Housing and development in the Lesser Antilles

Katharine Coit

Human
settlements
and socio-cultural
environments

July 88

UNESCO

ACKNOWLEDGEMENTS

I would like to thank first and foremost all the West Indians who made this report possible by answering my questions so patiently. In Dominica, particular thanks go to the Hon. Bryan Allyne, Sister Alicia de Tremmerie, Ms. Rosie Brown and to Mr. and Mrs. Andrew Roger, to the staff of SPAT and to Max Tonic. In Grenada, I would like to thank Byron Campbell, Mr. Roberts and Sam Kee. In St. Vincent, my thanks go to Mr. Grant, Mr. Gulley and to the staff of ORD.

This manuscript has been improved thanks to the help of Professor Paul Oren.

Finally, I was able to do this research thanks to grants from Unesco, the University of Paris VII and to the Ministry of Cooperation of France.

HOUSING AND DEVELOPMENT IN THE LESSER ANTILLES

INTRODUCTION

The aim of this book is to study human settlements in the tiny less developed countries of the Lesser Antilles in order to be able to suggest appropriate strategies for development concerning housing, community development, planning and the building industry in low income settlements. To this end a microcosmic, pluridisciplinary approach has been used combining an anthropological study of past and present settlement patterns and family characteristics, a political study of the policy and practices of the administration, a sociological study of the building industry and an evaluation of present housing programmes. Among all the possible ways of studying human settlements,these areas have been chosen as playing a key role in their evolution. The small scale of the area studied makes possible a holistic approach. The institutions and their impact on human settlements are relatively transparent making a study of causal relationships easier.

While inadequate housing and unsanitary environment are clear symptoms of underdevelopment, the strategies that will both improve conditions in human settlements and help "develop" the country are much less obvious. What real development consists of needs to be defined. "Development" which increases the PNB of a country and enriches a few but which has a negative impact on lower income groups results in even poorer living conditions and is not a stimulus to local consumption and local growth. Positive development means an increase in the standard of living of the population as a whole by the most appropriate means : increased productivity, increased buying power, an equitable system of distribution as well as the promotion of creativity and imagination in all forms of human endeavour. It cannot merely refer to the macro-economics of the country but rather to the development of an endogenous agriculture and industry that promotes the well-being of the whole population.

The first part of this book takes one small island, Dominica and analyzes human settlements from many different angles in order to study what was built in the past, what is built now, and how, where and why people settle and what institutions affect human settlements. A multidisciplinary approach has been used in order to place human settlements in a broad context and relate them to the endogenous development of the island. Without this global approach, it is nearly impossible to devise appropriate

strategies, that is strategies that are suitable to the particular historical, economic, political and cultural setting. It is tautological to say that appropriate strategies are those created from an understanding of the local situation and yet it is just that point that is so often neglected.

The full extent of the relationship of the condition of the built environment to the endogenous development of the country is not always evident. Clearly there is a direct relationship between income level and housing conditions. Questions affecting income such as a high rate of unemployment and underemployment, the high incidence of female heads of household combined with low wages for women, or the fractioning of agricultural land into lots too small to provide a decent living, will also have an impact on housing.

Many other elements have a direct on indirect impact on human settlements : family structure, settlement patterns, government policy, the level of skills of the builders and the materials used are the most obvious. On the other hand there are ways in which activities related to building and maintaining housing and neighbourhoods have an impact on the economy and the environment and therefore on the development of a country.

Having outlined the main social, political and economic factors pertaining to the built environment of Dominica, the second part of this study makes a comparative evaluation of different strategies employed recently for improving human settlements in three islands : Dominica, St. Vincent and Grenada and suggests which factors have been responsible for the success or failure of the projects.

Although the area here is tiny, many of the conclusions drawn can be used for developing strategies for other areas on one very important condition. In every case, it is essential to take into consideration the specific characteristics of each local situation. It is not possible to have a theoretical approach that applies universally. However, familiarity with the local terrain combined with a good dose of common sense enables the committed individual to profit from the successes and failures of others. They will see how the policies can be adapted to very different situations.

DOMINICA, AN INTRODUCTION

The Commonwealth of Dominica has undergone the influence of four different cultures : British, the colonial power from 1805 to 1978, French, as a colony from 1805, African, the population being largely African, Caribe ,as some of the original inhabitants of the island continue to occupy the island. The population is bilingual, the majority speaking French-African Creole, their mother tongue, and English. Its geographic situation between the two French overseas departments, Guadeloupe and Martinique, is of particular significance. The proximity, the similar creole language and the much higher standard of living induce many Dominicans to emigrate towards these islands sometimes with, but usually without, the necessary visas.

Dominica is one of the smallest countries in the world, with an estimated population of 80.000 inhabitants. (The last official figure of 1981 was 74.000 but this census was taken shortly after Hurricane David had devastated the country causing many to flee). Much of the 750 square kms of its mountainous terrain is uninhabitated and uncultivated. The population is generally situated along the coast and along the riverbeds, three quarters living in villages in rural and semi-rural areas. Approximately one quarter of the population live in the capital, Roseau.

Of volcanic origin, Dominica contains the highest peak in the eastern Caribbean. The mountainous interior is covered with a lush tropical rain forest. A "boiling" lake in an ancient crater and other lakes, streams, waterfalls and pools have attracted the adventurous traveller for several centuries. From the heights on the island one gets breath-taking views of the coasts. To the east the rough Atlantic never ceases to pound the pebble beaches of the windward coast. To the west lie the turquoise blue waters of the Caribbean. In the valleys and along the coast much of the land is planted with bananas and coconuts or citrus fruit trees.

The people of Dominica are most often descendants of African slaves. There are approximately 100 pure blooded Caribe indians and many more of mixed Caribe/African ancestry. While only a handful of the white colonists remain, mulattos descended from former colonists are more numerous.

The census of 1960 shows 66% blacks, 32.7% mulattos, 0.4% whites and 0.8% caribes. Today there are many more mulattos and fewer pure blacks. However, the reader should bear in mind that the statistics of Dominica are not always reliable, the method of gathering them not being very sophisticated.

The large majority of Dominicans (60%) earn at least part of their livelihood from farming. Agriculture absorbs 36.6% of the employed labour force (as compared with 10% for industry and 53.4% for services), 32% of the Gross Domestic Product and 60% of the value of domestic exports. According to the agricultural census of 1976-77, 21,126 persons 15 years or older were occupied in farm operations. Many more maintain gardens but have another occupation and others are supplied with provisions from the gardens of friends and family. The traditional crops in Dominica used to be coffee and sugar and root crops i.e."ground provisions", for local consumption. In the 20th Century, bananas, limes, grapefruit and coconuts have replaced coffee and sugar. Bananas became the main staple in the 50's and have remained the chief agricultural export, the entire ex-

SOCIO ECONOMIC BASIC INDICATORS

Area : 750 km^2 = 289.9 Sq miles.

Population : (1981,census) : 74.625

Density : 100 inh/km^2
243 inh/Sq mile

Natural growth : (1970-81) + 2% /year

Net migration : (1970-81) - 1.4%/year

Growth rate : (1970-81) + 0.6% /year

Gnp (1982.Market price):56,4 M US$

Gnp/inhabitant: 688 US$ (1982)

Main exports : (1982)

1. Bananas : 9,9 M US$:43.7% of total
2. Toilet & Laundry soap:38% of total

Contribution to gnp(1981 World Bank)

1. Services 45.6%
2. Agriculture 30.6%
3. Construction & Housing 15.7%

Unemployment rate

(official) : 18.6% of active population.

Labour force : 49% of the population.

EQUIVALENTS

Currency East Caribbean Dollar (EC $)

**Exchange rate us $** 1US$ = 2.7 EC $
1US$ = ca 8.50 FF
1EC$ = ca 3.2 FF

Units : 1 in = 2.54 cm
1 ft = 30.4 cm
1 ft^2 = 0.0929 m^2
1 ft^3 = 0.0283 m^3

Equivalents : 1 US $ / ft^2 = 10.76 US $ / m^2

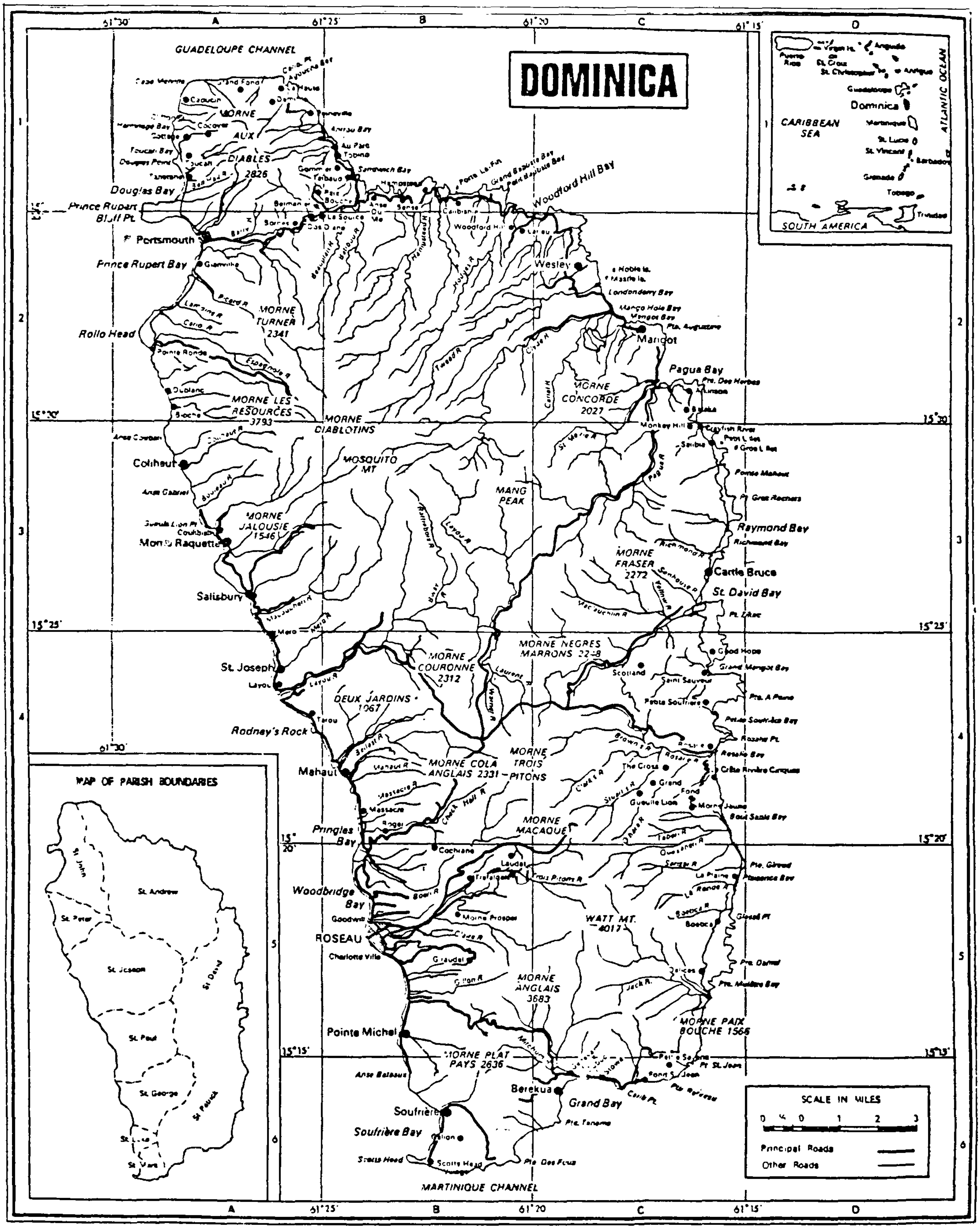


Fig. 1 : Map of Dominica

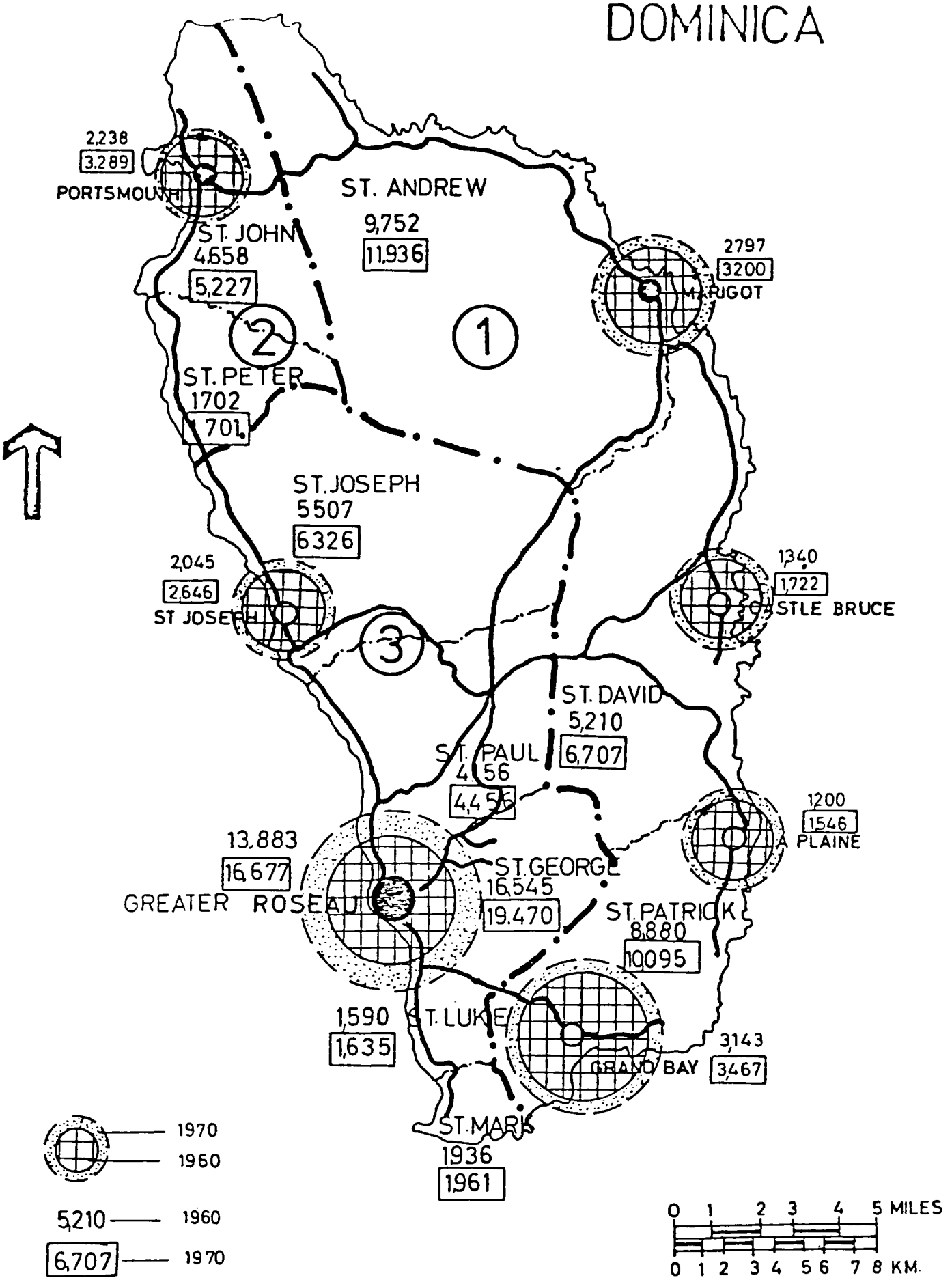


Fig. 2 : Growth of sites

portable crop being bought by Geest Co. and shipped to England. One quarter of agricultural land is devoted to bananas.

The Dominican economy suffers from a perennial deficit in the balance of visible trade. In 1983, the value of its imports was $121,709,985 EC (2.70 Eastern Caribbean dollars = $1.00 U.S.), while the value of its exports was only EC$74,171,357. In spite of the agricultural basis of the economy, nearly 20% of its imports are for food and agricultural products, meat accounts for 5.7%, flour 5.4%, fish 1.4%, sugar 1.7%. This deficit has been financed by arrangements with the IMF and the Eastern Caribbean Central Bank.

After 11 years of internal self government, Dominica became independant on 3 November 1978. Seven months after independence, the Labour Party government was overthrown by a coalition of democratic forces, including part of the Labour Party, because it has become involved in questionable financial dealings with South Africa and the U.S. based mafioso and because it attempted to pass anti-labour and anti-press legislation. There was an interim government and in the elections of 1980 Eugenia Charles's right wing Freedom party won 19 of the 21 seats. In 1985 the Freedom party won 15 seats, a revived form of the Labour party won 5 and a left wing party won 1 seat.

In August 1979 the island was devastated by Hurricane David, one of the most destructive to have ever hit the island. For at least two years after that date most of the energy and resources of the island went into the reconstruction of what had been damaged.

A brief summary of its social problems indicates that Dominica suffers from the same difficulties as many other "less developed countries" notably :

-an unequal distribution of agricultural land, the size of the lots owned by the vast majority being too small to provide a decent living (74% of the farmers own lots less that 2.5 acres) ;

-unemployment, the official figures in 1983 was 18,6% but it does not include all those who left Dominica to look for a job elsewhere;

-emigration and related problems such as a brain drain of educated Dominicans, abandoned or spilt families, and not to mention and the difficulties of Dominicans abroad, the racism, the unemployment, the problems due to illegal entrance and the resulting mental illness, delinquency and crime;

-lack of local capital, especially risk capital ;

-lack of managerial skills.

PART ONE

CHARACTERISTICS OF DOMINICAN HABITAT

This presentation of Dominican habitat will discuss :

1. the impact of slavery, colonisation and the Caribe Indians on housing in the past and at present ;

2. the settlement patterns and use of land ;

3. Dominican household structure with brief histories of several Dominican families ;

4. profiles of two villages will familiarize the reader with the social, economic and political structure in Dominica's communities.

Fig. 3. House destroyed by hurricane David.

1.1. THE IMPACT OF HISTORY ON HOUSING

1.1.1. Slaves huts and colonial houses : precariousness and mobility

The slave ancestry of most Caribbean people has had an important impact on the built environment. The brutal uprooting and resettlement of the African forefathers as slaves to an entirely new environment has meant a rupture with their traditional forms and techniques of building. Slaves lived in huts that were provided for them. While they may have taken part in the construction work, no doubt the design and materials were prescribed. Documentation on the original slave quarters is meagre and it is hard to know to what extent the first arrivals tried to recreate a semblance of an African environment in the imposed structure.

J. Berthelot and M. Gaume underline the alienation of the slave from his house.

"The negro had no initiative in the building of this hut : he did not choose the location, the dimensions, the materials of the design. Everything was ordered and directed by the commander who "installed" the slaves according to precise rules. The relationship between the slave and his "home" deserves fuller description. He didn't have his "own" place : the master of commander could come in at any time to wake him up or check on the state of the hut ; he didn't live there, but only slept there... We can see the slave dwelling is inextricably bound to the coercive system of slavery.

Even though the slave built his own house he repeated a prototype that was imposed on him and that did violence to his needs and tastes". (2)

Another basic element of the history of these islands is the colonization by European powers. Both French and British settlers dominated the economic and political life of Dominica but they never established themselves in large numbers. Two characteristics of Caribbean housing advanced by G. Barthelemy are the precariousness and mobility which can be traced back to the colonial period.

The colonists considered themselves as temporary residents, staying only long enough to make their fortunes. This is one explanation for the use of wood as a building material for the masters' homes rather than more permanent material, for instance stone, which was also abundant. This was particularly true in Dominica under the British as very often the owners of the estates would not live in Dominica but send managers or attorneys to run the estate for them.

"In Dominica few of the houses were grand. The landowners did not reside here and saw no need to spend money on elaborate houses for their managers. Therefore the island has no fine plantation mansions characteristic of the rich sugar islands. Only a few old stone residences of the French proprietors remain to give us an idea of these estate dwellings and these have an air of quiet charm rather than richness. Most of the old estate buildings have gone to ruin, destroyed by hurricanes, fire and time..."(3)

Descriptions of houses on other Caribbean islands give us an idea of the early housing in Dominica. In St. Domingue in 1787, a house that had recently been transformed was described as follows :

"Imagine that you are looking at a barn where wheat is stored... the rooms have partitions that are only six feet high so that with a little ladder one can go from one room to another ... The outside wall : imagine little logs split in half and put one on top of the other with the bark on the outside... However the walls are plastered on the inside with lime and sand, as plaster is very expensive, as is labour. This coating serves as the tapestry except in one bedroom where M. Leger had the wall papered and a wooden ceiling put in" (4).

If the master's quarters were precarious we can expect the slaves'quarters to be even more so. Here is a description of the construction of a slave dwelling :

"Posts made out of very hard wood are planted three feet deep in the ground, four feet apart and six or seven feet high. The interstices are filled with a trellis of slats in palm or some other very hard and inflexible wood. Or else, large stakes are used that touch each other so that each hut is closed like a box. Huge forks 12 to 14 feet long by 10 to 12 feet across to support the roof are driven into the ground at intervals, to a depth of 4 to 5 feet" (5).

According to Berthelot and Gaume, "Simple rough materials were used for construction : wood frames that weren't squared off, tree trunks for walls, leaves "menus bois" and creepers. Wattle and daub was the commonest material, but wood was also used (6).

There was not much of a difference between the slave hut and that of the white hired-hand. According to Father Labat :

"They are usually thirty feet long by twenty feet wide. If the family is not big enough to occupy the entire dwelling, it is divided lengthwise down the middle. The doors that are on the gable ends open on to streets when the house is used by two families ; but when the house is occupied by only one family they only have to tolerate one door. These houses are covered with cane tops, reeds or palm leaves. They are fenced in or surrounded by reeds of fences made of wattle that takes a daub of cow-dung and is then covered with a coat of lime"(7).

These houses were a little more spacious than the slave huts but were built of the same materials.

Caribbean houses can be easily moved. The practice of transporting one's home has been observed in many islands. This habit can be traced back to the plantations when slaves' huts were moved to the different fields the manager wanted to cultivate.

"In the plantations of the slave era, the huts could be moved around according to cultivation requirements". As Debien says of Santo Domingo : "the huts are often rebuilt and moved not only because of the fragility of the materials, pushed to their limits by storms and tornadoes but at the orders of the colonists and managers. These displacements were the results of their search for ever richer soils .... They could thus take advantage of the compost from the abandoned little court-yards and gardens of the negro huts".

"This mobiity could exist, during this period, in all the islands where the absence of foundations permitted it. The persistance of this habit should probably be attributed to the instability of property".(8).

1.1.2. Caribe Housing

Since Dominica is the only island where the Caribe indians continued to live, the influence of the Caribe housing and life style was certainly more important here than elsewhere. Jean Pierre Sainton points out : "this (caribe) way of life represented, in an unknown country, a tested example of ways of dwelling that were linked to the local environment. Not adopting the Carbet* exactly as it was, the first colonists took those elements from it that could be turned to their own purpose according to their own housing logic"(9).

We can still find several features inherited from the Caribes' adaptation of the housing to the local climate and wind system : use of wind for ventilation, orientation towards the sea, strict separation between communal and private spaces, use of the yard as a private space and having the kitchen under a separated roof are examples.

1.1.3. Dominican Housing

Although atypical of the Caribbean in some ways there is no doubt that the slave huts on Dominica's plantations ressembled those of her sister islands in the 17th and 18th centuries ; still today there are many common features. There has not been any drastic transformation of the essential characteristics of the peasant hut. Wattle and daub are no longer used in Dominica as there is a plentiful supply of timber on the island if one is willing to cut it. The majority of existing housing is built of wood (60%). Their simplicity, however, ressembles that of the slave huts. The enormous amount of destruction wrought by hurricane David is a witness to the precariousness of housing ; as for mobility, houses are readily transported either by being hoisted on a truck as is, or after having been "broken down" (see figure).

One woman told me of how she had had her house moved from one end of the island to the other. "Datene", as she was called, had been living in a house her husband had built for her on land belonging to her husband's family. At his premature death, Datene stayed a while where she was, but soon felt unwanted. She discovered she did not have the right to cultivate the land or even to pick up coconuts for herself or her five children, so she moved back to the village where her father lived and rented a tiny shack that was totally inadequate for her family. She lived there for several years trying to find some way to move her house from her in-laws' land. The cost of a truck was prohibitive, and no one she asked was able to help. Finally one day a stranger came up to her saying that he had heard that she needed a house moved and that he had a truck that could do it. It only took a few hours to "break down" the house and transport it to its new location. The work was accomplished by a group of friends with what is called a "coup de main". Datene's role was to prepare food and drink for them.

Carbet : a big common house about 60, 80 or 100 feet long made of forked tree branches planted into the ground connected together by pieces of wood. On top of this, they put rafters reaching the ground, and they covered the whole thing with palm leaves.

