction -- cement, reinforcing bars, concrete block, zinc roofing, floor tiles, windows and doors, etc. -- are produced domestically using a HG labor component. The foreign exchange component of residential building materials varies from 5-7.5 percent (see Table II-8).

The Dominican Society of Engineers and Architects (CODIA) prepares a monthly price index for the construction sector based on average prices for building materials surveyed at several Santo Domingo hardware stores. The following table shows that after a relatively stable period in the cost of construction from 1975-78, prices rose sharply in 1979 and are apparently continuing to rise in 1980. During the period 1975-78, the price of building materials rose at a relatively low rate of 3.3 percent. However, since 1978, prices have increased at an annual rate of 15 percent.

Average Annual Price Index for Construction Industry

Year	Jan-March 1974 = 100 Index
1974	104.81
1975	110.83
1976	111.90
1977	111.74
1978	112.07
1979	122.91
1980 (Jan)	130.44

Source: CODIA with PADCO modification to compensate for base year shifts.

6. Employment in the Construction Sector

There is little recent information available on employment in the Dominican construction sector. The 1970 Census registered 27,800 persons from the economically active population as working in the construction sector. An ILO study¹¹ estimates 1971 construction sector employment at 38,000. The National Statistics Office August 1977-January 1978 survey of employment in Santo Domingo estimates 20,900 persons as employed in the construction sector. This figure represents 7.6 percent of the

¹¹ "Generacion de Empleo, Producto y Crecimiento Economico," International Labor Organization, Geneva, 1975.

capital's total employment. Santana and Pellerano assume in their excellent study on the Dominican employment situation¹² that approximately 40 percent of the Dominican Republic's total employment population resides in Santo Domingo. Having made this assumption, it is an easy matter to estimate that the Republic's total employment in the construction industry approaches 52,300 persons. This figure is about double the 1970 Census total and represents an annual growth rate of roughly 9.4 percent from 1970.

There exist in the Dominican Republic two types of wage scales -- a daily wage rate and a piecework rate. The daily rate predominates, however, with the piecework rate being used only for certain trades such as painters and electricians, etc. The present minimum wage rates by type of construction trade are the following:

Trade	Daily Wage (RD\$)	Avg. Hourly Wage (RD\$)
Day laborer	4.40- 6.00	0.65
Apprentice carpenter or mason	6.00- 8.00	0.87
Carpenter or mason	8.80-10.70	1.22
Equipment operator	8.00-10.70	1.17
Master carpenter or mason and project foreman	10.20-20.00	2.26

Source: Secretaria de Estado de Trabajo, Comité Nacional Salarios.

This salary scale is in effect since 1975 when the previously existing 1962 wage law was adjusted by the National Salary Committee of the Ministry of Labor. It is worth noting that the minimum wages of the construction industry remained fixed for a period of 14 years. Even with the minimum wage increase of 1975, the real salaries of construction workers have not kept pace with the large increments in the cost of living which preceded and postdated the increase.

7. Organization of the Construction Industry

The principal characteristic of the organization of the Dominican construction industry is the concentration and centralization of capital in a few large firms. A small number

¹² "El Empleo en el Sector Público y en la Construcción," paper presented by Isidoro Santana and Fernando Pellerano, Santo Domingo, June 1979.

of domestic and foreign construction firms practically dominate this production sector. The 1975 study published by the ILO notes that "the local construction industry comprises about 10 large firms (large being defined as capable of undertaking civil works construction for an amount of RD\$3 million) and a large number of small firms." The study goes on to estimate that approximately 95 percent (in value) of all public works contracts have been realized by six large firms and that five firms have undertaken 80 percent of all non-residential construction.

Until very recently, these very large firms have grown and expanded through a system of direct awarding of contracts (in comparison to a system based on competitive bids) -- a fact which has facilitated the accumulation of large amounts of capital in a few firms. An article in CODIA illustrates this situation by citing the following National Budget Office statistics which refer to contracts awarded by GODR:¹³ (1) 23 contracts (3.4 percent) awarded by competitive bid, RD\$14.8 million (8.8 percent); and (2) 658 contracts (96.6 percent) awarded by direct hire, RD\$153.3 million (91.2 percent).

In an attempt to remedy this inequitable situation, Public Works through its Department of Norms, Regulations and Standards has elaborated a set of criteria to be used in the prequalification of firms to bid on government contracts. All construction firms are prequalified on the basis of reputation, expertise, experience, professional staff, organizational structure, equipment and financial resources. Each of these factors is evaluated by Public Works on the basis of a pre-determined point system. The construction firms will be classified into two major types. The following table summarizes these two types.

¹³ "El Ejercicio de la Profesion de Arquitectura en Republica Dominicana," Arq. Placide Pina, Revista del CODIA, No. 48, Santo Domingo, June 1976.

Category	Definition	Value of Civil Works Capability
TYPE E	All types of civil works.	
E1		200- 600
E2		601-1800
E3		1800-5400
TYPE EM	Electrical and mechanical contracts.	
EM1		25- 50
EM2		51- 150
EM3		151- 500
TYPE P	All civil works not included in Type E.	
P1		200- 900
P2		901-2700
P3		2701-8100
TYPE PM	All electrical and mechanical contracts not included in Type EM.	
PM1		25- 50
PM2		51- 150
PM3		151- 500

Source: "Reglamento de Precalificación de Empresas Constructores," Secretaria de Estado de Obras Publicas y Comunicaciones, Departamento de Nirmes, Reglamentos y Sistemas, No. 3/79, Santo Domingo, April 1979.

D. GENERAL ENVIRONMENTAL ACTIVITIES, ISSUES AND CONSIDERATIONS

1. The Context for Action

During the next three years, the GODR will place a major emphasis on the more effective utilization of the country's natural resources as part of its efforts to upgrade and stimulate the economic development. In pursuing this course of action, the government is quite cognizant of the parallel requirement to develop and implement policies and programs directed at the fullest possible protection and preservation of the natural environment.

In order to spearhead such efforts, a Department of Natural Resources and the Environment has been established under the Office of the Technical Secretary to the President. It is charged with the responsibility for developing specific overall

policy guidelines and strategies for the government's total program.

Even as comprehensive studies and policy guidelines are being carried out, the variety of specific programs and projects has already been initiated. Typical of these are the following examples:

- The Ministries of Education and Agriculture have jointly embarked on formal and informal education programs directed at the issues of effective environmental conservation. The objective of their program is to develop community knowledge and support for environmental conservation and protection measures as well as to integrate community resources and programs within the government's total program.
- Individual private and public efforts have begun to reforest the rural areas which have been subject to indiscriminate cutting of trees as well as forest fires in order to eliminate erosion.
- Pre-feasibility studies on the utilization and cultivation of suitable natural building materials and the development of construction techniques and systems which permit sound ecological solutions to housing programs are already under way in both the public and private sector. Among those currently being reviewed for action are: (1) a pre-feasibility study of the potential for cultivating la palma cana as a potential natural building material in rural areas and (2) the development of prototype techniques and plans for the construction of a casa popular of tamped earth construction.

2. Preliminary Environmental Considerations for HG

Although the current level of program development does not permit the identification of specific recommendations concerning environmental impacts, specific basic analysis must be performed at subsequent stages of program development once specific project locations are selected. However, the following issues are identified here to facilitate that work.

a. Basic essential infrastructure and services. A considerable positive impact should result for the proposed integrated upgrading program proposed for low income squatter settlements throughout the country. The availability of potable water, sewerage and electricity services for each potential project town or site.

b. Physical environmental conditions. Geology, physiography, soils, hydrology, etc. should be reviewed for each projected site in order to identify potential hazards as well as

to focus specific program components on the most critical problems.

c. Natural building materials and systems. The HG might provide significant assistance and opportunities for the stimulation of local building materials as well as labor intensive methodologies. Efforts should be made to incorporate these elements in both public and private sector efforts.

d. Regional planning and development. The foreseeable direct and indirect effects of the proposed HG program on specific regions and sites should be ascertained, especially with respect to the effect on the urbanization process which the HG project entails.

Chapter III

THE EXISTING HOUSING FINANCE SYSTEM FOR HOUSING AND BASIC SERVICES

A. THE PRINCIPAL SOURCES OF FINANCE FOR HOUSING AND RELATED SERVICES

1. Housing Finance

During the period of the last administration (Balaguer, 1966-1978), the principal sources of housing finance which functioned included:

- El Banco Hipotecario (BH).
- El Banco Nacional de la Vivienda (BNV) and the Savings and Loan Associations (SAAP) linked with it.
- Other institutions: Concejo Estatal del Azucar (CEA), Loteria Nacional, etc.¹
- El Instituto de Auxilios y Vivienda (IAVI)¹
- La Presidencia de la Republica (P)¹
- El Instituto Nacional de la Vivienda (INVI)
- The informal sector (in the tugurios, cuarterias, viviendas viejas, etc.).

These entities or groups are listed approximately in the order of the income groups which they served but not in terms of the volume of housing they supported. Throughout the country, in Santo Domingo and Santiago as well as in the smaller cities, the informal sector is, in terms of the number of lots and/or housing units provided, the most important single source.² Significantly, between 1972 and 1978, the single most important government source of low income housing (based on large scale government subsidies) was the Presidencia de la Republica which usurped, for all practical purposes, the responsibilities of INVI.

¹ Not currently responsible for the financing and construction of housing under policies established by the present administration.

² In rural areas, the impact of the informal sector on housing production is even more significant than in urban areas accounting for perhaps more than 90 percent of all rural housing produced.

Under the present administration, efforts have been made to develop a more coherent institutional approach to national housing policy and programming; the primary responsibility for the financing and the construction of housing has been centered in INVI (low income urban and rural housing), BNV and the SAAP's (lower middle income and middle income housing) and the Banco Hipotecarios (BH, upper middle and upper income housing).³

The major sources of housing finance in the Dominican Republic now are the Asociaciones de Ahorros y Prestamo (SAAP), together with the National Housing Bank (BNV), the mortgage banks, the commercial banks and two public sector institutions: the Instituto Nacional de la Vivienda (INVI) and the Instituto de Auxilios y Viviendas (INAVI). The total portfolio of these institutions at the beginning of 1979 came to US\$320 million. The Savings and Loan system, comprising BNV and the SAAPs, now accounts for about 45 percent of housing finance.⁴ Commercial banks lend short term, often only complementing lending by the more specialized institutions. The mortgage banks began operations in 1973 and are now responsible for about 20 percent of the loans outstanding in the sector. INVI and INAVI, which were created to finance and implement housing for low income groups and public sector employees, account for less than 15 percent of total housing loans and their portfolios have grown very little since 1975.

Private sector institutions finance housing in the RD\$10,000 to RD\$30,000 range and above for the Savings and Loan system, and housing loans by the mortgage banks average RD\$25,000. SAAPs have been lending at 9.5 percent interest and mortgage banks at 12 percent.⁵ Deposits and mortgage guaranteed bonds (cedulas hipotecarias) to individuals and institutions have been the major sources of funds for these institutions. Recent inflation rates have resulted in a developing shortage in available funds based

³ The Corporacion Dominicana de Empresas Estatales (CORDE) is still allocating money for housing through its businesses and will spend an estimated RD\$5.0 million between 1980-82.

⁴ USAID Housing Guarantee Funds have already been utilized in the Dominican Republic. They were instrumental in the establishment and reinforcement of the BNV/SAAP system in the 1960s. Several middle income housing developments were financed by HG. Although that loan is still being repayed by client groups, no additional information of those initial projects is presented in this report due to their age and lack of direct relevance to the present policy and finance constraints and potentials.

⁵ The mortgage banks have also been charging a one-time 6 percent closing cost in order to ameliorate the effects of the 12 percent limitation on interest rates fixed by law.

on the outflow of savings and investment from the country under current legal interest rate limitations. Competition for funds has been one of the reasons why private sector institutions have not financed low cost housing which are perceived as high risk operations. INVI's lending rates range from 5 to 7 percent for amounts up to US\$11,000. Its sources of funds have been government contributions, short term loans from the National Reserve Bank and downpayments from the beneficiaries.

2. The Financing of Basic Services

The institutions and entities that have primary responsibility for the provision of basic urban services are the Corporacion del Acueducto y Alcantarillado de Santo Domingo (CAASD), the Instituto Nacional de Agua Potables and y Alcantarillado (INAPA), the Corporacion de Electricida (CDE), the Secretaria de Estado de Obras Publicas y Comunicaciones (SEOPC), the municipal governments, the Liga Municipal Dominicana (LMD), private contractors (formal and informal) and households themselves (within low income settlement areas).

INAPA was formed in 1962 to centralize control over the Dominican water and sewer systems. The responsibility for design, construction and operation of these urban systems was to be handed over to INAPA by the municipal governments. The Liga Municipal Dominicana (LMD), created in 1938 also assists the intermediate municipalities in the planning and financing of water and sanitation programs. As of 1980, 27 systems were still being administered by local governments. INAPA also supplies water to rural residents. However, only approximately 30 percent of the rural population and about 60 percent of the urban population is served by the formal system. However, in urban areas even where services exist they are overburdened and suffer from lack of adequate pressure leakage, etc. providing inadequate and uneven services for connected households.

The Corporacion de Acueducto y Acantarillado de Santo Domingo (CAASD) was created in 1973 to elaborate and execute the master plan for water and sanitation in Santo Domingo and to be in charge of the administration, operation and maintenance of the system in the National District and certain areas of influence. The Municipal government of the City of Santiago also operates its own system. Both INAPA and CAASD still depend heavily on subsidies from the central government.

Local streets, drainage and small erosion control projects in new urbanizations are supposed to be the responsibility of private developers. Their maintenance and upgrading is the responsibility of the local government in collaboration with LMD and, in the case of the National District, with SEOPC. Major urban and rural roads, major drainage works and erosion control are the responsibility of SEOPC and are financed primarily from the general funds of government.

The Corporacion Dominicana de Electricidad (CDE) is responsible for the operation, transmission and distribution of electric power for public and private use. Until the present time, the Dominican Republic has continued to experience severe power rationing due to both delays in the installation of additional productive units and the lack of proper maintenance of existing units, as well as excessive drawdown of the Tavera and Valdesia Hydro reservoirs. The greater output of electricity due to large investments made in multi-purpose dams constructed by the Instituto Nacional de Recursos Hidraulicos (INDRHI) has been limited because of lack of effective coordination with CDE in the planning and design stages. The dams which also provide for irrigation were only turned over to CDE for operation after completion. Theoretically, CDE is in condition to generate approximately 427 megawatts of electricity against an actual demand of 421 megawatts if all of the existing plants are put into full operation.

While it is anticipated that the damage caused by the recent tropical storms -- David and Frederick -- will be fully repaired by mid-1980, CDE still faces other significant problems. CDE lost about 60 percent of its income over the 6-month period which followed the storms due to its inability to bill its clients. Historically, CDE also has suffered chronic deficits due to both a low rate structure as well as the chronic indebtedness of the public sector institutions. Recent rate increases have already been outstripped by the increases in petroleum import costs over the last year and additional rate increases are being contemplated to compensate for the cost of this combustible. The actual cost of electricity to the consumer averages about 5-6 cents per kilowatt while the current costs of providing electricity is estimated at about 10 cents per kilowatt.

With respect to the chronic indebtedness of public sector users, the national government has recently repaid RD\$700,000 on a total outstanding debt from past administrations (national and municipal governments) estimated at almost RD\$13 million.

In many marginal settlements, households are able to afford only one electric light outlet. In rural areas surveyed in 1974, approximately 53 percent depended on candles or kerosene lamps as a lighting source. In urban areas, it is not unusual for a few households in a settlement to receive metered power from CDE and then retail it, illegally, to other households. Over a 5-month period in 1979-1980, CDE claims to have lost about RD\$2 million due to unauthorized connections into its system. Marginal households typically utilize between 2 and 3 percent of their monthly income for electric light. In other than marginal settlements, households with otherwise adequate service suffer from frequent short circuits due to overloading of the basic supply network.

The municipalities (with the assistance of LMD) are, in principle, responsible for a number of support services related

directly to housing -- including local street maintenance and cleaning, street lighting, environmental sanitation as well as, in the case of major cities, the development and application of development norms and standards. It is generally well recognized, however, that their independent financial resources are utterly inadequate for proper levels of service -- and chaotic. For financing their activities, the municipalities are heavily dependent on central government transfers. Even the National District is no exception; in March of 1980, it had to request a major special subsidy from the President in order to pay the salaries of its laborers.

B. THE RESPONSIBILITIES OF THE PRINCIPAL FINANCING ENTITIES AND PROGRAM EMPHASES IN THEIR RECENT ACTIVITIES

Table III-1 identifies the legal nature, geographic scope, declared objectives and sources of finance of the principal types of housing finance entities in the formal sector over the last five years in the Dominican Republic. They are listed in order of the household income levels which they served during this period, beginning with the entity reaching furthest down in the income scale.

The orientation of the programs of the six principal types of entities engaged in housing finance during this period (considering, as in Table III-1, even those entities no longer producing housing) is shown in Table III-2, which identifies the prices of the types of housing financed, downpayments, loan periods, interest rates, monthly payments and income groups typically served.

While Tables III-1 and III-2 seem to indicate that there are a reasonable variety of institutions engaged in housing finance, it is important to note that many of these organizations are no longer financing housing and even while they once were, the Presidency under Balaguer dominated not only the low income market (based on wholesale implicit and explicit subsidies) but actually started to invade the middle and upper income markets in 1977-1978 (e.g. the Hotel Embajador project). Of the entities listed in Tables III-1 and III-2, only three of them are engaged in the financing and construction of housing under the current administration. Of these, only INVI is now directly responsible for the construction of housing which is responsive to the needs of low income groups and marginal households, although the BNV and the Savings and Loan Associations under a recent policy reorientation have indicated their intention of bringing their housing production more in line with the effective demand of at least the upper stratum of the low income households.

C. INTER-INSTITUTIONAL RELATIONSHIPS

Historically, unless the execution of a specific housing project by one entity requires the financial support of or action

TABLE III-1

Legal Nature, Scope, Objectives and Sources of Finance of Principal Housing
Institutions and Groups in the Formal Sector
(1976-1980)

Entity	Legal Base Nature	Geographic Scope	Stated Objectives	Sources of Finance
Instituto Nacional de la Vivienda (INVI)	Autonomous 1962	National urban/ rural	Planning, implementation and management of housing programs for low income households.	<ul style="list-style-type: none"> • subsidies • loans • payments by households • issuing of cédulas
Savica (IAV)	(1961)	National	Serve public employees; serve autonomous institutions	<ul style="list-style-type: none"> • own resources • loans from private international bank • loans from D.R. Reserve Bank
Presidencia	---	National (\approx 60% of actual programs in Santo Domingo)	---	<ul style="list-style-type: none"> • own resources • general fund • authorized funds of other entities
Banco Nacional de la Vivienda (BNV)	(1962) An official credit institution -- autonomous and decentralized	National	To facilitate through savings and loan associations the acquisition and maintenance of houses for the maximum number of middle income and low income households. Among its other functions, the BNV is able to provide financial assistance to the SAAPs and supervise and control them and guarantee mortgages.	<ul style="list-style-type: none"> • loans • payments by borrowers • issuing of cédulas
Savings and loan Associations (SAAPs)	(1962) Private credit entities	National (84% of actual loans concentrated in Santo Domingo and Santiago)	To provide loans for the construction, acquisition, conservation, repair or improvement of housing. The SAAPs are also able to finance the urbanization of land for the construction of housing. They are regulated by norms established by the BNV.	<ul style="list-style-type: none"> • savings deposits • loans • payments by borrowers
Banco Hipotecario (BH)	An official credit institution -- autonomous and decentralized (1971)	National (80% of loans concentrated in Santo Domingo and 18% in Santiago)	To undertake loans with real property mortgage guarantees, including loans for the construction and acquisition of housing. For middle income and high income households, particularly for the latter.	<ul style="list-style-type: none"> • loans • payments by borrowers • issuing of cédulas

TABLE III-2

Financing Terms of and Income Groups Served by the Principal Housing
Institutions and Groups in the Formal Sector
(1970-1980)

Entity	Prices of Housing Financed Minimum (Average) Maximum	Downpayments (D) Periods (P) Interest Rates (IR)	Monthly Payments	Income Groups Served (Monthly household income)
INVI	RD\$7,000 (RD\$9,000) RD\$11,000	D: 1,000-2,500* P: 15, 20, 25, 30 yrs IR: 5% - 7.5%	Minimum RD\$50.00	RD\$250 or more (if without subsidy)
Savica (IAV)	RD\$17,500 (---) RD\$22,300	D: 2,500 - 10,000 P: 20, 25, 30 yrs IR: 5% - 6.5%*		RD\$300 or more (4.2% of public em- ployees)
Presidencia (P)	Information not available	D: 0 - 1,500 P: 20-25 yrs	RD\$5 - 60	
BNV/SAAP	RD\$10,000* (RD\$15,000) RD\$30,000	D: P: 20-30 yrs IR: 9.5%		RD\$500 and up
Bancos Hipotecario (BH)	RD\$12,000 (25,000) RD\$75,000	D: P: 25% of monthly income IR: 12% (6% closing costs)		RD\$650 and up

* Under BNV/SAAP housing policy reorientation (1979), the minimum price of housing financed should drop to at least RD\$4,500.

by another organization, the housing finance activities of the principal groups that have been identified have not been adequately coordinated nor related to one another systematically. Each entity tends to act independently, in accordance with the regulations governing it, and does not consider the impact of other institutions on its activities nor the impact of its activities on theirs.

Because of limited coordination, many opportunities to use the financing resources of individual entities in complementary ways in large projects have been lost. There are thus far no formal procedures for regular communication among the principal housing finance entities for the formulation of their plans, the purchasing of land, or the execution of projects. This situation also exists with respect to the coordination of basic urban services.

In the informal sector, similarly, individual landowners and developers operate independently. There is virtually no coordination between the formal and informal sectors.

INVI, according to its basic law and subsequent amendments,⁶ has as its basic functions the formulation and implementation of a national housing plan, to implement part of the plan and to promote private sector participation. INVI is also responsible for promoting self-help and mutual aid housing programs in urban and rural settings and for providing technical assistance on housing matters to individuals and organizations. It must request appropriations from the executive branch necessary to these purposes and coordinate other activities related to the above-mentioned ends.

Despite these statutory powers, INVI, over its history, has had little say over the allocation of resources and the formulation of policy. Rather, under the past administration, it was limited to the execution of small scale programs and estate maintenance. Under the current administration, INVI is undergoing a complete reorganization under a reorientation of national policy concerning housing production, and its scope of operations will be expanded.

This reorganization which is firmly backed by the Technical Secretariat of the Presidency will provide the basis for INVI to become the main governmental agency responsible for providing housing solutions to a broader range of low income groups. The national government is currently considering the strengthening of INVI's capital base by transferring public estate currently held

⁶ Law No. 5892 dated May 10, 1962. INVI is currently reviewing this law for the purpose of amending it in accordance with its anticipated demands.

by Bienes Nacionales (BN) which will assist INVI in establishing an independent borrowing capacity while expanding its scope of operations.

With respect to the key area of inter-institutional coordination necessary for the effective planning and implementation of a broad housing policy, INVI has already taken steps to reinforce the potential role of the private voluntary organizations (PVOs) which came together in a broadly coordinated effort after Hurricane David struck the country in August of 1979.

The USAID Mission actively supported INVI's efforts, via the provision of materials, and a program to repair damaged units, employing local materials and local self-help manpower organized by cooperating ODC field staff and supervised by INVI skilled carpenters or foremen. In seeking to reach out into the rural areas with shelter assistance, the INVI and USAID Mission strategy enlisted the cooperation of a group of PVOs to develop a collaborative approach and the framework for their participation.

Each PVO represents a separate constituency and brings the apparatus of a distinctive system of counterpart and local community groups to serve in reaching out into the rural area affected. The CARE project enlisted the Comite Pro-Bani and the Federation of Credit Unions (FEDOCOOP). Catholic Relief Services counts on the extensive CARITAS administrative and distributive network and links up with the local parish priests and through them to community associations. Church World Services, on a smaller scale, collaborates with the Servicio Social de Iglesias Dominicanas (SSID) program network. The Dominican Development Foundation represents an effective organization with an established programmatic relationship with rural agricultural associations.

These major institutions and others which participated in reconstruction efforts in both the urban and rural areas affected by the hurricane have since been organized (under INVI's leadership) as Comision Inter-Institucional para la Coordinacion de Programas de Viviendas (CICV). (See Annex III) The purpose of this commission is to organize housing programs which facilitate public and private sector collaboration in the implementation of a housing production policy which is more adequate to the demands of low income groups, both urban and rural. This commission will have a permanent status and seek to plan and implement programs with both national and international financing. However, each participating institution will maintain its autonomy and the recommendations and proposals of the commission will be adopted by each entity in accordance with its individual objectives, characteristics and norms.

With respect to housing finance relationships with other national institutions, the Banco Nacional de la Vivienda (BNV) under the law which created it, can act as financial agent for

both INAVI and INVI and provide mortgage insurance for these institutions on mortgages which originate with BNV.

The interaction between the Savings and Loan Associations and BNV is reasonably well defined, with BNV facilitating the SAAP functions of promoting savings for use in long term loan financing for the construction, acquisition or upgrading of family housing. Given the mixed character of the Savings and Loan system, BNV is responsible for the supervision, financial assistance and technical assistance of the SAAPs and the guarantee of the operating risks. The SAAPs, in turn, must operate with the public in accordance with norms and standards set down by the BNV. Historically, the role of BNV has been to audit the fiscal and monetary system of the Savings and Loan Associations while the SAAPs select projects for financing in accordance with their own criteria and credit policies.

This traditional role of the BNV and its coordinating relationship with the SAAPs is apparently changing. Based on a national seminar held in 1979, the Savings and Loan system, under the leadership of BNV, has resolved to develop urgent immediate actions directed at providing more credit to low income households than have traditionally been attended (within the overriding criteria of capacity to pay). The recommendations of the seminar will require that BNV provide leadership to its affiliate savings and loan entities in: (1) realizing the social-economic studies which will permit the savings and loan system to target its low income programs; (2) developing housing solution typologies appropriate to the needs and capacities of low income groups; and (3) elaborating a new system of norms and standards appropriate to the low income sub-markets to be served. The specific policy changes as implemented will permit the BNV and the SAAPs to serve approximately 29 percent of the total demand of the population served in the country and will reach down as low as the RD\$200 per month level of income (between the 40th and 50th percentile of national urban household income).

The clear definition of the low income housing policy of the savings and loan system established jointly with the public sector would provide dramatic support to the eventual conformation of a realistic and effective national housing policy and plan -- one of the medium term objectives of the present administration. Clearly, greater inter-institutional coordination could result. However, even under such positive circumstances, both the public (INVI) and private (BNV/SAAP) sector will need time to identify and develop adequate institutional responses (personnel, organizational formats, norms and standards, etc.) to meet the effective demand of low income households. Substantial pilot efforts in these areas seem to be required. Furthermore, additional sources of financing clearly must be identified in order to carry out the new housing programs.

D. TARGETS AND PERFORMANCE

1. Housing

a. Recent targets and performance. During the past administration, no clear targets for housing existed for the major entities and their actual performance during the period is difficult to evaluate in terms of ability to meet projected production goals. Performance for the last 5-year period of the past administration is presented in Table III-3 and covers the period of 1972-1977. Financing sources of the Construction Sector for the period of 1974-1978 are presented in Table III-4 and show loans outstanding.

The importance of the informal sector should be kept in mind in relation to the entities identified in Table III-3. If it is assumed that, for example, all of the additional marginal households in the Santo Domingo Metropolitan Area during the 5-year period 1972-1977 were housed, albeit inadequately, by the informal sector, then the delivery capacity of the informal sector in that period probably was on the order of 35,000 units -- about equal to the total production of all the groups listed in Table III-3.

b. Targets and expected demand for the 5-year period (1980-1985). In Table III-5, the very preliminary estimates of housing demand for 1980-1985 are related to the preliminary housing targets (or, in some cases, to expected output based on past performance) for the major housing finance entities in the formal sector for the same period.

All of the figures in Table III-5 should be treated with some caution, but if they are at least in the right order of magnitude several points seem clear.

First, the targeted output of INVI (26,000 units already targeted for 1980-1983 and an assumed target of approximately 31,000 units over the 5-year period 1980-1985) does not correspond at all to their past levels of production under the previous administration.

Two of the more important programs to be carried out by INVI include international financing by the World Bank and the Interamerican Development Bank. The World Bank project will include the development of two sites and services projects for an estimated 10,000 families in the Santo Domingo Metropolitan Area. Advance funding will permit the preparation of the project during 1980-81 with loan disbursement beginning in July 1981. The total cost of the project is approximately U.S. \$60 million with international financing covering about 60 percent of the total costs.

INVI will also construct approximately 3,700 rural houses with GODR funds as part of a loan agreement with the

TABLE III-3

Housing Units Financed by the Principal Housing
Institutions and Groups
(1972-1975)

ENTITY	APPROXIMATE NUMBER OF UNITS FINANCED (1972-1977)***		
	National	Santo Domingo	Santo Domingo as a Percentage of the Total
Instituto Nacional de la Vivienda (INVI)	2,080	1,650	79.4%
Instituto de Auxilios y Viviendas (IAV)	2,246	2,246	100.0%
La Presidencia (P)	10,790	6,474	± 60.1%*
Loteria Nacional (LN)	1,250	993	79.0%
Banco de la Vivienda/ Asociaciones de Ahorros y Prestamo (BNV/SAAP)	17,654	11,465	65.0%**
TOTAL	34,020	22,828	67.0%

* Percentage over the period estimated based on data for 1977 only.

** Approximately 19.5% of the total units financed by the SAAP were located in Santiago, for a total of 84.5% in the two principal cities of the nation during the period 1972-1977.

*** Although no breakdown is available by numbers of units financed, the Mortgage Bank (BH) made 1,062 loans totaling approximately RD\$44 million during the period. 63% of these loans were for single family housing and about 18% for condominiums. Between 1972-1977, the commercial banks loaned approximately RD\$270 million for housing construction financed with the maximum period being 7 years.

TABLE III-4

Financing Sources of the Construction Sector
(loans outstanding)

Institution	1974		1975		1976		1977		1978	
	Amount*	%								
National Housing Bank (BNV)	10.6	8.0	18.1	10.2	22.9	10.2	30.9	11.8	40.4	12.6
Savings and Loan Associations (SAAPs)	40.1	30.0	56.0	31.7	76.4	33.9	87.4	33.3	103.3	32.3
Mortgage Banks (BH)	5.1	3.8	10.5	5.9	19.2	8.5	32.9	12.5	64.0	20.1
Commercial Banks	43.7	32.8	49.1	27.7	64.8	28.7	72.3	27.4	69.2	21.6
National Housing Institute (INVI)	8.4	6.3	8.9	5.0	8.9	3.9	8.8	3.3	9.7	3.0
Welfare and Housing Institute (IAV)	25.5	19.1	34.4	19.5	33.3	14.8	30.8	11.7	33.1	10.4
TOTAL	133.4	100.0	177.0	100.0	225.5	100.0	263.1	100.0	319.7	100.0

* In million U.S.\$.

TABLE III-5

Housing Finance Targets of Principal Housing Institutions
and Groups Relative to Estimated Demand^{1/}
(1980-1985)

Location and Type of Housing	Household income levels served (monthly income) (RD \$)	Estimated demand, 1980-1985 (number of units)	Targets of principal housing institutions and groups, 1980-1985 (assuming same percentage is allocated to urban and rural areas as in 1972-1977 or in plan trienal, 1980-1983)	
			Targeted number of units (rounded to nearest 10) and income levels served (1980-85)	Entity
I. SANTO DOMINGO METROPOLITAN AREA				
A. Rehabilitation				
-- Cuarterias	50-400	10,000		
-- Tugurios with access	50-400	34,000		
-- Tugurios without access/island	50-300	60,000		
-- Urbanizations with minimum services, upgraded	100-500	8,700		
B. New Units				
-- Cuarterias	50-400	5,000		
-- Tugurios	50-300	51,000	16,000 (SSCH) ^{2/}	INVI
-- Low income housing	150-300	7,900	(3,400) ^{3/}	INVI
-- Middle income	300-600	15,200	12,000 ^{4/}	BNV BNV BNV
-- Upper middle	600-1000	7,300		BNV
-- High income	1000-	4,500	6,400	BH/BC
II. SANTIAGO				
A. Rehabilitation				
-- Tugurios		25,000		
B. New Units				
		10,000	(2,000) ^{3/}	INVI
			3,500 ^{4/}	BNV
			1,440	BH
III. OTHER URBAN				
A. Rehabilitation				
	Not Available	50,000	6,000	
B. New Units				
		45,700	2,500 ^{4/}	BNV
			1,600 ^{2/}	INVI
			160 ^{2/}	BH
IV. RURAL AREAS				
		17,900 (new Units)	4,600 ^{2/}	INVI
TOTAL UNITS		145,600 new units 197,700 upgrading	54,200 new units	

^{1/} Assumes ability to fulfill targets (but see Table 3.3 for recent performance).

^{2/} Target trienal (1980-83) projected over 5-year period.

^{3/} Previously committed housing projects to be terminated under plan trienal and then discontinued.

^{4/} Based on performance between 1972-77 and assuming continuation of such production levels within policy reorientation.

Interamerican Development Bank signed in October of 1979. The GODR financing of these rural houses forms part of the government's counterpart financing for the IDB-Agrarian Institute rural settlements development program. In both of these cases, INVI will be responsible for the planning and construction of the required shelter solutions.

In order to effectively carry out its responsibilities, INVI has organized a Planning Unit as well as a unit in charge of project preparation. The United Nations is assisting INVI in the development of the planning function by providing one senior level advisor for one year. INVI has hired one architect to work with this international expert. It is also anticipating that some technical assistance will be made available for the sites and services project implementation under World Bank financing. INVI's new management, with full backing from the national government, is determined to revamp the existing structure of the agency to achieve greater efficiency and productivity and initial steps taken indicate that the prospects are good that the agency can be transformed into a more powerful housing production vehicle. However, this will take some time, and it seems unlikely that INVI, by itself, can be expected to produce that quantity of new housing solutions targeted.

With respect to the total targeted output of INVI, it should be noted that it is not at all responsive to the substantial need for rehabilitation in Santo Domingo, Santiago and other intermediate urban centers where it is estimated that approximately 238,000 units should be upgraded for low income and marginal urban households (over 150,000 units in Santo Domingo alone).

Third, although the BNV and Savings and Loan Associations have made a clear commitment to reorient their housing programs over the next 9-year period to serve lower income stratas not previously targeted (RD\$200-250), no clear programs have been identified thus far which will assist them in making this transition. Consequently, it is not yet clear how many of their targeted units will actually be made available to such low income households nor what mechanisms will be utilized to assure adequate recuperation of costs from the project beneficiaries.

Fourth, the targeted output is only minimally responsive to the needs of housing in the rural areas. Under the housing policy reorientation, INVI is now responsible for the construction of rural housing for IAD. However, it is not clear how quickly rural housing production will be able to proceed given the need for INVI to upgrade its institutional capacities on all fronts over the immediate future, in spite of the overall potential positive value which should be placed in trying to eliminate the construction of housing by IAD itself through collaborative efforts with INVI.