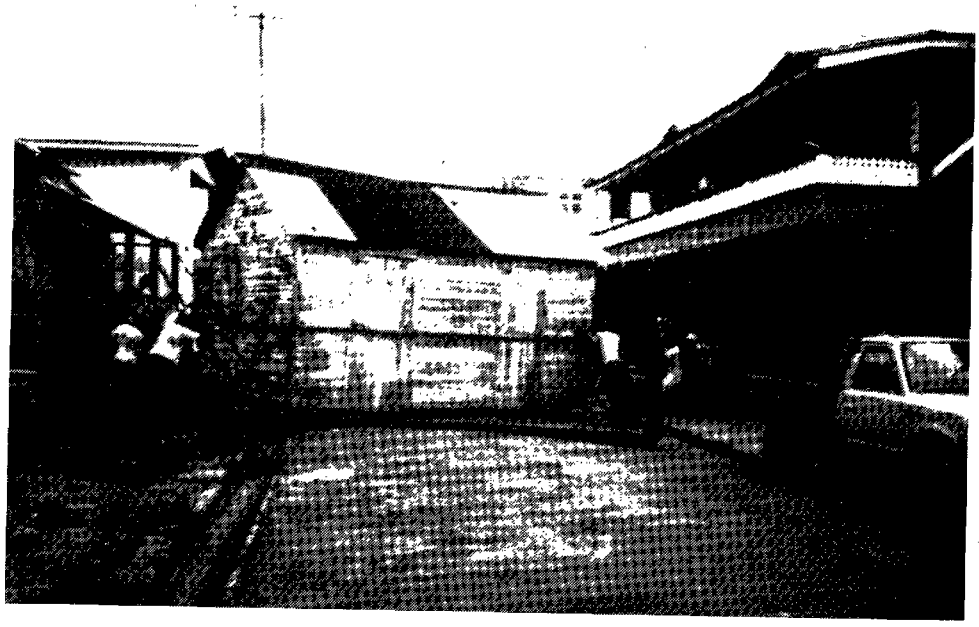


Fig. 4. Moving a house.

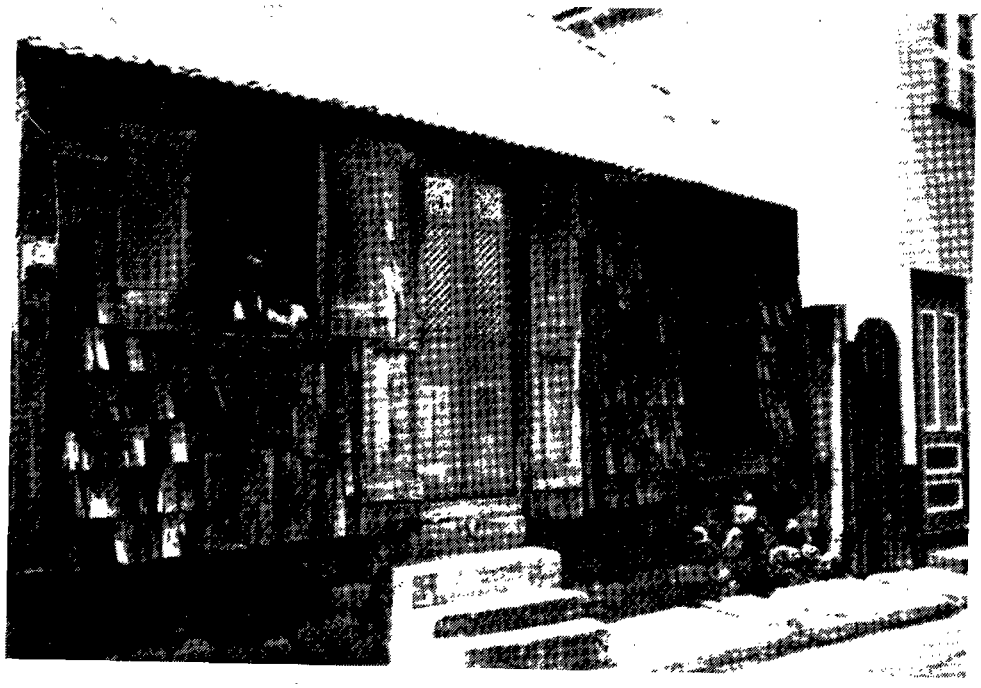


Fig. 5. Typical house in Roseau, Dominica.

It is easy to see the impact that slavery, colonization and the Caribe Indian housing have had on the built environment in Dominica. There are less visible ways which also show traces of their impact. For instance, a look at the building profession suggests that the lack of a tradition of skilled artisans is also due to this heritage. The ships' carpenters and the European architects and stone workers who were brought in to build the masters' houses and factories did not remain on the island and did not pass on their skills. This has meant that only the elementary building skills needed for the simple huts have been transferred from generation to generation of Dominicans.

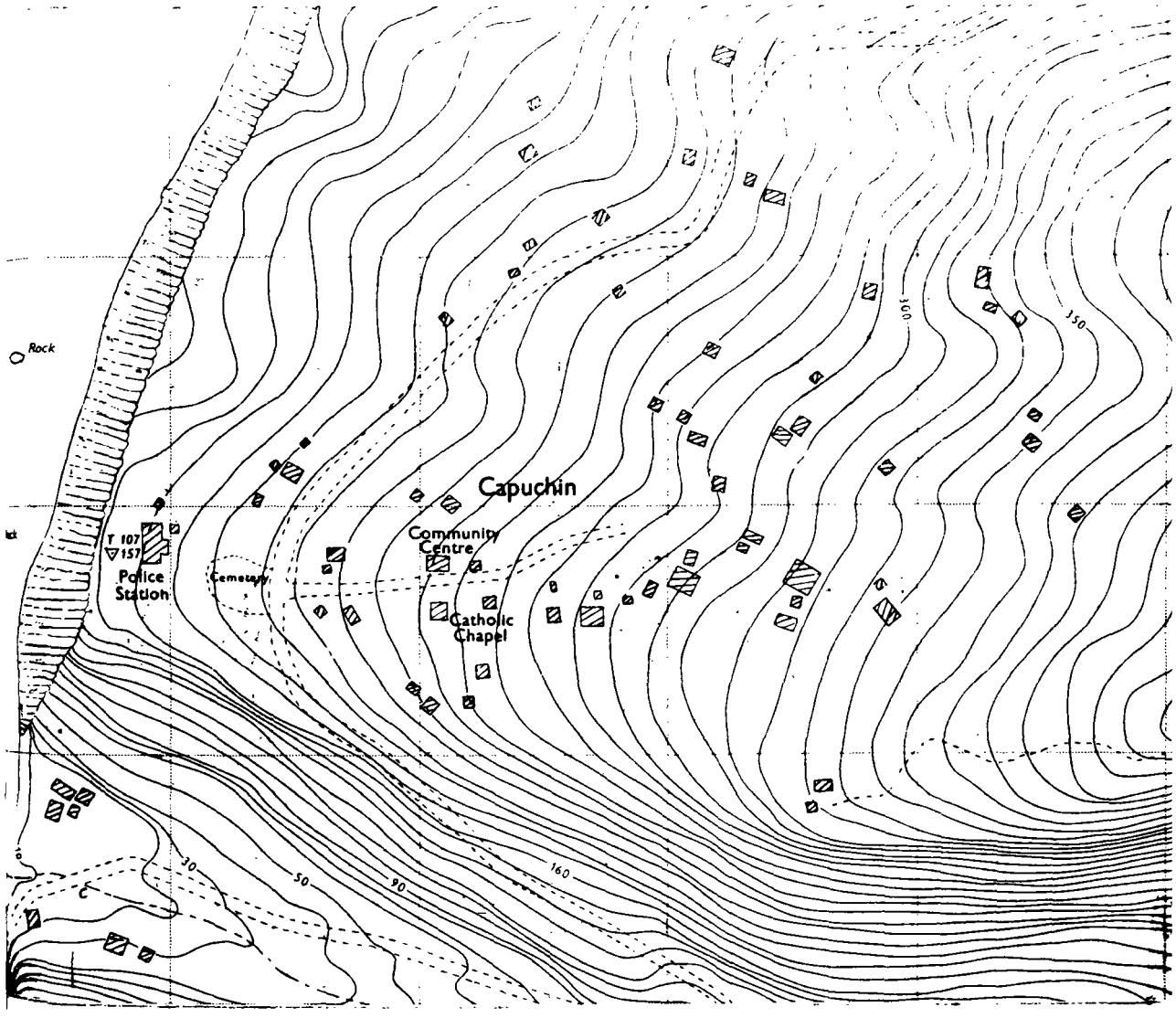


Fig. 6. Dispersed/scattered form of development.

1.2. DOMINICAN SETTLEMENT PATTERNS AND LAND USE

1.2.1. Ancestry

The ancestors of the Dominican villages were the plantations or "estates"as they were called. After emancipation many of the former slaves remained on or near the estates, regrouping in villages. The land belonged to the masters but the huts were considered theirs. Because all the flat fertile land had been taken up by the estates for money crops (mainly sugar and coffee) the slaves had only been allowed to grow their "ground provisions" (oignams, sweet potatoes, dashein, tania) on the sides of the mornes (mountains). The freed slaves had no choice but to continue to grow their food on the less arable high land often placed at some distance from their huts. After emancipation, two types of settlement patterns can be discerned in these villages, the dispersed pattern and a linear pattern. The dispersed pattern exists in hilly regions and the linear pattern follows the coast or a mountain.

Some of the former slaves left the estates and squatted on uncultivated Crown land along the leeward coast, this land was known as the King's Three Chains because a strip of land along the coast, wide by the length of three chains had been reserved for the crown to build fortifications or other buildings. Lennox Honychurch writes of these squatters :

"Those who lived on the coast would also squat on Crown lands in the interior and walk daily from their homes to their "gardens" (10). Thus there was a fairly dense settlement of the coastal strip of peasants who had their gardens in the highlands. Because the estate owners next to the squatters complained, the government attempted at times to evict them, but it was not always successful".

1.2.2. Peasant Settlements

Sidney Mintz has distinguished seven features of land use patterns of the peasant settlements in the Caribbean (11). We will see how each of them applies to the Dominican situation.

(1) "The peasant adaptation is primarily to the highlands and to sloping terrain rather than to coastal floodplains and alluvial fans or to intermontane valley floors"(11). To this day in Dominica, much of the flat land is monopolised by the estate owners. Furthermore the highland lots are small. More than two thirds of the peasants occupy less than five acre farms, the majority having less than two acres."

(2) "Main cultivation grounds do not usually adjoin the houses of their owners"(11). This applies to Dominica, in most cases, for the reasons we have given above. In some villages the "gardens" are so far that they have been abandoned in recent years as altogether not profitable enough.

(3) "House plots are often dispersed rather than clustered and are sometimes scattered along a slope or strung out upon a mountain spur (11)". In Dominica the mountainous terrain has sometimes prevented villages from spreading out so this only applies to some settlements. The prohibitive price of land has also caused higher density of the villages, particularly those on the west coast near Roseau.

(4)"Usually only one sexually cohabiting couple occupies a house though several houses and several couples may share a yard" (11). This is the

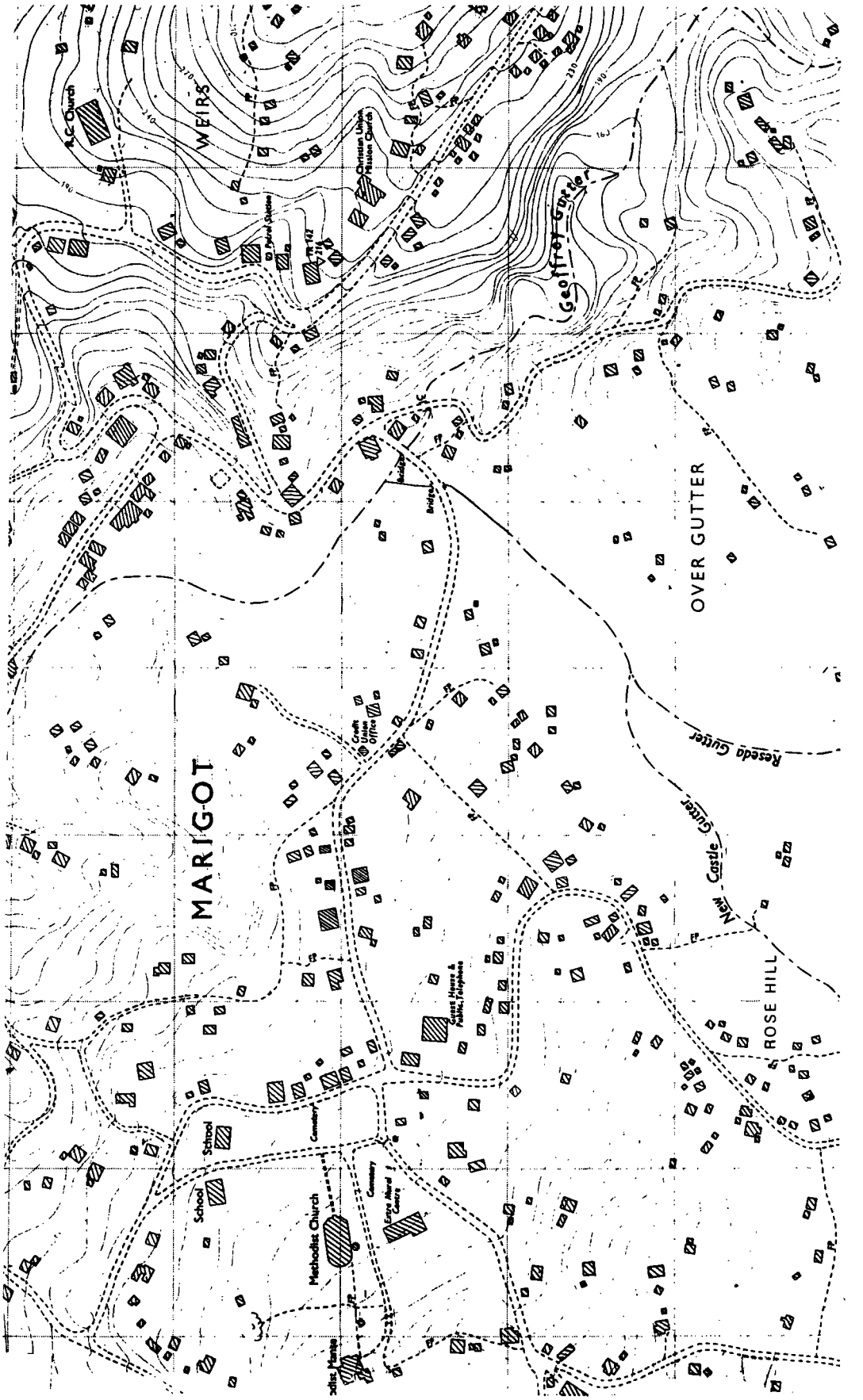


Fig. 7. Scattered form of development.

Fig. 8. Settlement with no potential for physical expansion.

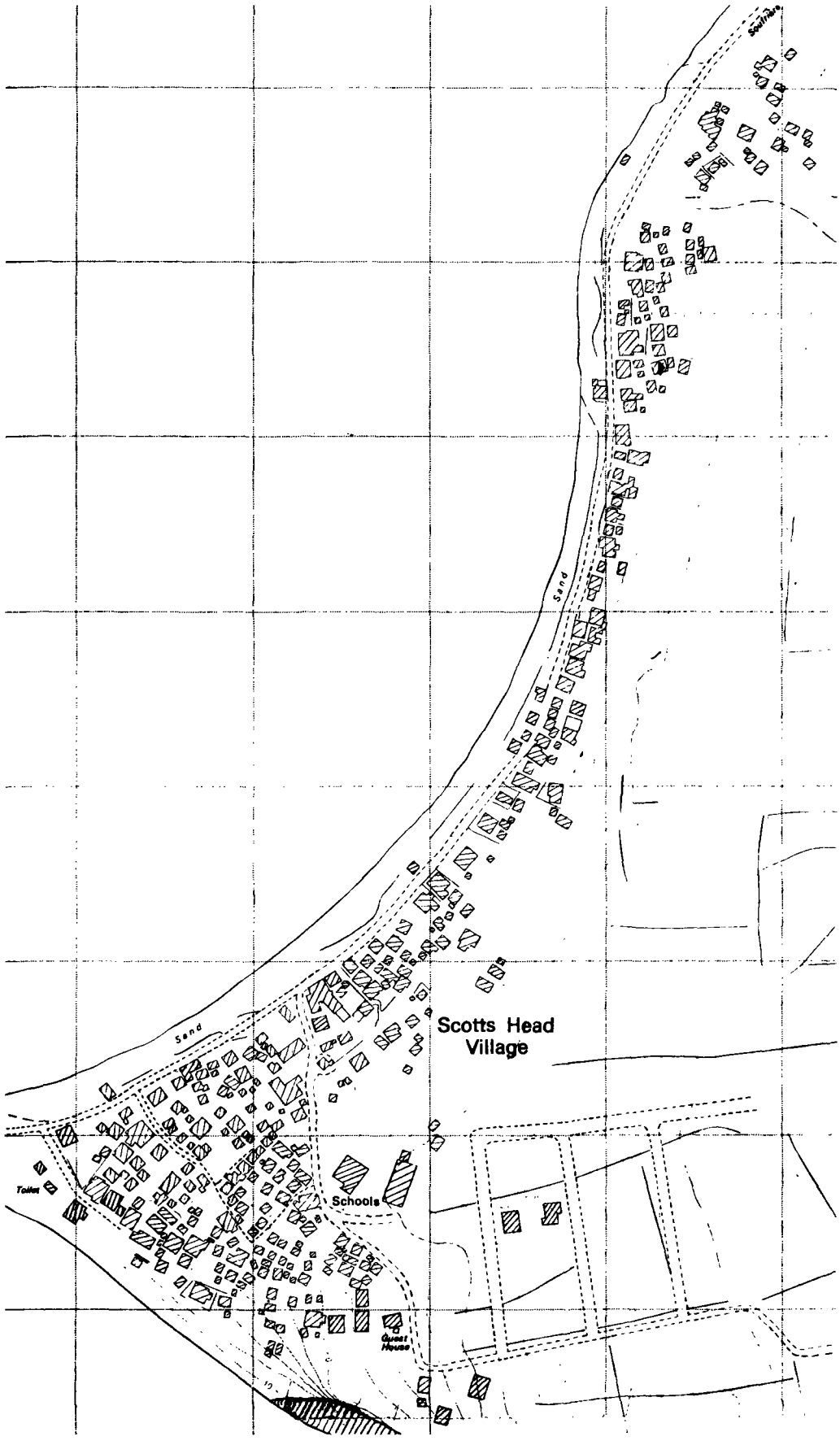


Fig. 9. Linear form of development.

custom in rural Dominica. In Roseau, however, we found cases of several couples under the same roof ; the house was often divided in two, one part being sublet to friends (or strangers) thus the two parts of the house may have been considered as two separate dwellings. The statistics for 1981 give 10% of households made up of two or more families. It is important to note that it is very common in Dominica for unmarried children with offspring to remain at home and to receive the fathers or mothers of the children as regular visitors. Generally it is the daughters who remain with their mothers. In one household we interviewed, there were four generations, but apparently no males with the exception of a 90 year-old grandfather who was taken in when he was too old to live alone. In Dominica one tends to marry late. The average age at one's first marriage is 32 for women and 36 for men. Sometimes these marriages legalize cohabitation. In other cases, marriage and/or cohabitation have been delayed until the couple could build, inherit or rent a house of their own, for in Dominica as elsewhere in the Caribbean, they believe "Que se casa pa su casa" (Let those who marry go to their own house)". It would be wrong to think that the late marriages are only due to lack of housing. It is common for children to be born out of wedlock and in fact many never marry.

It is common for children, married or unmarried, and relatives to build their houses near those of their family, the reason being partly economical ; land is often indivisible family property, cultivated by many members of the family. They may also share the yard, the kitchen house, a latrine, a water cistern, a faucet or shower.

(5) "Each homestead, whether consisting of one house or more, is usually surrounded by at least a small quantity of land, and set off from the outside by a fence, clumps of vegetation or a hedge or living fence" (12). It can be said that in Dominica the dwelling space is the yard, only part of which is covered and closed in. This is true even in the crowded shanty towns in and around Roseau, except in those cases where there is no room for a yard. The yard serves various functions but not always the same. It can be used for relaxing, for receiving friends (see figure), for preparing food, for eating, cooking (if there is not a separate kitchen house, which is more common), for bathing, showering, washing dishes or clothes (although most clothes are taken to the river). Flowers, vegetables, spices and fruit trees bearing coconuts, bananas, papaya, breadfruit, citrus fruits, avocados, mangoes) are grown in the yard, animals are kept there, and, of course, children play there (see photo).

Where there is space, sheds house domestic animals, tools and a latrine. In crowded areas, where the size of the yard has shrunk, it conserves its more essential role of bathroom, when there is water or kitchen (see figure). Fences or hedges are common but not universal.

(6) "The yard may be associated intimately with the house and its land may have an important ritual of kinship significance" (13). As we have seen, there is no doubt that the yard is an integral part of the home. The preferred arrangement is to share the yard with relatives, however, this is not always the case. In Roseau, yards were shared by neighbours that were not kin and it is surely the case in other villages which are overcrowded.

(7) "House and yard often have particular symbolic meaning for local people, though this may be implicit and little noticed by outsiders" (14). According to Berthelot and Gaume "the hut is thus the symbol of the couple and its future. The young man builds a house for his future family and from then on he is attached to it with indissoluble bonds. In all

Fig. 10. House in the Carib reserve.

likelihood it is the closeness of the relationship between poeple and their homes that explains why in certain islands the hut has remained mobile to this day" (15). In Dominica, as we have seen, homes are indeed mobile.

Mintz's description of Caribbean land use patterns portrays the situation in Dominica fairly accurately. Generally, farming is done on tiny peasant holdings on the highlands or steep slopes above the valleys and at a distance from the houses. Couples live in their own small house with their children but single mothers often remain with their parents or mother. Lack of a separate house is an important reason that young couples do not live together. The outdoor space near the house is part of the "dwelling" but as children tend to build their homes on the family land, in areas where land is scarce or costly, this space becomes filled, causing crowding and discomfort.

1.2.3. Land Tenure in the Caribe Reserve

In the 19th century, a Carib reserve had been set up in a remote area on the west side of the island where the remaining Caribes regrouped. The system of land tenure on the reserve has been totally different from the rest of the island. Traditionally, land is not viewed as something capable of being owned individually. Rather, in the Caribe culture, it is the community that holds the land and permits individuals to cultivate plots. It is the productive effort of the family which is thought to give value to the land. The individual or family has a right to his own plot only as long as he cultivates it. An act of parliament created a Carib council and made it the trustee of their land. This act stipulates that no person outside the reserve shall be able to hold property within it.

1.2.4. The Estates of Dominica

In 1960, over half the agricultural land in Dominica belonged to 67 estates. Six Dominican families own approximately twenty of the largest, having bought them in the distant or recent past from white colonials. Most of the other large estates used to belong to foreign investors, among them, two fruit companies, Geest, a banana company, and Rose which deals in citrus fruits. Rose has now left the country definitely and Geest is still shipping bananas but is selling its land.

Some of the estate land is rented under a leasehold system, some is cultivated by agricultural workers, some is squatted and some uncultivated. Much is undercultivated. Landowners often use the land for collateral for loans for commercial ventures rather than serious agricultural development. There is no land tax that would encourage the use of uncultivated lands and no legal framework that encourages agricultural leases. Over the last twenty years, the large estates around Roseau have been sold off for housing lots.

There also exist about 600 small and medium-sized estates scattered among the large ones. They range from 10 to 100 acres and are generally owner-managed. There is a tendency for these lots and the small peasant holdings to get smaller as they are divided up among a number of heirs.

The unequal distribution of land in Dominica has an obvious impact on revenues, agriculture being a primary source of income which, for those at a subsistence level, directly effects housing. Speculation on land also affects the availability of lots for housing that Dominicans can afford.

1.3. HOUSEHOLD STRUCTURE IN DOMINICA

The National Housing Policy for Dominica distinguishes five types of households : one person (17% of the total), family (64.5%), two family (9.7%), three of more family (1.3%) and non family (8.5%). (16). This indicates a high percentage of single people but tells us very little more about the make up of the households. In "Facts about Women" (17) we learn that 15 750 women and 16 151 men never married as compared to 6 678 women and 6 298 men who did. There are 256 women and 227 men legally separated or divorced and 4 007 women and 4 639 men who are heads of households that never married. All told, 6.676 females are heads of household, as compared to 11 046 men. Furthermore, 81% of all live births were illegitimate. We can deduct from these statistics that there are a large proportion of single-parent households most of them being headed by women.

The mother-centered family is the norm in Dominica. The father, when he is present, plays the role of breadwinner, but it is the mother who plays the predominant role in the house and yard. The father cultivates the "provision ground" or garden at a distance from the home.

1.3.1. Female Heads of Households

It is a common feature of the Caribbean for women to raise children alone and it has been so for some time. This trend seems to be on the increase. There is a reluctance for couples and especially the men to make permanent unions. There are women who feel that to live with someone is more trouble that it is worth. Others, however, suffer from being abandoned and many have a problem getting the fathers to help bear the cost of raising children.

As Lennox Honeychurch puts it : "The West Indian pattern of high illegitimacy and low percentages of marriages features prominently in Dominican society. The problems of paternal negligence and lack of a father figure has contributed to the complex nature of our modern social issues" (18).

It is the custom for the father of the children to give support but the fact that a law has recently been passed obliging fathers to do so implies that there are many breaches of this custom.

One consequence for Dominican housing of the tendency to have female-headed households can be surmised when we corrolate it with the economic position of women. Traditional attitudes about women and work, particularly by mothers, still prevail, thus fewer women get an education or seek jobs. There are 7 591 women who are employed as compared with 13 983 men (19). When women do work, they are paid less. The average weekly salary in 1985 was $100 E.C. for women and $159 E.C. for men. The rate of unemployment is higher, 29,2% as compared with 19,7% for men. In a word, women are poorer than men and yet often it is they who are responsible for the maintenance of the house as well as for raising the children. The poor state of many of the homes can be attributed to the very marginal resources of the women. Their first priority is seeing that the children are fed and clothed.

1.3.2. Illegitimate Children

Having children out of wedlock is so common that very little stigma is attached to it. On the contrary, for the adolescent it is a way of entering the adult world. A study of adolescent pregnancies discovered that girls wanted to become pregnant to be like their comrades. Parents sometimes worry about their teenage daughters getting pregnant or having relations with much older men but once a child is on the way it is usually welcomed and is always accepted in the household.