This probably should not be of as much concern as some of the other problems implicit in the data in Table III-5 because a large part of rural housing demand simply cannot be met by the formal sector in the immediate future. However, some pilot efforts to set the base for augmenting potential future production in rural areas with increased private sector participation seem necessary.

Fifth, with the exception of post-hurricane reconstruction efforts which will continue in 1980 (6,000 units) in conjunction with many of the private voluntary organizations mobilized during the emergency, participation of these organizations has not, thus far, been institutionalized in terms of projected targets over the 5-year period. INVI and the Comision Interinstitucional de Coordinacion de Programas de Vivienda (CICV) are clearly moving in this direction. The continuance of the USAID Mission support of the Private Voluntary Organizations who were active in post-hurricane emergency efforts will be possible through the HG program.

2. Basic Services

a. Recent targets and performance. During 1979, the Corporacion de Acueducto y Alcantarillado de Santo Domingo (CAASD) invested RD\$3,437,501 as part of the first stage extension and upgrading of the water system in the capital. This included the electrification of the well fields and pumping stations to serve the eastern sector of the city as well as the rehabilitation of the Haina well field which serves the west of the city.

Renovation work was continued on the existing distribution system through the replacement of obsolete lines and the provision of interconnections in order to better the water supply system.

Despite these efforts, major problems exist due to leakage and the lack of adequate water pressure to serve sectors of the city where major distribution systems already exist. Both the metering program and the Rotating Fund to connect households into the water system and to provide sanitary facilities have had only limited success due to the limited pressure available in many parts of the city, particularly lower income areas.

Over recent years, the Corporacion Dominicana de Electricidad (CDE) has been making parallel efforts to improve its financial situation as well as its generation transmission and distribution of energy. In 1979, RD\$49 million was invested in investments to improve the latter. To cover part of its outstanding debts, over RD\$80 million was paid to the national and international banking system, while payments of RD\$9.2 million were made to local and foreign businesses.

With respect to the severe damage inflicted by Hurricane David, CDE invested approximately RD\$15 million in equipment and materials. By the beginning of 1980, CDE estimated that 90 percent of generating capacity had been recovered.

b. Targets for the Plan Trienal (1980-1982). During the next 3-year period, CAASD hopes to seek financing for the construction of the Madrigal dam which would produce an estimated 182 million gallons each day (sufficient to cover the needs of Santo Domingo's population through the year 2000). Despite the fact that the studies and designs (financed by BID) were finished during 1978, discussions continue with sources of potential financing concerning the need and consequently the cost-effectiveness of such a major investment during this period given the potential water supply resources already available through the existing well system and the priority need to upgrade the existing distribution network in order to increase the coverage of the population with existing capacity.

With respect to sanitary sewerage, a 50 percent increase in the coverage of the existing system is projected (a total investment of RD\$135.6 million by CAASD to cover the water supply and sanitation needs; RD\$49.9 million over the period 1980-82).

During the period 1980-82, the Instituto Nacional de Agua Potable y Alcantarillados (INAPA) expects to execute 114 projects to construct or rehabilitate water networks to cover an additional 1.2 million residents of rural areas. Particular attention will be given to the Southwest Region where 35 water systems (24.4 percent of the total project investment) will be constructed or upgraded. The total investment in water supply over the 3-year period is expected to be RD\$55.6 million. An additional RD\$23.6 million will be invested in sanitary sewerage systems in order to benefit a population estimated at 825,000 persons.

The goal of CDE and INDRHI for the Plan period is to overcome the deficit in energy necessary to satisfy both residential and productive demands. Investment in large thermo electric plants is expected to increase existing installed capacity eight times, while correction of deficiencies in the existing transmission and distribution system will be made.

Of a RD\$142 million investment project for 1980, RD\$17.8 million will be allocated to the rehabilitation efforts in the areas affected by Hurricane David and Tropical Storm Frederick. An additional RD\$34.6 million will be destined to rural electrification projects. During the 3-year period, CDE will invest approximately RD\$227 million, while INDRHI will invest another RD\$37.5 million in hydroelectric development projects.

E. CREDIT POLICIES AND OPERATING PROCEDURES OF THE PRINCIPAL HOUSING INSTITUTIONS

1. INVI

The maximum amount which has been financed by INVI in recent years is between RD\$9,000 and RD\$11,000, depending on the beneficiaries capacity to pay. Generally, INVI has utilized financing terms of 15 to 25 years, but it can finance over 30 years if necessary.

The actual interest applied by INVI currently is 7.5 percent. However, it is apparently not restricted in its upper limit except by the 12 percent rate fixed by the national usury law which covers all lending, and, of course, by the borrower's capacity to pay. Monthly payments have been a minimum of RD\$50 in the past with a downpayment which has varied from a low of RD\$1,000 in 1970 to a maximum of RD\$2,500 in 1977.

The general norms and criteria applied by INVI to select participants in their low income housing programs (viviendas de interes social) are as follows:

- established home and residence in the national territory;
- good physical and mental health (both the head of household and the family);
- not be a property owner or in the case of property owners, that the property is sub-standard/inadequate as assessed by INVI;
- be a head of household or responsible for the sustenance of a family of a minimum of three persons.

INVI officially also has limited itself to a target group with a monthly household income of RD\$60 to RD\$80. However, in reality, such groups have automatically been eliminated from INVI's programs due to the cost of the standard solutions which have traditionally been constructed by the institution.

These houses have normally consisted of three bedrooms, bath, kitchen and sometimes a servants' quarters -- built in single family units and multi-family units. INVI, under the previous administration, also constructed housing for middle income households under agreements with other institutions.

The past administration reported a 90 percent cost recovery rate for INVI. If that is correct, it certainly seems to corroborate the fact that INVI has not been effectively reaching its low income target population, or they have been able to do so and recover costs only due to massive implicit and explicit subsidies. Even so, in February 1980, the current administration

of INVI reported RD\$5,000,000 outstanding in payments from residents.

2. Instituto Nacional de Auxilios y Viviendas (INAVI)

Under the present administration, INAVI will no longer construct housing but will continue to finance low income housing for public employees whose value does not exceed RD\$12,000. INAVI is currently taking steps to increase its capacity as a social service organization for public employees and is also investigating the possibilities of providing medical services and increasing pension and retirement plans for public employees. Despite this policy reorientation, the past housing credit policies and operative procedures are briefly described below.

Under the past administration, INAVI was financing housing up to RD\$22 -- 300 plus the additional cost of the land. Over recent years, 25- to 30- year mortgage terms with 6 to 6.5 percent interest rates were normal with INAVI. Downpayments ranged between RD\$2,500 and RD\$10,000 with minimum monthly payments of RD\$50.00. Although INAVI is only legally responsible for public employees, it has been estimated that 74 percent of the residents of "el Millon" (INAVI's last housing project under the previous administration) were not public employees and although loan terms included 6 percent interest rates, the private international banks had lent the money to GODR at about twice that rate of interest thus decapitalizing INAVI.

3. Asociaciones de Ahorros y Prestamo (SAAP)

The criteria and policies of the SAAP for the construction of housing are clear and precise. Traditionally, the Savings and Loan Associations never finance the total costs of a house inasmuch as their client group has tended to be the middle income household which has a certain capacity for savings. In recent years, the amount financed by the SAAP has varied between 95 percent for a house valued at RD\$5,000 to a low of 62 percent for housing valued at RD\$60-65,000. House valuation is carried out by BNV through its FHA department and includes the land as well as the house itself. Clsng costs vary between 5 and 7 percent of the total value but can vary widely depending on the conditions and terms of financing. They include:

- valuation -- 1 percent;
- loan commision -- 2.5 percent;
- contract document -- RD\$2;
- legal/notary fee -- varying between RD\$30 and RD\$1,000, depending on the amount financed;
- property insurance.

Apart from those costs, there also exists a right of service charge of RD\$10.

The terms normally utilized by the SAAP are 20 years at 9.5 percent. Longer terms of 30 to 40 years are possible; 1.5 percent of the interest charged covers the payment for the FHA mortgage guarantee. In the case of isolated single family housing, this latter insurance cannot exceed 90 percent of the assessed value of the house. Mortgage loans for the construction of or acquisition of buildings in commercial areas or of apartments can be incurred through FHA for a maximum value of 50 percent of the assessed value of the same.

Feasibility studies are required by BNV for both condominium projects and new urbanizations in order to reduce the inherent economic risks in guaranteeing financing for such projects. If approved, such projects include the costs of the evaluation of feasibility studies and inspection in addition to the previously mentioned closing costs.

With respect to interim financing of construction or loans to contractors, these can be given for up to 80 percent of the assessed value of the project but in no case can these exceed the direct costs of such projects. Interim financing is limited to a maximum period of two years or the period of construction, whichever is less.

a. Policy execution. In order to qualify for a loan from the Savings and Loan System, individuals must have a savings account with one of the associations. When the potential borrower wishes to build a house on his own lot he must submit an application accompanied by: (1) title to the property; (2) confirmation of income; (3) two sets of construction plans approved by responsible government authorities; and (4) the cost estimate and description of the construction materials.

When the loan application is for a house within an urbanization approved by a savings and loan association, only the application and the confirmation of income must be presented.

The Board of Directors of each association normally reviews each application considering the longevity and frequency of saving of the applicant as well as his or her necessity for a house. A maximum of 25 percent of the total family income can be considered for monthly payments. Such payments include loan repayment interest, life insurance for the mortgagee as well as fire and earthquake insurance. The age of an applicant when added to the mortgage period cannot exceed 75 years.

b. Special dispositions. In order to assist the SAAP in serving lower income households, Law 548 passed on 8 December 1976 authorized the associations to provide mortgage loans for terms of up to 40 years and insurance for up to 97 percent of the FHA valuation in cases of the acquisition, construction or

rehabilitation of housing or rental with option to buy, whenever such loans form a part of the social development plans of a business, industry, cooperative, union, pension plan, etc. whenever any one of these entities subsidize the interest rate, the monthly rent etc. when the required payments would be in excess of the applicant's capacity to pay.

Furthermore, in cases where housing is to be built on municipal lands, the SAAP can authorize a loan if the municipal government and the applicant sign a contract guaranteeing use of such lands over the full term of the loan.

4. Banco Hipotecario

The Banco Hipotecarios provide two types of loans -- interim working capital loans and long term mortgage loans. Working capital loans are currently provided for two years at 11-12 percent interest annually. Closing costs range from 3-6 percent with insurance cost additional to this amount. Mortgage loans can be made for up to 85 percent of assessed value at 12 percent annual interest. Closing costs are approximately 6 percent.

The terms for financing industrial or commercial construction are generally the same as above, however only 70 percent of the assessed value of construction can be financed.

Despite the fact that the Banco Hipotecario can finance the construction of hotels, clinics, schools, etc. its actual policies have tended to focus on housing particularly for middle and upper income groups. While the BH has traditionally concentrated on housing valued at RD\$25,000 to RD\$30,000, over recent years they have tended to finance a considerable amount of housing in the RD\$12,000 to RD\$15,000 range, a middle income group that has traditionally been served by the SAAP. During its history, the Banco Hipotecario has tended to focus its finance activities in Santo Domingo (+/- 80 percent) and in Santiago (+/- 18 percent). Minimum monthly payments are at least 25 percent of income.

Chapter IV

CONCLUSIONS AND RECOMMENDATIONS

A. PROBLEMS AND CONSTRAINTS TO THE ADEQUATE PROVISION OF HOUSING

The major characteristics of the existing housing supply and system have been discussed previously. The principal constraints and problems which inhibit the supply of housing, particularly to low income and marginal households as well as their effective demand for such housing are summarized below together with their impacts.

1. Principal Constraints in the Supply of Shelter¹

a. Administrative/institutional constraints.

(i) Formal mechanisms for coordination among housing finance institutions are not as yet fully developed. This lack of coordination, the fragmented nature of the overall capital market and the major role which the informal sector must play make it virtually impossible for the government to plan and coordinate the financing of housing and complementary urban services effectively.

(ii) Geographic inequities are perpetuated by the concentration of credit facilities and consequently housing production in Santo Domingo and to a lesser degree Santiago and the relatively limited availability of facilities elsewhere. This is particularly true with respect to the SAAP which locates about 85 percent of its financing in the two largest cities.

(iii) The current housing finance and production capacity of INVI is limited. In order to remedy this problem, a complete institutional reorganization is underway designed to gear INVI to its new institutional responsibilities as the main governmental agency responsible for providing shelter, particularly to low income groups. This reorganization will take time and require a full gamut of assistance in planning, design, legal and financial aspects, as well as in operational areas, particularly with respect to the selection and participation of low income households beneficiaries.

(iv) Effective ongoing systems of evaluation for each of the stages of construction or building process are inadequate, as is an integrated information system on the home-building

¹ Supply is defined here to include both production and financing.

sector. This severely limits the potential formulation and implementation of national housing policy, plans and programs.

b. Technical constraints.

(i) In the past, the government has concentrated almost exclusively on production of heavily subsidized rather expensive housing for middle income groups. Norms and standards for housing specifically geared to the needs and the capacity of low income groups to pay have not been fully developed. The lowest cost unit currently produced by government costs over RD\$6,000 while the earnings of most urban dwellers in the larger cities (assuming interest rates of 12 percent over 25 years) could reach only about RD\$3,000-RD\$3,500.

(ii) Limited formal mechanisms exist to promote applied research of labor intensive technologies, as well as the adoption of appropriate house and infrastructure design emphasizing the use of locally produced materials and traditional construction techniques which could result in measurable savings of foreign exchange as well as facilitate greater employment opportunities through self help approaches.

c. General resources and basic services constraints.

(i) The capacity of public services is greatly overloaded in almost all urban areas and represents a major obstacle for the development of housing programs per se, especially those directed at lower income groups.

(ii) Increases in the prices of urban land in the private market contributes to the problems of housing development programs, particularly for low income groups. Although the large land holdings which reverted or were transferred to the state after the overthrow of Trujillo constitute a defacto land bank, their continued extensive use or sale by the public sector will eventually present more and more problems as such land becomes absorbed by the private sector. Clear land title over these lands may also present some problems in the planning and execution of future housing solutions.

(iii) The property registration system is quite complicated and requires significant amounts of time and lengthy procedures for transfers of land and the issuing of titles.

(iv) The present housing finance system (formal and informal) has a considerable impact on the pattern of urban land use -- far more important than either planning or land use regulations. In effect, it encourages the following patterns: the allocation of a high proportion of all residential urban land to a very small proportion of the well-to-do population; high densities, overcrowding and poor urban services for a large part of the low income and marginal populations of urban areas; fragmented lower density development with even worse levels of

service for another large percentage of lower middle and low income urban households; fragmented inefficient land use which will make the subsequent installation costs for adequate urban infrastructure unnecessarily high.

(v) The human resources capacity of the major housing institutions is not yet adequate to their assigned functions. INVI's present staff capacity seems far below the administrative, technical and operational capacity which would be necessary to fully implement their newly assigned responsibilities. Upgrading and redirection of existing staff resources as well as additional staffing will be necessary. The savings and loan system generally has been unable to recruit sufficient highly trained employees as well as to retain SAAP employees once they have been trained. This latter problem is largely due to the more attractive salary and benefit packages which are available with the commercial banks.

d. Financial resources constraints.

(i) Current and past inflation rates, together with the 12 percent interest rate ceiling for loans set by the national usury law, have resulted in negative real interest rates for depositors and investors in the savings and mortgage guaranteed bond system (cedulas hipotecarias) and a corresponding shortage in available housing funds. Competition for funds is clearly one of the reasons why private sector housing finance institutions have not financed low cost housing which is considered a high risk operation. The current financing system also increases the already serious flight of capital outside the Dominican Republic to external markets.

(ii) The present system of housing finance tends to accumulate financial resources in entities serving housing markets for which total demand is relatively limited but does little to relieve the shortage of funds in the low income and marginal market where there is an increasing demand. It increases rather than decreases inequities in the distribution of capital, including the distribution of urban land ownership and access to capital markets.

(iii) The present pattern of financing also almost entirely neglects the latent demand for low income rental space. It, therefore, tends to worsen rather than improve the current availability of housing space for low income and marginal households.

(iv) The multistorey apartment buildings erected by INVI and other housing institutions have involved the utilization of considerable imported materials and equipment and can be expected to have had measurable negative impacts on foreign exchange. The high design standards and the heavily subsidized financing terms have resulted in both limited production and decapitalization of public housing resources while failing to meet the needs of the majority low income population.

(v) Construction activities in the informal sector (estimated at 10,000/year in Santo Domingo alone) indicate the tendency of low income households to invest savings in housing. The informal financing system upon which low income and marginal households must depend heavily may help keep short-run risks to both the lender and the borrower relatively low; but it probably increases rather than decreases the long-run economic, physical and social risks to which low income and marginal groups are likely to be exposed.

(vi) The present methods for financing urban infrastructure that is related directly to housing together with weaknesses in the property tax system result in deficit financing and inadequate levels of service in urban infrastructure. They also result in the benefits of public investment accruing primarily to a small segment of the private sector while the public sector remains seriously short of funds for the infrastructure needed to support housing development.

(vii) With the recent exception of post-hurricane activities in 1979, little consistent concerted effort has gone into the identification and implementation of credit programs for building materials and for self-help construction programs.

e. Policy.

(i) No comprehensive housing policy or plan exists. INVI, whose statutory powers include responsibility for the same, has thus far had little say over the allocation of resources and the formulation of housing policy but rather has been limited to the execution of small scale projects and estate management.

(ii) Specific government housing policy and plan directed to the needs and capacities of low income households (the majority population) has not as yet been developed. Given the current average income levels of both the urban and rural poor, the need for establishing such explicit government policies, plans and programs is self-evident. These should be directed at more cost effective patterns in housing investment through: (1) more realistic norms and standards; (2) cost recovery mechanisms and procedures; (3) patterns of cross-subsidization between higher and lower income groups; and (4) the direct contribution of labor by low income beneficiaries.

(iii) In 1979, the BNV and SAAP agreed to a general policy to progressively lower the effective threshold of their housing finance and production to cover the upper lower income households (RD\$250-300). However, specific policies are still required to implement this general policy in order to stimulate the promotion, execution and financing of housing for the relatively low income sectors.

2. Principal Constraints in the Demand for Shelter

a. Financial constraints.

(i) Very little, if any, low level short term financial credit is available on a continuing basis to low income groups to facilitate the gradual upgrading or construction of housing.² Nor has suitable mortgage capital been made available under flexible eligibility criteria for preparing sites for low income settlement comparable to the Los Minas project in Santo Domingo in the early 1960s.³ Countless squatter dwellings have materialized through the informal credit system which charges exorbitant rates of interest for short term loans.

(ii) Despite recent policy reorientations, most of the principal housing finance institutions regard investments in low cost housing as extremely risky investments. Most urban dwellers in the larger Dominican cities have household incomes of only about RD\$120-200 per month. Overall urban unemployment rates average 24 percent of the labor force nationally with another estimated 25 percent of the labor force underemployed.

b. Social and cultural constraints. Despite limited individual small scale exceptions, successful experience with community organization is uneven. In general, the cooperative movement suffered significant setbacks with respect to public confidence over the last decade and will need to be approached carefully where it forms an integral part of any housing solution.

c. Constraints on community and self help efforts. Because access to both information and credit is very limited for low income and marginal households, their ability to participate in many of the decisions affecting their basic welfare is very limited.

² Only some of the Private Voluntary Organizations (PVOs) and the National System of Savings and Credit Unions (FEDOCOOP) have made credit available in this area and only then as an adjunct to their other basic programs. Post-hurricane efforts in 1979 by both government and the private sector were largely fully subsidized "emergency" schemes.

³ INVI, under the government's new policy orientation, is currently preparing a sites and services proposal for financing by the World Bank -- 10,000 sites in metropolitan Santo Domingo -- to be implemented between 1981 and 1983.

B. OVERALL PRINCIPLES FOR THE PLANNING AND FINANCING OF HOUSING AND BASIC SERVICES

The following principles are recommended as guidelines for the planning and financing of housing and related service programs in the Dominican Republic and have been utilized in formulation of the specific recommendations for the USAID Housing Guarantee Program.

(a) The mechanisms used for the financing of housing and related services should be capable of producing adequate funds for capital expenditures, operating expenditures and maintenance on a sustained basis.

(b) The mechanisms utilized should be efficient in at least two senses:

- They should result in an allocation of resources to housing and related services that is consistent with overall priorities for the nation's economic and social development. The sources used for specific types of housing finance should reflect the levels and distribution of costs and benefits expected to be associated with such financing. Diversions of funding from their original sources to uses different from those originally anticipated should, in general, be avoided; but reasonable flexibility in the use of funds should be a feature of the overall financing system in order to enable the government to be responsive to changing expectations and priorities. At least a part of the benefits resulting from public investment in housing and related services should be recuperable by the public sector to facilitate subsequent investment in urban and regional development.
- The mechanisms used and the allocations of funding among entities should be such that fiscal responsibility is encouraged and such that the financial performance of each entity is clearly identifiable.

(c) The impact of the overall financing system should be as equitable as possible -- and should help to rectify some of the existing inequities in the availability of urban land, housing and basic services.

(d) To the fullest extent possible, the mechanisms used should encourage the participation of the private sector on a voluntary basis, by virtue of the advantages of investment in the sectors for which funding is sought, rather than through the use of coercive or restrictive measures. Among other things, it is desirable to increase the amount of savings capital which can be made available to finance housing and related services.

(e) In order to encourage and facilitate the participation of low income and marginal households in the formal credit system, financing procedures and requirements should be as simple as possible and lending patterns should reflect these households' real capacities to assume debt responsibilities.

(f) The mechanisms used should make it possible to achieve acceptable levels of risk and acceptable rates of return in both the public and private sectors.

(g) The overall financing system should rely as much as possible on internal, rather than external, resources.

(h) The levels and types of funding mobilized should be consistent with the administrative capacities of the entities responsible for the management of funds and the capacities of users to utilize funds efficiently for the purposes for which they were originally intended.

(i) The development of improved mechanisms for the financing of housing and related services should be coordinated with the development of mechanisms to take advantage of the resources thus mobilized (including, for example, the urban property tax system, land use regulations, legal and technical assistance for low income households, health services, education services, and delivery systems for basic urban services such as water supply and sanitation).

(j) The mechanisms used should facilitate the development and maintenance of the statistical and other information necessary for the formulation of systematic housing policies and programs.

1. Objectives

The basic objectives of a strategy for integrating the housing sector should reflect national level objectives for economic development planning. The achievement of higher levels of overall consumption is a basic element in achieving national level objectives. Within the housing sector this will require the increased production of housing of all kinds. Another element is the improvement of the distribution of consumption which, in the case of the housing sector, will require housing programs which reflect the structure of effective demand and are affordable by low income groups. The improved distribution of capital assets is also required to provide for the improved distribution of future consumption. In the case of housing, the improved distribution of property ownership and the resulting improved security for borrowing will help in overall asset redistribution. The national level objective of improving efficiency in the use of existing resources is also important in the housing sector where overlapping functions and production bottlenecks have reduced efficiency in the past.

To summarize, the basic objectives of a strategy for integrating the housing sector should be as follows:

- (a) To increase the levels of production of housing.
- (b) To direct an increased number of housing programs toward low income groups.
- (c) To improve the efficiency of housing finance and delivery.
- (d) To provide for integrated institutional development in carrying out the basic objectives stated above.

2. Overall Strategy Recommendations and Concerns

The concerns which should be addressed by the GODR housing strategy and program should include the coordination of public sector resources more effectively on a sustained basis. They should be designed to utilize the private sector as fully as possible and attract private funding from the major capital markets into the low income and marginal sub-markets. They should seek to help to develop the capacities of low income and marginal households to use the reoriented resources effectively. The overall strategy measures proposed are designed as a set of mutually reinforcing financing measures linked with complementary mechanisms in related sectors such as water supply and sanitation.

Specifically, it is recommended that the government support increasing participation by the private sector in housing construction and rentals and focus public resources on the provision of basic infrastructure and community facilities rather than on direct housing construction. The government has had difficulty penetrating low income housing markets in the past. If it were to withdraw gradually from the types of housing construction and rentals traditionally provided by public agencies, it would be possible to focus public capacities in those sub-markets where housing problems are the most urgent.

The development of an integrated upgrading program for the improvement of low income settlements in priority areas of the Dominican Republic would partially accomplish those ends. This program would involve the government in the provision of basic infrastructure, credit, and legal and technical assistance to the lowest income groups. A development fund, described below, is recommended to finance this program. Support from some of the existing housing institutions should be realigned to help in the implementation of this program. This implies a shift away from direct intervention in middle and upper income housing programs. As part of such a basic realignment of responsibilities, the overall coordination of public and private sector planning for housing should be improved. The Planning Office being organized within INVI should be complemented by a

housing secretariat representative of the major entities responsible for housing and basic essential infrastructure. This body would be responsible for the formulation of housing policies and plans and for the evaluation of progress in the housing sector.

C. SPECIFIC INSTITUTIONAL RESPONSIBILITIES RECOMMENDED

The major concern here should be to provide an adequate institutional base for the coordination of housing policies, housing programs, financing, public land acquisition, the public provision of urban infrastructure and urban property taxation -- within the context of the overall planning and coordination of urban and regional development.

One of the concerns here is to establish the permanent technical staff necessary to support the systematic formulation of housing policies and programs, the maintenance and dissemination of housing information and the provision of technical assistance in the formulation of housing programs. In this regard, the Planning Section currently under development within INVI should be fully supported at all policy and program levels of GODR. Another major concern is to provide the technical staff capacity necessary to encourage innovation in the use of building materials and methods and types of standardization that will encourage efficient overall resource use. A mechanism should be identified which allows both INVI and SEOPC to play major roles in this effort in an integrated way with private sector institutions.

1. Instituto Nacional de la Vivienda (INVI)

INVI should focus its activities increasingly on the improvement of existing low income settlements and on basic urbanization for newly-forming low income households in collaboration with the entities which are responsible for basic infrastructure and should undertake only work as is necessary to complement their activities. INVI should be able to utilize the proposed Development Fund to the extent necessary to finance improvement programs. Under the financing arrangements to be developed for the program, it should assure that the costs of physical improvements are recuperable from the beneficiaries.

INVI should withdraw gradually from the construction and management of rental housing and, eventually, from the construction and sale of housing. Such withdrawal should coincide with the build-up of private sector capacity in these areas. Most of the problems INVI has encountered in these fields are common in other countries that have attempted public housing. They are not unique to INVI. INVI's withdrawal from such activities should be timed to coincide with the development of increased capacity in the construction industry and the mobilization of the urban land market in the private sector. INVI could eventually sell existing stock of apartments and

housing and use the funds available for financing its future activities. INVI's housing construction activities in the future should be limited primarily to the physical improvement of existing low income settlements and basic site development in new low income settlements. It could also undertake the construction of prototypes for very low cost housing and multi-family rental space, but this should be only on a small scale as an incentive for the private sector to enter these markets. It should also continue to expand its activities with the Comision Inter-institucional para la Coordinacion de Programas de Viviendas (CICV) directed at facilitating the production of low income housing solutions in both urban and rural areas.

2. Instituto Nacional de Auxilios y Viviendas (INAVI)

INAVI should focus its housing related activities on the financing of small scale loans for public sector employees, including the families of low income workers, to upgrade existing housing. In accordance with GODR policy, it should not be responsible for the direct production of housing including the purchasing of land, direct contracting for construction and the short term financing of major construction.

In the long run, unnecessary overlap in functions could be eliminated by completely withdrawing INAVI from direct lending. Public employes could solicit loans from the savings and loan associations who could act as INAVI agents, appraising and granting loans according to criteria stipulated by INAVI. INAVI would continue to collect loans as part of regular payroll deductions.

3. Banco Nacional de la Vivienda (BNV)

The BNV will continue its role as the central agency of the savings and loan system. It should conduct an extensive review of its norms and standards for housing development and should also review the credit policies for lower income groups. With respect to the financing of housing it should investigate the following aspects, suggested during the 1979 SAAP seminar: (1) differential interest rates in accordance with housing unit prices to permit cross-subsidies between income groups; (2) the preferential treatment by BNV for mortgages directed at low income groups; (3) the establishment of variable interest fees for low cost housing; and (4) revision of regulations and procedures for the granting of credit to lower income groups.

4. The Savings and Loan System (SAAP)

The savings and loan associations will continue their role as private housing finance institutions. A pilot low cost housing project should be implemented in order to provide the SAAP with experience in serving low income households both in terms of norms and standards for physical development as well as appropriate credit mechanisms and collection procedures. Pending

further detailed study, they could receive a fee to act as administrators for loan collections from low income families participating in the proposed urban upgrading program. As experience is acquired and legal assurances are provided, it is hoped that they will participate directly in some aspects of the improvement program with their own funds. They could also act as loan originators for other finance entities.

5. Corporacion de Acueducto y Alcantarillado de Santo Domingo (CAASD) and the Instituto Nacional de Aguas Potable y Alcantarillados (INAPA)

The responsibilities of CAASD and INAPA would remain as they are at present. However, its activities should be focused more effectively on low income areas. In addition, the following actions should be undertaken:

(a) INAPA and, in particular, CAASD's tariffs should be increased gradually until they reach reasonable levels in relation to actual operating costs. At present they are far too low in relation to actual costs.

(b) CAASD's control of wastage and water losses in water distribution should be improved.

(c) Both CAASD and INAPA's plans and programs, particularly their revolving loan funds for house connections, should be coordinated with local development guidelines and annual operative plans for upgrading and rehabilitation of low income areas and with the sectoral programs of other entities.

(d) An additional mechanism (valorization) should be studied and introduced to finance the capital costs of basic infrastructure.

(e) The transfer of the operation of locally run water systems in small municipalities should be accomplished as rapidly as INAPA's capacities allow them to assume such responsibilities.

6. Secretaria de Estado de Obras Publicas y Comunicaciones (SEOPC)

SEOPC, through its Norms and Standards Division, is currently initiating investigations and studies necessary to prepare a comprehensive set of norms and standards to guide physical development. The Department of Environment and Natural Resources in the Office of the Technical Secretary to the President is also preparing guidelines to provide for the more effective utilization of traditional materials in the construction of housing while INVI and BNV/SAAP need to revise their norms and standards in order to relate housing production more effectively to demand. SEOPC and INVI should coordinate

their efforts as well as those of other entities in order to assure that the effective design and implementation of revised norms and standards for physical development reflect: (1) the needs and capacities to pay of low income households; and (2) maximum utilization of traditional building materials and labor intensive construction techniques.

7. Liga Municipal Dominicana (IAD) and the Municipalidades

It is extremely important that the capacities of the municipal governments be upgraded in the areas of planning, management, tax administration and collection, budgeting and maintenance in order that they are better able to support nationally sponsored housing and basic essential infrastructure programs. Particular emphasis should be given to those municipal development efforts which can assist in deflecting migration over the long term. In order to facilitate this process, the Liga Municipal Dominicana (LMD) must upgrade its own technical capacities and play a greater role than that of a simple agent of the national government at the local level.

Particular attention must be given to more effective coordination between the sectoral programs and the local government's activities (e.g., the programming for the installation and improvement of local streets should conform with local development guidelines and with the scheduled improvement programs of the entities responsible for other sectors including water supply, sanitation and street lighting).

8. Corporacion Dominicana de Electricidad (CDE)

As in the case of water supply, sanitation and local streets, street lighting generally benefits specific properties more than others and might well be financed through valorization. The problems associated with the supply of domestic electricity include the generation of sufficient supply to eliminate power failures and the identification and implementation of a tariff structure which covers the costs of CDE. Illegal users must be controlled as quickly as possible, and the public sector must meet its outstanding obligations in order to provide CDE with a satisfactory economic base.

D. POTENTIAL LENDING TERMS AND FINANCIAL MECHANISMS

1. Potential Lending Terms

The system of lending for housing should clearly be more responsive to the needs of lower income groups than in the past, but it should function without large government subsidies. The use of government resources from outside the housing sector to subsidize low income shelter programs is not recommended because of the high priority placed on growth in other sectors in the Plan Trienal de Inversiones Publicas 1980-82.

There are many inequities in the present system. The lowest income groups pay very high rates of interest to informal sector lenders and developers. Most of the beneficiaries of the moderate interest programs of the existing housing institutions are not the lowest income groups.

In order to avoid dependence on public subsidies for low income programs, there must be an incentive for the private sector and the autonomous government institutions to participate in low income lending. To achieve this, interest rates charged to users must reflect more closely the opportunity cost of capital and the risks and administrative costs involved. This will also give the private sector an incentive to participate as administrators and eventually as direct investors in low income programs.

Any recommendation of higher interest rates in some housing institutions must necessarily depend upon and be related to the overall interest rate structure for the Dominican economy. In this regard the national usury law which has restricted bank interest rates to 12 percent is undergoing review by the Banco Central. As long as some imports qualify for official exchange rates and there exists concern for maintaining the premium of the parallel market within a certain range of the official rate the government must influence the level of aggregate demand in order to avoid too rapid a growth in the demand for imports. The amount of expansion of domestic credit through the Central Bank lending must be tightly controlled to achieve this while additional deposits should be used to finance the private sector with commercial credit.

Significantly, the rapid rise in interest rates in the United States in recent years and the corresponding rapid increase in Dominican depositors in the Miami banking system as well as the rapid emergence of private non-bank finance institutions in the 1970s which offered domestic savers alternative savings choices at higher rates of interest (both formal and informal) have severely limited the growth of commercial bank savings depositors. In 1978, for example, private deposits in the commercial banks showed no change (a drop in real terms) while deposits in non-banking institutions rose by an estimated 20 percent.

The Central Bank monetary policy must include a relative disincentive for commercial banks to borrow from them, as well as an incentive for them to attract more deposits and encourage private and corporate savers to increase their deposits.

The appropriate combination of increases in the Central Bank rediscount rate and the appropriate increase in deposit rates are currently under study. If competition does exist within the commercial banking system, it is entirely possible that an official loan rate for commercial lending need no longer be set by the government. The modification of the usury law, however

(requiring Congressional action), in the immediate future would permit the interest rate structure to become an effective tool of government monetary policy.

At this point in time, the current state of flux in the national interest rate structure clearly makes it impossible for interest rates for housing to be firmly established or recommended. Potential housing solutions, as outlined in subsequent sections of this chapter have been predicated on the interest rates commonly charged by the respective participating entities for their ongoing programs. However, an upward revision in such rates in the near future is suggested for most of these entities. Interest rates in the 12 percent range (within today's overall interest rate structure) have been utilized for the proposed upgrading program. These do not include charges for loan administration and risk insurance which might further raise the costs. Low income families in many cases are already paying higher rates to private lenders; preliminary analysis for the urban upgrading program shows that low income households can be provided with greatly improved living conditions at such lending rates. (The alternative cost packages in terms of the financing terms are shown in Appendix IV.)

In any case, the upward revision of lending rates for participating entities such as BNV/SAAP should allow them to better maintain the real value of contributors' deposits and remove some of the inequities in the uses of those funds. Higher rates will also encourage housing finance institutions to adopt lower standards which more closely reflect the availability of land, materials and other resources.

If a more open interest rate market already existed, with the current lack of liquidity, there would be a tendency for interest rates to rise to encourage additional savings and ration available credit. In such a situation, with limited government subsidy resources available, financing could only be channeled to lower income households if they were paying market interest rates.