The tendency for women to have children while very young also has a direct impact on household composition as the young mother will stay in her home with her babies. Overcrowding is often a result.

1.3.3. Emigration

Emigration has been an important factor in Dominican life - both emigration to northern metropoles and emigration to nearby islands. In the past it was predominantly male emigration but in recent years as many women have emigrated as men. Young people seeking a living elsewhere leave behind their children for a grandmother or aunt to care for. Foster children of emigrants are is a common feature of households in Dominica.

1.3.4. Two Profiles of Dominican Households

The following profiles are not necessarily those of an "average family" as such a thing does not exist. They should help create an idea of how Dominicans live. The families exist but the names are ficticious.

1.3.4.1. Marie and her husband are both approximately 55 years old. They live in a rural village only about six miles from Roseau up a steep winding road. They are farmers and are relatively well off as they can sell their surplus produce easily at the weekly market in Roseau. They live in a house approximately 32 square meters, not including a porch and two kitchen

Fig. 11. Small farm in a rural village.

shacks, one adjoining the house and the other in the yard. Around the house there are sheds for animals and a large flower and vegetable garden. At some distance from the house is the family land that they farm. Marie's husband spends most of his time away from the house and rarely has meals there ; but on Sunday morning he puts on a clean suit and white shirt and goes to church with Marie.

Marie spends her time in and around the house preparing produce for market. Five of their eight children,three daughters and two sons, still in their 20's, live at home. Their eldest daughter, who lives in England, sent her teenage daughter to spend the summer in Dominica with them. Two of the daughters at home have a child living with them. The third is handicapped and goes to Roseau every day to work in a home for the handicapped. One of the daughters has a part time job as clerk in the village. The other one stays home and does most of the housekeeping and looking after the children. One son works in a bank in Roseau and the other helps his father on the farm. A third grandchild lives there whose parents have emigrated.

The house has a living room and four tiny bedrooms, one for the sons and the oldest grandson and one for the handicapped daughter and visiting granddaughter. Each room has only one bed that is shared. At one end of the living room, stairs lead down to the adjoining kitchen which is furnished with a refridgerator, a gas burner and a charcoal burner. Outside across the yard is the other kitchen used for preparing food and cooking jams and dishes that take some time. This way the house does not get heated and smokey from the cooking. Meals are taken informally. Rarely does the family all sit down at the table.

The pride of the living room is the colour T.V. No matter what is showing, or if anyone is watching, it is turned on regularly every afternoon around five and stays on until the last member of the family has gone to bed. It is on most of the weekend. The programmes are taken directly from American channels along with advertising for goods and services that are totally incongruous in Dominica.

The house is used for sleeping, dressing and receiving friends occasionally. The yard is used for washing people and clothes, for preparing food, for the animals, for children to play and for relaxing. The only water source is a cistern that collects rain water. In the dry season, water has to be brought up from Roseau at great expense.

1.3.4.2. A poor urban household : Edwina lives in Newtown, one of the shanty towns on the edge of Roseau, where she was born in 1927. Her mother came from a rural village and her father from Newtown. He was an overseer on a nearby estate. Edwina went to primary school until she was fifteen. Most of her life she worked in the Newtown factory washing limes. Perhaps as a result she got sick with rhumatism and diabetes and spent four months in hospital. Then, in 1972, she lost her job when the lime factory closed down.

Edwina has a son of 34, a daughter of 23 and a son 22. The oldest son has a different father from the other two and neither were ever married to Edwina. The oldest son emigrated to St. Johns but left his son to be brought up by grandmother. The daughter works in Roseau as a cashier and she too has a son that Edwina takes care of. The second son works as a porter for a wholesaler when there is work. Edwina's only income is what her children give her. She, her son and two grandsons live in a tiny ramshackle wooden house which they share with two other families. One family lives in the cellar and the others share the ground floor. The house is built on a slope so that the cellar opens on to a very small yard about ten square meters that is used for washing and cooking by all three households. A roof over one corner of the yard provides shelter from the rain while cooking. There is no W.C. The nearest public convenience is a block away.

1.4. PROFILES OF TWO VILLAGES

Three quarters of Dominicans live in villages with a population of less than 4000. Only nine have populations over 1500. It is important to understand the economic, political and cultural factors in these villages if one is to understand recent transformations in Dominica's settlements. Each village has its specific characteristics as well as some that are common to them all. I have chosen to portray two villages with contrasting features to give a better idea of daily life in Dominica.

1.4.1. Grand Bay

The history of the village of Grand Bay is intricately linked to that of the Geneva estate, one of Dominica's largest plantations with over 1000 acres of land. It grew up on the slopes beside the valley of fertile land occupied by the estate. Situated on the Atlantic coast, it was a difficult trip to the capital, Roseau, until the 1920's when the track over the mountains was turned into a road that motor vehicles could use.

Before that, boats linked Grand Bay to Roseau but the rough seas, the stony beach and an open bay that is unsafe for moorings made sea voyages dangerous.

After emancipation the former slaves remained in the valley working on the estate for their livelihood and cultivating their own gardens on the hills near by. During the first half of the 20th century, much of the land was left uncultivated by the estate. The villagers began to use this land for themselves. In 1949 Geneva was bought by Elias Nassief, a Lebanese businessman who had a long association with Dominica. Nassief started evicting the peasants and planted coconuts. There was much resentment against Nassief as many people had depended on that land for their livelihood. In 1972 there were acts of terrorism, vandalism and arson. The road to Roseau was blocked and the buildings on the estate were burned. The government eventually took over the property and put the administration in the hands of a Land Management Authority.

Today, there are approximately 350 households living on the estate, a total of nearly 2000 people. Of this population 28% are households headed by women, 76% are full time farmers. Recently the O.A.S. has prepared a programme of integrated rural development including plans for the acquisition of this land by those settled on it.

The turmoil in this area in the 70's was clearly related to the socio-economic situation, notably the problems of access to land, the high rate of unemployment, the poor level of education resulting in the lack of opportunity. A study made in the late 1970's estimated that 35% of the population was unemployed (18). The educational standards were low ; out of 1100 students, only betweeen 60 and 80 went to grammar school (for this they had to go to Roseau). Many people from Grand Bay had emigrated causing a noticeable gap in the population of men of working age. In the age group 35-54, there were twice as many females as males ; 63% of the population was under 20 and 13% were 55 or over. The emigrants who came back were used to "a fast way of life" and "good money". The leaders of discontent were often found among them.

The present situation in Grand Bay has not changed much. Unemployment and the need for land are still major problems. Subsistence is eaked out by the small scale cultivation of bananas, ground provisions, cocoa, limes and vegetables and fruit trees. Marketing the produce is difficult. It is costly to take it to Roseau by truck. To reduce the cost of transport each week a few people hike over the mountains to Soufriere (a one and a half hour walk) with their produce to sell in the market there. Those in the village who are relatively well off are the shopkeepers, the school teachers and other government employees, those who have jobs in Roseau and those who receive remittances from abroad. Very few people are wealthy ; 90% of the population reported earnings of under $500 E.C. per month. Some of the women do handicraft work, sewing and basket weaving. Two cooperatives have been formed, one that raises pigs and runs a shop and another that runs a preschool and has a sewing project. Education is still a problem. In 1985 not one student received a scholarship to go to Roseau to grammar school.

As might be supposed of an underprivileged area, Grand Bay generally supports parties of the left. However, in 1980, it send a Freedom Party candidate to parliament. In 1985 a majority voted for the labour candidate, Pierre-Charles, known for his progressive outlook and considered as a "communist" by many Freedomites. Politics penetrate many levels of

life in Grand Bay. There is a deep cleavage among the population and resentment towards the few visibly better off (21). Labourites complain that appointments in the schools are made with a political bias ; those who support the Labour Party are victimized and sometimes forced to resign. They also believe that pauper allowances to Labour Party supporters have been cut off. Freedomites complain of violence and the "communism" of Labourites. During the election campaign of June 1985, stones were thrown during a Freedomite rally.

The built environment of Grand Bay reflects the difficult economic situation. The average size of a home is 225 sq.ft.(approximately 15 sq. mts). They are closely packed, deteriorating and lacking comfort.

1.4.2. Giraudel

Giraudel is a small village perched in the mountains above Roseau. It is a six mile drive up a road laced with hairpin bends. Administratively and for statistics it is grouped with the neighbouring village of Eggleston. Together they have 750 inhabitants. There was never a large plantation ; if anyone cultivated the small plateaux in the area in early colonial times it was probably the Maroons or run-away slaves. Little is known about the first settlers, the Giraudels. The village is scattered, the houses are surrounded by vegetable and flower gardens and fruit trees. Larger fields are cultivated further away from the homes. Rainfall is plentiful and makes it possible to grow a wide variety of vegetables and flowers. These are marketed in Roseau every Saturday. The land is generally owned by the farmers many of whom have been there for several generations.

The lots are larger on the whole than in Grand Bay, furthermore in Giraudel there is not the same problem of access to land. However, as elsewhere families tend to be large and there is not enough land to be divided up into viable farms for all the heirs. There is a problem of unemployment for the young people who do not choose to farm or for whom there is not enough family land.

The school in Giraudel is more successful than in Grand Bay in having its students pass the common entrance exam for acceptance into grammar school. In 1985, 10 out of 25 were accepted (two had scholarships). A diploma from a grammar school can mean access to white collars jobs in Roseau, considered a step up on the social ladder, better than farming and offering a more regular income.

There are several active associations. The Catholic Church has a committee that has been responsible for both the annual flower show and the creation of the housing committee (which will be discussed later). There are two youth groups and a "jing ping" orchestra, that uses traditional Dominican musical instruments.

One of the major problems in Giraudel is lack of water. It is higher than the water supply of Roseau so that to pipe water up it would be very expensive. The farmers are eager to have water as sometimes their cisterns go dry and they have to bring water up from Roseau by truck. They want piped water to be able to water their gardens during the dry spells. The chief engineer of the Central Water Authority has studied the question and has concluded that the rainfall in Giraudel is sufficient for the area and that rather than bring up piped water at vast expense, a public catchment area and cistern would solve the problem during dry spells and be much less costly.

The farmers of Giraudel are not wealthy by any standards, though they are better off than their compatriots in Grand Bay on the whole. Before Hurricane David, the housing in the area ressembled that of much of Dominica. Since then the action of the Housing Reconstruction Committee as we shall see later has improved the standard of housing in the area. No doubt a collective sense of self estime and optimism helped the Committee succeed.

1.5. RECENT TRANSFORMATIONS

1.5.1. Roads and Industry

Until the second half of the 20th century, Dominica was pretty much untouched by modern society. It was only after the 2nd World War that the road system was built that linked the east coast of the island to Roseau. The road system made way for many changes : for instance, to transport bananas from the plantations to the ports, for village children to go to grammar school and for villagers to hold jobs in Roseau. The local shops could carry a larger variety of imported goods, builders could obtain imported materials : cement, lumber, galvanized sheets.

A second recent phenomenon has been the development of a limited amount of industry. There are several agro industries, Dominica Coconut Products making coconut oil and soap products, Dominica Agro Industries which has taken over a lime processing factory, Bello Products making jams and juices. Other industries include a bottling factory, a bakery and furniture makers. Over the last five years, the government has built factory shells for foreign industrialists to rent for "off shore" American industries. In one of these a glove manufacturer brings precut gloves from the U.S. to be sewn in Dominica and exported. There are also several factories making cement blocks and other cement products for building, several saw mills and factories making prefabricated elements for housing. With the exception of the saw mills these industries are situated in or near Greater Roseau. We have, thus, the beginnings of an urban or semi-urban population.

A third phenomenon is the growth of the services offered in Roseau. Having long been the administrative centre and the commercial centre, in fact, the only town with a variety of shops and services, Roseau has recently added on to its traditional functions the services needed for the equipment of the 20th century : garages, T.V., and video repairs and rentals, photocopying services, etc. One of the most symbolic of these is the Mapin TV, a private channel which picks up U.S. TV programmes and sells them on its own cable TV network.

1.5.2. The Growth of Greater Roseau

These three phenomena are at the root of important trends in the distribution of population on the island. Roseau and its surrounding villages exert an attraction for the young people of the island. The growth rate there is 50% higher than that of the national population. It would be greater without the high rate of emigration (the official figure is 1000 emigrants a year, a large part of which left from Roseau. This figure does probably not take into account all the undocumented emigrants).

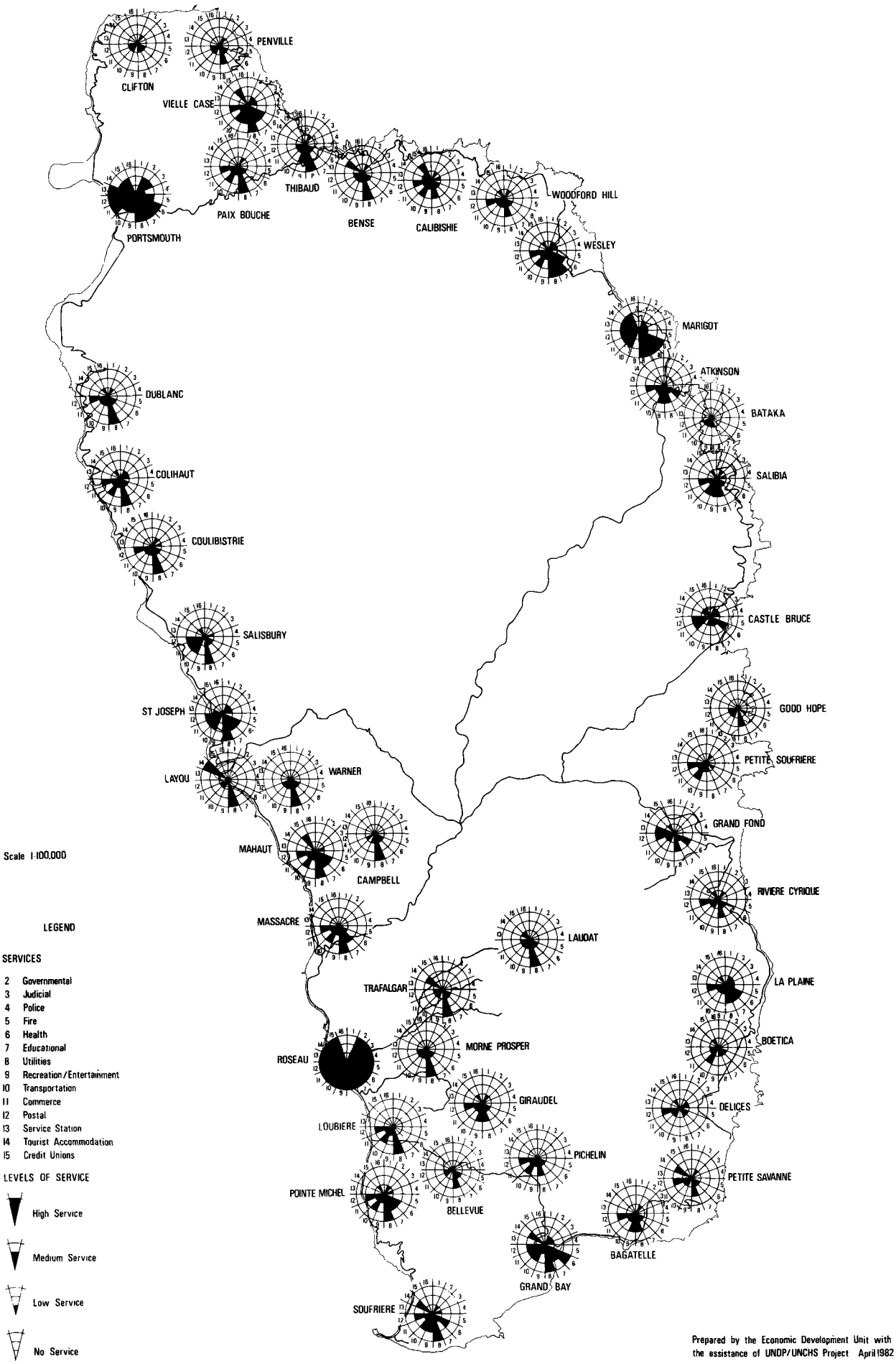


Fig. 12. Distribution of services and facilities in urban and rural settlements.

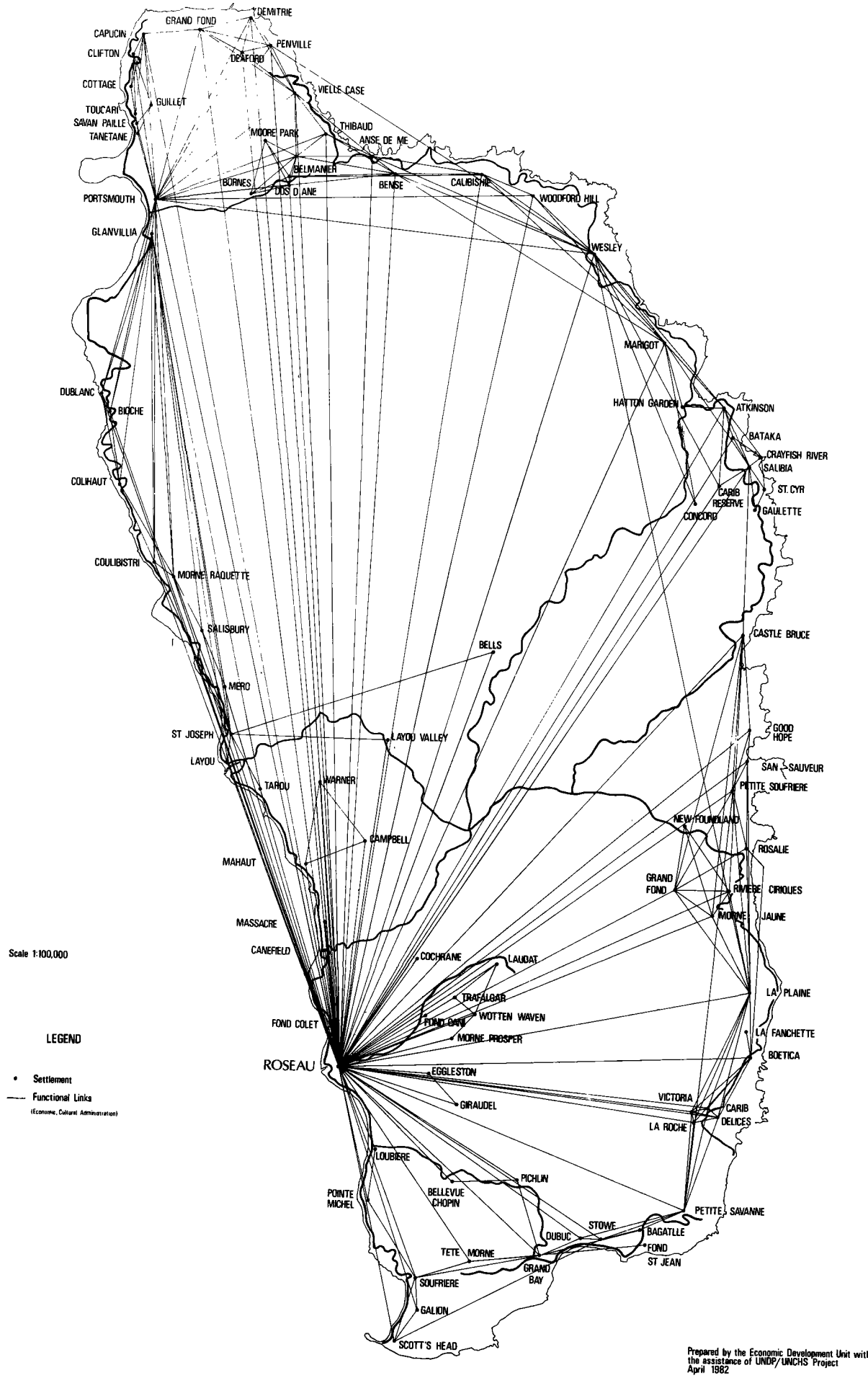


Fig. 13. Inter-settlement functional links.

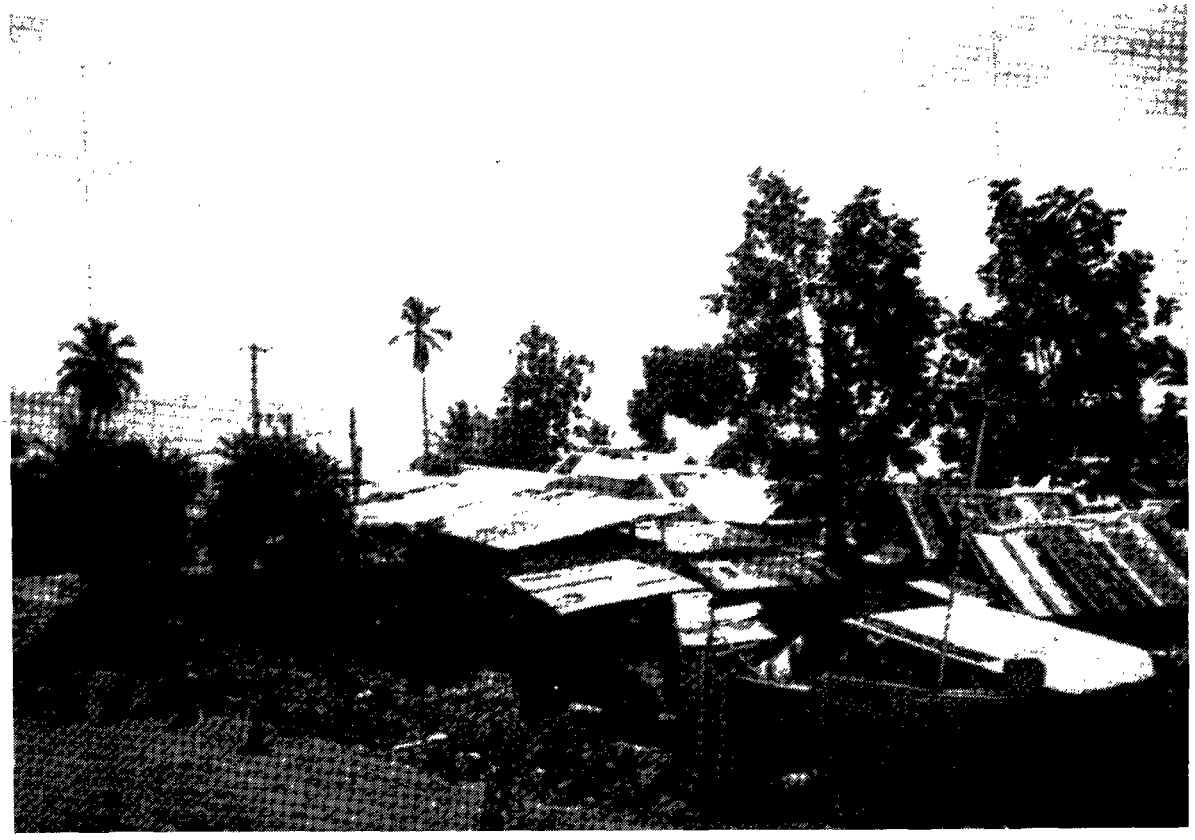


Fig. 14. Densely packed housing on the outskirts of Roseau.

These migrants to Roseau do not find employment easily and they either swell the ranks of the unemployed or move on to farther shores.

Although it has not yet taken on the size of an urban centre, Roseau can be seen as the embryon of a large city. It has the same problems on a smaller scale as other Third World metropolises. Much of its population live in overcrowded shanty towns lacking basic infrastructure and sanitation. Land for building is not available for the newcomers at prices they can afford so they pack into the existing built areas filling in the gaps between shacks that were once yards, thus reducing the living space. Areas not appropriate for housing have been squatted. Families double up or sublet part of their house.

It is difficult to establish the limits to Greater Roseau as little by little the surrounding villages are becoming suburbs. Other villages remain rural but house a certain number of people who commute every day to Roseau. Early each morning a parade of Japanese minibuses and pick-up trucks fitted out with benches to carry passengers files into Roseau packed with commuters and school children from the outlying areas. There are 14 villages within 10 miles of Roseau and 23 less than 20 miles away. These commuters, no doubt, have a positive impact on village housing as those with regular salaries, and particularly civil servants are able to borrow money for improvements. On the other hand, the difficulty of finding housing in Roseau compels many to commute from far away, a practice which is both costly and time consuming.

Fig. 15. Building materials typically used in Dominica today: cement, blocks, galvanized roofing, glass windows.

1.5.3. The Transformation of Housing

1.5.3.1. New Building Materials

Easy communication with the rest of the world has had a definite impact on building and particularly on building materials and methods. The emigrants returning to Dominica have brought with them revised concepts of housing : a desire for modern materials, more rapid methods of construction, more durable homes. These ideas have spread among Dominicans who have never left the island. The arrival of TV to Dominica has accentuated this trend. Cement blocks were introduced into the island in 1946 by a builder who had used them in Aruba. At that same time, galvanized iron sheets started replacing the thatch roof or wooden shingles traditionally used. Today there is not a thatched roof to be seen and very few shingled roofs. Cement blocks are preferred over wood and stone. In 1979 Hurricand David confirmed this preference as most Dominicans believe that a block house will withstand a hurricane much better than a wooden house.

Modern work habits and notions of productivity have also had their impact. Fewer and fewer Dominicans have had the energy and patience to go into the forest with a longsaw to cut the timber needed to build a house and then wait until it is seasoned before using it. Ready to use imported lumber even if of inferior quality has been preferred because it is readily available and also easier to use.

Dominicans often admit that as a people they have a preference for imported goods over local ones. This is perhaps a left over attitude of colonial times when the Europeans waited impatiently for each ship bringing them luxuries from home.

The attitude of Dominican builders towards new building materials will be dealt with at length in Part III. It is important to note here that they have a practical attitude and have adopted new materials in the past when they have thought it to their advantage.