During any future periods of tight credit and higher overall interest rates, secondary market operations could be activated by the BNV. Housing bonds could be issued, the proceeds of which could be used as an additional source of capital for any housing fund.

The interest rate structure should also enable autonomous public institutions to avoid most of the threat of decapitalization from inflation. The rate structure should provide a small range within which interest rates could be differentiated for different groups. It is not considered desirable, however, for interest rates to be widely differentiated. If still lower payments are required for lower income groups, it would be possible to lengthen the payment terms and/or incorporate down payments.

Large government subsidies from other sectors are not desirable. However, if the rate structures required are considered too high for political reasons, a cross-subsidy mechanism could be devised within the housing sector which would effectively accomplish subsidies from upper and middle income groups to lower income groups.⁴ Within the context of emerging monetary policy, what is clearly needed is an adjustment of some rates within the housing sector to relate housing investment more closely to the long term cost of capital and to ensure the availability of future capital for housing programs serving all income groups. The rates should, of course, be reviewed and adjusted frequently, both in relation to other rates in the economy and current conditions in the housing sector. Overly rigid administered interest rates would run the risk of causing serious misallocations of resources as economic conditions change.

2. Housing and Urban Development Fund

In order to further the government's current efforts to meet the effective demand for housing, particularly from low income households, consideration should be given to the establishment of a Housing and Urban Development Fund to finance high priority projects such as sites and services and low cost housing, urban upgrading of squatter settlements, infrastructure expansion, or the expansion of critical building materials industries in cases where the public agencies cannot do so quickly enough within their basic budgets. While most of the financing required for infrastructure, housing and other purposes should be funded through the normal budgets of existing entities which are responsible for these functions, experience suggests that urgently needed projects often cannot be implemented quickly enough with regular funding. This is particularly true in projects that involve considerable inter-institutional coordination or those which involve relatively high risks in their financing. The proposed fund should be coordinated with, but distinct from, the existing financial mechanisms used by the BNV, the Savings and Loan Associations, CAASD, CDE, INVI and the other principal entities responsible for housing and urban development.

⁴ One possibility which should be the subject of further investigation is the potential use of the legal reserves as interest bearing deposits to complement other funds in the proposed Housing and Urban Development Fund. Pension funds of GODR employees might also be utilized if market rates of interest were being paid. The use of Housing Guarantee Program (HG) proposed in Part G of this chapter would also provide a source of "fungible" monies which can be integrated as an effective instrument of broader GODR monetary policy.

The purposes to be served by establishing a Housing and Urban Development Fund as a distinct financial mechanism are several. First, it will provide a device for centralizing funds and channeling them efficiently to high priority projects. Second, it will not complicate existing financial mechanisms by adding relatively high-risk financing to their responsibilities. Third, it will keep the accounting for high priority projects separate from other accounts. Fourth, the availability of this special funding should facilitate and encourage the participation of all principal executing entities in high priority projects. Fifth, it will provide evidence of strong political support and high visibility for such projects. Finally, it will be an important first step toward establishing a more efficient, centrally managed financing system.

The Housing and Urban Development Fund could be capitalized in part by the government. External funding could be used to the extent that this is considered desirable. The fund would also be authorized to receive deposits and loans from autonomous public institutions for which it would pay a rate of return equivalent to what they would receive elsewhere. When these institutions have excess resources, a part of which could be made available for the fund, they could be directed by monetary authorities to deposit their surpluses in the fund in the amounts deemed necessary.

Even without the utilization of surpluses in the finance institutions, if a market rate of interest would be paid the fund would be likely to continue receiving funding during periods with less liquidity than if it were solely dependent on allocations from the government budget. The maintenance of adequate flows of funds is a central purpose of the mechanism proposed.

The Banco Nacional de Reservas could serve as the initial fiduciary agent for the Housing and Urban Development Fund and channel funds from it into priority projects as directed by ONAPLAN which is responsible for urban and regional development policies.

The credits made from the fund could be insured by mortgage insurance which the Banco Nacional de la Vivienda is authorized to provide, or separate guaranty fund could be established within the fund and a premium for default risk paid into it. In any case, the deposits made by outside entities to the Housing and Urban Development Fund should be guaranteed by the government and recognized as contingent liability of the General Fund, if credit insurance should prove insufficient.

The centralization of funds proposed here could be an important first step for improving the flows of housing finance and simplifying the existing overlaps of functions among institutions in the sector. The private housing finance institutions could initially specialize as loan originators for other institutions. As experience grows and risks are reduced,

they could also lend more of their own resources for low income programs.

E. COMPLEMENTARY POLICY MEASURES TO SUPPORT IMPROVEMENTS
IN HOUSING FINANCE MECHANISMS

A major concern is to improve the urban real property tax system to help to achieve an adequate supply of urban land for housing and other purposes; to help to achieve more efficient urban land use; to augment public revenues to facilitate subsequent urban development; and to recover for public use some of the financial gains that result from public investment.

The second major concern here is to provide support for the construction industry in order to help to confront the problems that exist on the supply side.

Finally, support of the GODR's efforts to improve the planning, management and implementation of housing development policy is needed.

1. Urban Land Policy

New measures for property taxation and valorization are equally important instruments for achieving a more efficient and equitable use of urban land. Due to the Trujillo land holdings, large scale land banking is not necessary at this time.

Proposals for a tax on urban land are currently being considered by the government. A tax on the market value of urban land is not just an instrument for generating additional public revenues. It can also be used to encourage a more efficient use of urban land and it can be used to recover some of the benefits arising from public investment in urban development.

A more effective valorization system should be developed to recover the cost of public investment in urban infrastructure and to increase the supply of urbanized land. This is the type of land value increment charge used in Colombia. It could be used to finance such things as water, sewerage and local streets. The increases in the market value of land that result from the installation of adequate infrastructure usually are so much greater than the charges made through valorization that many landowners welcome projects financed in this way.

It is necessary to help low income households achieve more secure land tenure by modifying the existing regulations which affect contracts for the sale, purchase and leasing of land and by providing disadvantaged groups with legal assistance. Reductions in legal development standards should also enable low income groups to conform with the law and acquire access to adequate urban services. Increased legal representation for low income groups will help to mobilize urban land markets. Bienes Nacionales should participate fully in proposed low income

settlement upgrading projects seeking to provide more secure tenure to households located on public lands as part of more comprehensive programming efforts.

2. Construction Materials and Technologies

It is necessary to promote an expansion of the capacity of the construction materials industry and encourage improvements in construction technology to increase the overall supply of housing, particularly for low income groups. An immediate step in such a strategy is the full utilization of installed capacity. The public and private sectors should collaborate:

- (a) To identify, promote and prepare projects for the modern and artisanal production of construction materials, particularly those which involve technologies utilizing local materials and having high labor components.
- (b) To establish lines of credit for priority construction industry projects and construction companies.
- (c) To utilize industrial and artisanal projects as strategic instruments for increasing opportunities for employment in appropriate urban and, perhaps, rural areas.

F. INTER-INSTITUTIONAL COORDINATION AND PROGRAM MONITORING

As an initial step towards more effective inter-institutional coordination, it is recommended that immediate action be taken to establish a housing policy secretariat within INVI. Initially, it should be served by the permanent full-time planning staff group being developed in INVI. The housing secretariat would be responsible for formulation of housing policies and plans and for the evaluation of progress in the housing sector. Because this will require a range of expertise beyond the physical aspects of construction, the staff should eventually include economists, lawyers and social scientists as well as architects and physical planners (some of these might be seconded from ONAPLAN or other participating entities).

Two advisory task forces should be associated with the secretariat -- one for the coordination of housing finance and one for the coordination of the implementation of housing programs. These task forces would be composed of the representatives from the principal entities responsible for the finance and production of housing solutions.

The secretariat and its task forces would maintain contact with the private sector as required.

The secretariat staff group within INVI would be responsible for carrying out analyses, maintaining up-to-date housing market data and formulating recommendations. It would be responsible

also for the regular monitoring and evaluation of housing programs assisting in the coordination of activities of different entities within the housing sector and the coordination of housing sector activities with activities in other sectors at all stages in the planning and development cycle.

The development of housing programs in each area of the country should be coordinated with other activities through ONAPLAN or the institutes responsible for urban and regional development in each area.

Because of the complexity and importance of the housing sector, the establishment of an independent Ministry of Housing might eventually be considered. The mechanisms for immediate action described above might represent the first step towards the establishment of such a ministry. A separate ministry can evolve naturally after the housing secretariat has achieved sufficient experience and as need indicates.

The activities of the secretariat of housing should be closely connected with but separate from the planning and coordination of urban and regional development due to the magnitude of the housing sector and the distinct nature of urban and regional development.

G. THE PROPOSED HOUSING GUARANTEE PROGRAM (HG)

1. The Role of HG in National Housing Development

The overall policy and program recommendations presented in the previous sections of Chapter IV are presented in tabular form for brevity and clarity in Table 1 of the Executive Summary. It is anticipated that their fuller development and implementation would be carried out with both internal and external financing as deemed appropriate to the furtherance of the GODR's emerging housing policy and program. To provide a preliminary sense of the scheduling suggested, the recommendations are organized in three time periods:

- Immediate Action (1980)
- Medium Range Action (1981-85)
- Long Range Action (after 1985)

The USAID Housing Guarantee Program can play a significant role in assisting these efforts. It is therefore recommended that HG be utilized to finance the initiation of a variety of pilot efforts designed to stimulate the sustained and continuous improvement in the conditions of low income households while simultaneously providing the basis for the systematic development and strengthening of responsible participating institutions. Specifically, pilot HG projects should be planned and executed which:

- Serve the greatest number of low income families with the minimum investment possible while maximizing the preservation of the existing housing stock, both formal and informal.
- Facilitate the fullest possible integration of low income households within the development process in urban and rural areas through loans to upgrade housing and basic urban services and programs to legalize the land tenure in the lowest income settlements.
- Stimulate housing policies, plans and programs which are congruent with national urban/regional development strategies and with corresponding investment plans for basic essential infrastructure and services in order to achieve an efficient use of scarce resources.
- Promote the revision and adjustment of norms and standards for the design and construction of housing and basic essential services which are directly related to the needs and capacity to pay of the different social income groups (urban and rural), complementing the same with technical assistance as required.
- Stimulate the more effective use of local available materials in accordance with environmental considerations and most particularly with the needs and possibilities of user groups and their more effective participation in the elaboration, execution and administration of their housing.
- Promote the maximum feasible participation of existing human and financial resources of the proposed target groups through cooperative systems, mutual self help and integrated community/government and private efforts.
- Provide greater access to credit through the promotion of more flexible and accessible credit mechanisms in order to assure that low income households can obtain credit in accordance with their real needs and capacities to pay.

The mechanisms and changes proposed for institutional and financial development under HG should be accompanied by an implementation strategy and program which provides for the gradual assimilation of such changes and the opportunity to "educate" participating institutions and groups about the necessity to complete the required changes as well as to develop the technical personnel required. All mechanisms to be used should stimulate the development and maintenance of statistics and information necessary for the systematic formulation of policy.

2. The HG Program Focus

a. The spatial focus and urban/regional development in the Dominican Republic. Although fiscal and decision making power has historically been concentrated in the Central government, there are now some indications of decentralization. While the issues regarding a strategy for deconcentration are not as yet completely defined, the GODR has tended to address such issues on the basis of regional initiatives (multi-disciplinary approaches to sub-national regions).

In this regard, the government recently unveiled three new regional development plans: the operating plan for the southwest; the plan for rehabilitation of the south-central region; and a regional development strategy plan for the Cibao region. It has also made it clear that the future spatial sectoral emphasis of public expenditures will be rural.

This has been reflected in the three-year public sector development plan (1980-82) in which the government has stated its goals, specified its priorities, and presented its investment program. While the project content of the investment program has been worked out fully for 1980 (largely reflecting commitments arising from previous investment programs), only tentative and imprecise project identification has taken place for subsequent years. The allocation of expenditures based on the new priorities will require improvement in planning in these areas as well as the refinement of criteria for selecting and preparing projects where planning capability has already identified investment projects beyond the resources which will be available. Additionally, new resources must be identified which provide the potential to meet both sectoral as well as institutional development objectives.

With respect to the housing sector, the emphasis is on low cost housing solutions to meet the needs of the majority population. Priority has been placed on the rural areas where the deficit is accentuated in order to better conditions as well as to diminish the continued overwhelming urban/rural migration tendencies. Particular emphasis has been placed on those areas most effected by the tropical storms David and Frederick -- the south-central and southwest areas of the country.

b. HG and the USAID/DR plans and programs. The regional approach strategy for sectoral investment mentioned above is clearly reflected in activities of the USAID Mission to the Dominican Republic, which, over recent years, has been seeking to focus its programming on geographic areas whenever appropriate, while simultaneously treating those problems which require a broad approach, such as employment policy, interest rates, energy, small industries and housing policies within a national context. USAID has also continued to link specific sectoral program efforts and loans with integral efforts to strengthen responsible institutions with whom they are working.

Guaranty Program and ancillary grant programs. Furthermore, the proposed HG will permit the Mission and GODR to strengthen the role of Private Voluntary Organizations in housing activities because of their special outreach capabilities and their experience gained through the emergency housing projects funded by USAID and the GODR following the hurricane disaster.

The scope of this study does not permit the detailed identification of the points of interaction/coordination between HG and other Mission programs. However, it is clear the proposed HG could well be one of the primary tools for Mission and GODR efforts to develop multi-faceted integrated approaches to urban and rural developments.

Given the above situation, the Housing Guarantee Program offers potential not only as an additional source of financial resources for housing solutions but also as a tool to assist the government in: (1) the effective implementation of the incipient urban/regional development and deconcentration process; (2) the public and private institutional development process required in order to fully implement the government's emerging housing policies and programs; (3) the development of pilot housing solutions based on the real needs and capacities of the low income target population; and (4) increasing housing production as rapidly as possible while stimulating the overall construction sector.

In order to achieve this potential it is recommended that the HG program initially be focused on rural as well as urban residents residing within the high priority geographic regions of the country already identified by the government (see Map IV.1). The specific areas recommended to be covered by HG are:

- the Southwest Region (urban and rural)
- the South-Central Region (urban and rural)
- Santiago (urban)
- Santo Domingo (urban)

The cities of Santiago and Santo Domingo are included as primary focuses of the initial HG program based on the overwhelming numerical magnitude of low income households requiring housing and basic urban services in these two cities as well as the current limited capacity of absorption of the responsible institutions which need to be involved in HG programming outside of these centers. It is anticipated that major pilot efforts not only of the public sector but of the private sector as well (the private voluntary organizations and foundations, etc.) will be required in order to effectively meet both urban and rural demands in the Southwest and South-Central regions. In this regard, the extensive efforts of the government and the private sector institutions after the recent hurricane can be built upon by the use of HG financing, thus assisting to

In recent years, this strategy has been carried out through a series of sector loans in agriculture, health and education, with these efforts supplemented by other loans and grants generally aimed at improving the government's institutional capacity to reach the rural poor (e.g., rural roads maintenance and rehabilitation loan and the Dominican Development Foundation grant).

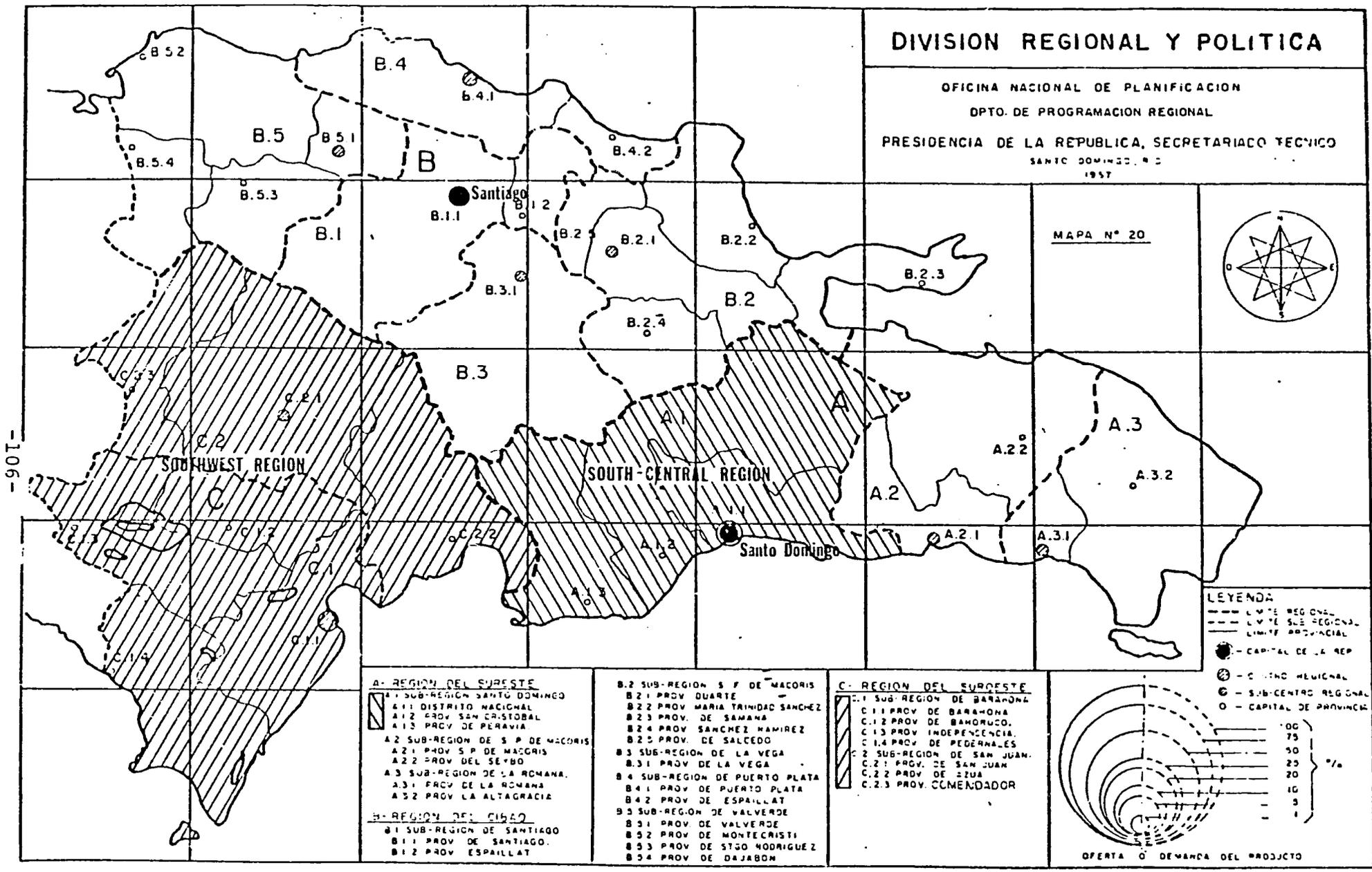
Since the Dominican Republic's high unemployment rate continues to be a cause of concern, small grant funded programs have also been initiated, primarily to improve the analytical base for decision making and planning for employment policies. The Mission plans to increase its involvement in vocational education, efforts to stimulate agro-industry and small businesses of all types and is considering a significant assistance effort directed toward small scale enterprises (US\$10 million). The Mission has recognized an expanding need to create jobs where the majority of the people are moving -- to the urban centers. They will, of course, require not only jobs, but shelter. Vocational education and small industrial development is considered critical. The expansion of home construction, through access to HG funds, is seen as a complementary and urgent need.

In addition, a Regional Rural Development Project has been proposed for fiscal 1982 to assist the government in developing more effective methods of dealing with poverty within the context of responding to local problems and developmental potentials. As that project develops, the Mission plans to explore possibilities of incorporating various aspects of decentralization of individual agency activities as well as of regionalization of multi-agency efforts.

While the identification of specific regions await further discussions with the GODR, the USAID Mission believes that an attractive area for an integrated regional program is the zone most affected by the hurricanes. The area is a subdivision of the "south-central" region defined by the GODR as extending from Azua east to San Pedro de Macoris. In addition to the area's need for developmental assistance to recover from hurricane destruction. Potential for development is great in this region. Its population is about 500,000, with 150,000 urban and 350,000 rural, providing a population size and balance for both rural and urban activities.

The Mission also is interested in sponsoring a series of studies on rural to urban migration patterns and the role of secondary cities in the country. These studies will be aimed at developing suggestions to alleviate the population burden faced by Santo Domingo and Santiago in meeting social needs.

This Shelter Sector Assessment and the recommended HG Pilot Projects will permit the Mission to frame integrated projects to promote both urban and rural development by using the Housing



DIVISION REGIONAL Y POLITICA

OFICINA NACIONAL DE PLANIFICACION

DPTO. DE PROGRAMACION REGIONAL

PRESIDENCIA DE LA REPUBLICA, SECRETARIADO TECNICO

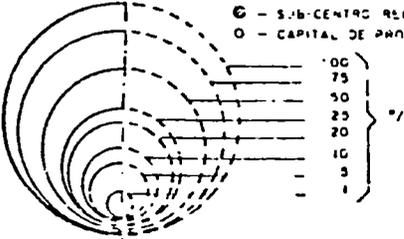
SANTO DOMINGO, R.D.
1957

MAPA N° 20



LEYENDA

- LIMITE REGIONAL
- - - LIMITE SUB REGIONAL
- LIMITE PROVINCIAL
- - CAPITAL DE LA REP
- ⊙ - CENTRO REGIONAL
- ⊙ - SUB-CENTRO REGIONAL
- - CAPITAL DE PROVINCIA



OFERTA O DEMANDA DEL PRODUCTO

A- REGION DEL SURESTE

- A.1 SUB-REGION SANTIAGO DOMINGO
 - A.1.1 DISTRITO NACIONAL
 - A.1.2 PROV. SAN CRISTOBAL
 - A.1.3 PROV. DE PERAVIA
- A.2 SUB-REGION DE S P DE MACORIS
 - A.2.1 PROV. S P DE MACORIS
 - A.2.2 PROV. DEL SEYBO
- A.3 SUB-REGION DE LA ROMANA
 - A.3.1 PROV. DE LA ROMANA
 - A.3.2 PROV. LA ALTAGRACIA

B- REGION DE SANTIAGO

- B.1 SUB-REGION DE SANTIAGO
 - B.1.1 PROV. DE SANTIAGO
 - B.1.2 PROV. ESPAILLAT

B.2 SUB-REGION S P DE MACORIS

- B.2.1 PROV. DUARTE
- B.2.2 PROV. MARIA TRINIDAD SANCHEZ
- B.2.3 PROV. DE SAMANA
- B.2.4 PROV. SANCHEZ MAMIREZ
- B.2.5 PROV. DE SALCEDO

B.3 SUB-REGION DE LA VEGA

- B.3.1 PROV. DE LA VEGA

B.4 SUB-REGION DE PUERTO PLATA

- B.4.1 PROV. DE PUERTO PLATA
- B.4.2 PROV. DE ESPAILLAT

B.5 SUB-REGION DE VALVERDE

- B.5.1 PROV. DE VALVERDE
- B.5.2 PROV. DE MONTECRISTI
- B.5.3 PROV. DE STO. RODRIGUEZ
- B.5.4 PROV. DE DAJABON

C- REGION DEL SUROESTE

- C.1 SUB-REGION DE BARAHONA
 - C.1.1 PROV. DE BARAHONA
 - C.1.2 PROV. DE BAHORUQUE
 - C.1.3 PROV. INDEPENDENCIA
 - C.1.4 PROV. DE PEDERNALES
- C.2 SUB-REGION DE SAN JUAN
 - C.2.1 PROV. DE SAN JUAN
 - C.2.2 PROV. DE AZUA
 - C.2.3 PROV. COMENDADOR

MAP IV.1

"institutionalize" the emergency coordination efforts to rebuild homes and infrastructure destroyed by David and Frederick.

c. The recommended target groups for the HG program.
The U.S. Congressional mandate for Housing Guarantee Programs requires that at least 90 percent of the target households to be served by the program are below the 50th percentile income level of the country. A 1976-77 household survey carried out in the Dominican Republic reveals substantial income differentials between urban and rural areas with the mean family income (unadjusted) amounting to about RD\$237 per month in urban areas, while reaching only about RD\$150 per month for rural households. These levels surprisingly enough coincide with estimated urban and rural poverty levels.

Clearly, given the current household income levels, the amount of income available for housing solutions is extremely limited, even in urban areas such as Santo Domingo. In both urban and rural areas, the amount of housing which can be afforded by low income households will depend significantly upon the personal self help and community labor which can be mobilized in support of housing efforts as well as the types of solutions proposed.

However, although income levels suggest a serious limitation for the HG program efforts to construct traditional housing for low income households, they should not be taken as meaning that no solutions are possible for such groups. Rather, the limited economic capacity present in both urban and rural areas suggest the need to develop solutions which are based on house improvement, settlement upgrading through enhanced basic essential services, and minimal low cost core housing solutions to meet effective demand. Although some such efforts have gone on in the past in the Dominican Republic (the Los Minas urbanization in Santo Domingo, the rural housing activities of the private voluntary organizations, etc.), the public sector is only starting to recognize their viability given the magnitude of needs and the limited public and personal household financial resources which can be made available to meet such needs without major government subsidies.

It is, therefore, recommended that the overall distribution of HG funds be weighted towards those households -- urban and rural -- which are below the 40th percentile of the income curve and that corresponding levels of solutions be designed which are appropriate to the capacity to pay of target households. Such a target group strategy should be carried out through demonstration or pilot project efforts which permit the GODR to realistically implement their expressed housing development objectives and strategies while identifying and developing the technical, institutional and financial mechanisms necessary to sustain the program on a continuing basis as part of the government's long term national urban and regional development efforts.

The distribution of the total financing to be made available should be roughly broken down along the following lines:

- 10 percent of total budget for 50th percentile and over;
- 30 percent of total budget between 40th and 50th percentile;
- 40 percent of total budget between 20th and 40th percentile;
- 20 percent of total budget for below the 20th percentile.

d. The proposed HG institutional development strategy. A considerable amount of time, effort and resources will be required to begin to produce the non-subsidized housing solutions in magnitude required by the effective demand of low income groups. Despite their recent policy decisions, neither INVI nor the BNV/SAAP is presently equipped to do this. Their lack of significant relevant experience will require that initial efforts serve as a testing ground for the development of the mechanisms and institutions required for a sustained long term effort which: (1) increases output of urban and rural shelter solutions at affordable costs; (2) mobilizes private savings through broadened housing credit and secure tenure; (3) reduces foreign exchange requirements while stimulating labor intensive construction methods and the use of local materials; and (4) develops effective credit and cost recovery mechanisms.

Although public and private sector responsibility for such long term programming will rest primarily with INVI and BNV/SAAP respectively, many more institutional resources exist which can and should be utilized. As a result of the emergency situation caused by Hurricane David and Tropical Storm Frederick, a wide variety of private voluntary organizations and foundations collaborated with the government's reconstruction efforts. These entities have since that time organized the Comision Inter-Institucional Para la Coordinacion de Programas de Viviendas (CICV)⁵ in an effort to institutionalize the potential role and contribution of such entities in the planning and implementation of low income housing solutions. (See Appendix III for a fuller description of the CICV and the post-hurricane efforts of the private voluntary organizations.) Other entities such as the

⁵ The entities comprising the Inter-institutional Commission include non-profit groups (FDD, Caritas, Care, Asociacion San Jose de Ocoa, Fundacion San Jose, Catholic Relief Services, Servicio Social de las Iglesias Dominicanas, etc.), government agencies (INVI, SEOPC, INAPA, CDE, Banco Central, IAD, etc.) and the Dominican Society of Engineers and Architects (CODIA).

Federacion Dominicana de Cooperativas (FEDOCOOP) have been providing credit for home improvement and small business to their membership through their more than 71 affiliate credit unions located in urban and rural areas throughout the country. INAVI has begun preliminary efforts to identify the needs of public sector employees with respect to housing and basic urban services -- needs which must be met by some entity.

If the public and private sector is to begin to meet the effective housing demand of low income households in urban and rural areas, all of these resources must be mobilized and effectively utilized. It is therefore recommended that the HG program incorporate these ongoing or planned public and private efforts within a series of demonstration or pilot programs which can provide the experience and develop the institutional capacity required on a sustained basis.

In order to maximize the potential positive impact of such pilot efforts, the institutional mechanisms and processes proposed to implement the HG strategy should:

- Reinforce as much as possible the potential of the existing government entities responsible for the provision of housing and basic essential infrastructure and services -- integrating such resources with potential private and community resources.
- Provide for the effective utilization of existing legislation and regulations, avoiding major changes which require large time periods to become effective.
- Provide opportunities for community education and participation as integral and basic elements of the implementation process.
- Provide greater and more explicit opportunities for the effective participation of private institutions and promoters through adequate incentives and controls.
- Promote the planning, programming and extension of multiple purpose projects which give promise of being more responsive to target group needs while providing real experience in inter-institutional coordination.

The following section of this report provides a preliminary identification and description of the types of pilot efforts which are proposed for financing under HG. The general project types include:

- Home improvement loans in urban and rural areas.
- Integrated upgrading for low income urban settlements.
- Minimal services urban and rural settlement programs.

- Low cost urban housing and urbanization.

At this stage the level of project identification should be considered as only indicative in nature. While many specific institutional questions remain unanswered, the specific institutions to be responsible for each project type are identified. The financial terms used in each case reflect current policies and would of course need to be reviewed and probably revised in future stages of project preparation activity. The purpose is to provide a focus for discussions and for decisions to be made by USAID and the GODR.

3. Specific HG Program Recommendations

The present section provides a preliminary description of the elements of the various program components⁶ which have been identified for potential HG financing.

The program elements which will be discussed include the following:

- Major housing solution types.
- Specific program components.
- Responsible/participating agencies.
- Geographic location of program component.
- Description of the target population
 - housing types served
 - household target population
 - target household income percentiles
 - target household income level
 - affordable monthly housing solution payment
- Alternative physical housing packages
- Estimated costs of physical housing packages

⁶ At this early date, no attempt has been made to include and cost specific recommendations with respect to alternative socioeconomic programs which would complement the physical HG program -- for example, community health programs, adult education classes or credits to small businesses. Likewise, direct GODR responsibilities linked to the HG program (i.e., provision of secure tenure in areas to be upgraded) have not been specified.

In oversimplified terms, the HG program can be defined on the basis of two major issues -- the need of the target population on the one hand and its financial capacity to afford the recommended solutions on the other. Target groups and their corresponding present living conditions have been discussed in a previous section (see Chapter II-A and, in particular, Table II-1). The present section will analyze the financing capacity of the designated target groups and subsequently will recommend affordable physical packages.

Tables IV-1 and IV-2 and the descriptions of the specific program components found at the conclusion of this section summarize the specific HG program recommendations. The analysis of the financing capacity of the designated target groups is based on three main sources: (1) the Dominican Republic Health Department's "Diagnos" Study; (2) PADCO's Urban Development Study of Santo Domingo; and (3) the Dominican Republic Central Bank National Household Income and Expenditure Study.⁷ The specific housing solution recommendations are developed on the basis of ongoing programs, proposals submitted to AID or on discussions held with AID and/or Dominican private and public officials. Where the study team's program recommendations directly incorporate ongoing or previously proposed programs, these particular programs (including financial terms) will be included without change and analyzed to determine their affordability by the target groups designated for the present HG program.⁸

Before embarking on specific program recommendations, the previously listed program elements will be described.

a. Major housing solution types. Two major housing solution types have been identified for the present HG program -- those programs which deal with improvements to existing plots or marginal settlements and those which recommend the development of new sites.

⁷ "Estudio de Poblacion y Salud, Encuesta 'Diagnos'", Secretaria de Estado de Salud y Asistencia Social, Santo Domingo, D.R., June 1974. "Estudio Sobre El Desarrollo Urbano de Santo Domingo," PADCO-Borrell Asociados, Santo Domingo, D.R., July 1978. "Primera Encuesta Nacional de Ingresos y Gastos de Las Familias en la Republic Dominicana, 1976-77," Banco Central de la Republica Dominicana-Departamento de Estudios Economicos, Santo Domingo, D.R., December 1979.

⁸ Alternatives -- land use, infrastructure or superstructure standards, financing terms, etc. -- to ongoing programs incorporated within the present HIG program will be discussed in Appendix IV.

TABLE IV-1

Potential Target Groups -- Affordable Monthly Payments

Item	"Standard" Single-Family			Rustic			Provisional			Occupied Buildings Constructed for New Housing			Batey		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Number of Households (000's)	493.4	278.1	215.3	406.4	106.2	300.2	7.9	5.1	2.8	2.1	1.2	0.9	7.2	0.2	7.0
Percentage of Total Households (%) ^{1/}	51.2	28.9	22.3	42.2	11.0	31.2	0.8	0.5	0.3	3.2	0.1	0.1	0.7	0.3	0.7
Potential Target Population (%)	---	5-15	35-45	---	40-50	70-80	---	25-35	70-80	---	5-15 ^{2/}	50-60	---	10-20 ^{2/}	30-4
Potential Target Household Population (000's)	89.3- 138.6	13.9- 41.7	75.4- 96.9	252.6- 293.3	42.5- 53.1	210.1- 240.2	3.3- 4.0	1.3- 1.8	2.0- 2.2	0.5- 0.7	0.1- 0.2	0.4- 0.5	2.1- 1.8	Negligible	2.1- 2.3
Population Income Percentile for Beneficiary (%)	---	Low- est 20%	Low- est 40%	---	Low- est 30%	Below 50%	---	Low- est 20%	Below 50%	---	Low- est 30%	Below 50%	---	Low- est 20%	Low- est 30%
Corresponding Household Income Level (RDS/month)	---	≤100	≤100	---	≤115	≤125	---	≤100	≤125	---	≤115	≤125	---	≤50	≤60
Affordable Monthly Housing Solution Payment (RDS/month)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Upgrading ^{3/}	---	≤6	≤5	---	≤11	≤6	---	≤8	≤6	---	≤11	≤6	---	≤6	≤4
New Solutions ^{4/}	---	≤20	≤15	---	≤27	≤19	---	≤20	≤19	---	≤27	≤19	---	≤16	≤12

Notes:

- ^{1/} Based on a total population of 962.8 thousand households.
- ^{2/} The major problem facing urban residents of dwellings constructed for non-housing purposes is a lack of living space-- 50 percent of all households live in 2 rooms or less.
- ^{3/} The major problem facing urban residents of batey is also a lack of living space -- 100 percent of all households live in 2 rooms or less.
- ^{4/} The major problem areas with this sub-type are a lack of living space and a deficiency in access to water supply and sanitary facilities.
- ^{5/} Affordable monthly payments for upgrading of existing plots should not exceed 5 percent of household income in rural areas and 3 percent in urban areas, respectively.
- ^{6/} Affordable monthly payments for new housing solutions should not exceed 15 percent of household income in rural areas and 20 percent in urban areas, respectively.

Source:

PADCO Elaboration based on Diapos Survey.

ITEM PROGRAM TYPE	SPECIFIC PROGRAM COMPONENT	RESPONSIBLE/PARTICIPATING AGENCIES	GEOGRAPHIC LOCATION						HOUSING TYPES SERVED	POTENTIAL TARGET POPULATION PRIORITY AREAS (SOUTH)			
			SOUTH CENTRAL REGION (REGION I)		SOUTHWEST REGION (REGION IV)		NATIONAL DISTRICT (SANTO DOMINGO)	SANTIAGO		(1) ESTIMATED HOUSEHOLD POPULATION (000'S)		(2) RECOMMENDED TARGET INCOME PERCENTILES (%)	
			URBAN	RURAL	URBAN	RURAL	URBAN	URBAN		URBAN	RURAL	URBAN	RURAL
IMPROVEMENT OF EXISTING PLOTS	CREDITS FOR HOME IMPROVEMENTS	FEDOCOOP INAVI	✓	-	✓	-	-	-	-	↑	↑	LOWEST 25 PERCENT	-
	REVOLVING FUND FOR HOME IMPROVEMENTS	INVI/INTEGRATED COMMISSION OF PRIVATE GROUPS	-	✓	-	✓	-	-	-	↑	↑	-	LOWEST 50 PERCENT
	INTEGRATED UPGRADING OF MARGINAL AREAS	INVI; BIENES NACIONALES; CAASD, IHAPA, AYUNTAMIENTOS	✓	-	✓	-	✓	✓	-	↑	↑	LOWEST 25 PERCENT	-
NEW HOUSING SOLUTIONS	REVOLVING FUND FOR MINIMAL HOUSING SOLUTIONS	INVI/INTEGRATED COMMISSION OF PRIVATE GROUPS	-	✓	-	✓	-	-	-	4.1-6.8	37.9-44.6	-	LOWEST 50 PERCENT
	PILOT PROGRAM FOR MINIMAL HOUSING	FUNDACION SAN JOSE	✓	-	-	-	✓	-	-	-	-	10-22	-
	PILOT RURAL SETTLEMENTS PROGRAM	FUNDACION DOMINICANA DE DESARROLLO, BANCO NACIONAL DE LA VIVIENDA	-	-	-	✓	-	-	-	-	-	-	-
	LOW-COST HOUSING	BANCO NACIONAL DE LA VIVIENDA	-	-	-	-	✓	-	-	↓	↓	-	-

NOTES:

*BASED ON PERCENTAGES OR POTENTIAL TARGET POPULATION CONTAINED IN TABLE II-2 AND ON THE TOTAL NUMBER OF HOUSEHOLDS FOUND IN EACH HOUSING TYPE BY URBAN/RURAL (R., RUSTIC, ETC.) FOR THE TWO PRIORITY REGIONS ANALYZED FROM THE DOMINICAN REPUBLIC HEALTH DEPARTMENT STUDY "DIAGNOS".

*BASED ON THE ANALYSIS OF SANTO DOMINGO'S MARGINAL SETTLEMENTS FROM THE 1978 PADCO STUDY "ESTUDIO SOBRE EL DESARROLLO URBANO DE SANTO DOMINGO".

*BASED ON AN ARTICLE WHICH APPEARED IN THE SANTO DOMINGO NEWSPAPER EL CARIBE ENTITLED "BAJOS DE SANTIAGO CARECEN SERVICIOS FUNDAMENTALES".

*BASED ON THE APPLICATION OF COUNTRYWIDE INCOME DECILES FOR THE PRIORITY TARGET HOUSING TYPES TO BE SERVED BY THE HIG PROGRAM. (SEE TABLE IV-1).

*BASED ON THE INCOME PERCENTILES CONTAINED IN THE PRECEDING COLUMN AND ON INCOME DISTRIBUTION DATA CONTAINED IN THE DOMINICAN REPUBLIC CENTRAL BANK STUDY "PRIMERA ENCUESTA NACIONAL DE INGRESOS Y GASTOS DE LAS FAMILIAS EN LA REPUBLICA DOMINICANA" OF 1976-1977.

*AFFORDABLE MONTHLY PAYMENTS FOR UPGRADING OF EXISTING PLOTS SHOULD NOT EXCEED 5% OF HOUSEHOLD INCOME IN RURAL AREAS AND 8% IN URBAN AREAS, RESPECTIVELY. AFFORDABLE MONTHLY PAYMENTS FOR NEW HOUSING SOLUTIONS SHOULD NOT EXCEED 15% OF HOUSEHOLD INCOME IN RURAL AREAS AND 20% IN URBAN AREAS, RESPECTIVELY.

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**TABLE IV-2
AFFORDABILITY ANALYSIS BY PRIORITY AREA OF POTENTIAL TARGET POPULATION
BY HIGH LOAN DOMINICAN REPUBLIC**

SANTIAGO	POTENTIAL TARGET POPULATION SERVED BY HIGH PROGRAM IN PRIORITY AREAS (SOUTH CENTRAL REGION)										POTENTIAL TARGET POPULATION SERVED BY HIGH PROGRAM IN PRIORITY AREAS (SOUTHWEST REGION)											
	HOUSING TYPES SERVED	DESCRIPTION OF TARGET POPULATION										HOUSING TYPES SERVED	DESCRIPTION OF TARGET POPULATION									
		(1) ESTIMATED HOUSEHOLD POPULATION (000'S)		(2) RECOMMENDED TARGET INCOME PERCENTILES (%)		(3) TARGET HOUSEHOLD INCOME LEVEL (PES. MONTHLY)		(4) AFFORDABLE MONTHLY HOUSING SOLUTIONS PAYMENT (PES. MONTHLY)					(1) ESTIMATED HOUSEHOLD POPULATION (000'S)		(2) RECOMMENDED TARGET INCOME PERCENTILES (%)		(3) TARGET HOUSEHOLD INCOME LEVEL (PES. MONTHLY)		(4) AFFORDABLE MONTHLY HOUSING SOLUTIONS PAYMENT (PES. MONTHLY)			
		URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL		URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL		
-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL	↑	↑	LOWEST 25 PERCENT	-	≤ 85	-	≤ 7	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL	↑	↑	LOWEST 25 PERCENT	-	≤ 75	-	≤ 6			
-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL			-	LOWEST 50 PERCENT	-	≤ 110	-	≤ 6	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL			-	LOWEST 50 PERCENT	-	≤ 95	-			
✓	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL			LOWEST 25 PERCENT	-	≤ 85	-	≤ 7	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL			LOWEST 25 PERCENT	-	≤ 75	-	≤ 6			
-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES	4.1-6.8	37.9-44.6	-	LOWEST 50 PERCENT	-	≤ 110	-	-	-	≤ 17	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES	3.7-5.5	17.7-21.0	-	LOWEST 50 PERCENT	-	≤ 95	-			
-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES			10-22	-	30-75	-	-	6-15'	-	-	N.A.			-	-	-	-	-			
-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES			-	-	-	-	-	-	-	-	N.A.			-	LOWEST 50 PERCENT	-	≤ 95	-			
-	N.A.			-	-	-	-	-	-	-	-	N.A.			-	-	-	-	-			

↑ COUNTRYWIDE INCOME DECILES FOR THE PRIORITY TARGET BY THE HIGH PROGRAM. (SEE TABLE IV-1).

*AS PART OF ITS MANDATE, THE FUNDACION "SAN JOSE" WISHES TO SERVE THOSE HOUSEHOLDS WITH MONTHLY INCOMES BETWEEN RD\$6 AND RD\$15. THIS DESIRE DEFINES THE RELATED INFORMATION CONTAINED IN COLUMNS 2 AND 3.

↑ TYPES CONTAINED IN THE PRECEDING COLUMN AND ON INCOME 3 IN THE DOMINICAN REPUBLIC CENTRAL BANK STUDY "PRIMERA FASE DE LOS GASTOS DE LAS FAMILIAS EN LA REPUBLICA DOMINICANA," OF

*AS A RESULT OF A DECISION TAKEN AT A LOW-COST HOUSING SEMINAR, THE BANCO NACIONAL DE LA VIVIENDA HAS DECIDED TO MAKE A CONCERTED EFFORT TO LOWER ITS FINANCING POLICIES TO SERVE THOSE HOUSEHOLDS IN SANTO DOMINGO EARNING BETWEEN RD\$200 AND 250 PER MONTH. THIS NEW GOAL, THEREFORE, STRUCTURES THE INFORMATION CONTAINED IN COLUMNS 2 AND 4.

↑ TYPES FOR UPGRADING OF EXISTING PLOTS SHOULD NOT EXCEED 5% IN RURAL AREAS AND 8% IN URBAN AREAS, RESPECTIVELY. AFFORDABLE HOUSING SOLUTIONS SHOULD NOT EXCEED 15% OF HOUSEHOLD INCOME IN URBAN AREAS, RESPECTIVELY.

SOURCE: PADCO, ELABORATION OF THE ABOVE MENTIONED MATERIAL.

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TABLE IV-2

AFFORDABILITY ANALYSIS BY PRIORITY AREA OF POTENTIAL TARGET POPULATION SERVED BY HIGH LOAN DOMINICAN REPUBLIC

PROGRAM IN PRIORITY AREAS (D.N. -)	POTENTIAL TARGET POPULATION SERVED BY HIGH PROGRAM IN PRIORITY AREAS (SOUTHWEST REGION)												POTENTIAL TARGET POPULATION SERVED BY HIGH PROGRAM IN PRIORITY AREAS (D.N. -)						
	POPULATION				HOUSING TYPES SERVED	DESCRIPTION OF TARGET POPULATION								HOUSING TYPES SERVED	DESCRIPTION OF TARGET POPULATION				
	AFFORDABLE MONTHLY HOUSING SOLUTION PAYMENT (RD\$/MONTH)		ESTIMATED HOUSEHOLD POPULATION (1000'S)			RECOMMENDED TARGET INCOME PERCENTILES (%)		TARGET HOUSEHOLD INCOME LEVEL (RD\$/MONTH)		AFFORDABLE MONTHLY HOUSING SOLUTION PAYMENT (RD\$/MONTH)		ESTIMATED HOUSEHOLD POPULATION (1000'S)			RECOMMENDED TARGET INCOME PERCENTILES (%)				
	UPGRADING	NEW SOLUTION	URBAN	RURAL		URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL		URBAN	RURAL			
57	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL	↑	↑	LOWEST 25 PERCENT	-	≤ 75	-	≤ 6	-	-	-	N.A.	-	-	-	-
-	≤ 6	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL	↑	↑	-	LOWEST 50 PERCENT	-	≤ 95	-	≤ 5	-	-	N.A.	-	-	-	-
57	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL	↑	↑	LOWEST 25 PERCENT	-	≤ 75	-	≤ 6	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC AND PROVISIONAL FOUND IN MARGINAL SETTLEMENT WITH AND WITHOUT ACCESS	22.5-27.5	-	LOWEST 25 PERCENT	-	
-	-	-	≤ 17	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTION FOR NON-HOUSING USES	↑	↑	3.7-5.5	17.7-21.0	-	LOWEST 50 PERCENT	-	≤ 95	-	-	≤ 14	N.A.	-	-	-
-	-	6-15'	-	N.A.	↑	↑	-	-	-	-	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES	4.0-5.0	-	2-7	-	
-	-	-	-	N.A.	↑	↑	-	LOWEST 50 PERCENT	-	≤ 95	-	-	-	≤ 14	N.A.	-	-	-	-
-	-	-	-	N.A.	↑	↑	-	-	-	-	-	-	-	"STANDARD" SINGLE-FAMILY, RUSTIC, PROVISIONAL, OCCUPIED BLDGS. CONSTRUCTED FOR NON-HOUSING USES	7.5-10.0	-	38-49	-	

DATE, THE FUNDACION "SAN JOSE" WISHES TO SERVE THOSE HOUSEHOLDS WITH INCOME BETWEEN RD\$100 AND RD\$150. THIS DESIRE DEFINES THE RELATED INFORMATION IN COLUMNS 2 AND 3.

DECISION TAKEN AT A LOW-COST HOUSING SEMINAR. THE BANCO NACIONAL DE DOMINICANA WANTED TO MAKE A CONCERTED EFFORT TO LOWER ITS FINANCING POLICIES TO HOUSEHOLDS IN SANTO DOMINGO EARNING BETWEEN RD\$200 AND 250 PER MONTH. THE ABOVE STRUCTURES THE INFORMATION CONTAINED IN COLUMNS 2 AND 4.

REPRODUCTION OF THE ABOVE-MENTIONED MATERIAL.

POTENTIAL TARGET POPULATION SERVED BY HIG PROGRAM IN PRIORITY AREAS (D.N.—SANTO DOMINGO)										POTENTIAL TARGET POPULATION SERVED BY HIG PROGRAM IN PRIORITY AREAS (SANTIAGO)										
DESCRIPTION OF TARGET POPULATION										DESCRIPTION OF TARGET POPULATION										
(1)		(2)		(3)		(4)				HOUSING TYPES SERVED	(1)		(2)		(3)		(4)			
ESTIMATED HOUSEHOLD POPULATION (1990)		RECOMMENDED TARGET INCOME PERCENTILES (%)		TARGET HOUSEHOLD INCOME LEVEL (RDS/MONTH)		AFFORDABLE MONTHLY HOUSING SOLUTION PAYMENT (RDS/MONTH)					ESTIMATE HOUSEHOLD POP (1990)		RECOMMENDED TARGET INCOME PERCENTILES (%)		TARGET HOUSEHOLD INCOME LEVEL (RDS/MONTH)		AFFORDABLE MONTHLY HOUSING SOLUTION PAYMENT (RDS/MONTH)			
URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	UPGRADING		NEW SOLUTION			URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	UPGRADING		NEW SOLUTION	
						URBAN	RURAL	URBAN	RURAL							URBAN	RURAL	URBAN	RURAL	
-	-	-	-	-	-	-	-	-	-	N.A.	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	N.A.	-	-	-	-	-	-	-	-	-	-
-	LCWEST 25 PERCENT	-	≤ 150	-	≤ 12	-	-	-	-	STANDARD SINGLE FAMILY, PUSTIC AND PROVISIONAL FOUND IN 5 QUADRANT SETTLEMENTS OF THE CITY'S NORTH AND NORTHWEST ZONES	7.5-10.0	-	LOWEST 25 PERCENT	-	≤ 125	-	≤ 10	-	-	-
-	-	-	-	-	-	-	-	-	-	N.A.	-	-	-	-	-	-	-	-	-	-
-	2-7	-	30-75	-	-	-	-	6-15	-	N.A.	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	N.A.	-	-	-	-	-	-	-	-	-	-
-	38-49	-	200-250*	-	-	-	-	40-50	-	N.A.	-	-	-	-	-	-	-	-	-	-

b. Specific program components and responsible participating agencies. Under the broad category of improvement to existing plots, three specific program components have been identified: (1) Credits for Home Improvements -- Federacion Dominicana de Cooperativas (FEDOCOOP) and the Instituto Nacional de Auxilios y Viviendas (INAVI); (2) Revolving Fund for Home Improvements -- Instituto Nacional de la Vivienda (INVI) and the interinstitutional commission of non-profit groups; and (3) Integrated Upgrading of Marginal Areas -- INVI, Bienes Nacionales, CAASD, INAPA, etc.

The category of new housing solutions would contain four specific programs: (1) Revolving Fund for New Housing Solutions -- INVI and the interinstitutional commission of non-profit groups; (2) Pilot Program for Minimal Housing -- Fundacion San Jose; (3) Pilot Rural Settlements Program -- Fundacion Dominicana de Desarrollo in conjunction with the Banco Nacional de la Vivienda; and (4) Low Cost Housing -- Banco Nacional de la Vivienda.

In order to simplify the analysis at this stage in project development, the two similar but separate Credits for Home Improvements programs will be discussed as one program. The two new solution programs -- Revolving Fund and Pilot Rural Settlements -- will be handled in a similar manner. Therefore, the present study will describe five housing packages.

c. Geographic location of program components. Four areas of the Dominican Republic have been identified as priority areas for program development under the present HG program. They are the Southwest and South-Central Regions and the populous urban areas of Santo Domingo and Santiago. The four priority areas have in turn been divided into their urban and rural components.

d. Description of the target population. The three previously cited sources serve as the basis for the description of the target population served by the HG program. While no attempt has been made to update the cited source material at this time, the order of magnitude estimates of shelter need and affordability derived from this information is considered adequate at this stage in project development. The following five items are used to describe the target population:

(i) Household types served -- The households residing in the different housing types identified in Table II-2 and described in Chapter II serve as the basis for the HG program target groups. Once again, in order to simplify the analysis at this early stage in project development, all housing types deemed suitable for some kind of "improvement program" will be grouped together for discussion purposes, as will all types considered appropriate for a "new solution." Due to its small size and special characteristics, the housing type "batey" will not be considered for inclusion in the present HG program.

(ii) Household target population -- The household target populations to be served by the HG program in the four priority areas are estimated using the country-wide potential target population percentages contained in Table IV-1 and the regional population statistics from the "Diagnos" study.⁹

(iii) Target household income percentiles -- The household income percentiles to be served by the HG program have been approximated on the basis of the percentage of households residing in "sub-standard" housing within the designated target housing types. What has been assumed is that the neediest households physically are also the poorest.

(iv) Target household income level -- The target household income level is determined on the basis of the income percentiles calculated in the preceding step and the income distributions generated as a result of the Central Bank's 1976-77 Household Income Survey.

(v) Affordable monthly housing solution payment -- For the purposes of the present analysis, affordable monthly payments for upgrading of existing plots should not exceed 5 percent of household income in rural areas and 8 percent in urban areas, respectively. Also, affordable monthly payments for new housing solutions should not exceed 15 percent of household income in rural areas and 20 percent in urban areas, respectively.

e. Alternative physical housing packages. In addition to the affordability analysis described in the preceding steps, each physical housing package will briefly outline a recommended alternative with respect to infrastructure and superstructure norms, land use standards, plot development objectives and, in the case of credits for home improvements, specific improvement items.

f. Cost estimates of affordable housing packages. The five recommended physical housing packages will be costed and analyzed with respect to their affordability by the designated target group. The new housing solution packages will be analyzed using a model which defines the interrelationships between land

⁹ Since none of the 'Diagnos' regions correspond very well to the urban areas of Santo Domingo and Santiago, other sources have been used to estimate the target populations of these two areas (see footnotes 2 and 3 in Table IV-2).

use parameters, unit construction costs, financing terms and affordable monthly payments.¹⁰

$$d = \frac{10,000i(e+c_1+c_2)}{\frac{f \left[1 - \left(1 + \frac{i}{1200} \right)^{-12N} \right]}{\frac{i}{1200} \left(1 - \frac{h}{100} \right)} - (a_1b + a_2 + a_3 + \frac{a_4}{y})}$$

and

$$j = \frac{100i(100-m_1-p)}{d} - m_2i$$

where:

- d = gross residential density (persons/ha.)
- j = plot size (m²)
- f = affordable monthly housing solution payment (RD\$/month)
- e = raw land cost (RD\$/m²)
- c₁ = on-site infrastructure cost (RD\$/m²)
- c₂ = off-site infrastructure cost (RD\$/m²)
- a₁ = superstructure cost (RD\$/m²)
- a₂ = plot connection costs (RD\$/m²)
- a₃ = cost of shared sanitary facilities (RD\$)
- a₄ = cost of community facilities (RD\$)

¹⁰ "A Model for Analyzing Alternatives in Urban Project Design," Center for International Training and Research in Urban Development (CITRUD), Washington, D.C., December 1978.

- b_1 = area of superstructure (m^2)
- y = number of families sharing community facilities
- i = number of persons per plot (persons/plot)
- h = downpayment (%)
- I = annual interest rate (%)
- N = repayment period (no. of years)
- m_1 = percent of total area for open space (%)
- m_2 = number of square meters of land used for community facilities per person (m^2 /person)
- p = percent of total area used for circulation (%)

In the case of loans to improve existing plots, affordable monthly household payments for alternative physical housing packages can be calculated using the following ordinary annuity equation:

$$f = \frac{K}{\frac{1 - (1+I/1200)^{-N}}{I/1200}}$$

where:

- k = total cost of physical credit package to be recovered per household (RD\$)
- f = as previously defined
- I = as previously defined
- N = as previously defined

The following pages contain the detailed descriptions of the five recommended "improvement" and "new solution" housing packages.

H. RECOMMENDED PHYSICAL HOUSING PACKAGES

1.

Name of Program: IMPROVEMENT OF EXISTING PLOTS
INTEGRATED UPGRADING OF MARGINAL AREAS

Description: Improvements in the existing living environment through the provision of secure tenure; improved or new on-site and off-site infrastructure including access and

circulation roads, water supply, sanitation, electricity and refuse collection; community facilities including schools, health and community centers; and building materials loans.

Source of Program

Description: Discussions held with officials from INVI and other related agencies.

Responsible/Participating

Agencies: Instituto Nacional de la Vivienda (INVI); Bienes Nacionales; CAASD; INAPA; etc.

Geographic Location: Urban areas of four priority regions.

Proposed Income

Percentiles of Target

Population: Lowest 25 percent (all target areas).

Monthly Household

Income Level of Target

Population: Less than RD\$85 (South-Central Region); less than RD\$75 (Southwest Region); less than RD\$150 (Santo Domingo); less than RD\$125 (Santiago).

Affordable Monthly

Household Payment:

Less than RD\$7 (South-Central Region); less than RD\$6 (Southwest Region); less than RD\$12 (Santo Domingo); less than RD\$10 (Santiago).

Proposed Financing

Terms:

Downpayment = 0 percent; interest rate = 12 percent; repayment period = 10 years.

Total Project Cost

Recoverable per

Household:

Approximately RD\$400 per household.

PRELIMINARY IMPROVEMENT STANDARDS

Infrastructure Norms:

(i) Potable water -- Improvements in access to piped municipal water supply through the provision of public standpipes and fire hydrants. Standpipes would be provided within 100 meters of all plots; each standpipe would serve approximately 150 persons. Household water connections would be facilitated where distribution lines exist.

(ii) Wastewater disposal -- Where individual pit latrines presently exist and where soil conditions and housing unit densities permit, the pit latrines should be upgraded in accordance with World Health Organization (WHO) standards by the provision of water-sealed slabs. In areas not suited for individual pit latrines, public toilets with washing and bathing

facilities are recommended. Two four-place public facilities would be provided per hectare at a distance of 20-30 meters from the individual plots. Each facility would serve approximately 200 persons or 35 households.

(iii) Streets and footpaths -- All primary access and circulation streets and footpaths would be surfaced, while secondary means of circulation would be graded and aligned.

(iv) Drainage -- No specific recommendations.

(v) Electricity -- Consolidate existing electrical network through the provision of additional local distribution lines. Public street lighting would be installed on all primary streets and footpaths. House connections would be facilitated where appropriate.

(vi) Solid waste -- Communal collection system whereby the individual resident would deliver his/her waste to a centrally located storage facility from which the wastes are regularly removed for off-site disposal.

Land Use Standards:

(i) Parks and open space -- maintain existing levels.

(ii) Circulation system (streets and footpaths) -- maintain existing levels.

(iii) Community facilities -- Schools and health clinics would be provided where required. Primary schools would be provided on the basis that 20 percent of the total population is of primary school age. 3.00m^2 /pupil would be provided in the form of constructed area with 30-40 pupils per classroom. Health clinics of 250m^2 constructed area on 500m^2 plots are recommended. Both types of facilities would be provided with water and electrical connections. Given the utility connections, either type of facility could be used as a community center during off-hours.

Home Improvement

Loans:

The integrated upgrading program would include the provision of RD\$200 per household to be used for the purchase of building materials for home improvements or for the payment of utility connection costs. (See next section on Home Improvement Loans for specific improvement packages.)

Observations:

The proposed Integrated Upgrading package would cost approximately RD\$400 per household. No downpayment would be required from program beneficiaries. Total project costs would be equitably prorated on a household basis. Individual household project costs would be repaid on a monthly basis at 12 percent interest over 10 years. Using the ordinary

annuity equation, monthly payments are calculated at RD\$5.75. This monthly payment would be affordable by the target groups in all four priority regions. Due to greater affordable monthly payments on the part of target households in Santo Domingo and Santiago, the repayment period there could be shortened to five years. This shortened repayment period would have the effect of increasing monthly payments to RD\$8.90. This monthly sum, however, is well within the affordable range of Santo Domingo and Santiago target households.

2.

Name of Program: IMPROVEMENT OF EXISTING PLOTS
HOME IMPROVEMENT LOANS

Description: A system of credits for home improvements to be loaned to affiliates of the Federacion Dominicana de Cooperativas (FEDOCOOP) member cooperatives, of the Instituto de Auxilios y Vivienda (INAVI) or to members of one of the non-profit groups under the organizational leadership of the Instituto Nacional de la Vivienda (INVI).

Source of Program

Description: Discussions held with FEDOCOOP, INAVI and INVI officials and information contained in the August 1979 FEDOCOOP publication "30 Aniversario FEDOCOOP" and in the CENICC Study (see footnote next page).

Responsible/Participating

Agencies: (1) FEDOCOOP, INAVI; (2)
INVI/Interinstitutional Commission of non-profit groups (ICCV).

Geographic Location: (1) FEDOCOOP, INAVI -- urban areas of South-Central and Southwest Regions; (2) INVI -- rural areas of South-Central and Southwest Regions.

Proposed Income

Percentiles of Target

Population: Lowest 25 percent (urban areas of South-Central and Southwest Regions); lowest 50 percent (rural areas of South-Central and Southwest regions).

Monthly Household

Income Level of Target

Population: Less than RD\$85 (urban/South-Central); less than RD\$75 (urban/Southwest); less than RD\$110 (rural/South-Central); less than RD\$95 (rural/Southwest).

Affordable Monthly

Household Payment:

Less than RD\$7 (urban/South-Central); less than RD\$6 (urban/Southwest); less than RD\$6 (rural/South-Central); less than RD\$5 (rural/Southwest).

Proposed Financing

Terms:¹¹ Downpayment = 0 percent; interest rate = 4-6 percent; repayment period = 5 years.

Average Amount of Home Improvement Recoverable per Household: Approximately RD\$250-350.

Alternative Loan Components: Determined on the basis of 30-40m² unit.

<u>Materials to Improve Physical Structure</u>	<u>Estimated Cost</u>
Concrete floor (cement, gravel, sand)	75
Cement blocks for exterior walls (blocks, cement, sand)	225
Roof trusses (lumber, nails, wood screws)	300
Zinc roofing panels (including nails)	175
Doors and windows (5 windows and 2 doors, with hinges, nails and frames)	110
15m ² kitchen/dining room addition (including cement blocks, door, window, concrete floor)	400
Pit latrine	50
Utility connections:	
water connection with meter	90
sewerage connection (including excavation, installation and backfill)	80
electrical connection with meter	n.a.

Observations: A hypothetical home improvement loan could take the following form:

¹¹ Given the fact that of the two recommended loans for home improvement programs, the FEDOCOOP program is ongoing, the proposed financing terms are based on informal discussions with FEDOCOOP officials. Historically, however, a 1979 survey of the Dominican cooperative movement prepared by the Centro Nacional de Investigaciones Cientificos y Consultoria (CENICC) reveals that financing conditions in zones corresponding to the selected priority regions averaged 12 percent for interest rates and two years for repayment periods. It was also noted that a certain savings deposit (ranging from 3-10 percent of loan) was required as a loan condition.

Materials to cement an earthen floor	RD\$ 75
Replace an existing roof of native materials (cane, yagua, etc.) with one of zinc panels	RD\$175
Connect plot into existing municipal water distribution system	<u>RD\$ 90</u>
TOTAL	RD\$340

Assuming the financial terms mentioned previously -- no downpayment, 5 percent annual interest rate and a repayment period of 5 years -- a RD\$340 credit would be repaid in equal monthly payments of RD\$6.42. With the exception of rural areas in the Southwest Region, this monthly payment is within the affordable range of the other household target groups.

3.

Name of Program: NEW HOUSING SOLUTIONS
PILOT RURAL HOUSING

Description: Using self-help methods, a simple housing unit (as presently conceived, not including any provision for the development of infrastructure) would be provided from materials readily available in rural areas.

Source of Program

Description: Discussions held with interested officials and the FDD September 1978 document "Modelo de Proyectos a Ser Financiados al Traves del Proyectos de Desarrollo Rural."

Responsible/Participating

Agencies: (1) Fundacion Dominicana de Desarrollo in conjunction with the Banco Nacional de la Vivienda; (2) INVI/Interinstitutional Commission of non-profit groups.

Geographic Location: (1) FDD -- rural areas of Southwest Region; (2) INVI -- rural areas of South-Central and Southwest Regions.

Proposed Income

Percentiles of Target

Population: Lowest 50 percent (all target areas).

Monthly Household Income

Level of Target

Population: Less than RD\$110 (rural/South-Central); less than RD\$95 (rural/Southwest).

Affordable Monthly

Household Payment: Less than RD\$17 (rural/South-Central);
less than RD\$14 (rural/Southwest).

Proposed Financing

Terms:¹² Downpayment (closing costs) = 2 percent;
interest rate = 8 percent; repayment period = 5 years.

Total Project Cost

Recoverable per House-
hold and the Associated

Downpayment: Total project cost/household = maximum of
RD\$1,200; downpayment = RD\$24.

PRELIMINARY URBANIZATION STANDARDS

Infrastructure Norms:

- (i) Potable water -- No specific recommendations.
- (ii) Wastewater disposal -- Simple pit latrine.
- (iii) Streets and footpaths -- No specific recommendations.
- (iv) Drainage -- No specific recommendations.
- (v) Electricity -- No specific recommendations.
- (vi) Solid waste -- No specific recommendations.

Land Use Standards:

- (i) Parks and open space -- No specific recommendations.
- (ii) Circulation (streets and footpaths) -- No specific recommendations.
- (iii) Community facilities (schools, health clinics, etc.)
-- No specific recommendations.

Plot Development: A simple house, kitchen/dining area and
pit latrine constructed by self-help methods from readily
available local materials.

Observations: The total recoverable project costs per
household in combination with the recommended financing terms
yield a household monthly payment of approximately RD\$24.50.

¹² The financing costs for the Fundacion's Rural Housing Program
are extracted from a September 1978 FDD document entitled "Modelo
de Proyectos a Ser Financiados al Traves del Proyecto de
Desarrollo Rural."

This monthly payment greatly exceeds the target household affordability in all priority areas (less than RD\$17 in the rural South-Central Region and less than RD\$14 in the rural Southwest Region). In addition, the minimal superstructure that is provided as the main component of the program could be supplemented with a minimal site development package which would at least include alignment and grading of streets and access to potable water. This proposed site development alternative would further increase the target household's monthly financial burden. Appendix IV will investigate several options which could make the suggested rural housing package affordable by the target households.

4.

Name of Program: NEW HOUSING SOLUTIONS
PILOT PROGRAM FOR MINIMAL HOUSING

Description: A plan for the development of minimal housing which would give the families affected by Hurricane David and Tropical Storm Frederick a minimum area of individual secure living space with minimal services that could be expanded and improved at some future time.

Source of Program

Description: Discussions with Fundacion directors and the October 1979 document "Programas de Viviendas -- Fundacion San Jose."

Responsible/Participating

Agencies: Fundacion San Jose.

Geographic Location: 500 units to be constructed in Haina (National District); 500 units to be constructed in the South-Central Region cities of San Cristobal, Bani, etc. and in the National District.

Proposed Income

Percentiles of

Target Population¹³ 10-22 percent (South-Central Region); 2-7 percent (National District -- Santo Domingo).

Monthly Household

Income Level of

Target Population: RD\$30-75 (South-Central Region and the National District -- Santo Domingo).

¹³ The proposed income percentiles of target population for this program are constrained due to the intent of the Fundacion to serve those households capable of paying between RD\$10-15 (quotas of RD\$6-8 would be paid for half modules) per month.

Affordable Monthly Household Payment: RD\$6-15 (South-Central Region and the National District -- Santo Domingo).

Proposed Financing Terms: Downpayment = 0 percent; interest rate = 5 percent; repayment period = 20 years.

Total Project Cost Recoverable per Household: Approximately RD\$1,500 for the Fundacion's Type A unit on a 50m² plot.

PRELIMINARY URBANIZATION STANDARDS

Infrastructure Norms:

(i) Potable water -- Each plot with a single water tap located at rear of property.

(ii) Wastewater disposal -- Two four-place public toilets with washing and bathing facilities provided for approximately each 24 households.

(iii) Streets and footpaths -- Streets and footpaths will be aligned and graded.

(iv) Drainage -- No specific recommendations.

(v) Electricity -- Three to seven outlets per dwelling unit depending on type; minimal public street lighting provided on major streets.

(vi) Solid waste -- No specific recommendations.

Land Use Standards:

(i) Parks and open space -- 0 percent.

(ii) Circulation (streets and footpaths) -- Approximately 40 percent.

(iii) Community facilities -- No provision at present.

Plot Development: Five basic types of minimal housing (two bedrooms and a dining/living area) are offered with minimal services. These basic units can be expanded and improved by the project beneficiaries as their needs and financial capacity change.

Observations: The monthly amortization payments for all five housing types calculated using the previously discussed project design model fall within the proposed RD\$10-15 range. Alternatives to the proposed minimal housing schemes will be discussed in Appendix IV.

5.

Name of Program: NEW HOUSING SOLUTIONS
LOW COST HOUSING

Description: A low cost housing program (including site development) designed to serve those Santo Domingo households historically below the cut-off point for the savings and loan system on the one hand and above the target population to be served according to INVI's new guidelines on the other.

Source of Program

Description: Discussions with Banco officials and the new policy directions taken at the "Semanario de Ahorro y Prestamo y de la Vivienda de Bajo Costo."

Responsible/Participating

Agencies: Banco Nacional de la Vivienda (BNV);
Asociaciones de Ahorros y Prestamo (SAAP).

Geographic Location: Santo Domingo.

Proposed Income

Percentiles of
Target Population:¹⁴ 38-49 percent.

Monthly Household

Income Level of
Target Population: RD\$200-250.

Affordable Monthly

Household Payment: RD\$40-50.

Proposed Financing

Terms: Downpayment = 10 percent; interest rate = 12 percent; repayment period = 25 years.

Total Project Cost

Recoverable per House-
hold and the Associated

Downpayment: Total project cost/household = RD\$4,200-5,300; downpayment = RD\$420-530.

¹⁴ The proposed income percentiles of the target population are determined on the basis of the Banco's interest in serving those households with monthly incomes between RD\$200-250.

PRELIMINARY URBANIZATION STANDARDS

Infrastructure Norms:

- (i) Potable water -- Individually metered plot connections to municipal water distribution system.
- (ii) Wastewater disposal -- Individual house connection to either municipal or on-site disposal system.
- (iii) Streets and footpaths -- Asphalted vehicular streets with concrete curbs and sidewalks.
- (iv) Drainage -- Surface drainage at curbside with system of collectors.
- (v) Electricity -- Individually metered plot connections with public lighting on primary and secondary streets.
- (vi) Solid waste -- Collection and disposal as part of the municipal system.

Land Use Standards:

- (i) Parks and open space -- 7 percent.
- (ii) Circulation (streets and footpaths) -- 25 percent.
- (iii) Community facilities (schools, health clinics, etc.)¹⁵ -- 3m²/person.

Plot Development: The program calls for an easily expandable core house of 30-40 square meters with indoor toilet, washing and bathing facilities and kitchen.