1.5.3.2. Overcrowding and Densely Packed Housing. The increase in the population without a proportional increase in the revenues has caused severe problems of overcrowded housing and densely packed communities all over the island but particularly in the Roseau area.

Even before the hurricane, it was estimated that 37% of the population lived in overcrowded conditions (22). (Overcrowding is defined here as three or more persons per room). There was an average of 2,7 rooms per house and 58% of the houses had been constructed more than 25 years before. 57% of the houses had no toilets, 34% had pit latrines ; as for water, 76% of the houses had no running water inside. The construction of housing has been declining since the early 70's. After the hurricane the situation was much worse with 60% of the housing partially or totally destroyed. Much of the housing that was "rebuilt" was done so with whatever material could be scavanged and was more dilapidated and overcrowded than before. A second problem is the high density and poor spatial organization of the housing in many areas which leaves no place for building proper drains, septic tanks or even pathways. The density makes it difficult for piping water to individual houses. Thus, even for the families that might be able to improve sanitation, it is impossible to do so. The density of the housing addded to the overcrowding of the homes is very visible but not statistically documented with accuracy. The statistics of 1981 give the average size of households as 4.26 persons. That same year 45.9% of the houses had only one or two rooms and 79.9% had less than five rooms. No general statistics are to be found as to the size of the houses or rooms but any visitors to poor households are aware that "rooms" in Dominica are tiny (6-9 sq.m.). A four-room house (considered large locally) has an average of approximately 35 sq.m.

The only exact statistics that we could find on the density of the population is in the Pound area ; an overcrowded zone of Roseau of 2.382 acres or 9646 sq m. (of which 1655 sq.m. is a school site) (23). The total population is 354. "There were about 33 single-family detached dwelling units per net residential acre and 180 persons per net residential acre" or 14 sq.m. per inhabitant. There is roughly an average of 1.3 sq.m. per inhabitant of dwelling space.

One report concerning the disastrous impact that overcrowding can have is found in a study of housing in Newtown and Citronier (24)(two poor areas on the southern outskirts of Roseau). It is reported that "the majority of residents of Newtown and Citronier feel acutely the lack of privacy, the lack of opportunity to live in a dignified manner, and the sheer strain of living in such close proximity not only to their families but also to their neighbours.... Social strain in the form of frequent quarrels are a feature of the alleys and backyards of the area .... houses are built so close together that there is literally no breathing space .... The houses are so

tiny, one or two rooms being the norm that many children over the age of 5 or 6 must sleep out either under their own houses, under another building, or on the beach with a friend or in a wee kitchen .... Some mothers admit that they do not know where their older children sleep, only that they are sent away at night either because there is no room or because a boyfriend has arrived .... Older children especially boys, commonly leave home at around 12-13 years and sleep around Roseau.... Of the 173 homes visited, 20% at least could be considered overcrowded".

Interviews with social workers in 1984 do not indicate that this situation has improved much since 1980. It was noted that many children had never slept on a bed, the rooms being too small for beds even if the family could afford one.

Other areas as densely packed and overcrowded as Newtown and Citronier are Pointe Michel, Gutter Village, St. Joseph and Portsmouth. Certainly many areas of other vilages are also overcrowded and densely built.

1.5.3.3. Deterioration of Sanitary Conditions. The growth of the population and the ensuing density have an important impact on the hygiene and health because of lack of sanitary infrastructure in the overpopulated areas.

The following summary concerning the sanitary infrastucture has been drawn from government statistics for the year 1981. In that year, 47% of the population depended on public stand pipes for their water supply, 21,5% depended on "other sources" that is, generally, the river. Only 12,7% have water piped into the house, 9,5% have water piped into the yard and 9,3% have a "private" source of water, a cistern or a spring presumably.

It is generally agreed by United Nations experts that 20-40 liters of safe water per day is the minimum required and reasonable access to water denotes a stand pipe not more that 200 meters from the house. As for a W.C., 45% of the population have no toilet facilities, only 20% have flush toilets, 34% have pit latrines. Only Roseau has a sewage system and that system is both inadequate and decrepit ; furthermore, the sewage is not treated but dumped raw into the bay in front of Roseau.

The critical nature of the sanitary conditions related to the environment is manifest in the health records. Dominica has one of the highest rates of typhoid fever in the world : 38 cases in 1983 (65 in 1981). There are regular cases of gastro-enteritis, many of which are not even declared, and numerous outbreaks of viral hepatitis, according to the doctors in charge of health clinics.

The lack of garbage collection also presents a health hazard. Only the two largest towns have regular garbage collection which is dumped in sanitary land fill areas. The other villages have a serious problem of garbage that rots in open piles, on the beaches and in the rivers. Garbage collection was recognized as a serious problem by the village councillors interviewed in the more densely crowded areas. In the rural areas, where there is sufficient space and domestic animals to consume waste food and gardens for compost, garbage is less of a problem.

II. GOVERNMENT HOUSING POLICY

II.1. GOVERNMENT HOUSING POLICY

An analysis of the present housing and planning policy of Dominica shows up certain contradictions. On the one hand, we can see the impact of a "laissez-faire" ideology as the present government has been highly influenced by "Reaganomics" but on the other hand the planning department influenced by international experts and different bilateral and multilateral aid programmes has acted as though the government had a policy of subsidizing houses for the poor.

These political and ideological contradictions stem from the fact that the government is totally dependant on loans and gifts for the investment budget as the revenue it is able to raise locally through taxes does not even cover current expenses completely. Thus it is obliged to accept the practices and principles of the powers on whom it depends, notably the U.S.A., the IMF, the UNO, Canada, France and a few other countries. This dependant position explains in part the contradictions.

In fact, there have been two housing policies in Dominica, that of the Labour Party, and that of the Freedom Party.

Land Management

The policy of the Labour Party (1960-1980) was to make land reserves of the estates inherited form the British government. Thirteen villages have reserves of from 5-21 acres. Theoretically these lands were to be used for public housing. The policy of the Freedom Party, in power since 1980, has been to sell this land to individuals able to pay the market price. Curiously, in spite of its liberal ideology, the government does intervene with a policy that it erroneously calls "sites and services". Whereas generally this term refers to serviced lots put at the disposition of the poorest elements of society and includes a social transfer, in Dominica this term refers to lots serviced by the Government and sold at the going market price, way out of the price range of the low income population. Thus the more affluent households that are able to borrow from the bank benefit from this policy and build villas in the suburbs of Roseau (for instance, in Canefield North, a programme of a million EC dollars has been foreseen for this purpose).

There is another point which will simply be noted in passing. The subdivision of land in Dominica has been done according to the norms of industrialized countries taking into account neither the style of life of Dominicans (for instance the use of the courtyard as part of the home) nor their resources.

As for speculation, the only step taken to control land speculation concerns foreigners. On the other hand, land is used by the wealthy as collateral for loans to start businesses.

Housing : the Labour Government Policy

When in 1973, as part of the British withdrawal policy, the "Commonwealth Development Division" dropped its aid for mortgages for Dominicans, the result was a net slowdown of the construction of houses. It went from 5 new units per 1000 inhabitants to 2 units per 1000. In an attempt to remedy this situation, the government created the "Housing Development Corporation" or HDC, a statutory body. Its role was to service lots belonging

to the government and to build low income housing for needy families. By 1979, it has built 523 units and had serviced several areas. Although, in theory it was to cover its expenses by the rents and rates paid by the recipients, it was never solvent and had to cover its running expenses by selling off government land to pay its debts. There are several explanations for the financial difficulties of the HDC. The immediate cause was that there was a problem in the collection of the "rates" and the rents, the beneficiaries of the projects not being able or willing to pay, so the revenues were not able to cover the expenses. From July 1981 to February 1982, the receipts were $2954718 while the expenses were $412523. The labour government felt it was normal to subsidize housing in this way but the Freedom government felt it was poor management. The HDC was accused of inefficiency and sloppy accounting ; it was said to have too many employees for the work accomplished. These criticisms were no doubt founded but apply to many other administrations as well and not specifically to HDC. There were other reasons for the deficit of the HDC :

(i) Hurricane David damaged 240 of the 400 houses built by the HDC which had not yet been insured. These houses had to be rebuilt.

(ii) Several ministries appropriated land serviced by the HDC without paying for the work, for instance, the Ministry of Culture took land for the stadium in this way.

(iii) The loans from the Caribbean Development Bank were paid with a delay of at least three months, obliging the HDC to borrow temporarily from local commercial banks at a high interest rate.

(iv) The right to collect the rates on serviced land was transferred to the Roseau City Council, thus the work done by HDC on city land was not paid for.

In 1982 the HDC was disbanded. The official reason given was insolvency, however, the opposition felt that the reasons were political. Of the 137 employees working for HDC, 120 were supporters of the Labour Party. Another reason for shutting it down may have been the wish of the Freedom government to adhere to the injunctions of the IMF which opposed statutory bodies.

The Freedom party was elected less than a year after Hurricane David has destroyed or badly damaged 60% of the houses in Dominica. International aid was mobilized to help Dominica back on her feet. Among the aid projects, several aimed at building houses, two of which were to be managed by the HDC. One was a core house project financed by Trinidad and Tobago. 830 prefabricated "core" houses were to be built with a loan of $7,6 million EC reimbursable in 25 years at 2% interest. The approximate cost of each unit was to be $9150 EC for a house of 264 sq. ft. built of wood from Guyana. In 1983, the actual cost per unit was $18.000 EC and only 120 were ever built. (The rate of inflation is only 4% per year). The reason given for the poor implementation of the programme varied according to the source of information. The Prime Minister declared publically that it was above all due to the delay in funding by the Government of Trinidad and Tobago. In an article in the Trinidad Express, the Ministry of Foreign Affairs of T & T explained the delay as caused by "variations in the agreement concerning the size, the construction methods and the cost of the houses". In March 1983 a team from T & T had inspected the programme and had identified certain problems, the long delay in furnishing the material, the lack of competent employees in Dominica to manage the programme, lack

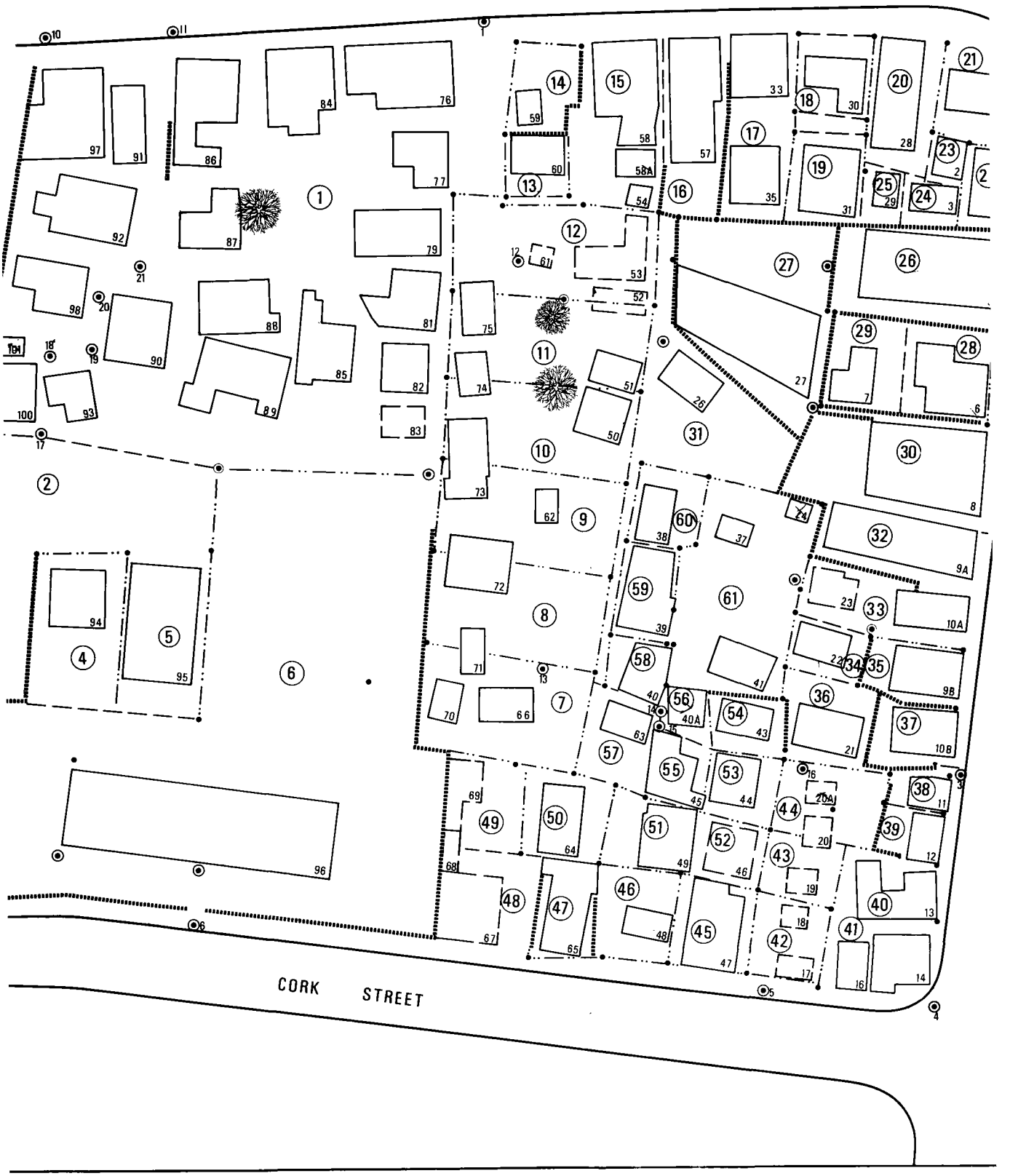
of transport and difficulty for the beneficiaries to produce title to the land. (This is a serious problem in Dominica as much land is inherited from generation to generation with no titles). Furthermore, the higher price of the houses meant that many households were not qualified for loans because of lack of sufficient income. The cost of the houses was not lower than houses built by the private market. The fate of this project would seem to indicate that the government was not ready to subsidize low-income housing.

The fate of the houses given to Dominica by the Government of Venezuela after the hurricane also indicates the attitude of the Freedom government towards low income housing. One hundred prefabricated three bedroom wooden houses were sent ready to be built but lacking the roofs. The government at first renegociated with Venezuela for a loan to cover putting up the houses and adding roofs. In 1986, the material for the houses was still sitting on the pier. The government was servicing a site to set them up. The cost to the buyer was to be approximately 60.000 EC, a price which eliminated all low income families. According to the statistics of the National Housing Policy for Dominica only 26% of the population of the island would be able to borrow this sum using 25% of their income to reimburse this debt. In theory, the money recuperated from this operation would be used to finance other housing programmes.

Since the Freedom party has been in power (1980), only 225 "low cost" houses have been built. Of these, 105 resulted from negociations of the Labour Party with the Royal Bank of Canada and the others were the core houses sponsored by Trinidad and Tobago. In fact, the government has concentrated as much on middle class housing as on low cost housing. Statistics of the World Bank of 1982 show that of a total of $4,900,000 EC of public investment in housing, $2,500,000 EC went to housing for the middle classes.

There are projects which seem to interest the Freedom government more than low income housing judging from the effort put into new studies. One of these is the renovation of the Pound area. A low-income neighbourhood facing government headquarters has been the object of plans for a classical slum removal scheme. The buildings, the population and a government school on the site would be removed and replaced by office buildings, a commercial centre and modern apartments. There have been several drafts of this project but no concrete steps taken. The government expects private developers to take over this project but at the same time, it has been conceived as a public renewal operation. There are quite a few obstacles to the renovation, one being the fate of the present inhabitants. Many of them are tenants of the land and owners of the houses which are not worth a great deal, the price paid for them would not enable them to rebuild elsewhere nor would they find cheap land to build on. The government plans to rehouse them on the Bath Estate but it is questionable if the majority could pay the price asked for land and/or houses there. As the government does not believe in subsidizing housing, this project, if undertaken, would mean great hardship for the majority of the families removed (see annex III for a description of the Pound Area).

There is another major problem related to the renovation of this area. Only 25% of the houses have toilets. Any renovation will mean adding flush toilets but as the present sewer system is already over-used and antiquated, a new sewer system for this area will have to be devised or the existing one renovated, both of which are very expensive operations.



LEGEND

- Wall
- Property boundary
- Approximate property boundary
- Control point
- Property boundary point
- Building with code number
- Plot code number
- Unsurveyed building

Scale

0 50 100 feet

Fig. 16. Plan of the Pound Area scheduled for redevelopment.

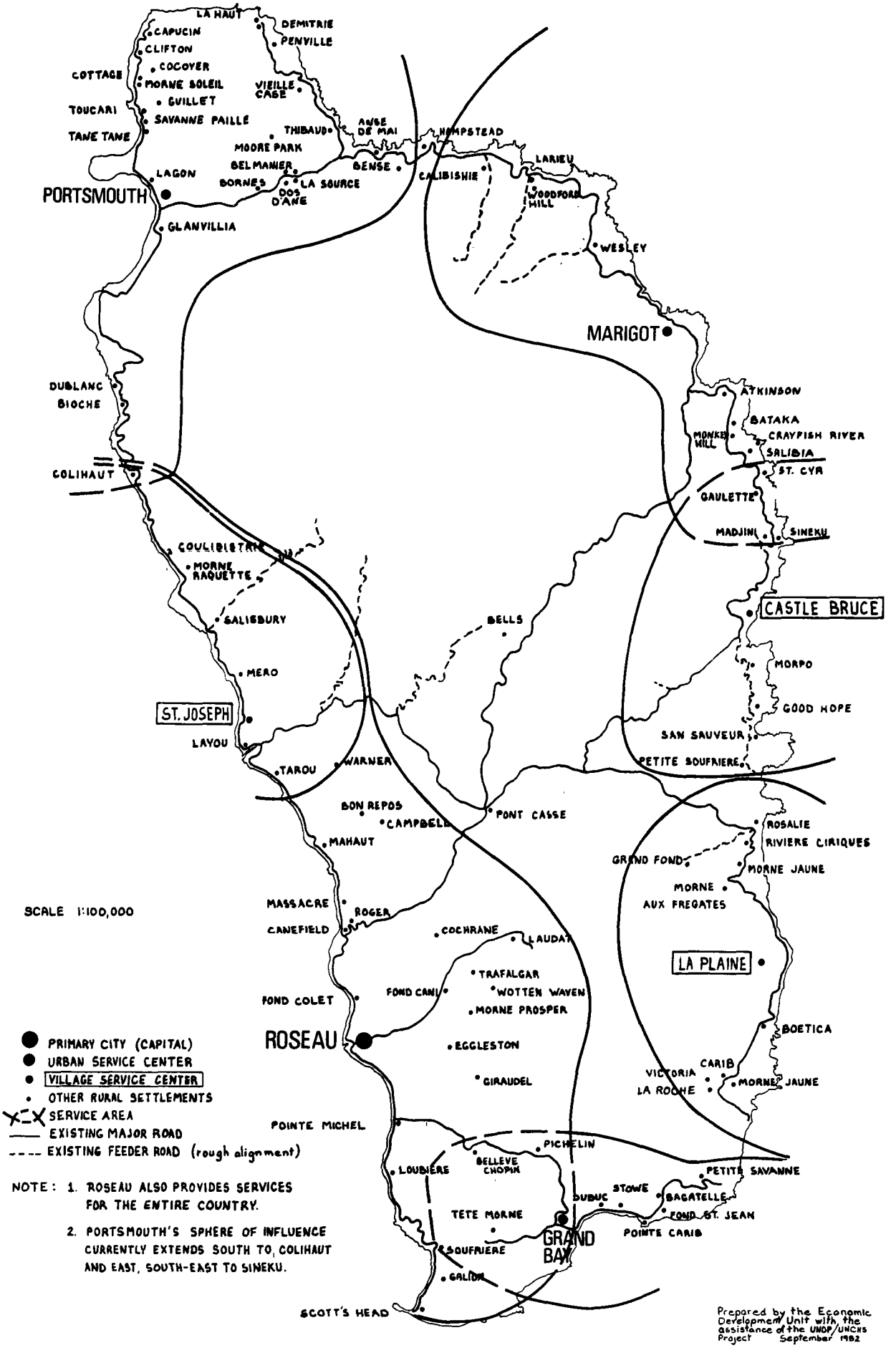


Fig. 17. Service centres and their areas of influence.

A certain amount of attention has also gone to removing squatter settlements in and near Roseau to zones prepared for this purpose and sold to the settlers. This programme is discussed in Part II.

It is clear from these programmes that the Freedom government is heavily influenced by the economic policy of the Reagan administration and the IMF. There are certain contradictions in the policy since a UN consultant spent two years drawing up a housing policy for Dominica concerned with providing housing for the low income majority.

The Prime Minister, in a interview with the author, declared that it was not the role of the government to house the poor. "How could such a poor country as Dominica", she asked "deal with this problem when the United States itself had so many hundreds of thousands living on the streets".

PLANNING

There are as many contradictions in the planning policy of the government as in that of housing. There is also a tendency to imitate the norms of the industrialized world which are not necessarily adapted to Dominica.

Building permits are required in principle before any structure can be built. There is a "Town and Country Act" of 1975 which was amended in 1983 which borrows directly from texts used in Great Britain concerning the size, the density of the site and the form of the buildings. Anyone applying for a mortgage from any of the banks or credit unions must have a building permit. On the other hand, there is very little control over what is actually built by the "informal sector" nor is there any effective way of controlling what is built once a permit has been granted. According to an official of the Planning Department, there is no way of knowing how many houses are built without building permits, but it may be as much as 50% of all construction.

Recently there have been several attempts at planning at the level of the state. In 1980, the Dominica National Structural Plan 1976-1990 was published. However, its chances of being applied were considerably reduced because of two factors : (i) the hurricane had caused so much destruction that the government concentrated all its energy in putting the country back on its feet rather than considering long term development; (ii) the arrival of the Freedom party in the government meant a change of policy and in fact a refusal to pay much attention to a document drawn up under the Labour Government.

It should be added that in any case, planning documents are used above all as catalogues of possible projects which will be put into practice if, and only if, a funder is interested in financing it. The Freedom government has selected from the Plan those projects which coincide with its political optique and has tried to convince international funders to support them. Planning in Dominica is thus subject to the will of the different funders.

The present Prime Minister has had a certain success in obtaining funds for those programmes to which her government has given priority, that is, rebuilding the roads and renovating the Deep Harbour. However, in spite of the fact that, as she says herself, "she is the best beggar in the Caribbean", the government is restricted in its activities by the decisions of the funders.

A quick glance at an attempt at planning in Dominica illustrates the great gap that exists between preparing plans and applying them. The "Report of a National Survey of Settlements of 1980" was prepared by a consultant sent by the UNDP/UNCHS for the Economic Development Unit (EDU) of the government. The report was based on a survey made of 65 human settlements and made recommendations concerning : a) the physical planning aspects of socio economic development and b) the local council revenues. Essentially the plan supported the policy of developing growth centres which had been developed in the National Structural Plan. Rather than either spreading thin social and physical infrastructures or concentrating all resources and investment funds in Roseau, it recommended that seven selected centres be the pole for future development. Furthermore, it suggested that a valuation of all properties in urban and rural areas be made in order to increase the property tax, the only resource of local councils other than government subsidies. The report points out the very low contribution made by the collection of rates and suggests that ten times the amount could be collected, and thus increase the capacity of the villages to initiate and implement development projects. One of the implications of this suggestion would be to add taxation on agricultural land which is exempt of taxes in Dominica in spite of the fact that it is one of the chief sources of revenues and is subject to speculation. It is easy to see why this recommendation has not seen much follow up. The government in power is supported by many of the greatest land holders. Adding a land tax would be a very unpopular step among these powerful electors. Furthermore, it would give more power to the local authorities and diminish that of the central government. As for developing growth centres, although the idea may have had a certain support, the major effort in the past six years has been to develop Roseau, a constituency that strongly supports the Freedom government.

Recently three other planning documents have been prepared by the consultants. A brief look at their conclusions will indicate the slight chance they have of being implemented.

The first document "A National Housing Policy for Dominica" insists on the need for low cost housing and building lots in the larger towns. But, as we have seen, housing is not one of the Freedom government's priorities. What action is taken benefits the middle classes more than the poor.

A second document "Dominica, The Pound Area Scheme : Economic Feasibility, March 1984" underlines how important it is for Dominica that a construction project generates local employment and thus that it uses local materials. It insists also on the need to use local financial support. Without the use of local resources, this development will have a negative economic impact. When questioned about this Pound Area project, the Prime Minister claimed no knowledge of this document. Another member of the government told me that the use of local material was the suggestion of a foreign consultant but that no doubt it would be impossible to follow this advice because of the high cost. This attitude is not consistent with other positions of the Freedom Government as they have a stated policy of supporting local building material.

II.3. BUILDING MATERIALS

According to the National Housing Policy for Dominica, 90% of the building materials used in Dominica are imported. After the hurricane, a great deal of material was needed for reconstruction work. The government has had two

policies towards building materials : one to make cement cheaper and the other to encourage local building materials.

II.3.1. Cement

The price of cement is relatively low. The government was instrumental in bringing down the price from $18 EC per bag in 1980 to $12 EC per bag in 1984. This was done by lowering the duty on cement and by exhorting the wholesalers to reduce their profit margins. It was thought essential to reduce the price in order to encourage the reconstruction of the island.

II.3.2. Local Building Materials

The Ministry of Housing has a policy of promoting local building materials. As far as local lumber is concerned, it has required both the private company Superior Timbers and the government Core Housing Programme to use local wood. It owns half the shares of the Lumber Company that extracts and prepares the local wood, mainly "Gomier".