Observations: Cost estimates have been made for the recommended infrastructure norms, land use standards, plot development and financing terms assumed in the present analysis (see Appendix IV). Based on this costing and the affordable monthly payment of the target households, a preliminary range of housing solutions would include a 30-40 square meter core house (without stucco or painting) being developed on a 100-125 square meter plot. The site would have a complete complement of albeit lower standard, infrastructure items. It would also have the levels of open space, classrooms and health facilities to serve the anticipated user population.

¹⁵ Historically in the Dominican Republic, the cost of community facilities is not borne by the project beneficiary. Rather, the provision of schools and health facilities is undertaken directly by the appropriate government agency. The present analysis will follow this practice.

I. PHASING OF PROGRAM COMPONENTS FOR PROPOSED
HG PROGRAM

Table IV-3 summarizes the phasing of the program components for the proposed HG program over the period 1981-1985. The proposed HG program recommends the spending of RD\$15 million for 1981-82, RD\$15 million for 1983-84 and an additional RD\$9 million for 1985. Total HG program costs over the 5-year period approaches RD\$40 million. For this total program cost, approximately 60,000 housing solutions would be provided to serve the poor households of the four priority regions. This total target household population represents approximately 360,000 Dominicans or almost 7 percent of the country's total 1980 population.

TABLE IV-3

Preliminary Yearly Distribution of Program Components for Proposed HIG Loan
Dominican Republic
1980

Proposed Program Component by Geographic Region	Responsible/ Participating Agencies	Number of Target Households Served by HIG Program Housing Solutions in Priority Areas 1981-1985					Total 1981-85	Required Capital Investment from International, National and Local Sources* (1981-1985; thousand RD\$)					Total 1981-85
		1981	1982	1983	1984	1985		1981	1982	1983	1984	1985	
SOUTH-CENTRAL REGION													
Urban													
-- Integrated Upgrading of Marginal Settlements	INVI, et al. FEDACOOP, INRAVI	500	1,000	1,000	1,000	1,500	5,000	200	400	400	400	600	2,000
-- Credits for Home Improvements		350	350	350	350	500	1,900	105	105	105	105	150	570
-- Pilot Program for Minimal Housing	Fundacion San Jose	---	---	250	250	---	500	---	---	375	375	---	750
Rural													
-- Revolving Fund for Home Improvements	INVI/Interinstitutional Commis.	1,750	1,750	1,750	1,750	2,000	9,000	525	525	525	525	600	2,700
-- Revolving Fund for Minimal Housing		"	400	400	400	400	500	2,100	480	480	480	480	600
-- Integrated Upgrading of Marginal Settlements	INVI, et al. FEDACOOP, INRAVI	500	1,000	1,000	1,000	1,500	5,000	200	400	400	400	600	2,000
-- Credits for Home Improvements		300	300	300	300	500	1,700	90	90	90	90	150	510
Rural													
-- Revolving Fund for Home Improvements	INVI/Interinstitutional Commission	750	750	700	700	1,000	3,900	225	225	210	210	300	1,170
-- Revolving Fund for Minimal Housing		"	200	200	200	200	500	1,300	240	240	240	240	600
-- Pilot Rural Settlements Program	Fundacion Dominicana de Desarrollo with Banco Nacional de la Vivienda	250	250	250	250	350	1,350	300	300	300	300	420	1,620
SAN PEDRO DE MACORIS (D.R.)													
Urban													
-- Integrated Upgrading of Marginal Settlements	INVI, et al. Fundacion San Jose	2,550	3,000	3,000	3,000	4,000	15,550	1,020	1,200	1,200	1,200	1,600	6,220
-- Pilot Program for Minimal Housing		250	250	---	---	---	500	375	375	---	---	---	750
-- Low Cost Housing	Banco Nacional de la Vivienda	600	600	500	500	500	2,700	2,850	2,850	2,375	2,375	2,375	12,825
SANTIAGO													
Urban													
-- Integrated Upgrading of Marginal Settlements	INVI, et al.	1,000	2,000	2,000	2,000	2,500	9,500	400	800	800	800	1,000	3,800
TOTAL		9,400	11,850	11,700	11,700	15,350	60,000	7,010	7,990	7,500	7,500	8,995	38,995

* The total capital investment is estimated on the basis of the following average program cost/household:

1. Integrated Upgrading of Marginal Settlements - RD\$ 400/household
2. Revolving Fund for Home Improvements - RD\$ 300/household
3. Credits for Home Improvements - RD\$ 300/household
4. Revolving Fund for Minimal Housing - RD\$1200/household
5. Pilot Program for Minimal Housing - RD\$1500/household
6. Pilot Rural Settlements Program - RD\$1200/household
7. Low Cost Housing - RD\$4750/household

Source: PNUD Elaboration.

BEST AVAILABLE DOCUMENT

DOMINICAN REPUBLIC
SHELTER SECTOR ASSESSMENT

VOLUME II
ANNEXES

OFFICE OF HOUSING
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C.

Contract No. AID/SOD/PDC-C-0155
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VOLUME II

ANNEXES

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ANNEX I

The Characteristics of Internal Migration in the Dominican Republic

The last population census in the Dominican Republic was carried out in 1970.¹ While overall population growth has been about 3 percent, the country's urban population growth rate has been much higher -- between 5 and 6 percent. By the mid-1980s the projected urban population will exceed the rural population. The current population is estimated at about 5,545,000; 2,869,000 of this is already urban. By the year 2000, an estimated 70 percent of the national population is expected to be urban.

This trend has been fueled by rural-urban migration, following the urban-rural differentials in employment opportunities, income and overall better living conditions. The general pattern of internal migration seems to suggest that economic factors are the most important motivation of migration (see Table I-4 and Map I.1); those provinces with cumulative net immigration all are areas with relatively good employment opportunities outside of the agricultural sector, or are areas with ecological conditions which are favorable for agriculture.

With respect to the characteristics of migration and migrants, the principal conclusions of the most recent study of migration patterns in the Dominican Republic based on the 1970 census are as follows:²

1. Urban population growth due in large part to rural-urban migration is particularly strong in the larger cities: in 1950, there were only two cities of over 20,000 inhabitants which represented 46.8 percent of the urban population; in 1970, there were 14 cities in that category, representing almost 76 percent of the urban population.
2. Of the 539,485 persons considered migrants to the urban areas, about 62.5 percent were concentrated in Santo Domingo representing about 40 percent of all the total number of migrants in the country.
3. Between 1960 and 1970, apart from the National District of Santo Domingo, only the provinces of Santiago, San Pedro de Macoris, Pedernales, Valverde and the combined

¹ Another national population census will be carried out in 1980 by the Oficina Nacional de Estadística (ONE).

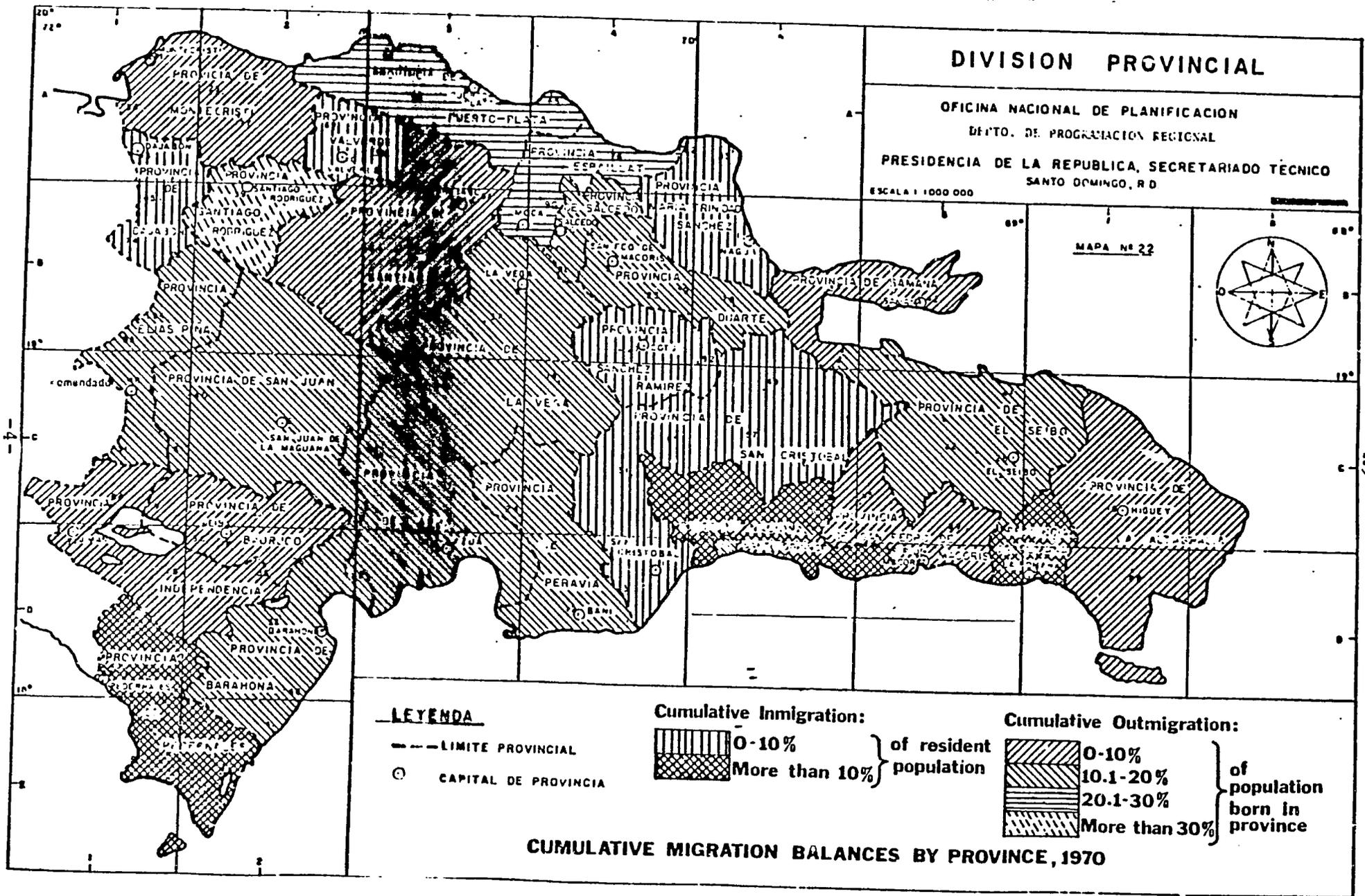
² Ramiriz, Tactuk, Breton, La Migración Interna en la República Dominicana, November 1972.

area of La Altagracia and La Romana had a positive migration flow.

4. During the decade of the sixties, the largest net losses due to migration occurred in Puerto Plata, San Juan, Espaillat, Sanchez Ramirez, Duarte, La Vega, Maria Trinidad Sanchez and El Seibo. Of the 20 provinces which experienced net emigration, the above-mentioned accounted for 70.9 percent of the total negative flow.
5. The most important internal migration movements occurred within the provinces of Cibao. Apart from migration to and from the National District of Santo Domingo, almost all migration movement was to adjacent provinces, or short distance migration.
6. Two out of every five heads of household have moved at least one time from their place of birth.
7. Most of the migration has occurred in recent years; 53 percent of all migrants have lived less than 10 years in their current location. Of that group, the majority have between 5 and 10 years of residence. Recent migrants tend to be very young.
8. Sixty-five percent of the population of Santo Domingo comes from other areas while the proportion in Santiago approaches 46 percent. Apparently the volume migration to Santiago was much more important several decades ago (40 percent of the heads of migrant households arrived over 20 years ago) than that to Santo Domingo (only 20 percent of the heads of migrant households arrived over 20 years ago). This tendency clearly suggests that Santo Domingo can be expected to continue to outdistance Santiago as long as it presents better opportunities for work as well as better developed basic essential services and facilities.
9. ~~Approximately 28 percent of the men and women migrants to Santo Domingo were less than 20 years of age upon arrival, while 76 percent of the men and 68 percent of the women arrived before their 35th birthday -- a clear reflection of the youthful characteristic of migrants.~~
10. Over half the heads of urban households are migrants while only one-third of rural heads of households have migrated.
11. Not all of the regions of the country have been affected equally by migration. Only 30-34 percent of the heads of household in the Southwest Region were migrants, while in the Southeast Region the percentages ranged from more than 50 percent in the sub-region of Santo Domingo to an extraordinary 71 percent in La Romana and its adjacent sub-region.

12. Heads of migrant households to urban areas with less than 5 years of residence in the locale where they were surveyed seem to have migrated by stages. Only 28 percent of those migrants whose last residence was rural lived in that place of residence since birth. Only 16 percent of the migrants from other urban areas had resided in such areas since birth. With respect to the mobility of these recent migrants, 30 percent of migrants by stages who came from rural areas had less than 5 years residing in those areas before migrating, while 43 percent of migrants by stages from urban areas had less than 5 years of residence before migrating.³
13. Overall, there was only one woman head of migrant household for every 5.4 males in urban areas. However, in Santiago, the ratio was one to seven and in Santo Domingo, one to 4.5.

³ The surprising amount of migration by stages among the recent migrants arriving from rural areas was believed to indicate a strong rural-rural migration or even urban-rural or rural-urban-rural migration. A special study has been suggested to understand this phenomenon.



MAP I.1

DOMINICAN REPUBLIC / INTERNAL MIGRATION

ANNEX II

Household Income and Expenditure for the Dominican Republic

The May 1976 to April 1977 Central Bank of the Dominican Republic survey of household income and expenditure¹ serves as the basis for the Study Team's discussion of income and the subsequent selection of target population income deciles to be served by the proposed HG program. This survey is a first attempt at a national investigation of income; previous surveys of this kind (1941, 1969) were confined to Santo Domingo. Although the results of this survey have not been officially published, the Central Bank provided the Study Team with its preliminary findings.

The survey was based on a proportional multi-stage sample of urban and rural households. The sample units were the country's municipios and distritos municipales. The most populous 15 were selected beforehand, with an additional 24 selected at random to represent the rest of the country. Therefore, about 70 percent of the total population was directly represented. The rest (60 administrative units) was assumed to be adequately represented by the 24 municipalities selected at random.

1. Household Income

Table II-1 summarizes the survey results for the total Dominican population. The results are also subdivided into their urban and rural components. The table shows that considerable differentials exist between urban and rural areas. The mean household income in urban areas is approximately RD\$225 per month, while in rural areas it is only RD\$125 per month. The rural mean represents, therefore, only 55 percent of its urban complement.

2. Household Expenditures

The composition of household expenditures also varies greatly between the country's urban and rural areas. The percentage of the household budget spent on food (by far the largest expenditure) ranges from an average of 39 percent in urban Santo Domingo to about 65 percent in rural areas outside the National District. Housing (encompassing expenditures on rent, fuels, electricity and furnishings), the second largest component of household expenditure, varies from 28 percent in Santo Domingo to 17 percent in rural areas outside of Santo

¹ First National Survey of Household Income and Expenditures, Central Bank of the Dominican Republic, Department of Economic Studies, May 1976-April 1977, Santo Domingo, February 1980.

Domingo. Table II-2 illustrates these particular differences, as well as the percentages of household budget spent on other items.

TABLE II-1

Household Income Distribution
Dominican Republic, May 1976-April 1977

MONTHLY INCOME RANGE	HOUSEHOLDS					
	Total		Urban		Rural	
	Percent	Accumulated Percent	Percent	Accumulated Percent	Percent	Accumulated Percent
0.0- 50.0	5.6	5.6	2.1	2.1	8.2	8.2
50.1- 100.0	20.3	25.9	12.1	14.2	26.2	34.4
100.1- 200.0	35.7	61.6	30.0	44.2	39.8	74.2
200.1- 300.0	16.5	78.1	21.5	65.7	12.9	87.1
300.1- 400.0	7.5	85.6	10.4	76.1	5.3	92.4
400.1- 600.0	7.3	92.9	11.0	87.1	4.6	97.0
600.1- 800.0	3.0	95.9	4.9	92.0	1.6	98.6
800.1-1000.0	1.5	97.4	2.9	94.9	0.6	99.2
1000.1-1500.0	1.7	99.1	3.3	98.2	0.5	99.7
1500.1-2000.0	0.4	99.5	0.9	99.1	0.1	99.8
2000.1-3000.0	0.4	99.9	0.7	99.8	0.2	100.0
3000+	0.1	100.0	0.2	100.0	---	---

-7-

Source: First National Survey of Household Income and Expenditures, Central Bank of the Dominican Republic, Department of Economic Studies, May 1976-April 1977, Santo Domingo, February 1980.

TABLE II-2

Average Household Expenditure
(percentages)

Category	Food	Housing*	Clothing	Health	Education	Other
<u>Urban</u>						
Santo Domingo	38.9	28.0	6.0	4.3	3.5	19.4
Rest	<u>50.1</u>	<u>27.5</u>	<u>6.0</u>	<u>4.4</u>	<u>1.7</u>	<u>10.3</u>
Total	42.7	27.8	6.0	4.3	2.9	16.3
<u>Rural</u>						
Santo Domingo	58.4	27.6	4.0	0.0	0.0	10.0
Rest	<u>64.9</u>	<u>17.0</u>	<u>5.0</u>	<u>3.5</u>	<u>0.0</u>	<u>8.7</u>
Total	64.3	18.0	5.7	3.2	0.0	8.8
<u>National</u>	51.2	23.9	5.9	3.9	1.8	13.3

* Includes rent, imputed rent, fuels, electricity, furnishings and other household goods.

Source: First National Survey of Household Income and Expenditures, Central Bank of the Dominican Republic, Department of Economic Studies, May 1976-April 1977, Santo Domingo, February 1980.

ANNEX III

Powers and Responsibilities of the Principal Housing-Related Institutions

1. Instituto de la Vivienda (INVI)

INVI, the National Housing Institute created by Law No. 5892 (1962)¹ is the main autonomous state agency charged with implementation of the government's housing policy. The INVI's basic functions are: to formulate the national housing plan; to execute its part of the national housing plan; to promote participation of the private sector in the plan; to provide, upon request, technical advice in housing matters to individuals or groups, within its capabilities; to promote self-help and mutual aid housing programs in both rural and urban settings; to request from the executive branch the necessary appropriations for housing purposes; and to coordinate other related activities.

Particular emphasis in the law is placed on the need to coordinate efforts of the government and citizens, guiding and directing popular housing initiatives, especially through self-help programs that generate strong and dynamic communities; the strategic allocation of limited resources for housing in coordination with national development planning guidelines; and the need to take into consideration the comprehensive nature of settlements when designing and building new dwellings.

The INVI is directed and administered by a General Director and by a Board of Directors. The General Director acts as chief executive and legal representative. The Board of Directors is made up of five members: the President, who is the Secretary of Public Works and Communications; the Secretary, who is the General Director of INVI; the National Director of the National Planning Office (ONAPLAN); the General Director of the Dominican

¹ Modifications to this basic law include: No. 6017, dated August 27, 1967; No. 466, dated October 31, 1964; and No. 283, dated March 27, 1968. INVI's operations are also guided by the following laws: No. 693, dated April 3, 1965, penalizing violations of salary withholding requirements; No. 472, dated November 2, 1964, establishing the "family estate" status of dwellings awarded by INVI; No. 240, dated December 28, 1967, requiring the "conditional sale contracts" entered by the INVI to be in accordance with Law No. 1087, dated January 12, 1946; No. 330, dated July 25, 1968, establishing the "family estate" status of all dwellings built by the State directly or through its autonomous agencies; No. 195, dated September 21, 1971, prohibiting notary publics from participating in informal sales and establishing related penalties.

Agrarian Institute (IAD) and a member directly chosen by the Executive Power. The Board establishes INVI's policy, approves its annual budget, sets salaries, authorizes all acts and business that INVI carries out through its General Director, adopts INVI's bylaws, approves the direct execution of specific projects and proposes tax legislation for housing promotion purposes.

Due to the reorientation of national housing policy, INVI is presently undergoing a complete internal reorganization. Its structure will be modified and its coverage greatly expanded. The reorganization for the institution seeks to establish INVI as the main governmental agency charged with the implementation of a policy aimed at providing affordable shelter to low income groups.

INVI's potential financial resources include direct allocations from the national budget, resources granted by specific laws, its own mortgage loan operations and any other private sector resource allocations. INVI is exempt from all taxes, national and local, as are all contracts, real estate and judicial transactions, etc. Persons acquiring housing directly from INVI are likewise exempt. As an executive agency, INVI can contract out its projects to private firms or administer them directly through the design, construction and management supervision stages.

INVI carries on two kinds of housing finance operations: regular mortgage lending and "conditional sale contracts." Both of these limit the right of alienation and other real property rights which otherwise exist. Despite this fact, a high incidence of subsequent illegal transfer takes place on conditional sale contracts.

Some beneficiary selection criteria are fixed, others require the exercise of the institution's discretion. They include: residence in the Dominican Republic; good health; own no other real estate or own an inadequate dwelling; to be the head of at least a 3-member family; to have proven sufficient income to qualify; to have a good reputation; to prove the family's need.

The Law allows INVI to require salary withholdings for loan repayment; this provision is presently used by INVI in its "conditional sale contract" forms. Loans repayments are collected both in INVI's Offices in Santo Domingo as well as through collectors in the provinces. In early 1980, INVI had about RD\$5 million in delinquent loan payments.

2. Comision Inter-institucional para la Coordinacion de Programas de Viviendas (CICV)

Shortly after Hurrican David, INVI began organizing a permanent consultive commission representing the principal public

and private institutions which have housing programs for low income families as well as those entities which are relevant to such activities. The members of the Comision now include INVI, ODC, FDD, Caritas, SEOPC, CODIA, the Fundacion San Jose, the Asociacion para el Desarrollo de San Jose de Ocoa, Catholic Relief Services, Servicios Social de las Iglesias Dominicanas, IAD and INAPA. Other members may be added as the need arises.

Although the Comision is still emerging and its final structure has not been established, the members have agreed that its overall purpose should be to organize housing programs directed towards the needs of low income households and the collaborative efforts of the public and private sector through the more effective utilization of both national and international financing.

The functions of the Comision are proposed as follows:

- Establish plans for the integrated development of rural areas relating housing programs with agricultural development.
- Develop guidelines for a housing policy for low income households.
- Develop criteria for housing programs and institutional approaches which provide for the maximum feasible coordination of responsible entities.
- Collaborate in the identification of policies and programs for low cost housing.
- Promote necessary studies and analysis of the housing sector -- both urban and rural.
- Direct the Comision's activities towards the priority housing problems through both public as well as private efforts.
- Stimulate the production of local materials for the construction of low income housing; recommending the manners in which such materials could be utilized to lower housing costs.
- Stimulate the development of prototype low income housing solutions.

The Comision has identified the following immediate actions as the most urgent: (1) coordination of existing entities and programs; (2) investigation of potential sources of housing finance; and (3) establishment of a coordinating office within INVI attached to INVI's emerging Planning Office.

The Coordinator's Office is to have the following functions: collect, maintain and disseminate information on housing programs; establish coordination between the Comision and public and private entities; facilitate contacts with relevant international housing finance institutions; and channel housing information and materials to the participating entities as necessary and appropriate.

This approach represents a significant step forward toward the effective continuance of the successful GODR disaster relief efforts with the private sector. In seeking to reach out into the rural areas with shelter assistance after the hurricane, INVI and the USAID Mission enlisted the cooperation of a group of private voluntary organizations (PVOs) and their network of affiliated national and community organizations. The Dominican Development Foundation (DDF), Catholic Relief Services (CRS), Church World Services (CWS), CARE and others participated in the development of a collaborative approach and the framework for their participation in reconstruction efforts.

Each organization represented on the Comision Interinstitucional represents a separate constituency and brings the apparatus of a distinctive system of counterpart and local community groups to serve in reaching out into the rural area affected. After the hurricane, the CARE project enlisted the Comite Pro-Bani and the Federation of Credit Unions (FEDOCOOP). Catholic Relief Services counted on the extensive CARITAS administrative and distributive network and linked up with the local parish priests and through them to community associations. Church World Services, on a smaller scale, collaborated with the Servicio Social de Iglesias Dominicanas (SSID) program network. The Dominican Development Foundation represents an effective organization with an established programmatic relationship with rural, agricultural associations in the affected area. The AIFLD project channeled materials through Federacion Nacional de Cooperativas Agropecuarias (FENAC), a "campesino" organization. INVI organized these efforts on the behalf of the GODR, provided materials, supervision and technical assistance with local self-help manpower organized by the PVOs and the OFC (GODR Office of Community Development). USAID donated materials and provided grants to many of the PVOs in order to assist and complement GODR efforts (see Table III-1).

The formal organization of the Comision Interinstitucional by INVI offers a most viable vehicle for continuing the successful PVO participation in low income housing production.

3. Banco Nacional de la Vivienda (BNV)

The Banco Nacional de la Vivienda (BNV) is an autonomous state agency created by Law No. 5894, dated May 12, 1962² to develop and execute a housing mortgage lending policy. Its functions include: financial support and institutional promotion of housing savings and loan associations; establishment and review of housing mortgage lending regulations; blanket insurance of savings accounts to a maximum (currently RD\$25,000) fixed by the Administrative Council; acting as a financial agent of and providing insurance to mortgages originated by INVI; and general mortgage insurance operations (FHA) under specifically designated provisions.

The authorized capital of BNV is ten million pesos (RD\$10,000,000); modifiable. Total outstanding obligations of the Bank cannot exceed twelve times its paid capital plus its legal reserve. The sole owners of the Bank are the Dominican Government and the Savings and Loan Associations (SAAP) who subscribe for shares in proportions fixed by the law.

The Administrative Council of BNV is made up of five members: the General Manager of the BNV, and four members appointed by the Executive Power, one of which acts as President. The Administrative Council has the following powers related to SAAP: regulation of their organization and operations; direct but limited financing of SAAP operations; subject to approval by the Monetary Board, they may borrow money, issuing appropriate debt instruments, providing a secondary mortgage market; and direct mortgage finance operations for housing construction purposes. BNV's operations and contracts, etc. are exempt from National and Municipal taxes and charges.

The specific functions the BNV may have as a financial agent of the INVI are set forth in Regulation No. 8867, dated November 23, 1962. These include: to collect mortgage payments on behalf of INVI, directly or through other banks or S&L associations; to insure, through FHA, mortgages originated by INVI; to receive commissions for operations performed as indicated above; to issue negotiable mortgage certificates guaranteed by INVI's mortgages; to negotiate, in national and foreign markets, the mortgages issued to INVI; and to collect the monies that special laws may require from firms or entities for housing purposes.

Its main goal is supporting the SAAP. BNV is presently fulfilling the following functions: promotion, regulation and supervision of their operations, as well as providing technical assistance.

² Further regulated by Regulations No. 8867, dated November 23, 1962; and No. 8836, dated February 26, 1964.

The capital of BNV is subscribed and paid by the State and savings and loan associations and the two main sources of funds are international long-term credits and investment of mortgage bonds issued by the BNV itself. Specifically, the BNV acquires mortgages engendered by associations. In this type of operation, BNV has invested almost all funds with which it has been endowed until now.

The savings and loan associations (SAAP) are mutual non-profit private institutions. SAAP operations are carried out under regulations and State control and protection. As financial intermediators, they attract funds through savings deposits, the issue of fixed or undetermined term certificates and sale of mortgages. Funds obtained by associations are preferably utilized to grant long-term mortgage loans for housing. However, they also grant short-term mortgage loans to finance housing projects and grant personal loans guaranteed by savings accounts. At present, there are fifteen savings and loan associations with 48 branches. Associations are authorized by the BNV to open agencies and attract savings in specific regions, but they can grant loans at any place of the territory of the Dominican Republic.

4. Bienes Nacionales (BN)

Bienes Nacionales is a department of the Ministry of Finance and was created by Law No. 1832, dated November 3, 1948. It is charged with the administration and management of government owned properties. As such, its principal functions include maintaining the cadaster of government owned properties; supervising the execution of contracts which affect government owned properties; collecting charges and rents for the same as appropriate; registering and maintaining titles for government properties; conserving and maintaining an inventory of government properties; executing contracts for the use and or rental of the same under instructions of the President of the Republic; directing procedures in case of expropriation for public utility or social good; and directing the processes required under law in cases of properties acquired by the state.

Bienes Nacionales is directed by an administrator appointed by the President who is directly subordinate to the Secretary of State for Finances. Its resources come from annual appropriations contained in the Public Expenditures Law.

Based on these functions, Bienes Nacionales regulates all transactions regarding real property carried out by government agencies, keeps an inventory of government owned properties and is, in fact, the principal land banking and land distribution agency between the government and private sector. BN also serves as broker between government agencies. It has an active role in the housing sector and participates in various large subdivisions. Based on the conditional sales contracts utilized by the government to sell its public housing, BN is the landlord

of approximately 20,000 houses. The current administration of BN believes that these properties should be under the responsibility of another government institution. The government is now considering the transfer of such properties to INVI in order to strengthen its capital base in order that it might expand the scope of its operations by developing an independent borrowing capacity.

With respect to people living in housing built by the government, one of the most important regulations regarding the transfer of government property to individuals for housing provides that such property constitutes a family estate (Bien de Familia),³ a status which severely limits the beneficiary's rights of use and transfer. Despite the fact that the intention was to protect the family's right to inhabit the dwelling, it has created an informal system of illegal land tenure. Apparently, about 90 percent of some government financed housing solutions which have been distributed by BN are no longer occupied by the original beneficiaries. BN states that the previous administration sold housing to households who were not economically able to afford either the initial or the monthly payments. Frequently, these families have preferred to transfer their occupancy rights illegally for ready cash. These transfers have been almost impossible to control.

With respect to the process required to transfer government owned property to housing institutions such as INVI, it includes the following: (1) a formal request from the institution to BN to transfer a suitable and available land parcel; (2) the assessment of the site by the National Cadaster Office based on BN's request; (3) BN requests a transfer authorization from the President (if the site's value is more than RD\$20,000, it appears that it must be authorized by the Congress); and (4) the execution of the transfer. Title registration procedures may then start and are more often than not quite lengthy.

With respect to government lands in the periphery of urban areas which have been occupied by illegal land subdivisions. BN actively endorses the concept of an orderly transfer of land title (through financed sales of land at prices affordable to the low income occupants of these lands) as a part of integrated efforts for the progressive upgrading of these marginal areas with basic essential services. The current Administrator of BN is actively seeking the means of participating in such a program. BN also is actively supporting the development of the INVI-IBRD sites and services project in Santo Domingo and a

³ Based on Laws No. 1024 (October 24, 1978), No. 339 (August 22, 1968) and No. 5610 (August 25, 1961).

private sector pilot project for minimal housing.⁴ BN has also expressed interest in a third program to provide reception areas for newly arriving rural immigrants as well as for residents of already established marginal settlements which present specific physical risks to the inhabitants.

⁴ Fundacion San Jose (see description Chapter IV-5, Pilot Project for Minimal Housing).

TABLE III-1

Sources of Funds of Savings and Loan Associations
(in million US\$)

Year	Savings Deposits	Mortgage Sales	Mortgage Sales to BNV	Other Funds from BNV	TOTAL
1972	36.9	17.2	15.7	3.5	73.3
1973	55.0	24.0	17.6	4.0	100.6
1974	74.9	34.7	20.9	4.5	135.0
1975	90.9	47.5	26.0	4.6	169.0
1976	111.1	58.3	35.7	6.2	211.3
1977	140.4	71.8	44.2	6.2	262.6
1978	169.8	89.1	52.1	8.2	319.2

ANNEX IV

The Effect of Varying Interest Rates on Proposed Housing Solutions

1. New Housing Solutions

As an indication of the effect varying interest rates have on proposed new housing solutions, Program #5 (New Housing Solutions -- Low Cost Housing for the Banco Nacional de la Vivienda) presented in Chapter IV, Recommendations and Conclusions, will be analyzed. All of the material presented in Chapter IV-G3 with respect to program definition -- target group served, preliminary infrastructure and land use standards and plot development -- will be maintained. The interest rate from the original financing terms -- downpayment equal to 10 percent, interest rate equal to 12 percent and repayment period equal to 25 years -- will be varied from 10 to 16 percent to show its effect on plot size.

The model for analyzing urban project design also presented in Chapter IV-G3 will be used to evaluate the proposed BNV housing package for alternative interest rates. The parameters for the model's two equations are defined with past BNV projects in mind. The proposed unit costs -- parameter value in most cases -- are generally below BNV's lowest standard project to date. However, it is felt that with a slight reduction in present standards (i.e. finished units without plastering or painting) the proposed unit costs could be attained. The model parameters are defined in the following manner:

- d = gross residential density (persons/ha) = dependent variable
- j = plot size (m^2) = dependent variable
- f = monthly payment (RD\$/month) = independent variable
- e = raw land cost = RD\$2.00/ m^2
- e₁ = on-site infrastructure cost = RD\$8.00/ m^2
- e₂ = off-site infrastructure cost = RD\$0.00/ m^2
- a₁ = superstructure cost = RD\$80.00/ m^2
- a₂ = plot connection costs = RD\$100.00
- a₃ = cost of shared sanitary facilities = RD\$0.00
- a₄ = cost of community facilities = RD\$0.00
- b₁ = area of superstructure = 35 m^2

- X_y = number of families sharing community facilities = $0.00 (0.0001)^1$
- i = number of persons per plot = 6.00 persons/plot
- h = downpayment = 10 percent
- I = annual interest rate = varies from 10 to 16 percent
- N = repayment period = 25 years
- m_1 = percent of total area for open space = 7.0 percent
- m_2 = number of square meters of land used for community facilities per person = $3.0m^2$ /person
- p = percent of total area used for circulation = 25 percent

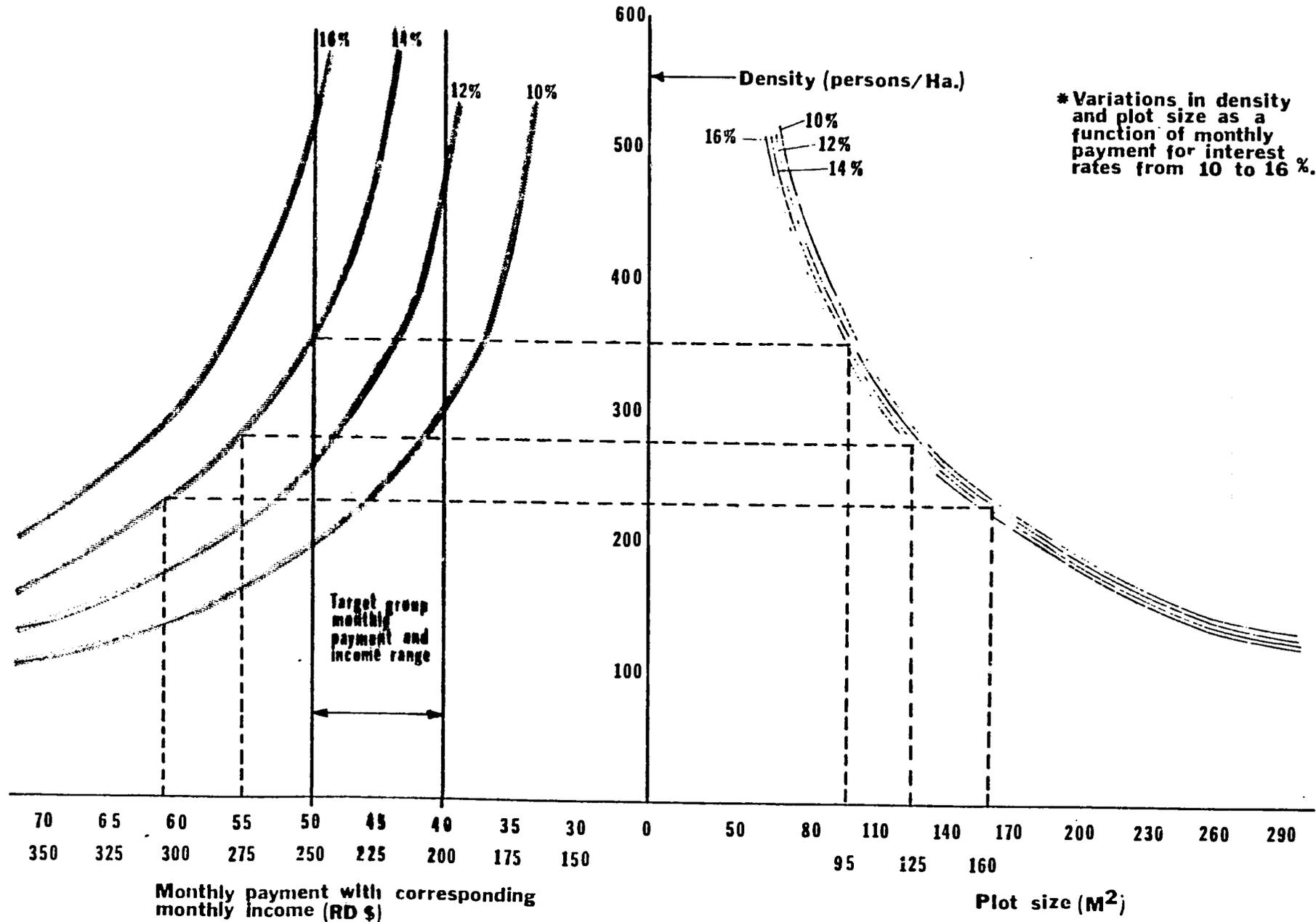
The graphic presented in Figure IV-1 summarizes the substitution of the parameters into the project design model. The graphic shows variations in density (d) and plot size (j) as a function of monthly payment (f) for interest rates varying from 10 to 16 percent. The graphic assumes that the previously defined variables remain fixed for the four alternative interest rates. Two heavy solid lines delineate the RD\$40-50 range of affordable monthly payments for the selected target groups.

Given existing U.S. market conditions and BNV financing costs, an interest rate charged to program beneficiaries of 14 percent will be assumed for the present in order to simplify the analysis. Selection of a different interest rate (i.e. the 12 percent rate used in the original analysis) does not change the methodology of the present analysis. For the 14 percent interest rate and the previously defined variables, the graphic examines the corresponding monthly payment for BNV's previous minimum plot size of approximately 160 square meters. A 160 square meter plot results in a monthly payment of about RD\$61, or RD\$11 greater than the maximum permitted for the selected target group. Lowering plot size slightly to 125 square meters still results in a monthly payment in excess of the allowable target group maximum. In fact, plot size would have to be lowered to approximately 95 square meters before the allowable target group monthly payment range is reached. However, a 95 square meter plot is probably below BNV's minimum acceptable standard. Lower interest rates would facilitate the attainment of larger plot sizes for the same monthly payment (see graph in Figure IV-1).

¹ The variable "y" has to be given an assumed value of slightly greater than zero in order that " a_4/y " from the model equation does not approach infinity.

FIG. IV-1

NEW HOUSING SOLUTIONS: Low-Cost Housing*



* Variations in density and plot size as a function of monthly payment for interest rates from 10 to 16 %.

Given the difficulty of serving the target households using the assumed unit costs and the resultant plot sizes with an interest rate of 14 percent, the Study Team recommends that initially some type of variable payment mortgage be tried in order to make the proposed BNV housing package affordable to the selected target group. The mechanics of how a graduated monthly payment would facilitate an initial reduction in monthly payment is considered in the next paragraph.

Under a variable payment mortgage, the target household's initial monthly payment is reduced to an affordable level (in the present program, RD\$40-50 per month) and then incrementally increased each year for a certain number of years until the household fully pays off all of the principal and interest in its mortgage loan. In the present analysis, the 160 and the 125 square meter plot size solutions (assuming the same unit costs as defined previously) will be reconsidered under a variable payment mortgage. The following table shows how this plan would work.

	125m ² solution	160m ² solution
Monthly payment (RD\$)	40	45
Annual interest charge (%)	14	14
Repayment period (years)	25	25
Annual payment growth rate (%)	6.5	6
Payment growth period (years)	10	10
Downpayment (%)	10	10
Capital cost per household (RD\$); monthly payment of RD\$55	5,077	5,538
Capital cost per household (RD\$); monthly payment of RD\$40	5,155	5,646

The preliminary results from the table show that by using a variable payment mortgage, both solutions (which were not affordable by the target group using a level payment mortgage program) are affordable under a variable payment mortgage plan.

2. Improvements to Existing Plots

As in the case of the preceding example, Program #1 (Improvements to Existing Plots -- Integrated Upgrading of Marginal Areas) presented in Chapter IV, Recommendations and Conclusions, will be used as an indicator to show the effect varying interest rates have on repayment period and monthly payment for general improvement programs on existing plots. All the material presented in Chapter IV-G3 with respect to program definition -- target group served, preliminary infrastructure and land use standards, home improvement loans and total project cost per household -- will be maintained. The interest rate from the original financing terms -- 12 percent -- will be varied from 10 to 16 percent to show the effect this variation would have on repayment period and monthly payment.

The ordinary annuity equation from Chapter IV-G3 will be used to evaluate the proposed integrated upgrading package for alternative interest rates. The recommended physical upgrading package is based mainly on the results of the 1978 PADCO Urban Development Study of Santo Domingo. The annuity equation parameters are defined as follows:

- k = total cost of physical package to be recovered per household = RD\$400/household
- f = monthly payment = dependent variable
- I = annual interest rate = varies from 10 to 16 percent
- N = repayment period = varies from 5 to 25 years

The graphic presented in Figure IV-2 summarizes the substitution of the parameters into the ordinary annuity equation. The graphic depicts variations in repayment period (N) with monthly payment (f) for interest rates (I) varying from 10 to 16 percent assuming project costs/household (k) remains fixed at RD\$400.

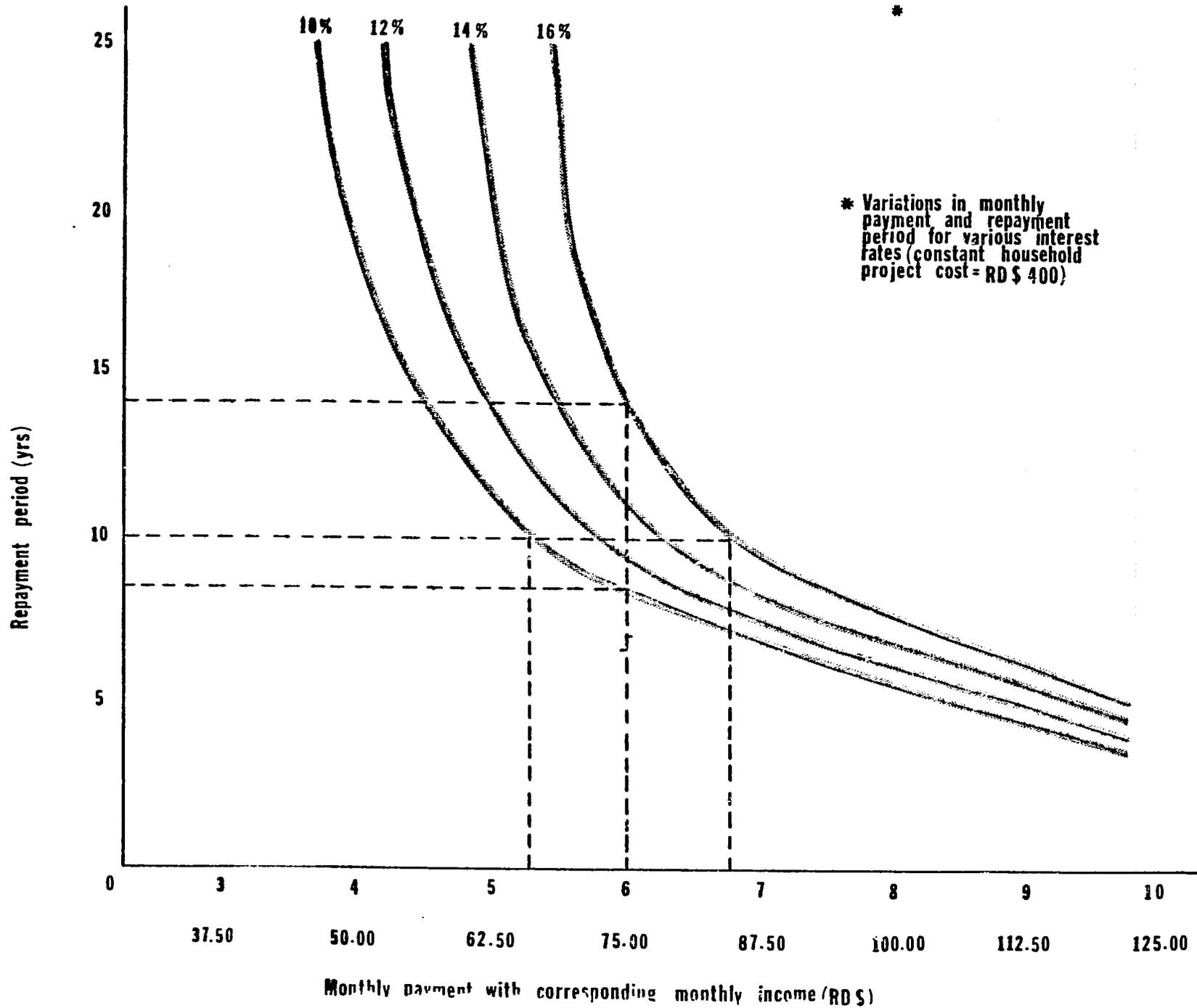
The graph shows two effects of varying interest rates. First, for a constant monthly payment of RD\$6 (corresponding to the affordable monthly payment of the Southwest Region's target group), varying interest rates from 10 to 16 percent increases the repayment period from approximately 8.5 years to 14 years to repay project costs of RD\$400. Conversely, maintaining, for example, a constant repayment period of 10 years and varying the interest rate from 10 to 16 percent, increases the monthly payment from approximately RD\$5.15 to RD\$6.75. This almost 30 percent (RD\$1.50) increase in monthly payment is not an inconsiderable sum for a poor Southwest Region urban dweller.

Another interesting aspect of an Integrated Upgrading Program, or for that matter a program dealing with home improvement loans, is the potential benefit to be derived from turning over the initial investment several times and thus increasing the number of beneficiaries served over the life of the 25-year loan.

The benefits to be derived from a revolving fund will be illustrated by the HG program component dealing with home improvement loans in the rural areas of the South-Central and Southwest regions. The seed capital for the program is RD\$3.87 million. Individual loans of RD\$300 will be made for five years at 5 percent interest rates. Household monthly payments will amount to RD\$5.66 (see description of Program #2 presented in this chapter).

FIG. IV-2

IMPROVEMENT OF EXISTING PLOTS: Integrated upgrading - Home improvement loans



As the first borrowers make repayments on their loans, the money is placed in the revolving fund to be held in escrow by INVI and the Inter-institutional Committee. When enough funds accumulate to finance another loan -- due to the size of the program, this happens on a monthly basis, the money is relent. Table IV-1 demonstrates the effectiveness of this approach. At the end of the repayment period for the initial program loans (five years), a total of almost 23,350 loans will have been generated by the initial seed capital. This figure represents 12,900 loans from the original HG program and 10,450 generated by the revolving fund. The revolving fund, of course, does not stop at this point but will continue to support an ongoing lending program for the life of the 25-year HG loan.

ALTERNATIVES FOR PROGRAM #3 -- NEW HOUSING
SOLUTIONS, PILOT RURAL HOUSING

Alternative Urbanization Standards

	<u>Present FDD Recommendation</u>	<u>Alternative</u>
Infrastructure Norms:		
(i) potable water	No specific recommendation.	Minimal system using pump(s) and piped distribution to taps serving 40-50 households.
(ii) wastewater disposal	Simple pit latrine.	Simple pit latrine.
(iii) streets and footpaths	No specific recommendation.	Clearing, alignment and grading.
(iv) drainage	No specific recommendation.	No specific recommendation.
(v) electricity	No specific recommendation.	No specific recommendation.
(vi) solid waste	No specific recommendation.	No specific recommendation.
Land Use Standards:		
(i) parks and open spaces	No specific recommendation.	No specific recommendations
(ii) circulation (streets and footpaths)	No specific recommendation.	Minimal circulation system (25 percent of total land area).
(iii) community facilities	No specific recommendation.	1m ² /person for small, multi purpose center (250m ²) to be used as school health clinic and social center and to be constructed on one plot of site.

Plot Development:	Core house with kitchen/dining area and pit latrine constructed by self-help methods using local materials.	Similar superstructure and pit latrine constructed on a site provided with minimal potable water and street layout.
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Financing Package

As previously noted, the physical housing solution and financing package presented in Program #3 of the text is not affordable by the designated target groups. A household monthly payment of RD\$24.50 was estimated for the proposed program when payments of RD\$17 and RD\$14, depending on region, are considered maximums. The additional site development would further increase monthly payments to approximately RD\$27-28 for plots in the range of 100-150 square meters. These calculations are based on the previously presented project design model and the following estimated unit costs, land use standards and financing conditions:

- d = gross residential density (persons/ha) = dependent variable
- j = plot size (m²) = dependent variable
- f = monthly payment (RD\$/month) = independent variable
- e = raw land cost = RD\$0.50/m²
- c₁ = on-site infrastructure cost = RD\$0.50/m²
- a₁b₁ = cost of core house superstructure = RD\$1200²
- a₄ = cost of community facilities = RD\$0.00
- i = number of persons per plot = 7.00 persons/plot
- h = downpayment = 2 percent
- I = annual interest rate = 8 percent
- N = repayment period = 5 years

² In the present analysis, no modification has been made to the proposed FDD core house because the overall cost of RD\$1200 is considered realistic for the proposed target groups, although the size (60m²) is probably excessive. If unit construction costs should prove on the low side, the core house size will have to be decreased to maintain the RD\$1200 figure.

- m_1 = percent of total area for open space = 0.0 percent
- m_2 = number of square meters of land used for community facilities per person = $1.0m^2$ /person
- p = percent of total area used for circulation = 25 percent

The program's financing conditions will be varied in order to propose monthly payments affordable by the target households for the modified physical housing package. A repayment period of 20 years was arbitrarily decided upon and interest rates were allowed to vary from 8 to 16 percent. Table IV-2 shows the effect on density and plot size as a function of monthly payment for varying interest rates.

The table shows that for each 1 percent increase in the interest rate, monthly payments increase by RD\$2 for the same physical package (assuming plot sizes of approximately 100-150 square meters).

ALTERNATIVES FOR PROGRAM #4 -- NEW HOUSING SOLUTIONS,
PILOT PROGRAM FOR MINIMAL HOUSING

Alternative Urbanization Standards

	<u>Present FSJ Recommendation</u>	<u>Alternative</u>
Infrastructure Norms:		
(i) potable water	One tap located in rear of each plot.	Same
(ii) wastewater disposal	Public baths and toilet facilities shared by 24 families.	Same
(iii) streets and footpaths	Clearing, alignment and grading.	Clearing, alignment and grading with placement of sub-base and base course material with concrete curbs.
(iv) drainage	No specific recommendation.	Same
(v) electricity	Three to seven outlets per unit depending on type; minimal public lighting provided on major streets.	Same
(vi) solid waste	No specific recommendation.	Same
Land Use Standards		
(i) parks and open space	No specific recommendation.	5 percent of total area for small open areas or play areas.
(ii) circulation (streets and footpaths)	Approximately 40 percent.	25 percent.

(iii) community facilities

No specific recommendation.

1m² per person for small, multi-purpose centers (250m²) to be used as schools, health clinics and social centers.

Plot Development: Five basic model types of minimum housing on plots of 25-50 square meters. Units can be expanded and improved by beneficiaries as their needs and financial capacities improve.

Same basic superstructure on plots of 100-125 square meters with a slightly improved site development package and provision for some open space and small multi-purpose centers.

Alternative Recommendations

As previously noted in the body of the report, the Fundacion's physical housing solution and financing package (Program #4) is easily affordable by the target households within a monthly payment range of RD\$10-15. The alternative housing package with the slightly improved site development and land use standards will be analyzed for its affordability using the original financing conditions -- downpayment equal to zero percent, interest rate equal to 5 percent and repayment period equal to five years, and then the same alternative will be analyzed for interest rates varying from 8 to 16 percent. As in past cases, the project design model is used for this analysis. The original and alternative parameters are defined as follows:

Variable Description	Symbol	Present FSJ Recommendations	Alternative
Gross residential density (dependent variable)	d	No recommendation.	350-400 persons/ha.
Plot size (dependent variable)	j	25-50 m ²	100-125 m ²
Monthly payment (independent variable)	f	RD\$10-15/month	Same
Raw land cost	e	RD\$0.50/m ²	Same
On-site infrastructure cost	c ₁	RD\$2.5/m ²	RD\$3.0/m ²
Core unit construction cost	a ₁	RD\$50/m ²	Same

Plot connection costs	a ₂	RD\$100	Same
Cost of shared sanitary facilities	a ₃	RD\$150	Same
Community facilities cost	a ₄	RD\$0.0	Same
Core house size	b ₁	20m ²	Same
Persons per plot	i	6.0 persons/plot	Same
Park and open space	m ₁	0 percent	5 percent
Community facilities/person	m ₂	0.0m ² /person	1.0m ² /person
Circulation	p	+/- 40 percent	25 percent
Downpayment	h	0 percent	Same
Interest rate	I	5 percent	Same
Repayment period	N	20 years	Same

The project design model shows that the new standards can be easily afforded by the target households (see the 5 percent columns in the table following). For just RD\$2 additional per month, plot size can be increased from the proposed Fundacion area of 25-50 square meters to over 100 square meters. The question then becomes one of what effect varying interest rates will have on monthly payments. The following table (Table IV-3) reviews this issue.

It is readily apparent from the table that increasing interest rates have a very adverse effect on affordable housing solutions for the target households. With the exception of interest rates of 5 and 8 percent, none of the other "most profitable" packages falls within the RD\$10-15 monthly payment range. This is another obvious case where a variable monthly payment could be of benefit.

In order to illustrate the advantages of using a variable payment mortgage in the present analysis, a 14 percent interest rate is assumed to be charged to program beneficiaries. The following table shows the parameters of this type of payment plan.

Parameters of a Variable Payment Mortgage
Corresponding to a Level Payment Solution of
RD\$23/Month; d=350 Persons/Ha; and j=114m²

	1	2	3	4
Monthly payment (RD\$)	13	13	13	15
Annual interest rate (%)	14	14	14	14
Repayment period (years)	20	20	25	25
Annual payment growth rate (%)	5	7	7	7
Payment growth period (years)	10	20	25	15
Downpayment (%)	0	0	0	0
Capital cost per household (RD\$) for monthly payment of RD\$23	1850	1850	1850	1850
Capital cost per household (RD\$) for variable monthly payment	1336	1596	1747	1923

The preliminary results from the above table show that even by using a variable payment mortgage, it is difficult to generate the capital cost per household corresponding to a RD\$23 level monthly payment mortgage. Cases #1 and #2 -- assuming a RD\$13 monthly payment -- do not generate sufficient capital. Case #3 experiments with an increased repayment period of 25 years. This, too, is not satisfactory. Finally, Case #4 increases monthly payment to RD\$15 and maintains the 25-year repayment period. Only with these changes to the original financing conditions (monthly payments are now at the maximum allowable by the target population) is the proposed physical housing package affordable by the target households.

TABLE IV-1

Cash Flow Schedule of Revolving Fund for Home Improvements*

YEAR	LOANS FUNDED			TOTAL HIG PROGRAM COSTS	MONTHLY PAYMENTS TO REVOLVING FUND (thousand RD\$)	BALANCE IN REVOLVING FUND AT END OF PERIOD (thousand RD\$)
	Total Loans Funded	Proposed HIG Program Loans	Loans Funded from Revolving Fund			
0	----	----	----	----	----	3,870.0
1	2,803	2,500	303	750.0	92.2	3,054.0
2	3,483	2,500	983	750.0	296.8	2,399.0
3	4,310	2,450	1,860	735.0	559.5	1,754.0
4	5,392	2,450	2,942	735.0	884.6	1,008.6
5	7,351	3,000	4,351	900.0	1,307.3	187.0
5-Year Total	23,339	12,900	10,439	3,870.0	3,140.4	187.0

Notes: * Based on program option #2, Revolving Fund for Home Improvements for Rural Areas of South-Central and Southwest Regions. Individual loans funded by RD\$3.87 million HIG program seed capital during repayment period for initially funded loans (5 years).

Source: PADCO Elaboration.

TABLE IV-2

MONTHLY PAYMENT (RD\$)	DENSITY AS A FUNCTION OF INTEREST RATE* (persons/ha.)					PLOT SIZE AS A FUNCTION OF INTEREST RATE* (m ²)						
	I=	8	10	12	14	16	I=	8	10	12	14	16
	10	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11	(493)	n.a.	n.a.	n.a.	n.a.	n.a.	(99.5)	n.a.	n.a.	n.a.	n.a.	n.a.
12	265	1016	n.a.	n.a.	n.a.	n.a.	190.9	44.7	n.a.	n.a.	n.a.	n.a.
13	181	(401)	n.a.	n.a.	n.a.	n.a.	282.4	(124.0)	n.a.	n.a.	n.a.	n.a.
14	138	250	719	n.a.	n.a.	n.a.	375.9	203.3	66.1	n.a.	n.a.	n.a.
15	111	181	(368)	n.a.	n.a.	n.a.	465.4	282.6	(135.6)	16.2	n.a.	n.a.
16	93	142	248	620	n.a.	n.a.	556.9	361.9	205.1	77.7	n.a.	n.a.
17	n.a.	117	186	(359)	n.a.	n.a.	n.a.	441.2	274.6	(139.2)	28.1	n.a.
18	n.a.	100	150	253	582	n.a.	n.a.	520.5	344.1	200.8	83.1	n.a.
19	n.a.	87	235	195	(362)	n.a.	n.a.	599.8	413.6	262.3	(138.2)	n.a.
20	n.a.	n.a.	107	159	262	n.a.	n.a.	n.a.	483.1	323.9	193.2	n.a.
21	n.a.	n.a.	94	134	206	n.a.	n.a.	n.a.	552.6	385.4	248.2	n.a.

* Circled numbers refer to "most probable" density and plot size combinations to complement the proposed physical housing package.

Source: PADCO Elaboration.

TABLE IV-3

MONTHLY PAYMENT (RD\$)	DENSITY AS A FUNCTION OF INTEREST RATE* (persons/ha.)						PLOT SIZE AS A FUNCTION OF INTEREST RATE* (m ²)							
	I=	5	8	10	12	14	16	I=	5	8	10	12	14	16
9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
10	792	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11	504	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	77.4	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
12	370	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	107.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
13	292	690	n.a.	n.a.	n.a.	n.a.	n.a.	138.0	54.8	n.a.	n.a.	n.a.	n.a.	n.a.
14	241	496	n.a.	n.a.	n.a.	n.a.	n.a.	168.3	78.8	n.a.	n.a.	n.a.	n.a.	n.a.
15	205	387	690	n.a.	n.a.	n.a.	n.a.	198.6	102.7	54.9	n.a.	n.a.	n.a.	n.a.
16	179	317	515	n.a.	n.a.	n.a.	n.a.	228.9	126.6	75.6	n.a.	n.a.	n.a.	n.a.
17	n.a.	268	410	714	n.a.	n.a.	n.a.	n.a.	150.5	96.3	52.8	n.a.	n.a.	n.a.
18	n.a.	233	341	546	n.a.	n.a.	n.a.	n.a.	174.4	117.0	70.9	n.a.	n.a.	n.a.
19	n.a.	206	292	442	756	n.a.	n.a.	n.a.	198.3	137.8	89.1	49.6	n.a.	n.a.
20	n.a.	184	255	371	586	n.a.	n.a.	n.a.	222.2	158.5	107.3	65.7	n.a.	n.a.
21	n.a.	n.a.	227	320	479	809	n.a.	n.a.	n.a.	179.2	125.4	81.8	45.9	n.a.
22	n.a.	n.a.	204	281	404	634	n.a.	n.a.	n.a.	199.9	143.6	97.8	60.3	n.a.
23	n.a.	n.a.	185	250	350	521	n.a.	n.a.	n.a.	220.7	161.8	113.9	74.6	n.a.
24	n.a.	n.a.	n.a.	226	309	442	n.a.	n.a.	n.a.	n.a.	179.9	130.0	89.0	n.a.
25	n.a.	n.a.	n.a.	206	276	384	n.a.	n.a.	n.a.	n.a.	198.1	146.1	103.4	n.a.

* Circled numbers refer to "most probable" density and plot size combinations to complement the proposed physical housing package.

Source: PADCO Elaboration.

ANNEX V

Current Economic Situation and Trends¹

A. Economic Prospects

Prior to Hurricane David, the Dominican economy was expected to register a growth rate of around 5-6 percent in 1979, compared with 2.3 percent in 1978. Preliminary estimates now indicate that GDP will decline by more than 2 percent. Exports are still estimated to show a 15 percent increase to \$775 million. However, an estimated \$140 million jump in the country's oil import bill will more than offset all of this increase. This greater petroleum bill plus added imports for foodstuffs and reconstruction materials should result in a trade deficit of about \$300 million and a current accounts deficit of approximately \$500 million. With the international assistance already received or promised for 1979, the country's international payments situation should be in balance. Led by the hefty price hikes for petroleum products, the rate of inflation was expected to increase at least 15 percent by the end of 1979.

Most of the damage caused by the hurricanes was not of a permanent nature. The industrial sector is expected to recover fully within several months. Short term crop and poultry losses account for most of the estimated \$292 million damages in the agricultural sector. The Government has already initiated programs to repair roads, bridges, aqueducts, schools, housing and the electricity system (see Construction). Repairing the electricity system, especially the hydroelectric projects and the generation and grid system west of Santo Domingo, will involve substantial international assistance.

However, 1980 promises to remain difficult. Even if world oil prices stay the same and the Dominican Republic maintains the same level of oil imports next year as in 1979, the country's oil bill will rise to around \$410 million, double that of 1978. Much will depend on the success of the reconstruction efforts and on world commodity prices for the Dominican Republic's major exports.

B. Balance of Trade and Payments

In 1978, export earnings dropped to \$675.5 million. Prior to Hurricane David, exports were estimated to total \$865 million

¹ This section is an edited and abbreviated version of the U.S. government publication, Foreign Economic Trends and Their Implications for the United States, U.S. Department of Commerce, Industry and Trade Commission, December 1979.

in 1979, an increase of 28 percent over 1978. Preliminary estimates now are that exports will reach \$775 million, \$90 million less than anticipated but still greater than the 1978 total. Fortunately, the mining sector, which enjoyed a strong performance in 1979, escaped virtually untouched from Hurricane David. The greatest increase in export earnings is expected from ferro-nickel shipments and earnings are estimated to increase 60 percent to a record \$120 million. Gold and silver earnings are also estimated at an all time HGH of \$120 million.² With production estimated to drop 27 percent, bauxite earnings are expected to decline by 20 percent to \$17 million.

Most of the 1979 sugar crop had been exported before the August 31 hurricane struck and the Dominican Republic should be able to fulfill its quota allotment under the International Sugar Agreement (ISA) by drawing down stocks. Hence, earnings for sugar and sugar products should increase by about 9 percent to \$240 million. Since the tobacco crop had been harvested and put into storage prior to David, the estimate for tobacco earnings remains at \$44 million, or slightly less than 1978.

Of the Dominican Republic's major exports, coffee suffered the greatest hurricane damage. Prior to David, earnings for coffee and coffee products were expected to increase 65 percent to \$150 million. Estimates indicate that the 1979-80 coffee crop was damaged 20-25 percent, with a large portion of the road network destroyed in the coffee growing areas. Thus, the original estimate of \$150 million for exports of coffee and coffee products is scaled down to \$100 million. Cocoa growing areas suffered less damage; the original estimate of export earnings for cocoa and cocoa products is being reduced only by \$10 million to \$80 million. In light of the anticipated shortages caused by the hurricanes, exports of foodstuffs were banned by the Government. Production facilities of light manufactured goods suffered serious damage and no significant exports were expected for 1979. Through August 1979, exports other than gold, silver, nickel, bauxite, sugar, coffee, cocoa and tobacco were \$51 million.

Total imports for 1978 were \$859.2 million, a slight (1 percent) increase over the previous year. Leading imports were petroleum and petroleum products (\$199 million), machinery (\$126.2 million), basic and processed metals (\$78.4 million), motor vehicles (\$66.6 million), plastic and natural resins (\$41.1 million), cereals (\$39.6 million), paper and paper products (\$34.2 million), animal and vegetable oils (\$30.8 million), pharmaceuticals (\$28.8 million) and textile materials and products (\$28.4 million).

² This estimate was made before the fall of silver prices on the world market.

The pre-David estimate for the Dominican Republic's total 1979 imports was \$1.035 billion, an increase of 20 percent over 1978. Almost all of this rise reflected an estimated \$140 million surge in the country's oil import bill. In order to cover a food deficit brought about by Hurricane David and Tropical Storm Frederick, the Dominican Republic was expected to have to import an additional \$12-\$15 million in foodstuffs. Other imports for reconstruction plus the additional \$12-\$15 million in foodstuffs will probably raise the Dominican Republic's total import bill to around \$1.070 billion. Hence, the 1979 trade deficit is now estimated at close to \$400 million, compared with \$185 million in 1978. As a result of this deterioration in the trade account, the country's current account deficit previously estimated at \$375 million will grow to around \$500 million.

However, with the series of international loans, credits and donations following David, the Dominican Republic's overall 1979 balance of payments deficit of a little less than \$50 million estimated before David has been essentially resolved.

The Dominican Republic continues to impose import restrictions in an effort to conserve scarce dollar resources. In April 1979, President Guzman issued decrees prohibiting for two years the importation of automobiles with an FOB value of over \$RD4,000 and suspending importation of a large list of consumer goods. In May, the Dominican Congress approved the \$185 million loan the Government negotiated last December with a consortium of international private banks, which has been used to cover the rest of last year's balance of payments deficit, to refinance existing Government guaranteed loans of the autonomous state agencies, as well as to provide these agencies with working capital.

In 1978, the Dominican Republic had a debt-service ratio (defined as the percentage of exports of goods and non-factor services needed to cover amortization and interest payments on the public and publicly guaranteed long term debt repayable in foreign currency) of about 13 percent. The Central Government's current expenditures are now increasing at a rapid rate while capital expenditures are declining. Sources of long term concessional financing are being sought for continuing capital projects now underway and planned for the near future. The debt service ratio will thus probably increase somewhat in the intermediate to long term. However, it is not anticipated that the increased debt service payments will be difficult for the country to finance over the next couple of years. During the first three months of 1979, the public external debt increased 7.4 percent to \$886 million. The private sector debt increased during the same period by 3.4 percent to \$444 million.

C. Inflation

Mainly as a result of a bumper agricultural year and stable prices for energy, the Dominican Republic's inflation rate in 1978 dropped to 3.6 percent. Circumstances this year have not been as favorable. Hence, the inflation rate in 1979 is estimated to increase to more than 15 percent by the end of 1979, slightly higher than the country's 1974-1977 average of 13.9 percent. World petroleum prices are placing the greatest upward pressure on the price index. In 1979, the Government has raised the price of gasoline by 87 percent to \$1.85 per gallon and the prices of other petroleum products by lesser though significant amounts. In April, cement prices were upped 28 percent and electricity rates were increased by an average 22 percent for the domestic sector, 16 percent for the commercial sector, 13 percent for large industries and 11.5 percent for small industries. Due to last year's outbreak of African swine fever on the island, meat prices have increased substantially as demand has shifted away from pork to beef and chicken. Ocean freight rates have also gone up. Temporary food shortages caused by David will put further upward pressure on the Dominican Consumer Price Index.

D. Income Distribution, Wages and Employment

Typical of most developing countries, income distribution in the Dominican Republic demonstrates a skewed pattern, with the lower 50 percent of the population earning 18.5 percent of total income, while the upper 10 percent earns 38.5 percent. During its first year in office, the Guzman administration adopted a series of measures favoring income redistribution. The minimum wage for government employees and for workers in firms with capital of more than \$10,000 was raised 56 percent to \$125 per month. All other government workers earning less than \$300 a month were granted a 10 percent salary increase, and civil service retirement pensions were raised. In addition, the daily minimum wage of \$2.50 in the countryside was raised to \$3.50. The population, which is estimated to reach 5.4 million by the year's end, continues to grow at a relatively rapid rate of 2.9 percent. The capital, Santo Domingo, and (to a lesser extent) Santiago in the interior, generate an important share of National Income and support a sizeable and growing middle class. The labor force is comprised of approximately 1.4 million workers, of which an estimated 8-10 percent are members of organized unions. Hurricane David has aggravated the unemployment situation. Recognizing the magnitude of this loss of human resources, the Government has declared the creation of employment to be one of its highest priorities, with special emphasis directed toward rural employment.

E. Construction

Unlike in past years when the public sector accounted for the lion's share of activity in the construction sector during the first half of 1979, it was the private sector that was the

engine of growth to the extent that the old 60/40 construction spending ratio in favor of the public sector was reversing in favor of the private sector. In the first five months of 1979, Government outlays for construction were running at a rate, that if maintained through December, would have resulted in total government spending for construction being less than half that of 1978. Prior to David, Government activity had continued on some of the old projects, but except for the building of rural clinics and secondary roads, no new major projects had been initiated.

Hurricane David, however, changed significantly the construction outlook for 1979 and 1980. The \$114 million short term reconstruction program announced by President Guzman will involve substantial Government outlays for construction. Fifty-two bridges were either totally or partially destroyed and it will take 2 to 6 months to repair them at a cost of \$10 million. Road damage is also estimated at \$10 million, with 2,500 kilometers of secondary roads seriously affected.