The same ministry has given verbal support to the French technical assistance project of developing a brick industry on the island. However, by 1985, the only government building which has been built out of bricks is the public convenience at the airport. The government and the contractors working for them feel that the brick industry is in the experimental stage and that before using bricks for public buildings, their quality must be proved. On the other hand, steps were being taken to give institutional support to the setting up of the bricketry. Up until then the bricketry only had made bricks on request primarily for the Newtown School and the model houses in the Bath Estate, two projects of the French government. A few bricks have been sold to private individuals for decorative purposes. A certain reticence on the part of the government to promote bricks can be noticed in the way they handled the raffle of the model house. The publicity for the house, hardly mentioned the fact that it had been made out of locally made bricks and other local materials. There may have been a fear that to stress this fact might cause a negative reaction to the house, "local" being so often equated with "inferior".

There is a vicious circle as far as the development of bricks goes. To be profitable, the brick factory needs to get orders and for orders, it needs to improve its produce. However, to improve its produce, there needs to be better equipment and a better kiln, and thus more investors, but to find investors, the enterprise needs to show a profit. This is the type of bind that experimental industry everywhere runs into. In Dominica there are added problems because it is a small undeveloped island :

(i) a serious shortage of "risque" capital ;
(ii) the high cost of transportation on the island and to and from it ;
(iii) a limited market.

Without firm government support such as tax breaks and guaranteed orders, this sort of company will have a difficult time surviving. However, can a government that believes in free enterprise take these measures? There is a president in that foreign firms are given tax breaks.

II.3.3. Sulphur

Another experimental project producing building tiles and blocks out of melted and plastified sulphur has been carried out by the OAS and a UN expert. Young people from the village have been trained to make the blocks and a workers' cooperative has been formed. They had plenty of orders for tiles only a few months after they had started but the equipment had already corroded. The work stopped, while the sponsor, the OAS, looked for more suitable equipment. Meanwhile, the initial enthusiasm for the experiment had wanned. Prejudice against sulphur is emerging. Of the twelve youths who started the coop, six have "disappeared to Martinique". Six others are waiting for the new material.

Both of these experiments have long-range goals of which it is too early to judge the success. It is a mistake to expect too much of them. They cannot perform miracles. It is reasonable to hope that, if they obtain the necessary support, they will find a local and regional market that will both bring good wages and a reasonable return on the initial investment. The tiles could gradually replace imported materials and create more jobs for Dominicans.

II.4. DECISION MAKING CONCERNING HUMAN SETTLEMENTS

The policies discussed above were all policies of different sectors of the central government. Even in so small an island, there are at least three departments concerned with human settlements : housing, planning and environmental health and yet one ministry knows little about the measures of another

Other agents are also concerned. Each of the villages and towns has a local council to administer a few specific aspects of government. There are also private and semi-private authorities such as the Central Water Authority and Domelec, the electric company, whose policies have an important influence on human settlements. There are the banks and the credit unions which give mortgages. The Catholic Church, and more recently a large variety of protestant churches have their own policies concerning housing and community development. Many of the bilateral aid donors, the international organizations and NGOs also make decisions affecting human settlements without much liaison between them. As with much larger countries, each of these bodies has its own logic and generally makes decisions accordingly. There seems to be little effort made to develop linkages, to coordinate policies and obtain overall views of the most urgent needs. To illustrate what can happen when there is too little coordination, I was told that only a few years ago, a housing estate was built outside Roseau equipped with a sewer system. It was not until the system was built that it turned out that there was nowhere to send the sewage that would be acceptable to the sanitary regulations (the plan had been to evacuate it to the river) so that each house had to be equipped with a septic tank.

An example of lack of coordination today can be seen in the work of the Ministry of Housing and the Economic Development Unit that are supporting the development of local materials while the Ministry of Communications and Works is not yet concerned with this problem and has not done experimental building with any of them.

There is thus a mosaic of different power structures in Dominica dominated heavily by that of the central government. The non-governmental bodies

Fig. 18. The Newtown School built by French Technical Assistance: an experiment with red bricks.

develop their own policy independently unless it contradicts government policy or unless it raises severe opposition among the local population. We find here a rather implausible situation where at one and the same time there is a lack of coordination and a lack of local autonomy because of a system of patronage and central control.

The Catholic Church, represented by the dynamic personality of Sister Alicia, has had a policy of influencing housing. For instance, she has encouraged building and loan associations and credit unions to develop both savings and credit for the improvement of moderate cost housing. Low income rental appartments have been built in Roseau and recently a non-profit Lumber Company has been producing a low-cost prefabricated house under her direction.

The former hegomony of the Catholic Church, which used to count a large majority of the population among its members has been challenged recently by a large variety of evangelical churches. The Anglican Church has always represented an important elitist minority. After Hurricane David, quite a few church groups with aid from sister churches abroad developed reconstruction programmes ; for instance, the Seventh Day Adventists organized the construction of a hundred small houses which were built with donated lumber by volunteer labour sent by a Maronite Institute in the U.S. The houses were given to twenty-five Seventh Day Adventist families and 75 needy families selected by the Welfare Department. The difficulties of

coordinating housing policy is exemplified by this sort of independent action. No steps were taken for the sanitation of these houses; the recipients were supposed to arrange it themselves, but most did not have the means or motivation.

Who makes decisions in Dominica is obvious if we look at how decisions concerning the extension of the semi-independent utility companies are made. The CWA (Central Water Autority), for instance, has drawn up plans for areas they consider to have the highest priority for piped water. The government, however, makes the final decision which is guided by political motives, the constituencies of members of the government being given priority (information obtained from well-informed sources which I prefer not to reveal). Furthermore the CWA is dictated the price it can charge for water but at the same time it is supposed to make ends meet.

II.4.1. Local Government

In comparison with the other Windward Islands, the local councils have been particularly active. However, an incident (*) that occurred under the Labour Government caused the latter to reduce the local councils' powers much to the regret of opposition labour deputies today. Mike Douglas, the leader of the Labour Party, told me the reduction of local government powers was a serious error of the Labour Government.

The means of the village councils are seriously restricted and dependent on the generosity of the central government. Local taxes, always low, have not kept up with inflation, councils being reluctant, for political reasons, to vote taxes. In many cases the taxes are so low that it is uneconomical to make the effort to collect them. Not only does the central government control the purse and regulate the powers of the local councils, but it has the power to nominate three of the eight members, so in most cases, it is able to control a majority.

The party in power is thus able to hegemonize decision-making concerning the local areas. Even in a locality where the council is in opposition to the government as in Portsmouth, the government was able to relieve the mayor of his powers of garbage collction because he allegedly misused money ; thus the central government took over one of the remaining prerogatives of the mayor.

Many small villages which do not have village councils have "Village Improvement Committees". These committees have often a similar role to the village council although they are non-governmental. They organize self-help teams for improving the roads, for building community centres or public toilets as do the councils. They stem from a long tradition of self-help which is dying out but is not altogether dead in Dominica. Under certain circumstances, it comes back to life again as was the case after Hurricane David. A heritage of self-help is precious for any community and should be

(*)The Freedom Party then in opposition but which had a majority in Roseau City Council renamed a main street of Roseau "Freedom Street". To retaliate the Labour Government passed legislation reducing the city councils powers in this and in other areas.

encouraged. This is recognized in that there is a special Self-Help and Community Development Department attached to the Local Government Department. No doubt another way of encouraging this local initiative would be to give the local committees more responsibility, more power and more means.

The chief problem caused by lack of local expression, too much central control and too little coordination concerning human settlements, is that a global view of what is most needed, never gets expressed as it is not the prerogative of any one department. One of the most urgent needs, as we have seen, is the dedensification of the overcrowded zones of quite a few communities. To look for ways to go about doing this there must be close coordination in developing a global programme between the Departments of Housing, Planning, Environmental Health, Welfare, Lands and Surveys and the local population. When the decisions made concerning human settlements are made sector by sector, they can only tackle the problem in part and give partial responses, but they cannot come up with a global solution. The point of view from which it is easiest to have a global view on human settlements is no doubt that of the user or local inhabitant. From his or her position, the whole set of urban services or lack of them can be seen. The user often has an idea whether the lack of more space, repairing the existing buildings, or bringing in running water or proper sewage or toilet facilities needs to be given priority. There should be ways the user can be informed and can give his point of view directly on future programmes.

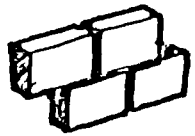
II.5. Individual Action

The human settlements policy of the different government administrations affect only a tiny percentage of the island. Approximately 56% of the population is not eligible for mortgages. To be housed, Dominicans have to rely on themselves and their friends and family for procuring land, building materials, labour and financing. There is a tendency to remain there where one's parents live, on family property. The offsprings' homes cluster around that of the parents. The number of people on the same lot increases regularly. If you cannot afford to build a new house, there are other possibilities of acquiring one. You can buy someone's old shack and move it to family land or to a bit of land you have rented. For material to build a new house, you either go into the forest and cut down trees which you saw yourself (with a chainsaw nowadays) or, more often, you buy a few bags of cement, collect sand and "tarrish" (a local gravel) and a mould for blocks and make your own cement blocks.

Traditionally, when Dominicans build or repair their houses, they hire local semi-skilled builders who supervise and do the more difficult jobs. They work for much lower wages for friends, relatives or neighbours than in the "formal sector". The jobs requiring a high percentage of manual labour such as building the foundations are done by a "coup de main" or collective self-help. Called by different names, this cooperative form of getting hard jobs done, whether house building or heavy work in the fields, is traditional throughout the Caribbean. In Dominica, it is a kind of party to which one invites all one's friends, relatives and neighbours to come help with the work. They are recompensed with generous food and drink. Sometimes there is a band and music to encourage the workers and for dancing in the evening. People will tell you that this custom is dying out. It was used more often in the past but is still a common practice. After Hurricane David, much of the rebuilding used "coups de main".

BUILDING MATERIAL AND ATTITUDE OF BUILDERS AND USERS

BRICKS

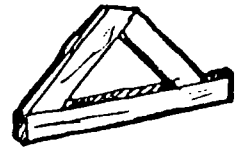


"Positive, but no idea of cost."

WOOD SHINGLE

"Seems outdated"

LOCAL TIMBER



"Superior, but not well cured and hard to work."

STONE

"Common, but needs highskilled workers."

SULPHUR blocks & tiles

"No experience"

PROBLEMS

- **INFORMATION:**
  - ON MATERIAL
  - ON COSTS
- **AVAILABILITY**
- **QUALITY**
- **SKILL OF BUILDERS**
- **COST**

SUGGESTIONS

1. PUBLICITY CAMPAIGNS BROCHURES

- Public Information
- Simple brochures on :
  - qualities ;
  - experiences ;
  - comparative costs ...

2. MORE EXAMPLES

- Promotion of local materials in all types of Govt buildings:
  - schools
  - housing
  - offices ...

3. STOCKS OF MATERIALS

- Materials must be stockpiled.
- Soft loans should be made available to producers to enable them to accumulate materials.

4. WIDE SCALE TRAINING PROGRAMS

- Existing courses of Technical College need to be continued.
- "On the job" training programs.
- Seminars for draftsmen.
- Technical Assistance

5. FISCAL POLICY

- In order for clay bricks and sulphur blocks to be competitive with cement blocks at first, a fiscal policy may be necessary.

(Tax breaks for the local industry and/or higher duties for imported materials.)

III. THE ATTITUDE OF THE BUILDERS AND LOW-INCOME POPULATION TO NEW LOCAL BUILDING MATERIALS

INTRODUCTION

IV.1. This study is a follow-up of the French Technical Assistance programme in Dominica for the promotion of local building materials and in particular the use of bricks and wooden shingles. It should be remembered that the promotion of local building material is directly related to the economic development of the island and the improvement of its capacity to stand on its own two feet. In particular, the substitution of local materials for imported materials is designed to :

(i) Improve the balance of payments of Dominica ;
(ii) Create local employment with the production of local materials and in building with these materials ;
(iii) If research and training programmes are developed in building methods and skill;
(iv) Improve the quality of housing in Dominica and improve the productivity of the builders ;
(v) Contribute to the local know-how in building.

Finally, the promotion of local building materials and appropriate methods of construction, if done in the right spirit, should help perpetrate local architectural forms and traditions including the tradition of communal self-help used for low-cost building.

Building materials have been traditionally produced on the island by going into forest with long saws, now replaced by chainsaws, and cutting the lumber necessary and more recently cement blocks are produced artisanally, with local sand or "tarrish", gravel and imported cement. Cement blocks were introduced into Dominica after the Second World War and now 19% of the houses are made of blocks and another 19% are made of blocks and wood. Although there is a preference for blocks, the subsistence farmer will build his house out of whatever material he can procure at the lowest cost. The "builder" when building for a client, family or friends, will use the material provided. When a wooden house is needed rapidly and there is the cash available, usually imported lumber is chosen rather than local wood as there is no delay in obtaining the lumber and it is easier to work with (softer wood).

IV.2. THE ATTITUDE OF THE BUILDING PROFESSION

The most useful way to categorize the members of the building profession in Dominica for the purposes of this study is by the size of the enterprise or the role of the person. Thus there are four categories of builders: (i) the large-scale contractors, who build the largest and most prestigious buildings; (ii)the medium-scale contractors who employ 5-15 workers; (iii)the individual small-scale builiders (by far the largest category), and (iv)the young trainees with little experience. The draughtsmen, who generally have the role of architect, except for the large-scale contractors, make of a fifth category. The number interviewed in each category was as follows :

Large-scale contractors.....5 of approx. 15
Medium-scale contractors.....5 of approx. 80
Builders.....18 of approx.300
Trainees..... 6 of approx. 50

Draughtsmen..... 6 of approx. 30

The interviews have been grouped by these categories and analyzed. The attitudes that were detected in each category indicate that the categories were useful. The findings are thus presented for each of them. A summary of the questions is given below (32bis).

QUESTIONNAIRE FOR BUILDING INDUSTRIES

1. (a) Where were you born ?
   (b) Where do you live now ?

2. (a) What is your occupation ?
   (b) What is your age?

3. (a) What training do you have for this work ?
   (b) Where did you learn the trade ?
   (c) For how many years did you go to school ?
   (d) Have you been trained for any other job ?

4. (a) What type of materials do you work with generally ?
   Occasionally ? What type of building ?
   The size of the team ? Its composition ?
   How many skilled ? Unskilled ? Coup de main ?
   Owner's family ?

5. What are you building now ?

6. What materials do you prefer to build with ?

7. What materials are generally used in Dominica and why?
   What materials are you using now ?

8. Have you ever built with :
   Stone ? Bricks ? Local woods ? Wooden shingles ?
   Lime ?
   Which ? Explain circumstances and why not ?
   (If yes, where did you learn to use those materials ?
   What other new local materials have you used ?

9. What are the drawbacks to the use of bricks, lime, shingles ?
   What could prevent its use ?

10 What are the advantages as you see to bricks, lime, shingles, (if any) ?
   (Mention the problems of need of foreign currency for imported materials)

11. Do you know of the Newtown School, Model House of Bricks in the Bath Estate ?
   What do you think of those buildings ?

12. What shall be done to help introduce the new materials to more builders, users ?

13. Any comments ?

14. If you could have a brick house with wooden shingles for the price of the house you are living in now, would you move ?
Would you prefer a new brick house rather than a cement block house, rather than a wooden house ?

IV.2.1. Small-scale Builders

This is the largest and most heterogeneous category of the groups interviewed. Half of them occasionally acted as small contractors and hired others to work with them, the others worked alone on small jobs. None depended uniquely on building for earning their living, some having other jobs and nearly all having land to farm. They were generally born in Dominica and had not moved. They all have been trained on the job with other builders. Several had learned masonry working on roads for the government. All but three were both masons and carpenters. Three were masons only using blocks and stones. Approximately one third were unemployed at the time of the interview. Of those 12 employed, 2 were only employed part-time, 8 of them were building houses or additions to them, one was repairing a house, one was building a septic tank, two were working on the roads. The second jobs held included plumbing, handicrafts and steel bending.

The most common arrangements were for them to be employed either by the job or by day at approximately $15 EC a day (30 or 40 for skilled workers). The owner would be responsible for buying the material but the builder would generally transport it. Some used plans but others were incapable of reading them. The size of the teams were generally from 2-5 and never over 10. Twelve of the eighteen had no preference for the material they worked with. One 62 year-old builder preferred to work with stone and two preferred imported wood because it was easier to work with and three men preferred to work with cement blocks.

Use of Indigenous Building Materials (*)

STONE

Stone has been used by 13 of the builders for foundations. Only two of the builders had used stone for walls. Only two had used lime and that was for making an oven. All of them had used local wood except, of course, those who only did masonry (**). In spite of the fact that shingles were considered old fashioned, eight of them had built with shingles for the wall of the roof. It was, in fact, the older men who had used this material in the past.

BRICKS

As for bricks, only three had built with bricks. Many indicated that because they could build with blocks, they could also build with bricks. (I saw one of the houses that had been built by the inexperienced bricklayer we interviewed. The roof was held up by concrete posts at the

(*)Not all the interviews answered all of these questions.
(**)Interestingly often when I mentioned "local material" the builder thought I was only talking of "local wood".

Fig. 19. Bricks used exceptionally for this house: the corners are cement pillars.

corners and the bricks were used only for walling, thus there was not as much of a saving of imported cement as there could have been). As for the drawbacks and advantages of building with brick, a common comment was that it would take longer to build with bricks. Two builders questioned the quality of the bricks and several more felt that they would be expensive or unavailable. On the other hand, most of them thought a brick wall was stronger. One said that a brick house was cooler than a block one. Three said that if bricks were the same price as blocks, they would prefer bricks. Although inexperienced in using bricks, most of them said that they would not hesitate to build in bricks.

Another comment was that if bricks were introduced more into the system, they would be accepted but not necessarily used for low-income housing. Similarly, it was said that bricks could not be made at home as were blocks so that people would not be able to save money that way, thus they doubted that bricks would replace blocks for low-income families. Many of the builders, when asked, said that they could see no inconveniences with bricks, but in the course of the conversation, slipped in a remark which showed that they were mainly concerned with building with blocks.

WOODEN SHINGLES

They were more outspoken about shingles which were considered by most as a material of the past. It was frequently said that they did not last as long as galvanized iron. In one house, I was told that the galvanized roof under which I was sitting was 40 years old as proof of how long galvanized roofs lasted. Shingles were said to be a fire hazard in town, they were said to rot and to collect bugs. It was also said that it was much quicker to put on a galvanized roof and that shingles had to be put on by a skilled worker. Another comment was simply that people didn't use shingles any more.

LOCAL TIMBER

It was very generally recognized that local wood was stronger, more beautiful and "better in many ways" than imported wood. It was said to be cheaper too. The drawbacks were that it had to be cured, that it was not treated, or even planed and that it was more difficult to work with (because much harder). Another drawback was that the kind of wood you wanted was often not available at the moment you needed it. One builder told me that if you wanted to make a profit, you had to use imported wood.

LIME

Few builders could comment on lime. I was told that, in the past, it had been dangerous to work with lime as the workers had neither shoes nor gloves, but that if it were reintroduced now there would not be the same inconveniences. Stone was recognized as good for making strong walls. Its chief inconvenience was that one needed a great deal of cement when you used stone. (They do not cut the stones). Another is the cost of transportation. It was said that it was hardly ever used except for foundations unless it was available at or very near the site. None of the builders had experience with sulphur blocks. Some were curious and said that they would use it if it proved to be strong and cheap.

A good number of these builders recognized in one way or another the advantage to Dominica of developing the local building material industry once the question was put to them directly, even though they had said they used imported wood, blocks and galvanized iron. Some made suggestions as to what could be done to encourage the use of local materials. The main suggestions were :

Comparison of cement blocks and 6-inch wall of brick

components	*cost per square metre constructed in EC $ 1983*	
	Cement blocks	*Bricks*
Cost of the blocks	21.5	55
Coating	9.6	-
Paint	6.6	-
Mortar and iron bay for reinforcement	13	-
Labour	6.7	19.8
TOTAL COST	*57.4 EC/m2*	*102 EC/m2*

source : Feasibility of the expansion of a Clay Brick Factory. CFTC. Newtown School Accounts.

Note: The cost on square yards was multiplied by 1.196 to get the exact cost in square metres.

The overcost of a wood-shingled roof compared to corrugated iron sheets is mainly due to the wooden structure.

(i) The government should bring down the cost of local wood and bricks ;
(ii) A tax on the imported materials should be raised to subsidize the local material and make bricks cheaper than blocks and local wood cheaper than the imported wood ;
(iii) The wood should be cured, treated, planed, cut, grooved, etc. and exist in plentiful stocks ;
(iv) The brick should be of better quality and ready available ;
(v) Training programmes for builders should be organized ;
(vi) Advertising of the local materials would be helpful as their clients choose the material. One builder suggested slogans and other devices to motivate the people and make them aware of the value of what there was in Dominica and to create jobs in Dominica.

It is interesting that when asked what they would use if they were to build a new house for themselves :

2 chose local wood
2 chose local wood for the interior only
13 chose cement blocks and a galvanized roof (but 3 said they would use bricks if they were as cheap as blocks)
5 mentioned a stone foundation
One chose a cement roof
One would use whatever material was cheapest at the moment
None chose wooden shingles for the roof or for siding.

They were obviously influenced by materials they know how to use. They were open to the use of different materials once informed and trained in the techniques necessary for using them.

IV.2.2. Medium-Sized Contractors

This group differed objectively from the first in that they were contractors, took on larger jobs, had no secondary occupations of importance, and were in general, older. The average age was 47 ranging from 31 to 72. Two of them had had training in building outside of Dominica and one had been trained as a secondary school teacher. The length of time in school was longer on an average, (2 years and 2 months longer) than the small builders.

All six used blocks generally and "galvanized" iron sheets on roofing. Although they are contractors, they sometimes contract for a whole job but sometimes just for the labour. They generally work with the team while acting as supervisor. The size of the team varies from 2 - 15 averaging at 8 men. In Roseau, a team is paid by the hour approximately :

- $2.50 to 2.80 EC for unskilled workers ;
- $3.50 for semi-skilled workers ;
- $5.00 to 5.50 for skilled workers.

They claimed no preference for any one material saying that it depended on the client (but in fact used blocks with very few exceptions).

BRICKS

One of these constructors had used bricks in construction in Dominica but for decorative purposes (a balcony). The others, although without experience, were all open to the possibility of using brick. One said he would find a mason with experience if he asked for brickwork. They were very practical about the use of bricks. They would be interested in them if they were easily available, and competitive with cement blocks when the price of the finished wall is considered ; but they were generally sceptical that this would ever be the case.

WOODEN SHINGLES

They had the same reaction to wooden shingles as the small builders, with the nuance that one of them thought they could be used for esthetic reasons, but they were sceptical about how economical it would be.

SULPHUR BLOCKS

One of this group was aware of the experiments with sulphur blocks and very much interested in seeing what could be done with them.

STONE

They all used stone for foundations and one had built a retaining wall. One had used lime for making an oven.

LOCAL TIMBER

As with the small builders, imported was preferred over local wood, however one of these builders was going to use local wood for floors for the first time because it was now available grooved and tongued. .They were open to the use of local wood if it were sold under the same conditions as imported wood. One added that the productivity of builders in the Caribbean was low and suggested that labour intensive building was costly.

Only two of them had visited the Newtown School of the Bath Estate. One felt that the walls on the south side were too low and would let rain in but that otherwise it was a beautiful building. The other was critical of the system of drainage. They also saw the advantages of local building materials once the question was brought up but did not offer suggestions as to how to encourage its use.

Five of them made detailed descriptions of the house they would build for themselves. They were knowledgeable about the different materials and had been thinking about the design for some time. Several were in the process of building or had done so recently.

Builder A wanted local wood and bricks for decoration

Builder B would look at the advantages and disadvantages and the costs of the materials

Builder C would start with "rabble walls" (stone) then he would use cement blocks which he makes himself at a cost of $0.70 EC per block and he would use concrete for the roof.

Builder D would use pumice blocks, cement made with crushed agregate and tarish rather than sea sand (which is generally used). He would use blocks for walls although he said bricks are beautiful. It would depend on the cost.

Builder E said "If bricks and blocks were the same price all told, I would use the bricks but I doubt they would be, as they take more cement, more time and you need two layers".

IV.2.3. Large Scale Contractors

This group is representative of the largest contractors able to employ more than 15 workers in Dominica of which there are no more than 15. Their average age was 51. Four of the five had training outside of Dominica, in Guadeloupe, Puerto Rico, Curacao and England. Interestingly, this training was "on the job" rather than in formal schools.

They had usually been trained as foremen or even managers. They were mostly self-made men. They sometimes employ up to 60 persons at one time but only for specific jobs. They generally employ from 10 to 25 workers. Contracting was not their only business, one had a hardware business, another a small brickmaking factory, several of them also ran a shop that made doors and windows and that planed and treated wood. Several of them made their own cement blocks. It is this group that builds the largest buildings in Dominica, the Social Security Building, the hotels, the large residences but they also build more modest homes.

Again the material generally used was concrete, cement blocks, and galvanized iron or concrete for the roofs. Occasionally for hotels, shingles were used. Local wood was used when available for interior work, doors and windows. Imported plywood and pitch pine were common also. They claim that the choice was that of the client. The government required local wood to be used in government buildings. When asked specifically about the use of local materials, the result was the following :

STONE : All five used stone for foundations and occasionally for walls.

LIME : It is hardly ever used. One contractor used it for ovens. The reason given was that lime was not available.

BRICKS : The reaction varied for :

Contractor A : the quality was insufficient. "Unless the quality of bricks improves, we cannot take a chance". There is too much variation in the size, the texture is not good enough, they absorb too much moisture.
Contractor B : they were too expensive and were used only for ornamentation.
Contractor C : was willing to use bricks if a client asked for them.
Contractor D : had no experience with bricks but he said they were prettier than blocks and stonger.

WOODEN SHINGLES : These contractors also said that it was a material used in the "old days". They are considered cost. One had used them for a luxury hotel. The quality was also questioned. They were said to be uneven in quality and rough. Most of their clients were not used to roofing with shingles any more.

LOCAL WOOD : Local wood was preferred to imported wood for certain types of work. None of them used it exclusively as the imported wood was more available, already treated, dryed, etc. and considered more appropriate for certain types of work. They too felt that the drawback in using local wood was that it was not prepared or easily available.

Generally speaking, these contractors were dubious about the cost, the quality and price of the materials. As one said "We will use local materials if the quality is proved and the price is right". Others were worried about the labour cost factor as both bricks and shingles were considered labour intensive and requiring skilled labour. In one case, I was told that in Britain one man could lay 700 bricks in a day. (He cited as an example a man who had won a prize for this feat), but that in Dominica, you would need seven bricklayers to lay 700 bricks a day and that would cost more than one man in Britain. However, he had no experience in building with bricks. (The number of bricks presently laid in one day in Dominica has been estimated at a minimum of 150 to 200 by semi-skilled workers and 400 bricks a day by skilled workers.

The reaction to the Newtown School and Bath Estate model house was generally positive with more reservations than for the smaller builders. Most of them were sceptical about the building being very economical. "I doubt they can be cheaper than a building of galvanized roofing and cement blocks". One reaction upon hearing that the price per square foot was cheaper than for other schools was : "It is not well built". It is inferior to other schools, for instance, the building seems "open" (he was referring to the space above the walls). Other comments were "There is a lot of wood which will need constant protection", and "In the time it took one could build three schools". "It's labour intensive and bound to be expensive".

When asked about the advantages of developing local materials and how to encourage their use, they recognized the advantage for the economy of the country and the employment created. Their suggestions as to how the government could promote their use were numerous. Many of their ideas were similar to those of the small builders. They insisted on better quality and longer lasting material that had been tested. They felt that the use of these materials in government buildings would be "a visual aid" and a model showing how to use the material as well as proof that the materials were of high quality. They also claimed that delays in obtaining materials made building expensive and therefore insisted on the availability of the materials. They suggested training programmes that would emphasize productivity (speed) as well as skill. One suggested "creating a fashion of building with bricks" by encouraging prominent members of the society to use them for building their large villas.

Two of the five considered the use of brick for their own residences but only provided that the bricks were of high quality and of a competitive price. One preferred stone to brick, another preferred concrete blocks and galvanized iron roofing with some local wood in the construction. None of them mentioned the use of wooden shingles.

IV.2.4. Trainees

This group is by definition young and therefore relatively inexperienced. Their average age is 21.5 years. Three had been trained in the youth division course in masonry and bricklaying. Two of those three had had

other training courses, one at the ILO centre and one had followed a plumbing course given by the OAS. One had had the ILO course in carpentry and masonry and two had trained at the Clifton Dupigny Community College at the Stock Farm in building and construction. They had all left school at 15. At the time, they were interviewed :

One worked as a baker part-time
One worked as a maintenance worker at St. Margaret's Hospital
One was working on a house for a friend without pay
One was working for St. Mark's Construction Co., building a school made of stone and blocks.

Of this group, three had used stone, 2 had used lime, four had used brick, all six had used local wood and the three youth division trainees had used shingles while they were on training at the Newtown School.

BRICKS

Those familiar with bricks found them easy enough to lay and saw no inconvenience to them. One said "It think it's faster, it's neat, I like to work with bricks". He had been trained as a bricklayer but he said no one was building in bricks at that time. Two of them said that better machinery was needed to make better bricks in Dominica.

WOODEN SHINGLES

Shingles, however, were not approved of in the same way. "The trouble with shingles is that there are no longer any hard working people like there used to be who want to go out and put shingles on a roof all day".

Interestingly this group, though often unemployed, did not comment upon the advantage of local material for the Dominican economy. They did think that more and longer training programmes were necessary. One suggested advertizing brick by making pictures of brick houses in the U.S. and showing them to Dominicans. Another said "If they sell bricks cheap enough, you wil see Dominica covered with bricks".

They were all very positive about the Newtown School. They said they thought it beautiful and that others thought so too. Several said that they would like to live in a house like the one on the Bath Estate. Of the houses they would build for themselves :

- three would choose bricks if bricks were the same price as blocks ;
- one would choose local wood because it is cheaper and stronger than imported wood and more resistant ;
- one would choose blocks with local wood inside. He felt that stone would be stronger but it takes too much cement and is expensive ;
- one would choose blocks for the ground floor because he trusted them more than bricks for load bearing and bricks on top because they are cooler. (He was trained as a bricklayer in the 3-month Youth Division Course).

It was interesting that the one person who said he would hesitate to build himself a house with bricks was one of the Youth Division trainees in bricklaying. He said he did not have the experience and could not read plans. He added that he would need help building a wooden house or a block house also. He felt a lot of the houses "mashed up" by Hurricane David had had something wrong with them as there were other small houses that withstood it.

IV.2.5. Draughtsmen (*)

It is interesting, that while nearly all of the other interviewees were born in Dominica, two of the draughtsmen were born abroad on other islands in the Caribbean. This group was between the age of 22 and 35 with an average age of 28. Four out of five had had at least a correspondence course in draughting. Only one had been trained on the job. Three of them had been outside to college for either 2 or 3 years. They were all employed in full-time jobs but they also drew up plans for individual houses on weekends and evenings. They were questioned uniquely on this activity as they were considered key persons when it came to building small houses since they came close to playing the role of an architect.

When asked who made the decision as to the building material to be used, they said that the client decided whether he wanted a block house or a wooden house (in nearly every case, it was a block house with galvanized roofing. Presumably, the wooden houses are made without plans). The draughtsmen, however, suggested what material would be used, for the partitions, the doors and the foundations. One draughtsman drew plans for a stone wall but in the end, stone was not used. The client generally would buy the material and not the contractor, who would only contract for the labour and who would act as supervisor. In one case, it was the draughtsman who acted as supervisor for a team of workers he chose himself. In other cases the draughtsmen complained that the contractor often did not follow the plans, sometimes it was because he did not understand them, but often because he thought he knew better or he knew an easier way. The builder could not often substitute one material for another. The materials that the draughtsmen chose tended to be the classical ones in use in Dominica, blocks, galvanized sheets, local and imported wood for the beams and interior partitions. One said he would not draw plans for a brick house unless he was satisfied that the builders to be employed could handle them. Another said "These people here do not have that kind of income to be able to afford those materials" (bricks and shingles). Furthermore, they all thought the local brick factory could not meet the demands upon it and they feared long delays. The same was said of shingles.

On the positive side, two of them said that bricks were very attractive and one said a brick and shingle house was cooler than a block house and did not need to be painted. One had chosen shingles for a picnic shelter in Scotshead for esthetic reasons, another had chosen shingles as the owner had wanted them. All of them mentioned the importance of being able to obtain the material they plan to use easily.

When asked what could be done to encourage the use of local building materials, this group showed a lot of imagination. For instance, one suggested creating an artificial shortage of imported materials. He also suggested the need for information on cost effective design. Another thought that the most important problem was making local materials acceptable to the future home owners by using the media. A third insisted on the use of the media and on advertising as ways of promoting local material. They all agreed on the need for more information and thought that a seminar or a series of workshops would be very helpful.

(*)Because this group played a different role in house building, the questionnaire was slightly modified to be more relevant.

IV.2.6. The Inhabitants of the Pound Area

The last group interviewed were the residents of the Pound area, a district in central Roseau destined to be renovated one day. The first step of the renovation will be the removal of the inhabitants with possible rehousing on a empty lot on the Bath Estate where the model house has been built. This group was chosen both because a certain amount of data on this population already exists and because there is an awareness that they may soon be rehoused and therefore, we thought, an interest in their future housing.

IV.2.6.1. Main Findings of the Questionnaire

Housing

The average number of persons per household was 5.33. Six households had from 4-6 persons and two from 7-9.

Tenure

Land -one household owns land
five rent land
one has land free of rent from sister
one has land free of rent from bishop

House -seven households own the house
two household live rent free
(Of the 7 households renting, 2 of them sublet rooms)

Number of rooms per housing unit - 1 unit had 2 rooms
2 units had 3 rooms
3 units had 4 rooms
2 units had 5 or more rooms

7/9 houses were overcrowded with from 5-8 people living in 2-3 rooms.

Size of Lot :

3 lots between 100 and 200 sq.ft.
2 lots between 200 and 400 sq.ft.
4 lots between 400 and 1000 sq.ft.

State of Repair of House

1 house in good repair
5 houses in fair state of repair
2 houses in poor state of repair

Most of the houses had to be rebuilt or repaired after the hurricane in 1979. 5 households had not modified the house since then. Three had enlarged their houses (one had added three times the volume, two had added kitchens). The material used to enlarge the house was :

local wood - 2 units
imported wood - 1 unit
cement blocks - 1 unit
galvanized iron - 4 units

The choice of wood, local or imported was because it was cheaper for 4 households; in two cases, they said it was cheaper to hire a carpenter than a mason and another because they house was already in wood. Blocks were chosen in one case because they were considered safer. It was quite clear that the choice of materials was influenced by what was available, which meant very often what could be scavenged or salvaged, for instance, sheets of galvanized iron.

Five of the persons interviewed had worked on building sites, his own, or that of friends or family. One was a skilled worker. As for the material they would like to use in the future:

3 said they would choose what was cheapest
2 preferred concrete or cement blocks

1 preferred local wood
1 would use either blocks or clay bricks if they were as cheap
2 expressed no preference.

Housing Needs :
The lack of running water and the lack of toilets were stressed by seven of the nine households (the other two had these facilities), three others mentioned the need for more space and one mentioned the need of beds. The neighbourhood needs were not expressed clearly. When urged, some made suggestions about places for the children to play, more outdoor space. There was no neighbourhood organization relative to housing but "people help each other" when necessary.

Age :

2 were under 25
2 were 25-35
1 was 36-45
2 were 46-55
2 were over 55

This sample is approximately 1/10th of the households in the area. A relatively adequate cross section of the age groups was seen.

Mobility :
The populatior was not a mobile one. 5 persons had been born in another village, 7 had lived in the Pound area for more than ten years and 7 had lived in Roseau since childhood.

Contact with Former Village : Only two persons said they went back for special occasions. Others seemed to have little or no contact.

Schooling
3 of the older persons had been to school for six years or less. Four left school at the age of 15 and two had gone to grammar school or professional school.

Employment Situation of 9 Interviewees :

1 was disabled and did not work
1 was retired (a former garbage collector for Roseau)
3 were unemployed most of the time
1 worked part-time
3 worked regularly
6 were unskilled workers (when they did work)
2 were semi-skilled
1 was skilled (had a managerial post)

IV.2.6.2. Synthesis

The means of these inhabitants and their attitude to self-help housing and local building materials.

IV.2.6.2.1. Means

Often the data collected by the use of the questionnaire was less useful and interesting than the information gathered informally during conversation after the interviews. For instance, it was not thought wise to ask directly their incomes. For one thing, the answers would not be trustworthy and in the second place, this question might cast suspicion on the reasons for the interviews. However, once a certain trust was established, I was able to obtain some information on salaries. For instance,

a woman who took in laundry (which was not a full-time occupation) earned $60 EC per month, a domestic worker earned 130 EC per month, a labourer, regularly hired in the botanical gardens or in the infirmary, earned 320 per month. Men in the building trades earned 20 EC per day but as they worked irregularly, they probably could not count on a monthly salary of even 400 EC. We had asked them to estimate how much money was needed for a family of four but their answers were so haphazard and varied that we discarded them. It indicated that budgeting was not a common practice.

This small sample indicated a wide discrepancy between male and female salaries. This is no doubt the case throughout the island. The statistics for the Pound area indicate that 65.5% of the households have single heads of households of which we can safely presume that the large majority are women. These two facts indicate a situation that we observed elsewhere, that the female head of household often depended upon the generosity of her boyfriends or sons, whether they were in Dominica or abroad, for support. This support is voluntary and probably aleatory. As far as housing goes, it is particularly difficult to calculate the resources available for improving housing or for paying rent.

IV.2.6.2.2. Attitude Towards Self-Help Housing and Communal Activities

Among the households we visited, there were four with female heads of household, one of whom was an invalid. There was one elderly person, three who had full-time employment and one who farmed plots of land outside Roseau. It would be unwise to count on these heads of household to contribute long hours of labour. Concerning a self-help experiment in St. Vincent, I was told that tending a family and working on a construction site do not blend well and that females lacked building skills.

However, a large majority of the members of the households were between the age of 15 and 30 and few had full-time employment so they might be considered available for self-help work, but as young adults, non heads of household, tend to drift away to form their own household or to emigrate. There would have to be strong motivation such as training in saleable skills or a salary to keep them active in a self-help project. What should be considered is that although self-help building is still a common activity, it happens at certain moments in the history of a family, whereas projected self-help schemes have a time schedule that is imposed.

There were no formal organizations or neighbourhood improvement committees but there were networks of friendship and support. There were neighbourhood activities. For instance, on Saturday afternoon, I found about 20 women sitting under a tree playing Bingo, no doubt a locally sponsored income generating activity. The few houses that had utilities (i.e. water or WC) shared them with their neighbours.

IV.2.6.2.3. Attitude to Clay Bricks and Wooden Shingles and the Model House

(One afternoon, approximately 10 people from the Bath Estate visited the model house, but only two of them were persons we had interviewed). Those we interviewed had generally seen the house from outside or heard it described. From their comments, we can conclude that on the one hand, no one objected to the materials of which the house was made. Most, in fact, were enthusiastic about the bricks, thought them resistant to hurricanes, good looking, high class. It was very difficult to get them to say discuss the materials. One person said that the shingles reminded him of olden times but did not give a value judgement. Another remarked that the

sulphur tiles did not smell although he had been told that they would. One remarked that because bricks were used for oven, he thought that the house would be hot, however, another said, that in fact, the house was cool. Most of the comments of the visitors were about the plan. They objected to the WC opening into the living room and some thought the kitchen too small. They liked the possibility of being able to add a bedroom later but one person said that it was a mistake as people would use concrete blocks and not bricks. If the house and the materials used were generally looked on very favourable, there was very often the fear that it would be too expensive. Those who visited the house were told that a house like that could probably be bought with monthly installments of 200 EC a month. No one volunteered a comment as to whether they could afford it. Most of the people we interviewed could not. The persons interviewed in the Pound area very often expressed the opinion that "up there it will be more expensive" (i.e. in the Bath Estate) or here we have a house of our own, up there we will have to pay rent. They can chuck us out if we do not pay.

APPROPRIATENESS OF INDIGENOUS MATERIALS FOR CONSTRUCTION

1.As the study progressed, it became more and move obvious that two objectives were being sought after, that were not necessarily compatible. On the one hand, the aim was to see whether and under what conditions the local materials being introduced or reintroduced into Dominica would be appropriated by the builders of Dominica and on the other hand, to ascertain whether they were appropriate for low income families and low-cost housing. For more clarity, each of these questions will be dealt with separately. A third and final section will outline a possible strategy for improving low-income housing in Dominica.

INDIGENOUS MATERIALS

1.1 BRICKS

The attitude towards bricks was essentially positive and especially from among those few who had some experience with bricks. There is no reason to anticipate rejection of this material because of habit, culture or tradition. Within less than forty years, the traditional wooden construction has been replaced by cement block construction when the owner can afford it. In all due course, bricks, too, will be accepted. The possible reasons for bricks not being adopted by local builders fall into questions related to (i) availability (ii) quality (iii) knowledge and skills of the builders (iv) costs (v) lack of information about the material.

1.1.1. Availability

It became clear that builders hesitate to use any material if they are not convinced that all the materials they will need are readily available. Delays are expensive; furthermore, transportation is difficult and costly in Dominica, thus if stocks are not fairly close to the building site, a bridge collapsing or a road washing out, could stop work for a long time.

1.1.2 Quality

The large scale contractors in particular, but some of the others as well, were concerned about the absorption of moisture and the regularity of the bricks and made better quality a condition of their use. The other

builders often felt that government buildings and other high-cost buildings should be built of bricks, as an example and as a proof of their quality. thus improved quality of the local bricks would be a definite factor in the encouragement of their use.

1.1.3. Skills of Builders

Only a few builders in Dominica have had any experience at all in building with bricks. Even skilled builders showed a lack of knowledge of the strength of brick walls, their load bearing possibilities or the technique of building with bricks and many ignored that there was much difference in building with brick and building with block. It would seem important that pamphlets be made available showing the comparative strength and usages of brick walls with simple explanations and drawings showing the techniques of building single and double walls, corners, strengthening for hurricanes and earthquakes, etc. Furthermore, on the job training programmes should be made available to mid-career builders as well as for the youth. The programmes should emphasize both skills and productivity at work but, at the same time, introduce basic building theory and plan-reading. To complete the information on brick construction, a series of evening lectures or workshops should be organized for those who already have the basic knowledge (contractors and draughtsmen).

1.1.4. Cost

Very few of the builders had any idea of the cost of one brick let alone the comparative cost of building a brick wall as compared to a block wall. This was true of both the large contractors who were used to making estimates and of the small builders. Opinions varied greatly, some thinking bricks must be expensive, others that they must be cheap because they were locally made. Most were aware that it took more labour to build a brick wall. Very obviously the cost of bricks and the comparative cost of a finished brick vs. block walls would be a determining factor in the extent that they are adopted.

1.1.5. Lack of Information

Many builders felt that a publicity campaign on the quality of bricks and the necessity to buy local materials would be an important factor in promoting bricks.

1.2. WOODEN SHINGLES

Wooden shingles, as a roofing material, were considered very often as an outdated material-"what my grandmother used"-and inferior because less durable than galvanized sheets. Poor quality was given as the most important of the elements causing rejection of shingles. The production being very artisanal, there is no control of the quality of shingles and some have been of very poor quality, cut from inappropriate wood at the wrong time of the month.

As with bricks, availability, cost, and information are also important. It was feared that the cost would be high because of the length of time needed to lay the shingles. On the other hand, there were a number of builders who had used shingles, thus the skilled workers needed, would be available. Few persons realized that there was a great demand for moderately priced wooden shingles for hotels and residences on neighbouring islands.

1.3. LOCAL TIMBER

The local timber was generally recognized as superior in quality to the imported wood. However, the imported wood was often preferred because the local material was not cured, grooved or dried. Furthermore, it was not always available when needed, and not as easy to work with as the softer imported wood.

1.4. STONE

Building stone foundations is fairly common in Dominica. Again it is a question of the availability and proximity of stones to the site. Building with stone is said to be costly because of the need for highly skilled workers, the use of large quantities of mortar (as the stones are not cut) and transportation costs. No one suggested that, with more skill and by cutting the rocks, that the amount of mortar could be decreased.

1.5. SULPHUR BLOCKS

Most builders declined to comment on sulphur as they knew too little about it. There were rumours that it smelled, but both the builders and the visitors to the model house agreed that there was no odour at all. By September 1984, the small experimental station had more orders for sulphur tiles and blocks than it could fill.

2. THE APPROPRIATENESS OF INDIGENOUS MATERIALS FOR LOW-INCOME HOUSING

There are several requirements for the materials used for housing the lowest income bracket. Some are very obvious. The material must be low cost, not needing sophisticated instruments but techniques that are known to the local population, and it must be easily procured or made. At this time, wooden structures are still probably the cheapest for building in Dominica, not so much because of the price of the materials, but because of the speed with which a timber house can go up and the relatively cheap cost of the semi-skilled labour used to build it. If we compare clay bricks and cement blocks, factors other than the cost of a professionally built wall the come into consideration. First, one way of making considerable savings on the construction of a house or an addition, is for the builder to make his own cement blocks. If he does this, all he needs to buy is the cement. He can usually get the sand and the tarish without cost. In Dominica, there is no tradition of local brick making, so if bricks are used, they will have to be bought. Another saving comes when members of the family and friends helping on certain of the easy steps in construction. Many Dominicans have experience in laying blocks but as bricks are not a habitual material, their use will mean the construction will have to be done by experienced masons. Furthermore, these masons will tend to ask for higher pay than ordinary masons as they are more skilled. Thus building with bricks would not seem to be appropriate for those low-income persons who use their own and their family and friends' labour to make blocks and to help build the own home until bricks become much cheaper than blocks, and a large number of Dominicans become skilled in building

with them. As for sulphur, at the time of writing, there has been no estimate of its cost, but the same analysis would probably apply to them.

The use of wooden shingles would only be appropriate for low income housing if they were produced cheaply on a large scale and of a quality that was recognized as being much superior to galvanized iron. The additional time and the additional structure needed for roofing a house with shingles would have to be compensated for by a much better product. Exceptionally, in the villages where shingles could be produce on a large scale, enough of the villagers may acquire the skill of cutting them in order to provide their families and friends with cheap, good quality shingles.

We are faced with the choice of either using local materials or using the cheapest ones available which are not necessarily local. As a small island, Dominica has the problem of not being able to mass produce goods for a local market. The result is that goods produced locally are relatively expensive. Paint, for instance, is produced locally, but the local paint costs more than paint of an excellent quality imported from Puerto Rica. In order to overcome this handicap, foreign markets must be found for local goods. While the industry is developing, the government can encourage it by subsidizing both these industries, and low-income families, with special low rates for these materials for families under a certain income. Recently steps have been taken to encourage local timber. The government required local timber for its "core house" project, as well as for the prefabricated houses built by Superior Timbers Ltd, a French company. The non-profit company set up by Sister Alicia, Northern Timbers, is also building prefabricated houses out of local timber.

SUGGESTIONS FOR FURTHER ACTION

This study along with interviews of professionals and members of the administration, suggests that local materials could be readily adopted under certain circumstances. A series of actions should be taken to promote local materials. The following is a brief outline of such actions :

1. Publicity Campaigns

As there seems to be little public awareness of the advantages of using local wood, bricks, shingles or sulphur blocks or of the benefit to the local economy of using local materials, there should be public information to this effect over different media. Information for the public on the comparative quality of the local materials would be also beneficial.

2. More examples of building with brick, sulphur and wooden shingles

The importance of the use of bricks and shingles in all types of government buildings, housing schools, offices should not be underestimated. The promotion of local building materials is hardly convincing unless the promoters of the material use it themselves. Furthermore, the fact that prestigious buildings use these materials would be a guarantee of quality. Stressing the advantages of brick should not be done to the detriment of another local material, timber, as there is already a strong prejudice against wood.

3. Brochures

Simple brochures should be prepared and distributed on each of the materials, explaining their qualities (load bearing capacity, insulating strength, resistance to high winds or earthquakes, etc.) showing how they have been used in the model house and the Newtown School (the technique of building corners for example) and indicating the comparative cost of local timber, bricks and cement blocks, shingles vs. galvanized sheets.

4. Stocks of Materials

The materials to be promoted must to stockpiled in sufficient quantity so that they are available to builders choosing to use them. As this involves capital that the producers may not have, soft loans should be made available enabling them to accumulate the materials.

5. Training Programmes

There is a need for training programmes at different levels of professional skills. a) The existing courses of the Technical College and the Youth Department in brick masonry need to be continued ; b) As there are already many skilled and semi-skilled builders all over Dominica, doing most of the construction work on houses, but having no experience with brick, an "on the job" training programme for mid-career builders is necessary to teach them skills in using the new local materials. This might be part of the French technical assistance's input. c) A series of seminars for draughtsmen and professional builders on the technique of building with brick, wooden shingles and sulphur blocks, and on the hurricane and earthquake resistance of all materials. d) Technical assistance in building with these materials should be available free on request from builders using them for the first time as well as advice on building disaster resistant constructions.

6. Lowering the Cost

Every effort should be made to make the locally produced materials cheaper and of comparative (or superior) quality to the imported materials. Efforts are already being made concerning lumber. In order for clay bricks and sulphur blocks to be competitive with cement blocks, a fiscal policy may be necessary at first (tax breaks for the local industry and/or higher duties for imported materials).

7. Improvement of Low-Income Housing

For many households in Dominica (a conservative estimate of their number would be from 25%-30% of the total population) even the $15.000 prefabricated timber houses are out of their financial reach essentially because a loan is necessary as well as the land and because these households are not "credit worthy" in any banking institution. They house themselves as they can, often in precarious buildings. To improve the housing of the poorest elements of society, two possible strategies can be suggested. The first is to develop the wide scale training programmes suggested above that will improve the building productivity and the techniques of a large number of the small builders who can then be expected to pass on their skills to those who work with them to produce houses that are stronger and more comfortable and more quickly and cheaply built. The building code that is soon to come into existence in the Eastern Caribbean will not be effective unless local builders have the skills to apply these

codes (this code is being drawn up by the British Research Establishment with the support of the local governments). This strategy would only have effects in the long run.

The second strategy would be for the development of a wide scale housing rehabilitation programme whereby households living in structures that are not up to standing and can obtain small very soft loans and technical assistance for repairs. This type of programme would certainly improve the housing and the standard of living of the largest number of families. However, it is the type of programme which is the most difficult to find funding sources for, as it is not spectacular.

The success of the Giraudel housing project would suggest that locally administered small loans for building materials can be very effective. This project was successful because a local group managed to get a loan from a Dutch charitable organization for $60.000 EC for the reconstruction of 100 houses. The loans are used uniquely to pay for materials for the construction of the houses. The building is being done by self-help. To date, 45 houses have been built with this loan. The only assistance from local government is in transporting the material.

In conclusion, this study suggests that two distinct strategies need to be developed. One is the encouragement of the local building material production. With the proper backing this industry can easily develop thus creating employment and reducing the balance of trade deficit. The second strategy concerns the dilapidated housing of the poorest Dominicans. Only long term and concerted efforts directed at the lowest income groups will cause a marked improvement of their housing. For this group loans on very easy terms ; organized collective self-help., cheap access to building lots with minimum infrastructure are the type of programme needed.