STATISTICAL ANNEX

TABLE I-1

Population and Vital Statistics^{a/}
1920-1980

Year	Popula- tion (Thousands)	Average Yearly Growth (%)	Crude Birth Rate (per Thousand)	Crude Death Rate (per Thousand)	Infant Mortality Rate (per Thousand)	Rate Natural Increase (%)	Net Migra- tion (Thousands)
1920 <u>b/</u>	905.1						
1920-35		3.4					
1935 <u>b/</u>	1,494.5						
1935-50		2.4					
1950 <u>b/</u>	2,135.8						
1951	2,209.9		41.4	10.0	79.0	3.2	-1.1
1952	2,289.4		42.2	10.1	78.7	3.2	-1.5
1953	2,371.8		41.5	9.0	74.2	3.3	-1.5
1954	2,457.2		43.9	8.8	68.3	3.5	-0.5
1955	2,545.7		41.6	9.1	73.8	3.3	4.7
1956	2,637.3		40.6	9.1	77.3	3.2	-1.9
1957	2,732.3		40.9	8.6	74.8	3.2	-2.6
1958	2,830.6		42.0	8.4	76.8	3.4	8.6
1959	2,932.5		39.8	10.5	13.2	2.9	1.6
1950-60		3.6					
1960 <u>b/</u>	3,047.1		36.8	9.0	00.6	2.6	-1.7
1961	3,128.0		32.6	8.4	02.3	2.4	-7.9
1962	3,220.6		33.1	6.9	79.5	2.6	-6.7
1963	3,316.0		33.2	6.8	81.3	2.6	-0.9
1964	3,414.2		33.8	6.7	79.0	2.7	-11.2
1965	3,515.3		30.4	5.9	72.7	2.5	-2.3
1966	3,619.4		34.9	7.4	81.1	2.8	-9.7
1967	3,726.5		36.5	7.9	80.4	2.9	-12.7
1968	3,836.9		35.6	7.3	72.6	2.8	-16.7
1969	3,950.5		39.2	6.9	61.9	3.2	-16.4
1960-70		2.8					
1970 <u>b/</u>	4,006.4		47.5	13.5	102.6	3.4	-9.4
1971	4,181.6		38.8	6.0	48.8	3.3	-5.6
1972	4,304.9		41.2	6.4	49.2	3.5	-6.0
1973	4,431.7		46.8	6.0	38.6	4.1	-2.7
1974	4,562.3		36.4	5.8	44.6	3.1	-15.6
1975	4,696.8		34.4	5.4	43.5	2.9	-9.9
1970-75		3.2					
1976	4,835.2		35.0	5.2	39.4	3.0	-11.1
1977	4,977.7			5.0			-18.9
1978	5,124.4						
1979	5,275.4						
1980	5,430.9						
1975-80		2.9					

a/ Birth and death rates are based on registration data and are understated by approximately 20 percent and 40 percent, respectively. The higher birth rate data for 1969-70 is the result of improved registration procedures.

b/ Census figures.

Source: National Statistical Office, census figures, and projections

TABLE I-2

Distribution of Population by Age and Sex
1950, 1960, 1970 & 1980
(thousands)

Age Groups	1950			1960			1970			1980
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 - 4	345.9	189.4	186.5	559.7	283.0	276.7	680.6	343.9	336.7	923.2
5 - 9	297.7	150.7	147.0	487.3	246.6	240.7	656.6	330.5	326.1	887.9
10 - 14	276.8	141.6	135.2	393.9	203.5	190.4	567.2	285.0	282.2	771.2
15 - 19	225.7	101.5	124.2	286.1	133.2	152.9	447.6	211.9	252.7	605.6
20 - 24	214.4	105.2	109.2	256.7	121.4	135.3	328.7	156.1	172.6	445.4
25 - 29	156.8	77.6	79.2	213.2	104.0	109.2	244.9	116.6	128.3	331.3
30 - 34	119.6	59.6	60.0	187.4	94.7	92.7	210.2	104.4	105.3	285.1
35 - 39	115.6	60.1	55.5	151.2	77.5	73.7	206.4	102.4	104.0	279.7
40 - 44	90.8	47.8	43.0	123.0	65.9	58.0	173.0	91.4	81.6	236.2
45 - 49	67.2	36.6	30.6	96.4	51.7	44.7	121.1	63.1	58.0	165.6
50 - 54	59.6	30.7	28.9	89.0	47.1	41.9	108.2	58.1	50.1	146.6
55 - 59	35.9	21.0	14.9	50.8	28.9	21.9	64.3	35.0	29.3	86.9
60 - 64	38.5	19.7	18.8	61.0	32.4	28.6	72.7	38.2	34.5	97.8
65 and over	61.3	29.2	32.1	90.5	45.9	44.6	124.9	62.4	62.5	168.4
Total	<u>2,135.8</u>	<u>1,070.7</u>	<u>1,065.1</u>	<u>3,047.1</u>	<u>1,535.8</u>	<u>1,511.3</u>	<u>4,006.4</u>	<u>1,999.0</u>	<u>2,007.5</u>	<u>5,430.9</u>

Source: National Statistical Office, census figures, and projections.

TABLE I-3

Population by Urban and Rural Areas

Year	Total Popula- tion	*	Urban Population		Rural Population		*
			Total	% of Total Population	Total	% of Total Popualtion	
1920	894,665		148,894	16.6	745,771	83.4	.
		3.4					6.0
1935	1,479,417		266,565	18.0	1,212,852	82.0	
		2.4					4.3
1950	2,135,872		508,408	23.8	1,627,464	76.2	
		3.6					6.1
1960	3,047,070		922,090	30.3	2,124,980	69.7	
		2.9					5.8
1970	4,006,405		1,595,235	39.8	2,413,170	60.2	
		3.2					5.9
1975	4,696,793		2,128,561	45.3	2,568,232	54.7	
		2.9					5.3
1980	5,430,879		2,751,923	50.7	2,678,956	49.3	

* Compound annual rate of increase

Source: National Statistical Office, census data and projections.

TABLE I-4

Cumulative Migration Balances by Province
1970

Province	Cumulative Net Migration	
	Number of Persons	% of Popula- tion ^{a/}
Distrito Nacional	327,425	41.8
Azua	-11,213	-11.3
Bahoruco	-4,385	-6.6
Barahona	-16,315	-13.3
Dajabón	1,304	2.7
Duarte	-29,546	-13.6
El Seibo	-20,651	-14.0
Españat	-44,114	-24.7
Independencia	-3,005	-8.7
La Altagracia	-7,085	-7.8
La Estrelleta (Elías Piña)	-6,970	-11.9
La Romana	11,812	21.8
La Vega	-34,211	-10.8
María Trinidad Sánchez	3,993	4.5
Monte Cristi	-5,747	-7.9
Pedernales	6,095	50.1
Peravia	-29,414	-19.2
Puerto Plata	-51,209	-22.3
Salcedo	-18,490	-17.8
Samaná	-2,854	-5.3
Sánchez Ramírez	1,005	1.0
San Cristóbal	5,509	1.8
San Juan	-23,454	-11.3
San Pedro de Macorís	-4,680	-4.6
Santiago	-33,768	-8.3
Santiago Rodríguez	-17,247	-72.1
Valverde	7,215	9.7
Total	<u>0</u>	<u>0</u>

a/ In case of positive balance, percentage is calculated on the basis of resident population; in case of negative balance, percentage is calculated based on population born in the province.

Source: National Statistical Office-1970 Census.

TABLE I-5

Economically Active Population, Employed and Unemployed,
by Sex and Residence^{a/}
1970

	Economically Active Popula- tion (thousands)	Employed		Unemployed	
		Thousands	% of Econ. Active Population	Thousands	% of Econ. Active Population
Total	<u>1,239.1</u>	<u>941.5</u>	<u>76.0</u>	<u>297.6</u>	<u>24.0</u>
Male	920.2	715.2	77.7	205.0	22.3
Female	318.9	226.4	71.0	92.5	29.0
Urban	483.3	368.0	76.1	115.3	23.9
Male	330.3	255.0	77.2	75.3	22.8
Female	153.0	113.0	73.9	40.0	26.1
Rural	755.8	573.5	75.9	182.2	24.1
Male	589.9	460.1	78.0	129.7	22.0
Female	165.9	113.4	68.4	52.5	31.6

^{a/} Small differences due to rounding.

Source: National Statistical Office - 1970 Census

TABLE I-6

Economically Active Population by Sectors and
Urban and Rural Areas
1970

	Total		Urban Areas		Rural Areas	
	Thou- sands	%	Thou- sands	%	Thou- sands	%
Agriculture, forestry, hunting, and fishing	549.3	44.3	46.7	9.7	502.6	66.5
Mining and quarrying	0.8	0.1	0.4	0.1	0.4	0.1
Manufacturing industry	101.0	8.2	50.6	10.5	50.4	6.7
Electricity, gas, and water	1.7	0.1	1.4	0.3	0.3	0
Construction	28.5	2.3	23.5	4.8	5.0	0.7
Commerce	77.1	6.2	56.3	11.6	20.8	2.8
Transport, storage, and communications	43.3	3.5	30.9	6.4	12.4	1.6
Banking, insurance, real estate, and services rendered to business enterprises	20.1	1.6	16.2	3.3	3.9	0.5
Government and other services	153.9	12.4	125.0	25.9	28.9	3.8
Activities not adequately defined ^{a/}	263.4	21.3	132.3	27.4	131.1	17.3
Total	<u>1,235.1</u>	<u>100.0</u>	<u>483.3</u>	<u>100.0</u>	<u>755.8</u>	<u>100.0</u>

^{a/} Adjusted figures.

Source: National Statistical Office - 1970 Census.

TABLE I-7

Economically Active Population, Employed and
Unemployed, by Age
1970

Age Groups	Economically Active Population		Employed		Unemployed	
	Thou- sands	% of total	Thou- sands	% of ec. act.pop.	Thou- sands	% of ec. act.pop.
10 - 14	105.8	8.5	69.1	65.3	36.7	34.7
15 - 19	169.8	13.7	117.4	69.1	52.4	30.8
20 - 24	178.6	14.4	134.4	75.3	44.2	24.7
25 - 29	143.9	11.6	112.3	78.0	31.6	22.0
30 - 34	129.0	10.4	104.4	80.9	24.6	19.1
35 - 39	124.6	10.1	99.3	79.7	25.3	20.3
40 - 44	104.7	8.5	83.6	79.8	21.1	20.2
45 - 49	74.8	6.0	60.0	80.2	14.8	19.8
50 - 54	66.9	5.4	51.9	77.6	15.0	22.4
55 - 59	39.4	3.2	31.0	78.7	8.4	21.3
60 - 64	42.7	3.4	32.3	75.6	10.4	24.4
65 +	58.9	4.8	45.8	77.8	13.1	22.2
Total	<u>1,239.1</u>	<u>100.0</u>	<u>941.5</u>	<u>76.0</u>	<u>297.6</u>	<u>24.0</u>

Source: National Statistical Office - 1970 Census.

TABLE I-8

Employed Persons by Weekly Working Hours and Sex
Santo Domingo
 1977/78

	Number of Employed (Thousands)	Percentages				Unspeci- fied
		Of which 0-14	with Weekly 15-29	Working Hours 30-39	of 40 +	
Total	<u>274.5</u>	<u>3.3</u>	<u>6.8</u>	<u>11.2</u>	<u>74.3</u>	<u>4.4</u>
Male	188.6	2.1	3.9	8.8	81.5	3.7
Female	85.9	5.8	13.1	16.4	58.6	6.1

Source: National Statistical Office - Santo Domingo Employment Survey,
 August 1977 - January 1978

TABLE I-9

Monthly Income Levels of Employed Persons by Sex
Santo Domingo
 1977/78

	Employed	Male	Female
Number of persons (thousands)	274.5	188.6	85.9
Of which with monthly income of RD\$..... to RD\$..... (percentages)			
0-49	17.4	8.8	36.2
50-99	24.1	23.0	26.4
100-199	39.0	45.0	25.7
200-499	13.9	17.8	5.4
500-999	1.2	1.5	0.2
1,000 +	0.2	0.3	0
Unspecified	4.2	3.6	6.1

Source: National Statistical Office - Santo Domingo Employment Survey, August 1977 - January 1978.

TABLE I-10

Employed Persons by Monthly Income and Weekly Working Hours
Santo Domingo
 1977/78

	Number of Employed (Thousands)	(Percentages)				
		Of which with Weekly Working Hours of 0-14	15-29	30-39	40 +	Unspeci- fied
Total	<u>274.5</u>	<u>3.3</u>	<u>6.8</u>	<u>11.2</u>	<u>74.3</u>	<u>4.4</u>
Of which with monthly income of RD\$..... to RD\$.....						
0-49	47.8	14.3	18.1	16.8	50.8	.
50-99	66.0	2.1	9.7	13.1	75.1	.
100-199	106.9	0.8	2.6	10.7	85.9	.
200-499	38.1	0	2.1	6.3	91.6	.
500-999	3.0	0	0	6.7	93.3	.
1,000 +	0.6	0	0	0	100.0	.
Unspecified	12.1

Source: National Statistical Office - Santo Domingo Employment Survey,
 August 1977/January 1978.

TABLE I-11

Open Unemployment by Provinces
1970

	UNEMPLOYMENT (% of Economic Active Population)
Distrito Nacional	25.2 a/
Azua	20.0
Bahoruco	24.4
Barahona	26.6
Dajabón	20.6
Duarte	22.2
El Seibo	19.6
Españat	23.2
Independencia	28.7
La Altagracia	17.8
La Estrelleta (Elías Piña)	23.8
La Romana	21.4
La Vega	25.1
María Trinidad Sánchez	24.3
Monte Cristi	25.9
Pedernales	29.2
Peravia	21.8
Puerto Plata	27.7
Salcedo	30.6
Samaná	24.3
Sánchez Ramírez	21.8
San Cristóbal	29.4
San Juan	22.7
San Pedro de Macorís	16.8
Santiago	22.7
Santiago Rodríguez	20.3
Valverde	23.0
Total	<u>24.1</u>

a/ Estimate

Source: ONAPLA: Apuntes para el desarrollo de una estrategia global de empleos en la República Dominicana (based on unpublished 1970 census figures).

TABLE I-12

Economically Active Population, Employed and Unemployed,
by Sex and Age
Santo Domingo
1977/78

	Economically Active Popula- tion (Thousands)	Employed		Unemployed	
		Thou- sands	% of econ. active po- pulation	Thou- sands	% of econ. active po- pulation
Total	<u>362.2</u>	<u>274.5</u>	<u>75.8</u>	<u>87.7</u>	<u>24.2</u>
Male	237.2	188.6	79.5	48.6	20.5
Female	125.0	85.9	68.7	39.1	31.3
Age 15-19	51.3	30.5	59.5	20.8	40.5
Male	33.3	22.7	68.2	10.6	31.8
Female	18.0	7.8	43.3	10.2	56.7
Age 20-24	79.9	48.0	60.1	31.9	39.9
Male	49.2	31.3	63.6	17.9	36.4
Female	30.7	16.7	54.4	14.0	45.6
Age 25-54	208.1	175.8	84.5	32.3	15.5
Male	136.9	119.2	87.1	17.7	12.9
Female	71.2	56.6	79.5	14.6	20.5
Age 55 +	22.9	20.3	88.6	2.6	11.4
Male	17.9	15.5	86.6	2.4	13.4
Female	5.0	4.8	96.0	0.2	4.0

a/ Small differences due to rounding.

Source: National Statistical Office - Santo Domingo Employment Survey,
August 1977-January 1978.

TABLE I-13

Employed Persons by Sex and Sector of Economic Activity
Santo Domingo
 1977/78

	Total		Male		Female	
	Thou- sands	%	Thou- sands	%	Thou- sands	%
Agriculture, forestry, hunting, and fishing	0.8	0.3	0.8	0.4	0	0
Mining and quarrying	0.6	0.2	0.6	0.3	0	0
Manufacturing industry	48.7	17.7	39.7	21.1	9.0	10.5
Electricity, gas, and water	4.4	1.6	3.8	2.0	0.6	0.7
Construction	20.9	7.6	20.7	11.0	0.2	0.2
Commerce (including restaurants)	66.9	24.4	46.6	24.7	20.3	23.6
Transport and storage	16.0	5.8	15.0	8.0	1.0	1.2
Financial services	6.2	2.3	4.2	2.2	2.0	2.3
Other services	103.0	37.5	54.0	28.6	49.0	57.1
Unspecified	7.0	2.6	3.2	1.7	3.8	4.4
Total	<u>274.5</u>	<u>100.0</u>	<u>188.6</u>	<u>100.0</u>	<u>85.9</u>	<u>100.0</u>

Source: National Statistical Office - Santo Domingo Employment Survey,
 August 1977/January 1978

TABLE I-14

Employed Persons by Occupational Status and Sex
Santo Domingo
1977/78

	Total		Male		Female	
	Thou- sands	%	Thou- sands	%	Thou- sands	%
Employer	1.6	0.6	1.4	0.7	0.2	0.2
Self-employed	82.3	30.0	56.2	29.8	26.1	30.4
Wage-earners	183.6	66.9	127.8	67.8	55.8	65.0
Family workers	6.6	2.4	3.0	1.6	3.6	4.2
Unspecified	0.4	0.1	0.2	0.1	0.2	0.2
Total	<u>274.5</u>	<u>100.0</u>	<u>188.6</u>	<u>100.0</u>	<u>85.9</u>	<u>100.0</u>

Source: National Statistical Office - Santo Domingo Employment Survey,
August 1977-January 1978

TABLE I-15

Age Specific Mortality Rates
1974
(rate per 1,000)

Age Group	Country As A Whole	Urban Areas	Rural Areas
- 1	103.8	73.9	127.9
1 - 4	16.8	15.0	19.6
5 - 9	4.7	3.6	5.4
10 - 14	2.0	2.0	2.1
15 - 19	2.6	2.3	2.9
20 - 24	3.7	2.4	4.0
25 - 29	4.0	3.7	4.9
30 - 34	4.7	4.5	5.0
35 - 39	4.9	4.6	5.0
40 - 44	5.2	4.5	6.0
45 - 49	7.8	4.9	13.4
50 - 54	10.6	8.5	13.6
55 - 59	15.7	13.7	17.8
60 - 64	13.9	15.3	12.7
65 - 69	44.1	37.3	51.9
70 - 74	65.0	48.3	75.7
75 +	141.2	132.9	148.3

Source: "Diagnos" Survey, Secretariat of Public Health and Social Assistance,
July 1974.

TABLE I-16

Ten Leading Causes of Death
1970 & 1977^{a/}
(rate per 100,000)

DISEASE	1970	1977
Senility and ill-defined causes	243.2	197.0
Infectious and parasitic diseases	95.7	71.6
Causes related to prenatal mortality	58.4	38.0
Diseases of the circulatory system	43.0	42.9
Diseases of the respiratory system	37.8	35.8
Accidents, poisonings, and violence	35.6	35.6
Other diseases	26.3	28.3
Tumors (neoplasms)	22.2	23.3
Diseases of the endocrine glands, metabolism, and nutrition	16.4	16.7
Diseases of the digestive tract	12.8	13.2

^{a/} The analysis of mortality is limited by the fact that approximately three-fourths of all deaths registered in the Dominican Republic do not have medical certification. Thus, over 50% of deaths recorded in the 1970 census were listed in Category 1 above ("Senility and ill-defined causes").

Source: Secretariat of State for Public Health and Social Assistance,
Statistical Division.

TABLE I-17

Educational Profile of the Population
1978

Age group <u>a/</u>	Percent of population			
	Without any Instruction	With primary education	With intermediate and secondary education	With university education
5-9	49	37		
10-14	21	68	6	
15-19	19	50	23	1
20-24	18	52	19	3
25-29	21	53	15	2
35-39	30	49	11	2
45-49	49	39	9	1
55-59	44	32	9	1

a/ No estimates available for age-groups 30-34, 40-44, and 50-54.

Source: Secretaría de Estado de Educación-Situación de la Educación Dominicana. Perspectivas y Propuestas, Octubre 1979.

TABLE I-18

Enrollment in Primary and Secondary Schools
1961-1976
(thousands)

	Primary Education			Secondary Education		
	Total	Urban	Rural	General ^{a/}	Technical	Teacher Training
1961-62	509.9	144.7	365.2	28.1	...	0.3
1962-63	489.5	151.5	338.0	32.7	...	0.3
1963-64	452.1	158.0	294.1	42.8	...	0.4
1964-65	516.1	171.6	344.5	50.6	...	0.4
1965-66	557.3	185.1	372.2	56.3	...	0.4
1966-67	584.8	206.9	377.9	67.5	1.8	0.4
1967-68	649.1	238.9	410.2	76.1	2.5	0.5
1968-69	685.6	257.4	428.1	87.9	2.1	0.6
1969-70	726.4	278.3	448.1	97.5	6.6	0.5
1970-71	764.5	294.1	470.4	113.6	3.2	0.6
1971-72	820.2	329.5	490.7	126.8	3.6	0.6
1972-73	833.4	343.6	489.8	132.5	4.6	0.7
1973-74	837.0	348.4	488.6	135.8	...	0.8
1974-75	867.6	365.7	501.9	171.2	7.4	1.1
1975-76	903.5	373.6	529.9	180.1	5.3	1.4

^{a/} Including intermediate level.

Source: Ministry of Education/National Statistical Office: República Dominicana en Cifras, 1978.

TABLE I-19

Coverage of the Educational System*

	1960-61	1965-66	1970-71	1975-76	Rate of Development (%)
Population, 5 to 14 years <u>a/</u>	881.2	1,052.0	1,240.9	1,477.1	3.5
Primary enrollment <u>a/</u>	502.6	557.3	764.5	903.5	4.0
Coverage in % <u>c/</u>	57.0	53.0	62.0	61.2	
Population, 15 to 19 years <u>a/</u>	285.1	357.0	453.0	539.2	4.3
Secondary enrollment <u>a/</u>	30.6	56.3	113.6	180.1	12.5
Coverage in % <u>c/</u>	11.0	16.0	23.0	33.4	
Population, 20 to 29 years <u>a/</u>	469.9	530.0	580.9	633.8 <u>b/</u>	2.3
University enrollment <u>a/</u>	3.4	7.1	23.5	36.0 <u>b/</u>	19.9
Coverage in % <u>c/</u>	0.7	1.3	4.0	5.7	

a/ In thousandsb/ For 1973-1974c/ Registered students as a percent of population in the age group specified.

* Coverage figures are approximate, based on available population data. The age distribution of primary students is normally 6-12 years; for secondary students, the distribution is 13-18 years.

Source: National Office of Statistics; Secretary of Education.

TABLE I-20

Primary School Retention Rates

1960-1973

(% of students who entered Grade 1 and completed Grade 6)

	Total	Urban	Rural
1960/61 - 1965/66	9.8	33.4	3.1
1961/62 - 1966/67	11.9	39.0	3.9
1962/63 - 1967/68	13.5	40.6	4.9
1963/64 - 1968/69	15.0	43.4	6.0
1964/65 - 1969/70	17.1	43.4	7.1
1965/66 - 1970/71	17.4	45.6	7.5
1966/67 - 1971/72	20.9	52.2	9.5
1967/68 - 1972/73	18.6	50.6	8.5

Source: Secretariat of State for Education, Statistics Department.

TABLE I-21

Population Aged 15 Years and Older by Employment Status and Educational Level
Santo Domingo
1977/78

	Total Population		Economically Active Population						Inactive Population	
	Thou- sands	%	Total		Employed		Unemployed		Thou- sands	%
			Thou- sands	%	Thou- sands	%	Thou- sands	%		
Total	<u>641.7</u>	<u>100.0</u>	<u>362.2</u>	<u>100.0</u>	<u>274.5</u>	<u>100.0</u>	<u>87.7</u>	<u>100.0</u>	<u>279.5</u>	<u>100.0</u>
Primary education (grades 1-6)	255.0	39.7	146.3	40.4	118.8	43.3	27.5	31.4	108.7	38.9
of which: up to grade 3	79.5	12.4	39.9	11.0	33.7	12.3	6.2	7.1	39.6	14.2
Intermediate education (grades 1-2)	126.8	19.8	71.9	19.9	55.4	20.2	16.5	18.8	54.9	19.6
Secondary education (grades 1-4)	142.7	22.2	82.1	22.7	52.0	18.9	30.1	34.3	60.6	21.7
of which: up to grade 2	67.2	10.4	32.5	9.0	21.1	7.7	11.4	13.0	34.7	12.4
Tertiary education (grades 1-6)	34.5	5.4	24.0	6.6	16.4	6.0	7.6	8.7	10.5	3.8
of which: up to grade 3	21.9	3.4	14.0	3.9	8.2	3.0	5.8	6.6	7.9	2.8
Illiterate	56.8	8.9	23.3	6.4	19.1	6.9	4.2	4.8	33.5	12.0
Unspecified	25.9	4.0	14.6	4.0	12.8	4.7	1.8	2.0	11.3	4.0

Source: National Statistical Office - Santo Domingo Employment Survey - August 1977 - January 1978.

TABLE I-22

Population Aged 15 Years and Older by Educational Level and Sex
Santo Domingo
 1977/78

	<u>Total</u>		<u>Male</u>		<u>Female</u>	
	<u>Thou-</u> <u>sands</u>	<u>%</u>	<u>Thou-</u> <u>sands</u>	<u>%</u>	<u>Thou-</u> <u>sands</u>	<u>%</u>
Total	<u>641.7</u>	<u>100.0</u>	<u>298.2</u>	<u>100.0</u>	<u>343.5</u>	<u>100.0</u>
Primary education (grades 1-6) of which up to grade 3	255.0 79.5	39.7 12.4	121.2 30.7	40.6 10.3	133.8 48.8	39.0 14.2
Intermediate education (grades 1-2)	126.8	19.8	67.0	22.5	59.8	17.4
Secondary education (grades 1-4) of which up to grade 2	142.7 67.2	22.2 10.4	62.6 28.9	21.0 9.7	80.1 38.3	23.3 11.1
Tertiary education (grades 1-6) of which up to grade 3	34.5 21.9	5.4 3.4	19.1 11.2	6.4 3.8	15.4 10.6	4.5 3.1
Illiterate	56.8	8.9	17.3	5.8	39.5	11.5
Unspecified	25.9	4.0	11.0	3.7	14.9	4.3

Source: National Statistical Office: Santo Domingo Employment Survey,
 August 77 - January 78.

TABLE I-23

Primary School Teacher Requirement and Deficit
1978-1983

	School age population (thousands)	Pupil- teacher ratio	Teacher require- ment <u>a/</u>	Teacher availa- bility	Of which graduates joining service	Deficit
1978	1,020.8	50	20,415	6,519	1,152	13,896
1979	1,050.0	49	21,482	6,843	1,282	14,041
1980	1,079.8	48	22,496	7,364	1,351	14,451
1981	1,124.1	47	23,918	7,893	1,414	15,400
1982	1,128.4	46	24,530	8,432	1,512	15,429
1983	1,174.5	45	26,100	8,921	1,579	16,492

a/ Based on 100 percent enrollment

Source: Secretaría de Estado de Educación - Situación de la Educación Dominicana.
Perspectivas y Propuestas, Octubre 1979.

TABLE I-24

Number of Primary School Teacher Graduates
1968-1979

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Escuelas normales	140	190	448	303	298	261	370	263	869	568	745
Plan de bachilleres	235	145	77	115	68	82	146	500	193	271	422
Program Government/ UNESCO/UNICEF	59	232	169	526	218	235	241	579	-	-	-
Pilot Plan East	-	-	-	484	-	-	-	-	-	-	-
Various schools	-	35	100	50	-	-	-	-	-	-	-
Total	434	602	794	1478	584	578	757	1342	1062	839	1167

Source: Secretaría de Estado de Educación - Situación de la Educación Dominicana.
Perspectivas y Propuestas, Octubre 1979.

TABLE I-25

Percentage Composition of GNP by Sector Activities
(at current prices)

Sector	1960	1967	1973	1978
Primary	28.6	24.7	25.8	22.0
Secondary	20.3	22.4	23.6	27.4
Tertiary	51.1	52.9	50.6	50.6
TOTAL	100.0	100.0	100.0	100.0

Source: Central Bank of the Dominican Republic, National Accounts.

TABLE I-26

The Structure of Industrial Production
(in percentages)

Item	1968	1970	1973	1975	1976*	1977
Consumption Goods	80.0	77.2	71.8	71.5	71.9	71.2
Intermediate Goods	17.5	19.2	23.6	24.4	23.8	24.4
Capital Goods	2.5	3.6	4.6	4.1	4.3	4.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

* Preliminary estimations.

Source: National Statistics Office (ONE), Estadística Industrial de la República Dominicana.

TABLE I-27

Real and Operating Projects
Investment Program
(in thousands of \$RD)

Type of Investment	No. of Projects	Total Investments	Implementation Program by Year					
			Before 1980	1980	1981	1982	Total	Other Years
Real investment	382	3,180,022	296,964	419,713	543,223	603,963	1,566,899	1,316,159
Operating investment	245	1,132,830	130,000	278,422	294,533	305,540	878,495	124,335
TOTAL	627	4,312,852	426,964	698,135	837,756	909,503	2,445,394	1,440,494

TABLE I-28

Investment Program by Sector/Institution
(in thousands of RD\$)

Sector Institución	No. de Proyectos	Monto Total	Antes de 1980	1980	1981	1982	Total Trienio	Otros Años
Agropecuario	172	1,038,879	82,107	194,200	259,935	300,000	750,135	206,637
SEA	116	341,735	30,088	60,784	96,873	95,351	253,008	58,639
DNP	5	250	85	60	60	45	165	-
BAGRICOLA	7	201,191	-	74,537	47,428	45,400	167,365	33,826
IAD	9	199,631	990	11,167	40,242	70,354	121,763	76,878
IDECOP	1	3,176	-	1,008	1,059	1,109	3,176	-
ZOOXOM	4	113	28	62	23	-	85	-
INDRHI	29	277,783	50,916	39,912	61,920	87,741	189,573	37,294
CDE	1	15,000	-	6,670	8,330	-	15,000	-
Salud	58	276,054	48,078	60,234	67,566	71,951	199,751	28,225
SEA	1	587	210	120	122	135	377	-
SNEM	3	22,140	15,010	2,804	2,163	2,163	7,130	-
CONAPOFA	3	3,240	517	1,796	927	-	2,723	-
IDSS	4	18,682	-	4,375	7,434	6,873	18,682	-
SESPAS	45	168,613	32,341	33,917	36,644	37,486	108,047	28,225
SFEBC	2	62,792	-	17,222	20,276	25,294	62,792	28,225
Educación	80	191,282	12,445	31,402	39,110	46,233	116,745	62,092
SEEBAC	44	153,007	3,527	21,657	31,137	37,543	90,337	59,143
SEA	14	14,473	3,338	4,337	2,077	1,772	8,186	2,949
ODC	1	1,802	359	412	477	554	1,443	-
ZOOXOM	2	49	17	19	13	-	32	-
SESPAS	16	21,801	5,171	4,938	5,367	6,325	16,630	-
DNP	3	150	33	39	39	39	117	-
Agua Potable y Alcantarillado	146	265,947	26,434	32,513	45,389	52,220	130,122	109,391
INAPA	135	129,363	26,434	19,527	28,389	31,281	79,197	23,732
C.A.S.I.D.	10	135,584	-	11,986	17,000	20,939	49,925	85,659
CFI	1	1,000	-	1,000	-	-	1,000	-
Vivienda	54	180,177	21,140	43,089	47,257	52,583	142,929	16,108
INVI	53	175,177	21,140	43,089	44,757	50,083	137,929	16,108
CORIDE	1	5,000	-	-	2,500	2,500	5,000	-
Transporte	30	344,136	7,921	77,430	99,165	109,369	285,964	50,251
SEOPEC	27	312,036	7,371	69,680	91,665	93,069	254,414	50,251
PR	3	32,100	550	7,750	7,500	16,300	31,550	-
Energía	18	1,323,479	92,553	86,951	118,503	108,995	314,449	916,477
CDE	14	349,769	92,553	82,838	100,425	93,716	276,979	480,237
INDRHI	4	473,710	-	4,113	18,078	15,279	37,470	436,240

Continúa

TABLE I-28 (continued)

Sector Institución	No. de Proyecto	Monto Total	Antes de 1980	1980	1981	1982	Total Trienio	Otros Años
Industria	21	195,282	38,069	62,424	39,778	41,250	143,452	13,761
CEA	3	72,483	23,471	39,627	4,592	3,732	47,951	1,061
CFI	8	54,798	10,438	12,156	14,586	17,618	44,360	.
SEIC	3	1,301	.	1,301	.	.	1,301	.
CORDE	7	66,700	4,160	9,340	20,600	19,900	49,840	12,700
Turismo	3	118,000	36,923	20,000	22,815	22,022	64,837	16,240
SETI	1	8,000	.	2,000	4,000	2,000	8,000	.
B C	2	110,000	36,923	18,000	18,815	20,022	56,837	16,240
Otros	50	379,616	61,294	89,892	102,238	104,880	297,010	21,312
ODC	4	16,828	3,342	3,848	4,455	5,183	13,486	.
S S	1	1,100	100	800	200	.	1,000	.
CONAPOFA	1	433	240	136	57	.	193	.
S B	2	294	.	55	239	.	294	.
SEIC	8	6,313	1,060	2,953	1,300	1,000	5,253	.
SEF	2	4,123	75	1,385	998	990	3,373	675
PR	2	599	115	199	163	122	484	.
SFOPC	1	15,000	.	2,000	4,000	9,000	15,000	.
CORDE	2	6,300	.	1,500	3,300	1,500	6,300	.
INDRHI	4	18,271	.	5,791	10,218	1,025	17,034	1,237
SEA	2	8,171	.	3,451	3,554	1,166	8,171	.
DNP	1	20	8	4	4	4	12	.
B. C.	1	231,000	50,000	55,000	60,000	66,000	181,000	.
SNEM	1	60	.	60	.	.	60	.
CFI	1	500	.	300	150	50	500	.
SEEBAC	2	1,562	.	1,482	40	40	1,562	.
CAASD	1	28	.	28	.	.	28	.
INESPRE	12	15,310	570	5,180	4,960	3,600	13,740	1,000
SLSPAS	2	53,704	5,784	5,720	8,600	15,200	29,520	18,400
TOTAL	632	4,312,852	426,964	698,135	837,756	909,503	2,445,394	1,440,494

TABLE I-29

Urban Centers in the Dominican Republic:
Population in 1970 and Hierarchy
by Size 1920-1970

	<u>1970</u>	<u>1960</u>	<u>1950</u>	<u>1935</u>	<u>1920</u>
1.- Santo Domingo	673,470	1	1	1	1
2.- Santiago	155,000	2	2	2	2
3.- San Fco.de Macoris	44,620	3	4	6	6
4.- San Pedro Macoris	43,010	5	3	3	3
5.- Barahona	37,260	7	6	8	8
6.- La Romana	36,720	4	8	5	-
7.- San Juan de la Maguana	32,965	6	10	14	18
8.- Puerto Plata	32,105	9	5	4	4
9.- La Vega	31,060	8	7	7	5
10.- San Cristobal	26,930	11	11	12	17
11.- Valverde	25,650	10	14	19	22
12.- M o c a	24,195	12	12	11	11
13.- B a n í	23,530	13	9	9	9
14.- Monseñor Nouel	22,020	15	19	24	27
15.- Higüey	17,995	16	15	18	13
16.- A z u a	13,880	14	13	10	7
17.- N a g u a	13,740	20	16	-	-
18.- Villa Altagracia	11,900	32	39	-	-
19.- Bajos de Haina	11,180	21	-	-	-
20.- Esperanza	10,530	30	-	-	-
21.- Hato Mayor	10,135	19	23	21	14
22.- Neyba	9,215	28	35	31	-
23.- El Seybo	8,960	25	27	20	16
24.- Salcedo	8,915	17	20	17	15
25.- San José de Ocoa	8,785	23	22	22	26
26.- Montecristi	8,475	22	21	13	12
27.- Vicente Noble	8,145	27	38	-	-
28.- Las Matas de Parfán	8,125	43	40	37	-
29.- Villa Vasquez(Lucas de P.)	7,920	24	28	-	-
30.- C o t u í	7,485	29	32	29	28
31.- Santiago Rodríguez	7,420	38	47	34	-
32.- Duvergé	7,375	18	18	16	19
33.- Sabana Grande de Boyá	6,720	47	57	-	-
34.- Sabana de la Mar	6,565	37	17	25	23
35.- Jarabacoa	6,445	42	30	-	-
36.- Sánchez	6,290	31	25	15	10
37.- Villa Bisonó	6,110	-	-	-	-
38.- Pimentel	6,050	26	24	23	25
39.- Dajabón	6,025	41	41	36	24
40.- Cabral	5,635	33	34	26	20
41.- Pedernales	5,240	57	-	-	-
42.- Samaná	5,080	36	31	27	21
43.- Jaragua	4,875	35	37	-	-
44.- Constanza	4,845	49	-	-	-
45.- Loma de Cabrera	4,690	46	51	-	-
46.- Padre Las Casas	4,675	48	55	-	-
47.- Imbert	4,665	56	43	30	-
48.- Tamboril	4,490	52	42	-	-

Table I-29 (continued)

49.-	Elías Piña	4,445	50	48
50.-	Sosua	4,365	67	-
51.-	Miches	4,180	44	44
52.-	Enriquillo	3,950	39	33
53.-	Tamayo	3,835	55	25
54.-	Monte Plata	3,820	61	46
55.-	Castañuelas	3,525	40	-
56.-	Fantino	3,465	69	-
57.-	Pepillo Salcedo	3,270	34	29
58.-	El Cercado	3,220	58	49
59.-	Castillo	3,150	59	50
60.-	San José de las M.	3,120	54	45
61.-	Nizao	3,085	51	36
62.-	Bayaguana	3,080	64	52
63.-	El Valles	2,800	45	-
64.-	Río San Juan	2,730	65	-
65.-	Tenares	2,725	60	53
66.-	Laguna Salada	2,670	62	-
67.-	Paraiso	2,535	66	54
68.-	Gaspar Hernández	2,440	68	-
69.-	Yamasá	2,405	77	-
70.-	La Descubierta	2,315	63	-
71.-	Villa Tapia	2,275	84	-
72.-	Luperón	2,220	72	56
73.-	Jimaní	2,175	71	-
74.-	Licey al Medio	2,130	53	-
75.-	Villa Riva	2,075	85	58
76.-	Oviedo	2,050	74	-
77.-	Villa González	2,025	73	-
78.-	Restauración	2,025	81	-
79.-	Yaguajay	2,010	79	-
80.-	Monción	1,880	75	-
81.-	Sab. Grande de Palenq.	1,880	-	-
82.-	Cabrera	1,790	-	-
83.-	Los Llanos	1,720	-	-
84.-	Altamira	1,710	-	-
85.-	Postrer Río	1,700	-	-
86.-	San Rafael del Yuma	1,600	-	-
87.-	Guayubín	1,490	-	-
88.-	Cayetano Germosén	1,460	-	-
89.-	Hondo Valle	1,370	-	-
90.-	Cevicos	1,320	-	-
91.-	Guaymate	1,165	-	-
92.-	Bánica	1,145	-	-
93.-	Jánico	1,100	-	-
94.-	Los Hidalgos	1,050	-	-
95.-	Hostos	1,030	-	-

TABLE I-30

Urban Center in the Dominican Republic
Average Annual Growth Rates
1960-1970

	Average Annual Growth 60-70	Rate of Urbanization
1.- Villa Altagracia	11.0	8 M A
2.- Las Matas de Farfán	9.6	5 M A
3.- Sosúa	9.3	3 M A
4.- Esperanza	9.0	6 M A
5.- Villa Bisonó	8.8	4 M A
6.- Pedernales	8.7	3 M A
7.- Sabana Grande de Boyá	8.4	4 M A
8.- Nagua	8.3	8 M A
9.- Fantino	7.8	2 A
10.- Los Llanos	7.7	A
11.- Cabrera	7.5	A
12.- Santiago Rodriguez	7.4	4 A
13.- Hondo Valle	7.3	A
14.- Neyba	7.2	4 A
15.- San Pedro de Macoris	7.0	22 A
16.- Imbert	7.0	2 A
17.- Jarabacoa	6.8	3 A
18.- Villa Tapia	6.6	1 A
19.- Villa Riva	6.4	1 A
20.- Barahona	6.3	17 A
21.- Santo Domingo	6.2	303 A
22.- Monseñor Nouel	6.2	10 A
23.- Monte Plata	6.1	2 A
24.- Bajos de Haina	6.1	5 A
25.- El Seybo	6.1	4 A
26.- Santiago	6.1	69 A
27.- Dajabón	5.8	3 A
28.- Puerto Plata	5.7	14 A
29.- Sabana de la Mar	5.5	3 A
30.- Higüey	5.5	7 A
Población Urbana Total		
31.- Yamasá	5.4	1 M
32.- Bánica	5.2	M
33.- Vicente Noble	5.2	3 M
34.- Constanza	5.2	2 M
35.- San Francisco de Macoris	5.1	18 A
36.- La Romana	5.1	14 M
37.- Moca	5.1	9 M
38.- Villa Vásquez	3.5	1 M
39.- Tamboril	5.1	2 M
40.- Cotuí	5.1	3 M
41.- Bayaguana	5.0	1 M
42.- San Cristóbal	5.0	10 M
43.- Baní	4.9	9 M
44.- Elías Piña	4.9	2 M
45.- Guaymate	4.8	M

M.A. = Very high; A = High; M = Medium; B = Low; E = Static

Table I-30 (continued)

46.- Tamayo	4.7	1	M
47.- Padre Las Casas	4.7	2	M
48.- La Vega	4.6	12	M
49.- Cayetano Germosén	4.6		M
50.- Restauración	4.5		M
51.- Hato Mayor	4.4	3	M
52.- San Juan de la Maguana	4.3	11	M
53.- Loma de Cabrera	4.2	2	M
54.- San Rafael del Yuma	4.1		M
55.- Río San Juan	4.0	1	M
56.- Sánchez	4.0	2	M
57.- Valverde (Mao)	3.9	8	M
58.- Yaguste	3.9		M
59.- Cevicos	3.9		M
60.- Hostos	3.9		M
61.- San José de Ocoa	3.8	3	M
62.- Gaspar Hernández	3.7	1	M
63.- El Cercado	3.5	1	M
64.- Castillo	3.5	1	M
65.- Paraíso	3.5	1	M
66.- Luperón	3.5	1	M
67.- Cabral	3.4	2	M
68.- Monte Cristi	3.3	4	M
69.- Oviedo	3.2	1	M
70.- Jimaní	3.0	1	M
71.- Villa González	2.9	0.5	M
	2.8		La Nación
72.- Monción	2.7		B
73.- Salcedo	2.7	2	B
74.- Altamira	2.7		B
75.- Miches	2.7	1	B
76.- Samaná	2.6	1	B
77.- Laguna Salada	2.5	1	B
78.- San José de las Matas	2.2	1	B
79.- Tenares	2.1	0	B
80.- Jaragua	2.1	1	E
81.- Pimentel	2.1	1	E
82.- Postrer Río	1.9		E
	1.4		½ La Nación
83.- Sabana Grande de Palenque	1.4		B
84.- Guayubín	1.4		B
85.- Nizao	1.2	0	E
86.- Duvergé	1.1	0	E
87.- La Descubierta	1.1	0	E
88.- Azua	1.0	1	E
89.- Enriquillo	0.9	0	E

TABLE I-31

Estimated Population of the Dominican Republic
by Zones, Provinces and Municipalities
1979-80

Province/municipality Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
TOTAL	5 275 410	2 616 767	2 658 643	5 430 879	2 751 923	2 678 956
Distrito Nacional	1 379 198	1 170 463	208 735	1 458 241	1 241 131	217 110
Azua	99 698	22 162	77 536	100 943	22 558	78 385
Azua	62 144	13 10	48 404	62 505	13 987	48 518
Guayabal (D.M.)	5 663	1 330	4 333	3 903	902	3 001
Padre Las Casas	22 696	5 098	17 598	5 742	1 353	4 389
Peralta (D.M.)	5 356	1 108	4 248	23 312	5 188	18 124
Sabana Yegua (D.M.) ...	3 839	886	2 953	5 481	1 128	4 353
Bahoruco	83 712	28 927	54 785	85 515	30 337	55 178
Neiba	35 744	13 360	22 384	36 702	14 528	22 174
Galván (D.M.)	10 496	3 761	6 735	10 639	3 640	6 999
Los Ríos (D.M.)	4 747	1 736	3 011	4 819	1 820	2 999
Tamayo	22 615	5 914	16 701	23 108	6 171	16 937
Jaragua	10 110	4 156	5 954	10 247	4 178	6 069
Barahona	151 841	91 104	60 737	156 596	95 243	61 353
Barahona	83 392	62 900	20 492	86 556	66 090	20 466
Cabral	16 983	2 127	14 856	17 425	2 095	15 330
Enriquillo	12 858	4 168	8 690	12 864	4 179	8 685
Paraiso	7 631	3 304	4 327	7 674	3 388	4 286
Polo (D.M.)	9 721	5 466	4 255	9 813	5 715	4 098
Vicente Noble	21 256	13 139	8 117	22 264	13 776	8 488
Dajabón	65 194	19 824	45 370	66 533	20 691	45 842
Dajabón	22 157	8 280	13 877	22 753	8 717	14 036
Loma de Cabrera	24 053	6 695	17 358	24 119	6 920	17 199
Partido (D.M.)	5 550	1 784	3 766	5 735	1 862	3 873
Restauración	13 484	3 065	10 419	13 926	3 192	10 734

Table I-31 (continued)

Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
Duarte	246 594	85 909	160 685	251 340	89 329	162 011
San Francisco de Macorís	129 147	61 404	67 743	130 507	63 984	66 523
Arenoso (D.M.)	22 865	7 732	15 133	24 063	8 040	16 023
Castillo	19 609	4 268	15 341	19 630	4 391	15 239
Hostos (D.M.)	7 268	1 469	5 799	7 397	1 522	5 875
Pimentel	17 587	7 290	10 297	17 808	7 415	10 393
Villa Riva	50 118	3 746	46 372	51 935	3 977	47 958
Elías Piña	67 005	12 672	54 333	68 335	13 285	55 050
Comendador	27 174	5 472	21 702	27 885	5 586	22 299
Bánica	10 433	1 827	8 606	10 539	1 913	8 626
El Llano	7 903	1 520	6 383	8 122	1 727	6 395
Hondo Valle	11 837	2 590	9 247	11 943	2 753	9 190
Pedro Santana	9 658	1 263	8 395	9 846	1 306	8 540
El Seibo	141 769	47 703	94 066	142 482	49 464	93 018
El Seibo	64 140	14 980	49 160	64 184	15 721	48 463
El Valle	6 290	2 447	3 843	6 322	2 403	3 919
Hato Mayor	42 407	14 586	27 821	42 552	15 081	27 471
Miches	12 407	4 947	7 460	12 368	5 016	7 352
Sabana de la Mar	16 525	10 743	5 782	17 056	11 243	5 813
Españolat	149 445	43 311	106 134	150 361	44 965	105 396
Moca	100 885	36 836	64 049	101 415	38 279	63 136
Cayetano Germosén (D.M.)	10 883	2 247	8 636	11 298	2 345	8 953
Gaspar Hernández	27 931	3 359	24 572	27 822	3 462	24 360
Jose Contreras (D.M.)	9 746	869	8 877	9 826	879	8 947

Table I-31 (continued)

Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
Independencia	37 377	15 417	21 960	37 849	15 592	22 257
Jimaní	6 839	2 862	3 977	7 007	2 939	4 068
Duvergé	11 296	4 046	7 250	11 392	4 056	7 336
La Descubierta	4 418	2 485	1 933	4 414	2 497	1 917
Mella (D.M.)	9 561	4 008	5 553	9 717	4 054	5 663
Postrer Río (D.M.)	5 263	2 016	3 247	5 319	2 046	3 273
La Altagracia	104 445	31 582	72 863	106 372	33 076	73 296
Higüey	88 777	29 234	59 543	90 320	30 637	59 683
San Rafael del Yuma ...	15 668	2 348	13 320	16 052	2 439	13 613
La Romana	85 246	58 065	27 181	88 767	60 529	28 238
La Romana	61 445	56 236	5 209	63 764	58 615	5 149
Guaymate	23 801	1 829	21 972	25 003	1 914	23 089
La Vega	362 425	104 638	257 787	369 760	109 751	260 009
La Vega	190 829	47 304	143 525	194 508	49 328	145 180
Constanza	33 699	7 807	25 892	34 453	8 184	26 269
Jarabacoa	44 201	11 812	32 389	45 036	12 530	32 506
Mainón (D.M.)	6 675	1 883	4 792	6 813	2 019	4 794
Monseñor Nouel	87 021	35 832	51 189	88 950	37 690	51 260
María Trinidad Sánchez ..	100 437	31 627	68 810	100 743	33 271	67 472
Nagua	68 403	25 329	43 074	69 188	26 775	42 413
Cabrera	23 115	3 083	20 032	22 769	3 244	19 525
Río San Juan	8 919	3 215	5 704	8 786	3 252	5 534

Table I-31 (continued)

Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
Monte Cristi	79 355	29 097	50 258	80 288	29 566	50 722
Monte Cristi	11 641	8 940	2 741	11 863	8 871	2 992
Castañuelas	9 773	3 322	6 451	9 882	3 289	6 593
Guayubín	32 890	1 659	31 231	33 342	1 674	31 668
Las Matas de Santa Cruz (D.M.)	5 536	2 036	3 500	5 548	2 365	3 183
Pepillo Salcedo	6 033	3 073	2 960	6 000	3 049	2 951
Villa Vásquez	13 442	10 067	3 375	13 653	10 318	3 335
Pedernales	17 703	12 316	5 387	18 308	12 945	5 363
Pedernales	14 021	10 207	3 814	14 694	10 845	3 849
Oviedo	3 682	2 109	1 573	3 614	2 100	1 514
Peravia	152 341	51 784	100 557	154 664	53 708	100 956
Saní	85 030	36 020	49 010	86 374	37 504	48 870
Nizao (D.M.)	12 563	3 329	9 234	12 922	3 344	9 578
San José de Ocoa	54 748	12 435	42 313	55 368	12 860	42 508
Puerto Plata	215 337	73 655	141 682	217 794	76 906	140 888
Puerto Plata	66 148	41 994	24 154	67 277	43 680	23 597
Altamira	34 099	2 166	31 933	33 951	2 214	31 737
Juanrico (D.M.)	5 597	2 210	3 387	5 598	2 307	3 291
Imbert	18 730	7 925	10 805	18 845	8 306	10 539
Los Hicalgos	17 266	982	16 284	17 363	974	16 389
Luperón	35 522	3 060	32 462	35 984	3 158	32 826
Sosúa	21 276	9 426	11 850	21 862	10 115	11 747
Villa Isabela (D.M.) ..	16 699	5 892	10 807	16 914	6 152	10 762
Salcedo	97 270	18 782	78 488	98 044	19 352	78 692
Salcedo	42 196	11 328	30 868	42 382	11 583	30 799
Tenares	25 755	3 292	22 463	25 741	3 350	22 391
Villa Tapia	29 319	4 162	25 157	29 921	4 419	25 502

Table I-31 (continued)

Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
Samaná	64 228	15 516	48 712	65 402	15 996	49 406
Samana	37 218	6 473	30 745	37 875	6 626	31 249
Sánchez	27 010	9 043	17 967	27 527	9 370	18 157
San Cristóbal	408 228	121 160	287 068	417 475	127 620	289 855
San Cristóbal	100 891	32 996	67 895	102 937	34 279	68 658
Rajos de Haina (D.M.) .	43 705	19 638	24 067	46 169	20 776	25 393
Bayaguana	21 486	4 755	16 731	21 716	4 956	16 760
Cambita Garabito (D.M.)	27 768	8 481	19 287	27 785	8 933	18 852
Monte Plata	31 226	6 512	24 714	31 488	6 853	24 635
Sabana Grande de Boyá	32 508	13 216	19 292	32 962	14 042	18 920
Sabana Grande de Palen- que (D.M.)	5 117	1 946	3 171	5 101	1 753	3 348
Villa Altagracia	47 387	26 826	20 561	48 619	28 744	19 875
Yaguajay	24 327	2 846	21 481	24 567	2 942	21 625
Yamasa	73 813	3 944	69 869	76 131	4 142	71 989
San Juan	235 424	71 743	163 681	240 163	75 262	164 901
San Juan	134 166	40 175	93 991	137 235	42 147	95 088
Bohachío	9 039	2 870	6 169	9 149	3 010	6 139
El Cercado	25 156	7 892	17 264	25 483	8 279	17 204
Las Matas de Farfán ...	58 082	17 936	40 146	59 179	18 816	40 363
Vallejuelo	8 981	2 870	6 111	9 117	3 010	6 107
San Pedro de Macorís	157 281	84 266	73 015	163 709	89 442	74 267
San Pedro de Macorís ..	114 765	79 347	35 438	120 440	84 222	36 218
Los Llanos	34 959	3 438	31 521	35 759	3 682	32 077
Ramón Santana	7 537	1 421	6 056	7 510	1 538	5 972

Table I-31 (continued)

Provincia y municipio	Población estimada al 1º de julio					
	1979			1980		
	Total	Zona		Total	Zona	
		Urbana	Rural		Urbana	Rural
Sánchez Ramírez	121 795	19 449	102 346	123 365	20 379	102 986
Cotuí	86 828	11 489	75 339	88 050	11 994	76 056
Cavicos	15 734	1 418	14 316	15 601	1 425	14 176
Fantino	19 233	6 542	12 691	19 714	6 960	12 754
Santiago	505 083	283 160	221 923	518 339	296 303	222 036
Santiago	336 468	253 375	83 093	346 832	265 025	81 807
Bisonó	27 120	13 409	13 711	28 808	14 499	14 309
Jánico	26 103	1 053	25 050	25 969	1 045	24 924
Liccy al Medio (D.M.) .	13 022	1 944	11 078	13 064	1 921	11 143
San José de las Matas .	54 241	3 766	50 475	54 707	3 830	50 877
Tamboril	30 108	7 220	23 088	30 626	7 329	23 297
Villa González (D.M.) .	18 021	2 593	15 428	18 333	2 654	15 679
Santiago Rodríguez	54 446	16 108	38 338	55 120	16 996	38 124
San Ignacio de Sabaneta	46 909	13 833	33 076	47 584	14 617	32 967
Los Almácigos (D.M.) ..	2 052	664	1 388	2 084	979	1 105
Monción	5 485	1 611	3 874	5 452	1 400	4 052
Valverde	92 533	56 327	36 206	94 371	58 226	36 145
Mao	57 560	36 287	21 273	59 220	37 522	21 698
Esperanza	24 371	16 821	7 550	24 569	17 432	7 137
Laguna Salada	10 602	3 219	7 383	10 582	3 272	7 310

TABLE II-1

Diagnos 1974 Households
(thousands)

	NATIONAL			REGION 0			REGION I			REGION II			REGION III			REGION IV			REGION V		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
TOTAL	962.8	428.9	533.8	209.1	192.9	96.2	95.1	27.9	67.2	242.9	102.7	140.2	191.1	47.0	134.1	52.2	17.4	34.8	102.4	41.1	61.3
HOUSING TYPE																					
<u>Single Family Units</u>	927.7	408.1	519.6	208.1	175.7	92.6	94.0	27.0	67.0	237.7	101.4	136.2	178.8	46.1	132.7	51.4	17.4	34.0	97.4	40.5	56.9
-Standard Single Family Houses	493.4	278.1	215.3	161.8	112.7	31.2	44.5	19.3	25.2	102.0	53.4	48.6	100.1	35.8	64.3	26.5	9.2	17.3	56.5	27.8	28.7
-Apartments	17.8	17.4	.4	16.2	16.0	.2	--*	--	--	1.5	1.3	.2	--	--	--	--	--	--	.1	.1	--
-Rustic Houses	406.4	106.3	300.2	82.4	21.9	60.6	49.1	7.7	41.4	131.7	46.1	85.6	78.5	10.3	68.2	24.4	7.9	16.5	40.2	12.4	27.8
-Improvised Houses	7.9	5.1	2.8	2.1	4.4	.6	.3	--	.3	1.7	.3	1.4	.1	--	.1	.3	.2	.1	.5	.1	.4
-Non-conforming Uses	2.1	1.2	.9	.7	.8	.7	.1	--	.1	.8	.3	.4	.2	--	.2	.1	--	.1	.1	.1	--
<u>Collective Housing</u>	23.9	16.4	7.5	18.7	15.8	2.9	.3	.3	--	.3	--	.3	.2	.2	--	.1	--	.1	4.1	--	4.1
-Bateys	7.2	.2	7.0	2.8	.2	2.6	--	--	--	.3	--	.3	--	--	--	.1	--	.1	4.0	--	4.0
-Hotels/Pensions	1.2	.9	.3	.7	.5	.3	.2	.2	--	--	--	--	.2	.2	--	--	--	--	--	--	--
-Institutions	.2	.2	.1	.1	.1	.1	.1	.1	--	--	--	--	--	--	--	--	--	--	--	--	--
-Other	15.2	15.1	.1	15.1	15.1	--	--	--	--	--	--	--	--	--	--	--	--	--	.1	--	.1
<u>Unknown</u>	11.2	4.5	6.7	2.1	1.4	.7	.7	.6	.1	4.9	1.3	3.6	2.1	.7	1.4	.6	--	.6	.9	.6	.3

* -- means less than 50 units

Note: Totals may not add up due to rounding.

TABLE II-3

The Marginal Population in Santo Domingo
1977

	No. of Families	Average Family Size	% of Total Families in Santo Domingo	% of Total Population in Santo Domingo	% of Marginal Families in Santo Domingo
1. Cuarterias (1)	47,377	5.0	23	23	34
2. Settlements with access (2)	25,348	5.9	12	14	18
3. Settlements without access (3)	28,556	5.9	14	16	21
4. Isolated settlements (4,5)	16,951	5.5	8	9	12
5. Settlements with services and improved settlements (6,7,8)	19,677	6.0	10	11	14
TOTAL	137,909	5.6	67	73	99

Source: PADCO, Inc. - Borrell Study.

TABLE II-4

1977 Family Income Distribution
Santo Domingo
(percent)

Monthly Income	Cuarterias	Settlements with Access	Settlements without Access	Isolated Settlements	Settlements w/ Services & Improved Settlements	Total Accumulated Percent
0- 50	7	1	14	--	--	6.1
51-100	9	8	21	26	2	18.4
101-150	26	31	22	24	6	41.6
151-200	18	24	17	16	14	59.4
201-250	9	13	11	10	12	70.2
251-300	7	9	7	4	19	79.2
301-350	6	6	4	--	18	86.3
351-400	4	4	2	1	11	91.0
401-450	4	3	--	1	8	94.0
451-500	4	1	--	1	6	96.5
501-550	2	1	--	1	2	98.5
551+	--	--	--	2	4	100.0

Source: PADCO, Inc. - Borrell Study.

TABLE II-5
Population Growth and Housing Need
 1980-90

YEAR	POPULATION*			NEW POPULATION		NEW HOUSEHOLDS**	
	Total	Urban	Rural	Urban	Rural	Urban	Rural
1980	5,430,879	2,751,923	2,678,956				
1981	5,598,163	2,897,775	2,700,388	145,852	21,432	26,341	3,540
1982	5,773,348	3,051,357	2,721,991	153,582	21,603	27,737	3,567
1983	5,956,846	3,213,079	2,743,767	161,722	21,776	29,208	3,596
1984	6,149,089	3,383,372	2,765,717	170,293	21,950	30,755	3,625
1985	6,350,534	3,562,691	2,787,843	179,318	22,126	32,385	3,654
1990	7,513,481	4,612,326	2,901,155	1,049,635	113,312	189,567	18,714

* Compound Annual Rate of Increase: National, 2.9; Urban, 5.3; Rural, .8; World Bank.

** Average Family Size: National, 5.8; Urban, 5.5; Rural, 6.1; World Bank.

TABLE II-6

Low Income Population of Santo Domingo
Population Growth and Housing Need
 1977-90

Type of Group	No. of Families 1977	No. of Families 1990	New Families 1977-90
Cuarterias and traspacios	47,377	59,743	12,366
Settlements with access	25,348	88,677	63,329
Settlements without access	28,556	125,213	108,262
Isolated settlements	16,951	31,823	14,872
Settlements with minimum services, improved settlements and areas in transition	19,677	25,184	5,507
TOTAL	137,909	330,640	204,336

Source: Urban Development Study of Santo Domingo, PADCO, Inc. and Borrell Associates, Interamerican Development Bank, Santo Domingo, 1978.

FIGURE II-7

Investment in the Construction Industry
(million RD\$)

SECTOR	YEARLY INVESTMENT											
	1974		1975		1976		1977		1978		Total	
	Total	%	Total	%	Total	%	Total	%	Total	%		
Public	105.3	39.4	153.4	40.4	152.6	40.7	146.2	35.6	77.2	32.0	634.7	37.9
Autonomous Institutions	62.2	23.3	97.5	25.7	85.2	22.7	119.3	29.1	164.3	68.0	528.5	31.6
Private	99.8	37.3	128.8	33.9	137.1	36.6	145.1	35.3	N.A.	N.A.	510.8	30.5
Informal	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
TOTAL	267.3	100.0	379.7	100.0	374.9	100.0	410.6	100.0	241.5	100.0	1,674.0	100.0

Source: Oficina Nacional de Presupuesto.

FIGURE II-8

Construction Industry: Input Coefficients by Type

Type of Activity	Skilled and Semi-Skilled Labor	Unskilled Labor	Total Labor	Imported Materials	Domestic Materials	Total Materials	Equipment	Profits, Other	Total
Construction									
Housing									
IAV: 1966	22.7	8.4	30.8						
1969	23.4	9.3	32.7	17.2	45.8	63.0	3.4	2.8	100.0
1972	24.1	9.8	33.9	23.5	35.5	59.0	5.2	3.1	100.0
IMVI: 1973, 3750 pesos per unit	23.2	16.8	40.0	30.2	26.5	56.7	6.1	3.3	100.0
8500 pesos per unit	20.5	12.5	33.0	5.5	49.4	54.9	0.1	5.4	100.0
Private Sector 1972, 7000 pesos per unit	14.7	9.2	23.4	6.0	54.0	60.0	2.0	5.0	100.0
Private Sector 1973, 10 500 pesos per unit	14.6	9.6	24.2	7.2	48.3	55.5	1.1	20.0	100.0
Non-Residential Buildings									
Medium-Scale Industrial	23.7								
Petroleum Refinery 1971-1972	23.2	7.1	20.8	24.2	30.0	54.2	5.0	20.0	100.0
Silo 1970	23.2	6.8	20.0	23.2					
Museum 1972-1973	26.0	7.9	23.1	22.1	28.8	52.0	10.0	18.0	100.0
Stadium 1972-1973	15.8	9.2	25.0	22.0	27.5	49.6	7.8	19.5	100.0
Hotels 1972-1973	23.2	12.2	28.0	18.0	33.0	55.0	3.5	15.5	100.0
		7.7	30.9	29.6	19.5	49.1	2.0	14.2	100.0
Highways (Private Contractors)									
Asphalt	23.0	13.0	26.0	10.0	14.0	24.0	40.0	10.0	100.0
Cement	23.0	13.0	26.0	5.0	19.0	24.0	40.0	10.0	100.0
Feeder Roads (Government)									
6 meters wide	21.2	13.7	34.9	0.5	14.2	20.7	44.4	0.0	100.0
Irrigation Canals (Government) 100%									
Stage 1 (earth removal: 45%)	27.0	6.0	29.0	6.0	15.0	21.0	50.0	0.0	100.0
Stage 2 (cement lining: 18%)	21.0	4.0	25.0	15.0	57.0	72.0	3.0	0.0	100.0
Stage 3 (structures: 39%)	24.0	6.0	30.0	34.0	26.0	60.0	10.0	0.0	100.0
Irrigation Canals (private) 100%									
Stage 1 (earth removal: 40%)	17.0	4.6	22.4	3.8	9.5	13.3	54.3	10.0	100.0
Stage 2 (cement lining: 25%) capital intensive	11.0	3.1	13.1	9.4	35.7	45.1	31.8	10.0	100.0
Stage 2 (cement lining) labor intensive	28.6	7.2	35.8	9.4	35.7	45.1	9.1	10.0	100.0
Stage 3 (structures: 35%)	21.1	5.8	29.1	29.3	22.5	51.8	9.1	10.0	100.0
Maintenance									
Highways									
1966									
1969			68.7	2.4	21.0	23.4	7.9		
1972			56.2	8.9	29.0	37.9	5.9		100.0
Feeder Roads									
1966									
1969			67.8	0.0	32.0	32.0	0.2		100.0
1972			67.8	1.7	30.3	32.0	0.2		100.0
Bridges									
1966									
1969			70.1	0.0	10.8	10.8	19.1		100.0
1972			66.6	0.1	31.0	31.1	0.3		100.0
Canals									
1972			80.6	0.0	18.6	18.6	0.8		100.0
Highway Reconstruction									
1966			31.0	0.4	0.4	54.0	15.0		100.0
1969			62.9	1.4	29.4	30.8	6.3		100.0
1972			86.4	3.0	8.1	11.1	2.5		100.0
			41.2	19.1	26.7	44.0	14.8		100.0

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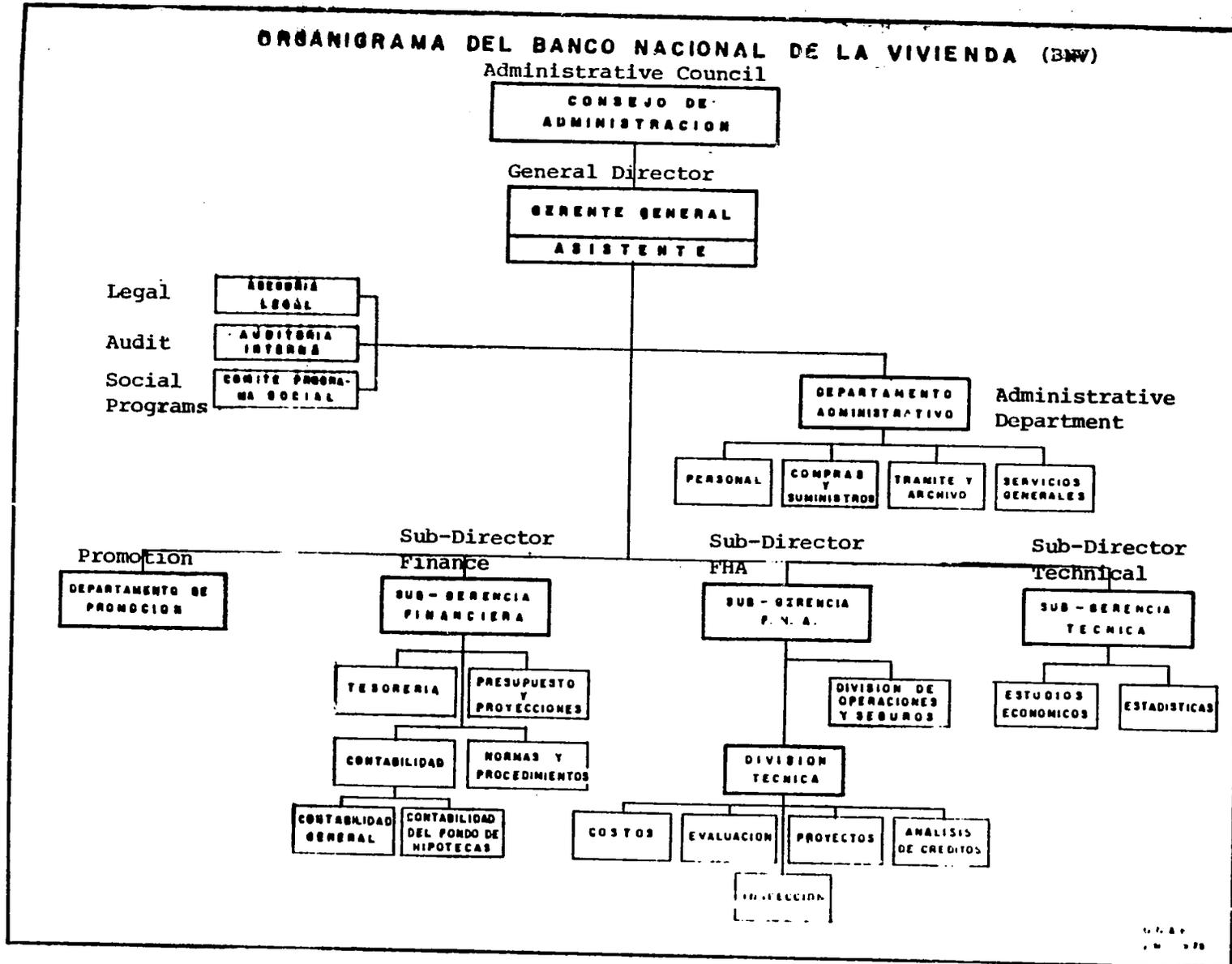
Source: Interviews with SOFC and private contractors.
 Tables from: Generación de Empleo Productivo y Circulación Económica.
 International Labor Organization, Geneva, 1975. (ISBN 92-2-301066-1)

TABLE III-1

USAID-Financed PVO Emergency Home Repair and Rehabilitation
(RD\$287,000)

Community	Houses to Be Repaired		Houses Repaired		Repair in Process	
	Phase I	Phase II	Phase I	Phase II	Phase I	Phase II
	11/20/79	12/17/79				
<u>AME - RD\$12,000</u>	\$30,000	\$50,000				
1. Limón	93	100	93	100	0	0
2. Sainago & Malpaso	<u>60</u>	<u>125</u>	<u>60</u>	<u>125</u>	<u>0</u>	<u>0</u>
Sub-Total	153	225	153	225	0	0
TOTAL		<u>278</u>		<u>378</u>		<u>0</u>
<u>SSID - RD\$70,000</u>	11/20/79	12/17/79				
	\$20,000	\$50,000				
1. Alcos de Fundación	73	0	73	0	0	0
2. Macha Agua	<u>0</u>	<u>152</u>	<u>0</u>	<u>140</u>	<u>0</u>	<u>12</u>
Sub-Total	73	152	73	140	0	12
TOTAL		<u>225</u>		<u>213</u>		<u>12</u>
<u>AIPD - RD\$50,000 - 12/17/79</u>						
1. Sabana Yelaguá - Azua	135	0	0	0	135	0
2. Pajón	40	0	0	0	40	0
3. Jamboroc	20	0	0	0	20	0
4. Yuma	<u>30</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>30</u>	<u>0</u>
Sub-Total	225	0	0	0	225	0
TOTAL		<u>225</u>		<u>0</u>		<u>225</u>
<u>DEE - RD\$75,000 - 12/17/79</u>						
1. Beaufort	293	0	0	0	293	0
<u>Southern Baptist - RD\$3,000 - 11/20/79</u>						
1. Nigua	22	0	22	0	0	0
SUB-TOTALS	766	377	248	265	518	12
TOTALS		<u>1,143</u>		<u>513</u>		<u>530</u>

FIGURE III-2



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