RESULTS OF THE STUDY

This study should help us to analyze two interrelated aspects of the development of Dominica. One the one hand, we have seen how the historic, social, political and cultural background influences human settlements; we can surmise how it will also influence strategies introduced to improve these settlements. If there is a general lesson to be learned, it is how important a thorough knowledge of the culture of a region is before any attempt is made to draw up development programmes. On the other hand, we can suggest to what extent activities concerned with upgrading human settlements will have an impact on the development of Dominica.

To take one example, knowledge of the culture of Dominica helps us to understand the characteristics which enable a community to improve its housing and up-grade its environment through collective action. From this study we have seen that this capacity depends on :

- the age and sex ratio of the population and especially the number of active vs inactive members ;

-household structure ;

-the moment in the life cycle at which an individual's effort is required (a young couple wishing to set up a house together will be much more willing and able to do so than a women who is a single head of a household having to raise a large number of children ;

-the extent to which a community is united or divided by political or ideological considerations ;

-government policies related to housing - construction of social housing, of course, but also tax breaks, subsidies for land and building materials, and other fiscal policies related to the building industry, land and house financing ;

-other factors affecting the availability of construction materials (i.e. transportation facilities, etc) the availability of land (speculation, topography) and the availability of cheap financing.

Housing conditions are also affected by the skills of the population and local builders in construction techniques and in the capacity to make their own building materials. The form of the housing built will be influenced by the extent to which modern living styles have replaced traditional ones which in turn depends on the amount of contact with the "modern" world by emigration, TV and radio, travel, etc..

The extent to which activities concerned with human settlements can have an impact on the development of Dominica is more complex ; we can suggest at least four ways in which there is a direct impact, either positive or negative.

1) Economic Impact

The construction industry could be a factor in generating employment, particularly if local materials are used and also if labour intensive methods continue to be used. Obviously the local building materials must be competitive with imported materials, by using fiscal means if necessary. The prefabrication of elements made of local materials may or may not have a positive impact on the generation of employment. It can be surmised that only in the case an export market is developed, will the impact on employment be very favourable.

Housing construction could also contribute to gross fixed capital formation, as it has done in the past (14). For low and middle income families, building one's home is a major, if not the only, instrument of creating capital and of investing savings. However, if the loans are financed with foreign credit, the country will have to cover the outflow of cash made to repay the loans. Furthermore, there is the risk that the foreign exchange rate will change. Thus, there should be a local source of credit. To put it suscinctly, "raising external credit to finance housing with 90% of imported materials is non-productive" (14). Furthermore, more and better housing will not be built except to the extent that the income level of the population increases. Put in a more positive way, the more Dominicans are able to improve their revenue, the greater will be the demand for more and better housing and this increase in housing demand, if chanelled to local production, can be transformed into more jobs and higher incomes.

2) Impact on the Environment and Health

How and where homes are built has an obvious impact on the environment and on the physical and mental health of the population. The link between a healthy population and development should also be easy to make. Other links harder to make are those between stating principles or making

regulations and creating the conditions in which they can be carried out ; in other words, requiring so much land around a house or a septic tank (by law) will be of no avail if too many people do not have the means to provide them. It is also not obvious to all that spending money today on seemingly non-productive sanitary infrastructures or subsidized housing lots will produce economic results in the form of a healthier and more productive population tomorrow.

3) Impact on the Social Structure :

The new housing built in and near Roseau recently has put physically on the map the hierarchical social structure of Dominicans. Housing lots are sold to people who can afford to pay ; the size of the lot determines the price. As the large lots are grouped together, so are the richest families. The smaller lots are also occupied by families of equivalent incomes. The limited access to mortgage financing also encourages social stratification. Spatial segregation tends to intensify and rigify social segregation and social barriers over time.

4) Impact on Settlement Patterns

Other than the densification and growth caused by concentrating buildings in one area, there is also a multiplier effect. Growth causes growth. Roseau is already the area of major growth activity and it will continue to be it unless measures are taken to decentralize.

Little attempt has been made to create and implement long-term global strategies which are appropriate to a tiny island state whether it be in the field of housing, planning, building materials or elsewhere. We rarely find strategies that take into account the necessity of using local resources, of creating a multiplying factor, that limit the impact of outside competition and which are adapted to the local situation. Instead, we find stop-gap policies on the one hand, and on the other hand, expensive capital investment in infrastructure for which the materials, the equipment and the managers have been imported. This is the case for three of the four roads built recently, financed by the British, Canadian and American governments. The fourth road, financed by the CEE, was built using local labour rather than imported diesel shovels and mechanized road makers and had an impact on the employment of the area. The tendency in Dominica is to maintain the economic and social status quo. The legacies of the hierarchical society of the colonial past and the present fascination with the North American and British consumer society, seem to be preventing the development of a more equitable community. Policies that would encourage the redistribution of resources would not only create a more just society, but one that would be more self-sufficient and more prosperous in the long run. It is the only way that real development can take place.

PART TWO

HOUSING THE POOR

AN EVALUATION OF HOUSING PROGRAMMES IN THE LESSER ANTILLES

The first part of this study dealt with the built environment of Dominica in a holistic manner. The second part is an evaluation of the many different projects aimed at providing decent housing and improving low-income settlements in Dominica and in neighbouring islands. What we are trying to show are the causes of the success and failures of efforts to provide social housing and an improved environment in third world countries.

The unsanitary and overcrowded conditions and the ramshackle precarious appearance of the housing in the Lesser Antilles has been the target for many different groups using various strategies for their upgrading : those of the government, the churches and other NGO's, bilateral and multilateral aid, but also those of the concerted action of local populations. The following pages will attempt to determine which strategies are most likely to have a lasting impact in the effort to improve the human settlements of the very low-income populations.

Programmes on the islands of St. Vincent and Grenada in addition to those on Dominica have been examined in order to compare a wider variety of practices. These two islands have similar histories and a similar culture to Dominica, being occupied by people of the same origins and having been colonized by the same countries ; therefore they make a logical zone of comparison. This is especially true since their recent housing policy and the programmes that ensue make an interesting contrast with those in Dominica.

Basic Elements of Housing

When we break down the elements that make up housing, what is essential is land, labour and material. When all of these basic elements are available or there is money to buy them, there are not large numbers of homeless people. The resources that enable people to come by these basic resources are finance or credit, organization, planning and technology. The main elements that transform basic housing into decent homes and the site into a healthy neighbourhood are infrastructure (roads, water, drainage sewers, electricity) and services (garbage collection, shops, schools, health services etc).

Strategies for improving human settlements can be grouped in different ways, the source or promoter of the project, whether the government, international aid, an NGO or local people is one possible way of classifying them. The different actions can be classified also according to the aims, whether for the building of complete houses or of "starter" houses, whether for providing land, infrastructure or loans at below the market cost or for subsidizing the construction industry or material or for repairing houses. The subsidy can go directly to the beneficiary or to the product.

In order to analyze these strategies, we will present case studies which will outline :

A : the source of the project , who planned it, and where the technical and financial support came from;

	Governemennt sponsored projects			NGO		BILATERAL AID	PRIVATE ENTERPRISE
TYPE OF PROJECT	DOMINICA	GRENADA	ST VINCENT	DOMINICA	ST. VINCENT	DOMINICA	DOMINICA
complete housing	1) Bath Estate & 2) Grand Bay		10) Fair Hall	5) Council of Churches Scots Head		9) French Model house	8) Superior Timbers
"starter" or "core house"	3) Core houses 13)		13) Barrouallie	6) Northeastern Timbers 14) 7) Giraudel Self help	Glebe project		8) Superior Timbers
house repair		15) House repair with local community	12) House repair with free material				
land and infrastructure	4) squattter removal		11) upgrading of Muller village squatter settlement				

Fig. 20. Government sponsored projects.

B : a description of the project, the type of housing and the material used ;

C : the actors involved in organizing, coordinating, building and financing the programme, whether of the formal, the informal sector or whether individual or collective self-help ;

D : whether attention is given to infrastructure and services ;

E : the cost ;

F : the outcome.

GOVERNMENT HOUSING PROGRAMMES IN DOMINICA

In Dominica, the following programmes have been included in this study. They can be grouped as follows :

A : Government Programmes

1. & 2. Government housing programmes at the Bath Estate and in Grand Bay.

3. the Government core housing programme.

4. Squatter removal programmes.

B : NGO Programmes

5. Scotts Head programme of the Caribbean Council of Churches.

6. The Northeast Timber Cooperative and house building project.

C : Local Committee Action

7. The Housing Committee at Giraudel.

D : Private Corporations

8. Superior Timbers Ltd.

E : Bilateral Aid

9. The French Model house project.

Government Housing

As we have seen until the election of the Freedom Party, the Dominican Government supported a series of housing schemes. The finished product differed considerably from location to location and in the type of administration. A similar programme in two different areas will be discussed here. It is a question of the "Royal Bank of Canada" schemes,

Fig. 21. Project No. 1. Bath Estate houses.

one in the Bath Estate on the outskirts of Roseau, and the second in Grand Bay.

Source of Both Projects

The government housing programmes were implemented by the Housing Development Corporation. This statutory body had the role of acquiring and administering land to be used for housing. It was to provide infrastructure, to build houses for the low-income population and to take care of the administration of selling them on very easy terms over a long period.

It had acquired the Bath Estate and had already built a scheme there. The project was to add more housing. It was also decided to put housing in Grand Bay where the government had land. The government, having no funds for this sort of investment, had to find an international sponsor for the project. In the last years of the 70's, the Royal Bank of Canada accepted to provide the credit necessary for building the housing. Political events, a provisional government and a hurricane in 1979 retarded the construction of these houses, and they were not completed until the Freedom Party had been elected.

No. 1. : The Bath Estate

Description

The houses were small, one storey, semi-detached, wooden houses with galvanized roofs. They were built in rows with a small garden in front and on the side. There were one or two tiny bedrooms and a built-in kitchen. The original houses have undergone so many changes that they are hardly recognizable. Some now have walls of cement blocks, others have added on rooms (see photo).

Actors

The housing scheme was planned and entirely built by the employees of the HDC and it is now managed by the Ministry of Housing. The HDC was also responsible for the roads, water and electricity. After entering, the beneficiaries participated in making significant improvements to the houses. Although no study has been made, it is manifest that the income level of the inhabitants in the Bath Estate scheme is not the lowest in Dominica. Many of the inhabitants have had the resources to make significant improvements to the housing and some even have automobiles, a luxury in Dominica.

Outcome

The construction of these houses in the Bath Estate has added to the supply of decent housing in Roseau. However, there are two main criticisms of this project. The first is that the income group which benefitted is not the neediest. One wonders whether a government with such scarce resources is justified in subsidizing in this way, the better off segments of the population rather than the poorest. The second is that the design of the houses did not take into consideration the traditions of the population. For instance, the kitchen is usually in a separate building outside the house so that when cooking with a charcoal burner, the whole house does not heat up. Also in case of fire, only the kitchen will burn. The yards are too public to be used as part of the dwelling.

No. 2 : Grand Bay

Description

This programme was built after the hurricane had hit the island in 1979. Prefabricated elements were used which were not suitable for the climate. The doors were made of beaver board and have not stood up. The houses are outside of the town far from any services. There is not even running water near the lots (see photo).

Actors

As in the Bath Estate, the houses were built by the HDC. As most of the houses have been empty for five years, no improvements have been made by the owners ; on the contrary, they have considerably disintegrated due to being abandoned.

Infrastructure and Services

None to speak of.

Fig. 22. Project No. 2: Grand Bay.

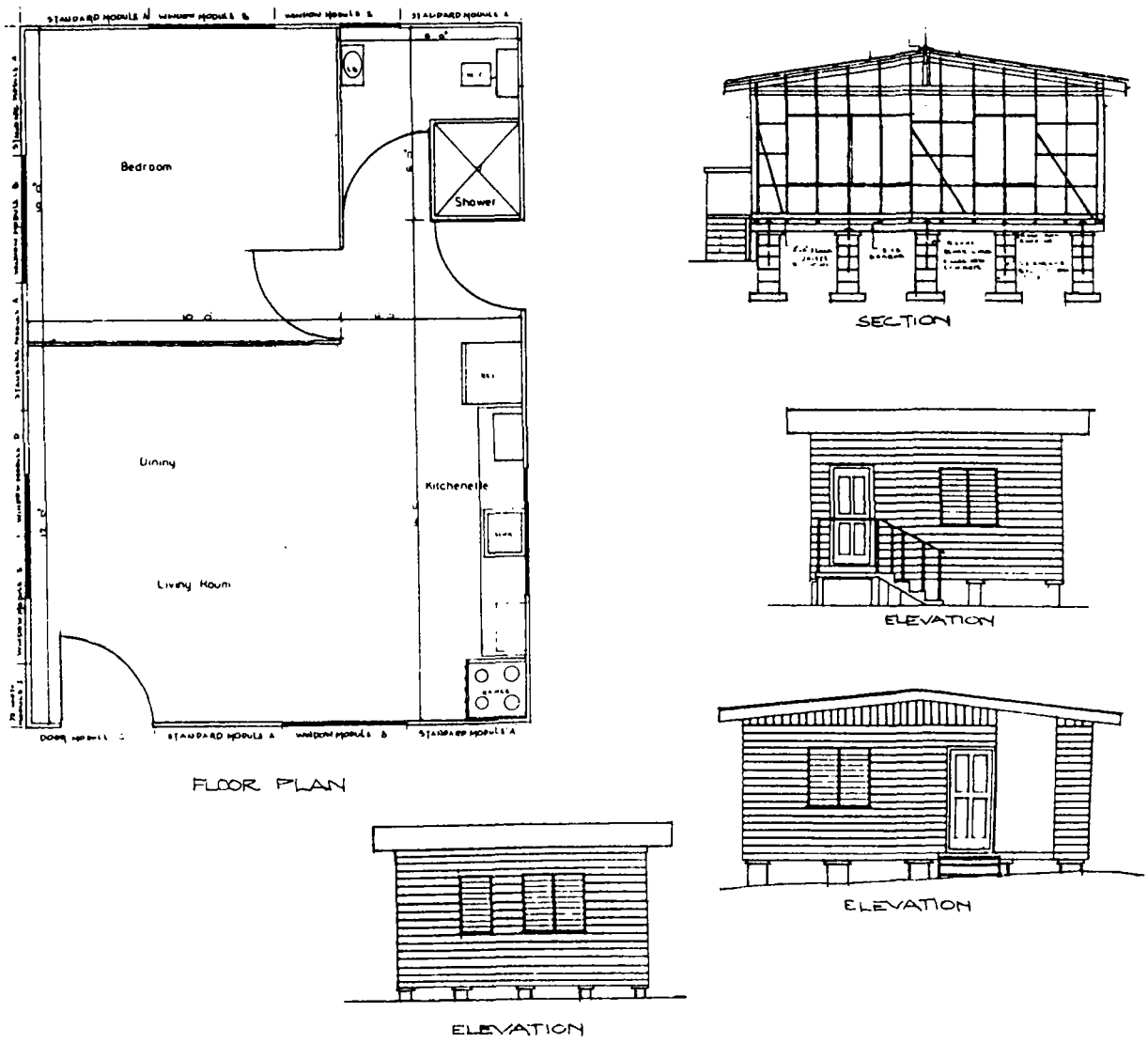
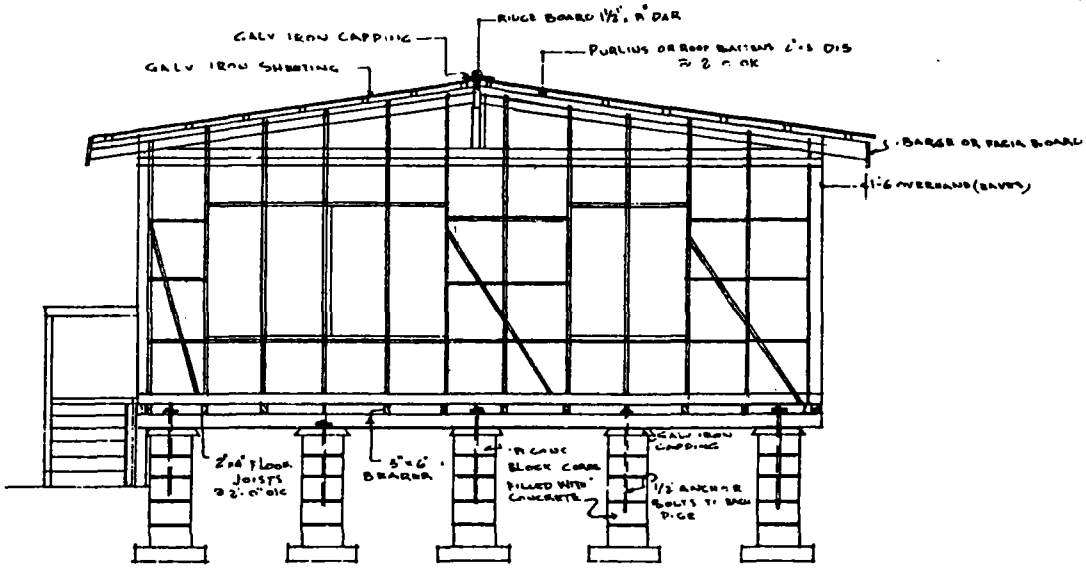


Fig. 23. Project No. 3: The Dominican Government Core Housing Project.

GRAPHIC INFORMATION (PLANS, DETAILS) AND DESCRIPTION OF COMPONENTS



SECTION
SCALE 1/4" TO 1'-0"

DESCRIPTION	QUANTITY
1. Foundations, walls columns, reinforcement, formwork, etc...	10 No. cols strip
2. Floor	
Concrete floor incl. hardcore, dpt. reinforeed, etc ...	4 S.Y
Timber suspended floor	774 BF
3. Walls	
External block walls	3 S.Y
External timber panelled walls	1294 BF
Internal block partitions	7 S.Y
Internal timber partitions	(221 BF
	(5 No. plywood sheet
	(¼ "
4. Roof	
Timber roof construction	307 BF
Roof covering galv. sheeting	55 SY
5. Doors incl. ironmongery	4 No.
6. Window ""	11 pr. jambs
7. Plumbing	1 kitchen sink)
	1 No. W.C)
	1 basin)
8. Finishes - i.e rendering of walls	18 SY

Fig. 24. Project No. 3 description.

Cost

The price was not disclosed, but it was more than most of the poorly housed people in the area could afford as the houses stood empty until the price was lowered considerably.

Outcome

This scheme is obviously a failure. To have built houses in a very poor area in which overcrowding and dilapidated housing is a serious problem and yet to have them stand empty for years, is not the outcome sought. The failure was partly due to the choice of building material and poor management, but there are two more fundamental reasons that the project did not succeed. In the first place, the change of government policy concerning subsidies put houses on the market that were much too expensive for the potential buyers. The second reason concerns the appropriateness of the houses for the population concerned. The resources of the future inhabitants, their needs and desires as far as housing is concerned were

Fig. 25. Project No. 3. Dominican Core Houses.

not taken into account. What they would be willing to pay, where they would be willing to live, in what type of houses, etc. were not taken into consideration. No doubt, it was felt that because similar housing had been accepted in Roseau, that they would also be accepted in Grand Bay.

No. 3 : Government Core Housing Project

Source

After Hurricane David hit Dominica, many different countries offered aid in one form or another. Trinidad and Tobago offered to finance a housing programme at very easy terms. The ambivalence of the Freedom Government to this loan has already been discussed. Although they accepted the project, the original goal, to sell houses at a very low cost in order for them to be accessible to a large number of people, was lost. Both Trinidad and Tobago and the Government were thus behind the project, the former as financer and the latter as manager.

Description

The original idea was to put 800 "core houses" on the market and to make it possibile for the future owners to obtain a mortgage. The houses were to be 380 sq.ft., built of wood with a galvanized iron roof. They were to be starter houses to which one could add on in the future. The foundations usually consisted of cement block pillars. The future owner was responsible for providing the land ; he had to produce a title or other papers proving that he had a right to the land. This was a problem as we have seen how few Dominicans have clear right to the land. Furthermore, to be eligible, the households were required to have an income of under $500 EC per month, but also to be regularly employed and to obtain a certificate from their employers proving it.

Actors

As the Housing Development Corporation no longer existed, the Ministry of Home Affairs and Housing hired private contractors each time it needed them to prefabricate and set up the core houses. The future owner was responsible for the inner partitions and electric wiring and any plumbing. The National Commercial and Development Bank handled the loans to the recipients.

Infrastructure and Services

None were provided.

Cost

$18.000 EC

Outcome

Many of the core houses are not weatherproof. Cracks in the walls and the flooring allow rain and insects in. The inhabitants with few resources find these houses very expensive in comparison with what they receive. There is a high rate of default in the payment of the loans : 51 loans out of 117 are at least 2 months behind and of these 22 loans of the 117 are 6 months in arrears or more.

No. 4 : Squatter Removal Programme

Source

The Freedom Government has directed its attention to squatters in two locations in Roseau : Pottersville and Gutter Village. Pottersville had a few squatters settled on a point between the river and the sea that was

Fig. 26.
Project No. 4:
Reconstruction of houses removed from squatted area.

Fig. 27. Project No. 5: New houses at Scots Head.

considered dangerous in case of floods. Some of the land they were on was needed for commercial development. Gutter Village was a steep ravine belonging to the government which had been completely taken over by squatters.

Description

In order to remove the squatters from Pottersville and to dedensify and regulate the situation in Gutter Village, the government has prepared lots on a site just beyond Gutter Village. A road has been built and one public bath and toilet. Several stand pipes have been put in. All the squatters in Pottersville have been told they must move. The government provides a truck to help them to transplant their house. If they prefer, they can build a new house on the site at their own expense. For Gutter Village, a plan has been drawn up by the Ministry of Housing and Home Affairs to dedensify the area by removing approximately one third of the households. Those living in wooden buildings will be selected to move.

Actors

This action involves the Ministry of Housing and the squatters and the Community Improvement Committee in the case of Gutter Village.

Infrastructure

A road, one public convenience and several stand pipes have been provided.

Cost

The relocated households are required to buy the land on which their house has been put. The installments are of $60 EC a month over a period of approximately two years. They are alloted an average of 1000 sq.ft. and pay $1.50 EC per sq.ft.

Outcome

The squatters from Pottersville have been moved without any trouble. The people accepted to be transplanted more or less willingly and once on the new sites, many are pleased to have more space in which to raise a garden and keep chickens. It represents a definite improvement in their living conditions. There are those who miss being in town and being able to sell peanuts or candy to passers by. They also have to go further for water.

On the other hand, the population of Gutter Village was not at all enthusiastic about the plan. They were informed about it once the Ministry had drawn up the plan. The immediate reaction of those households who could afford to do so was to start building a block house to replace their wooden one. In May 1986, two years after the government presented their plan none of the households of Gutter Village had been moved.

NGO PROGRAMMES

No. 5 : The Programme of the Caribbean Council of Churches in Scots Head

Source

Scots Head, a village at the southern tip of Dominica, was one of those that was most severely damaged by the hurricane in 1979. Even before then, it had been neglected. The villagers live by fishing and by subsistence farming. There used to be lime orchards and a lime juice factory in the area, but it had been abandoned thus creating a high rate of unemployment. The disaster relief committee of the Caribbean Council of Churches decided to concentrate their hurricane relief action on this village. The principle behind their action was the development of an integrated project of village development. Funds were collected by a world-wide campaign to be used for the development of fishing, agriculture, small businesses, as well as housing, sanitation and water. In other words, all the main concerns of the village were to be dealt with simultaneously. This did not turn out to be possible as far as the housing development was concerned as this part was delayed for several years until the government was able to provide the land to put the houses on.

Description

The project consists of 21 houses of approximately 400 sq. ft. built of cement blocks with galvanized iron roofs built in rows on a hill just outside the village. There is a living room, kitchen and two bedrooms and a verandah.

Actors

The original idea was that local villagers participate in all aspects of the project. Thus a committee was created to be responsible for housing. One of the first tasks was to select the families that were to be the recipients. But, as many members of the committee were candidates, the process took a long time and caused hard feelings. Meanwhile, the Committee of the Council of Churches in Barbados became impatient and wanted to get on with the building. The result was that much of the management was done by remote control from Barbados and by the employees in Dominica rather than by the committee which had ceased to function.

The families had also been expected to have a major part in the building of the houses, but in the end a qualified builder and a team of twelve construction workers did most of the work. It was possible for future owners to work on their own houses or for them to send family or a friend to work for them. This work is not paid but a calculation is made so that the equivalent of the labour that has been contributed to each house can be deducted from the price of the house that will be paid. If the owner does most of the work, it is possible for him to reduce to price by nearly a third. This is rarely the case. On an average, the price is reduced by 10% by this process of self-build.

Infrastructure and Services

Each house is equipped with a WC, a septic tank and a large water cistern for rain catchment. Provisions have been made for piped water to be provided in the future. A road has been built to the area.

Cost

The all inclusive price of the houses to the inhabitant is $23.000 EC or $7.151 US.

Outcome

The addition of 21 relatively substantial houses to the village at a moderate cost is certainly positive. However, there were several problems concerning this project. One concerned the local participation which, as we have seen, was marginal in spite of the fact that it was supposed to be an important aspect. We can assume that part of the problem stemmed from the fact that an inexperienced group was put in the very difficult position of selecting those who would be recipients. Also, as the houses were sponsored by a charitable organization, some of the villagers had the mistaken idea that the houses would be free and were very disappointed when they learned that the recipients would have to pay. Furthermore, the price of the houses excluded many families. On the other hand, as one informed observer said "there was too much Christian charity", meaning that the Church committee was so eager to have some results from their efforts in the project, that they did not give the local committee time to get organized and take over more of the responsiblity.

No. 6 : The Northeast Timbers Coop Project of Prefabricated Houses

Source

This cooperative was started by an enterprising nun, Sister Alicia de Tremmerie, after the hurricane had blown down much valuable timber. Its first objective was to involve the local youth in gainful employment by creating the cooperative to extract the fallen timber from the interior and then to mill it and to use if for rebuilding and repairing the houses damaged by the hurricane. As the project got under way, the need for low cost housing became evident and a prototype of a prefabricated house was developed and put on the market.

Description

These houses are prefabricated in the saw mill and then set up on site by the cooperative. The quality of the houses is superior to that of the

Fig. 28. Project No. 6: Model house.

government core house project. Organizational difficulties and problems in extracting the timber from the interior has meant that only a few houses had been built by 1986.

Actors

Sister Alicia herself is the prime organiser of this cooperative. She has been seconded by a local team and by volunteers sent from Europe. There are also two full-time managers. There are numerous members working in the cooperative but not all of them work on housing, the cooperative having branched out into metal work as well as lumber.

Infrastructure and Services

None are provided by the project.

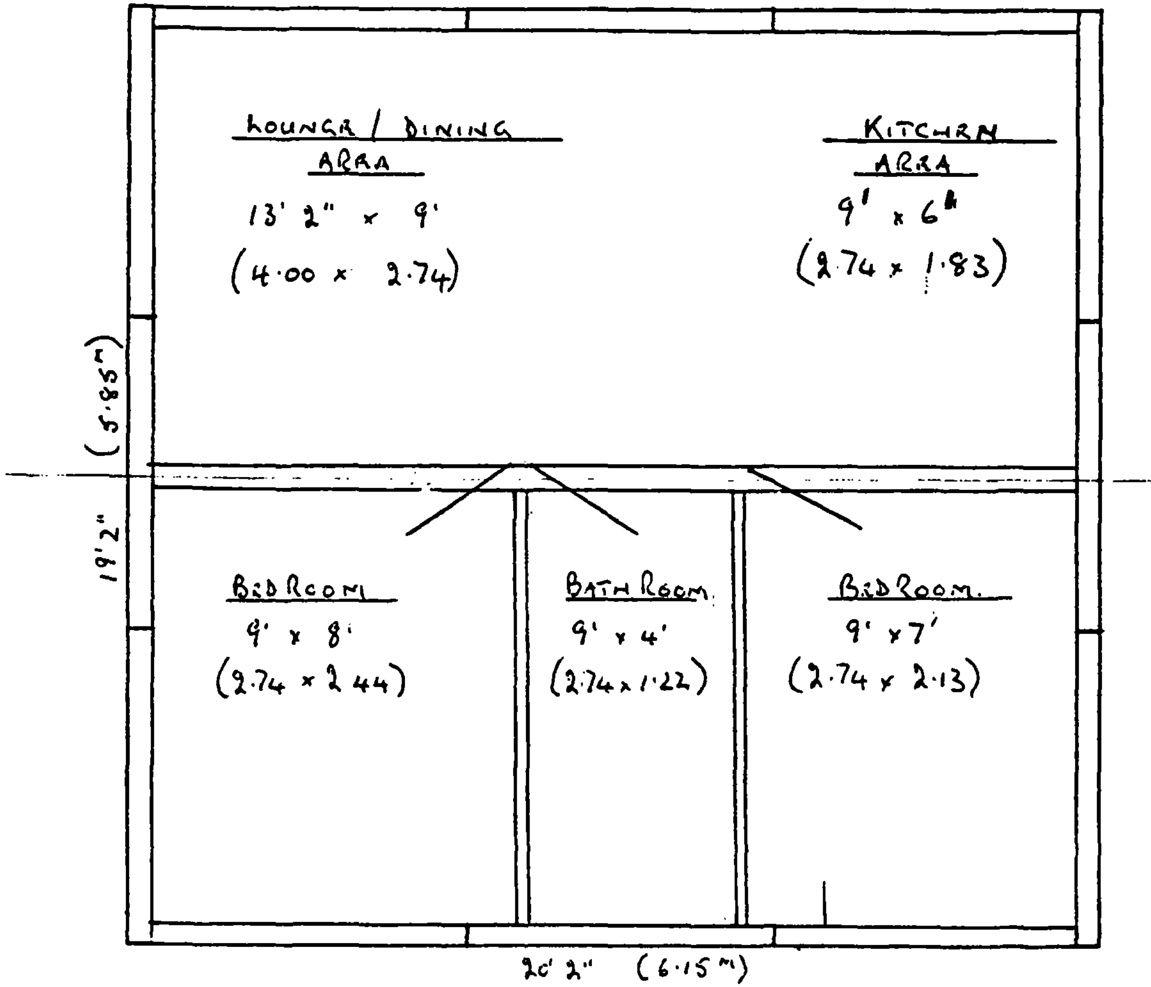
Cost

The price for the future owners is $18.000 EC, a price that is comparable to that of the "core houses" for equivalent space. The cooperative is not able to provide a mortgage so it is up to each prospective buyer to make arrangements.

Outcome

As the project has not yet gotten into full swing, it is too early to make an evaluation. The quality of the houses is very satisfactory but the price is still out of range of the majority of needy families. Furthermore, the project benefitted in its early stages from much volunteer work ; thus, to keep down the prices, either productivity will have to in-

TWO BEDROOM HOUSE



NORTH EASTERN TIMBERS CO-OPERATIVE

WOODFORD HILL, DOMINICA.

£ 16,500 - 2 bed
$ 23,500 - 3 bed

EXTERNAL AREA

387'² or (35·97m²)

INTERNAL AREA

349'² or (32·35m²)

Three bed room

465 sq ft or 43 sq. m²

The perspective customer marks the doors & windows

26/5/85.

Fig. 29 : Project No. 6 : Plan

crease or the volunteer work will have to continue. The main achievement of this coop has been to provide training and an income for the youth of the village.

No. 7 : Housing Project of the Giraudel Eggleston Reconstruction Committee

Source

These two villages were severely hit by the hurricane. Several years afterwards, many of the households had only makeshift, patched up shacks to live in. A housing reconstruction committee was created by the local association of the Catholic Church. This committee was aware of the very limited resources of the local population and realized that for better housing to be affordable to the lowest income group, it would have to be built by self-help teams. What was needed to start the programme were funds to be used to buy the construction material. With the help of the village priest, they eventually found a Dutch NGO which was prepared to make a grant of $600,000EC. These funds were used as a revolving fund to provide one hundred households with $6000EC for purchasing building materials.

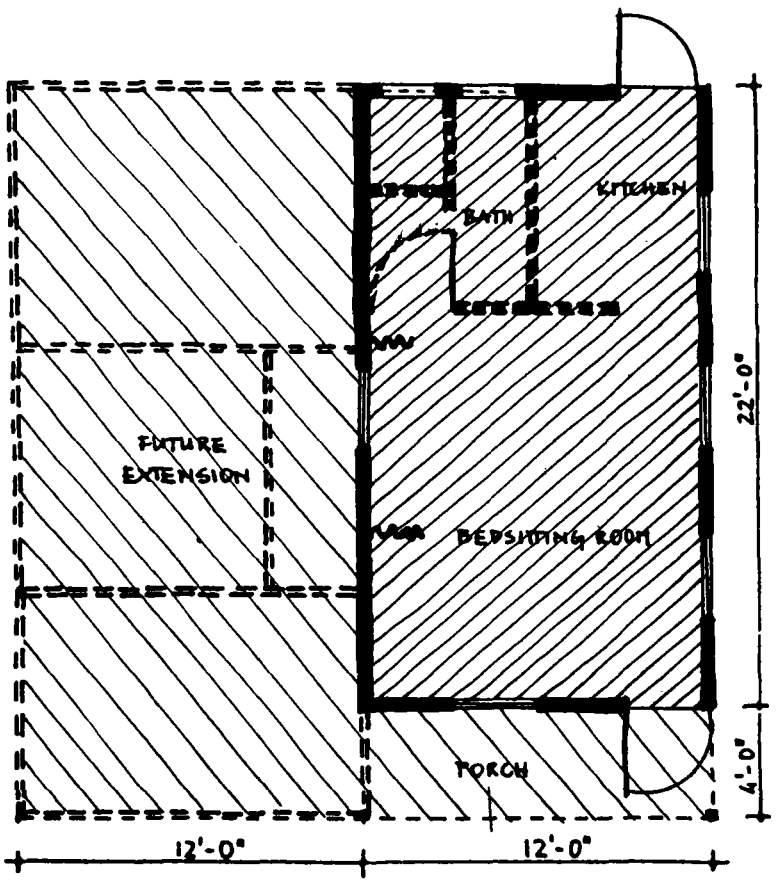


Fig. 30 : Project No. 7 : Plan

Fig. 31. Project No. 7. Giraudel.

Description

Originally one hundred houses built of either timber or of cement blocks were to be built with collective self-help labour. A simple plan for a 12 ft. by 20 ft. house was used to which the owner could add improvements before building or later on. Fifty-five houses were built this way by 1985 at which time they adopted the use of prefabricated timber elements for which they negotiated a very low price. The ready-made elements had the advantage of being put up very rapidly with less labour. Many households made some modifications either by enlarging the house, adding a verandah, internal partitions or glass louvers when they could afford it.

Actors

The project was organized and managed uniquely by the local people who formed the reconstruction committee. The village priest, a Belgian, was instrumental in finding the grant for the revolving fund and the local cooperative credit union receives the repayments of the loans. Nearly all the construction is done with collective self-help. Skilled builders in the community volunteered to help and they were also sometimes paid by those households who could afford to and who wanted improvements. The government self-help department transported the building material to the sites free of charge. A part time accountant has been hired to manage the bookkeeping which became too time consuming for volunteers.

Infrastructure and Services

None so far. When a sufficient amount of money has been repayed to the committee, it plans to use the money for cisterns for water storage.

Cost

The cost to the beneficiaries of the first 55 houses was $6000 EC, loaned to them at no interest. This covered the material needed for the basic house. Households needing additional space could negotiate an extension of the loan from the credit union.

Outcome

This project is one of the very few that succeeded in helping the extremely low-income families. As the local people initiated the project and took responsibility for it, they were able to judge how much the families could afford. They were also able to organize the community participation successfully. The houses are well built, though a little smaller than the government core houses. It should also be noted that in a village with a population of 783 and with 162 dwelling units, a local committee was able to reconstruct one-third of all the homes in the area.

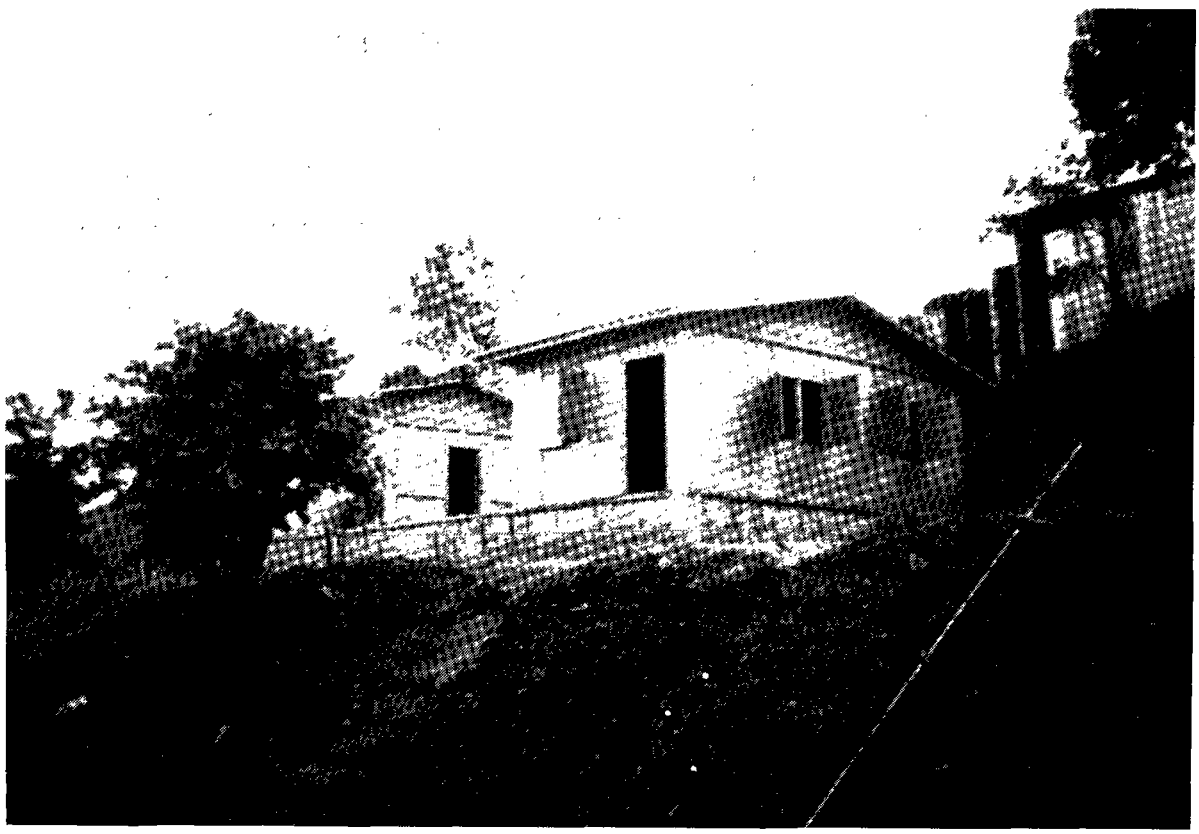


Fig. 32. Project No. 8.

No. 8 : Superior Timbers Products

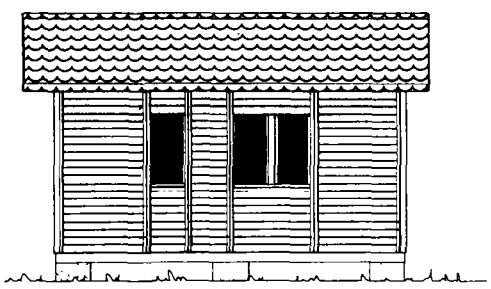
Source

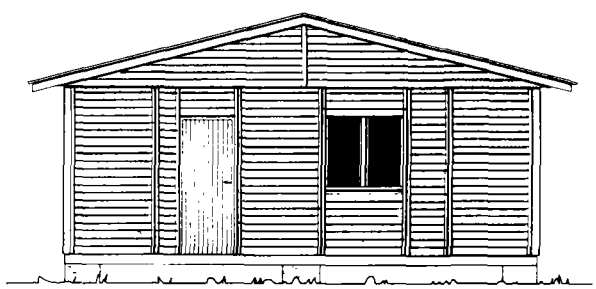
Superior Timbers Products or STP is a private company that builds prefabricated elements for houses in Dominica out of local timber. It is not explicitly a low-cost housing programme but it has received certain support from the Dominican government and it is considered by some as a strategy for building low-cost housing. This company was attracted to the island because of abundant local timber, low labour costs and a potential regional market for low-cost prefabricated houses.

Description

STP offers a variety of units from a one room 280 sq.ft. model to a three-bedroom house of 720 sq.ft. The houses come with or without kitchen and plumbing and can be put up by the buyer or by the company. The roof ismade of galvanized sheets and the foundations cement pillars.

SISSEROU





One bedroom house SISSEROU design.
Surface: 368 Sq. Ft.

Sanitary equipment including:
- 1 Prefabricated water pipe network with taps and fittings
- 1 Bathing-hut with steel enamelled shower receiver
- 1 Water closet with flush.

Kitchen equipment including:
- 1 Single bowl stainless steel sink
- 1 Two-rings gas cooking stove.

Outside joineries:
- 1 Single Louvres window
- 5 Double Louvres windows
- 2 Outside doors.

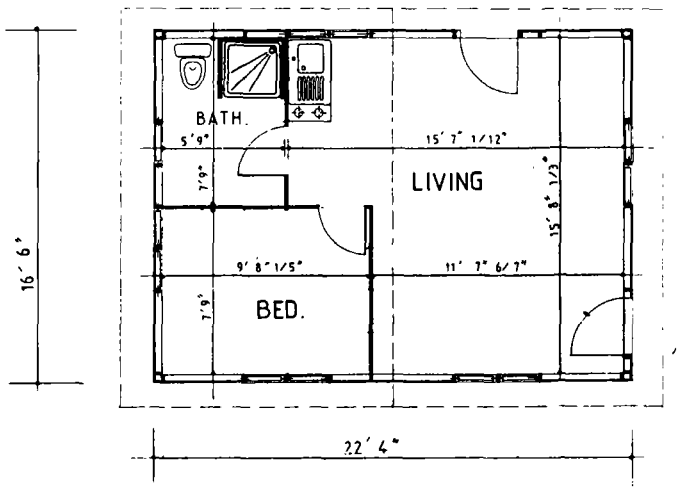
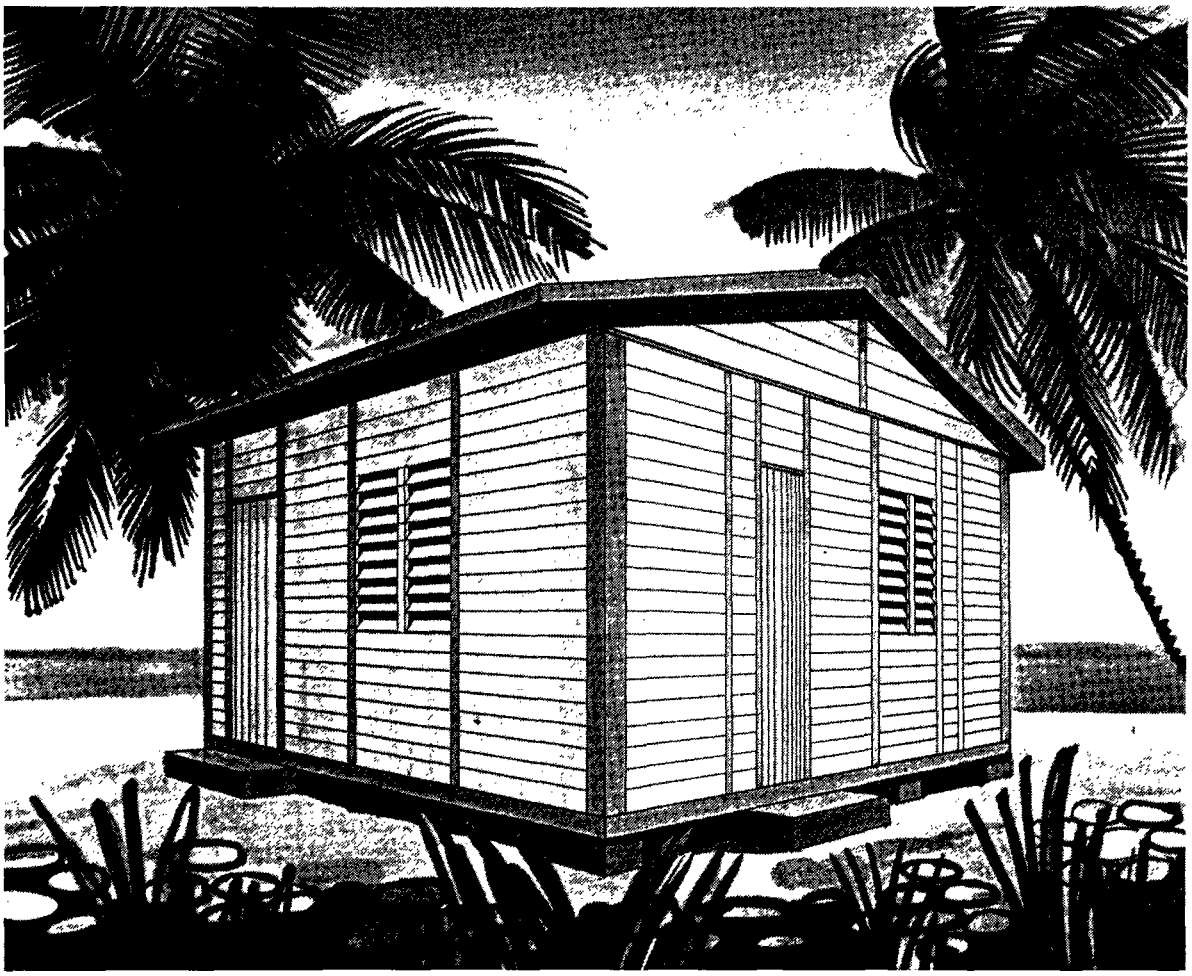


Fig. 33. Project No. 8: Drawing.



GENERAL DESCRIPTION SISSEROU

FOUNDATIONS:
Pillars made of concrete blocks or reinforced concrete according to their height.

FLOOR:
The floor is made of wooden planed boards assembled by grooves and tongues nailed onto the wooden structure which is, itself, anchored onto the foundation pillars.

OUTSIDE WALLS:
The walls are made of prefabricated wooden panels including wooden planed timber frame and cladding. Window panels have 7 blades built-in Louvres windows.
Door panels have solid wood doors with door lock-sets.

INSIDE PARTITIONS:
The inside partitions are made of wooden frame and melamine coated chipboards.

INSIDE DOORS:
Prehung flush doors equipped with inserted door lock, coated both faces with sanded plywood ready for staining, varnishing or painting.

ROOF FRAMEWORK:
Wooden framework including:
- Gable wooden trusses assembled by metallic connectors.
- Ridge and side beams.
- Rafters.
- Purlins supporting the roof covering.

Assembling secured by hurricane anchors.

ROOF COVERING:
Made of galvanized corrugated steel sheets secured by lag-bolts and waterproof washers onto the purlins of the framework.

Fig. 34. Project No. 8. Sisserou.

Actors

Owned jointly by Dominicans and the French company, STP is managed by a French engineer, but after a training period, all the other employees have been Dominican. The government helped set up the company and built a factory shell which STP rents. The Dominican AID Bank provides mortgages for the purchase of STP houses.

Infrastructure

None.

Cost

A simple shell of 280 sq.ft. ex-factory costs $11,200 EC and with partitions and kitchen and bathroom fixtures, it costs $13,900 EC. For a one-bedroom house of 368 sq.ft. the price is $15,250 EC ex-factory and $18,350 EC built. An important factor in the cost is the possibility of obtaining mortgage financing. Credit is so scarce that whether or not a future home owner prefers STP homes to traditional building or not, he is obliged to use STP elements in order to obtain a mortgage. One house builder interviewed claimed that he could have built the house cheaper on his own, but had bought STP elements in order to be financed by the AID Bank.

Outcome

The first observation is that STP is able to build houses for approximately the same price as the government core houses and of a similar quality. Furthermore, the use of local timber has a positive impact. On the other hand, the use of prefabrication means less work for the local builders in a country with a high rate of unemployment. It would also seem unjustified to tie mortgage borrowing to building with STP elements.

No. 9 : The French Model House Project

Source

The French aid project of building a school in a neighbourhood of Roseau was coupled with a programme of technical assistance in developing local building materials. To demonstrate that a low-cost house could be built out of local material, a model brick house roofed with wooden shingles was built on the Bath Estate in Roseau.

Description

The model house was an attractive two-bedroomed house with a bath, a kitchen and a verandah. Nearly all the material used was produced locally : fired brick walls, wooden shingles for the roof and tiles of sulphur for the floor.

Actors

French Technical Assistance supplied the financing and an engineer to supervise the construction and advise the brick factory. An architect sent by UNCHS designed the house and a local builder produced bricks and built the house. Local woodsmen cut the shingles. Not knowing how to allot the house, the government organized a lottery and raffled it off (See Figure 27).

Infrastructure and Services

The house is situated in a housing lot which was serviced with water, roads, sewage and electricity.

Fig. 35. Project No. 9. French model house.

Cost

The cost was $30,000EC for the construction of the house (not including the cost of the architect or the engineer).

Outcome

The house was appreciated by the neighbours that visited it and by the local builders that saw it. It is too early to know what the impact of this demonstration will be on building materials in Dominica in the long run. It is disappointing that even at the time of the raffle, it was being shown off as a comfortable house with a bath, rather than a house made of all local material. The cost of the house put it out of reach of the lowest income families. The French Technical Assistance Programme is continuing to experiment with building low-cost houses and is in the process of developing much less expensive houses using brick and timber.

SAINT VINCENT

SAINT VINCENT

Introduction

St. Vincent is another island of the Lesser Antilles with a history that is not too different from that of Dominica. The government policy towards housing and urban development makes an interesting comparison with that of Dominica. St. Vincent also has a great need for more and better housing and upgrading of the environmental conditions of the settlements. In 1980, it was estimated that there was a deficit of 5500 houses and by 1985, the deficit had grown to at least 6000. As in Dominica, overcrowding and dilapidation are serious problems. At least 56% of the population were living in overcrowded conditions (defined as 2 or more persons per room). Only one quarter of the households had WCs.

There are two government agents involved in housing, the Ministry of Housing and the House and Land Development Corporation. The role of the former is to formulate policy and that of the latter to implement policy. From 1976 to 1984, the HDLC had :

(i) built over 200 "low cost"housing units that cost from $9500EC to $41000 EC.

(ii) sold building materials on loans of an average of $2500 EC per person to 300 people.

(iii) financed and constructed 31 private homes (presumably sold at market prices).

(iv) started to develop several sites and service programmes.

(v) upgraded several squatter settlements.(25)

An NGO, sponsored by the Caribbean Council of Churches, also developed housing programmes. For this study, we have chosen to analyze a government housing programme, a programme developed by CADEC, a government programme to upgrade a squatter settlement and the government building material programme.

No. 10 : Government Housing at Fair Hall

Source

This is a continuation of the housing programme begun by the HLDC in 1976. The government has acquired 20 acres of land in an area just outside

Fig. 36. Overcrowded house - 7 adults and 8 children.

Fig. 37. House on stilts and kitchen with thatched roof; water carriers in background.

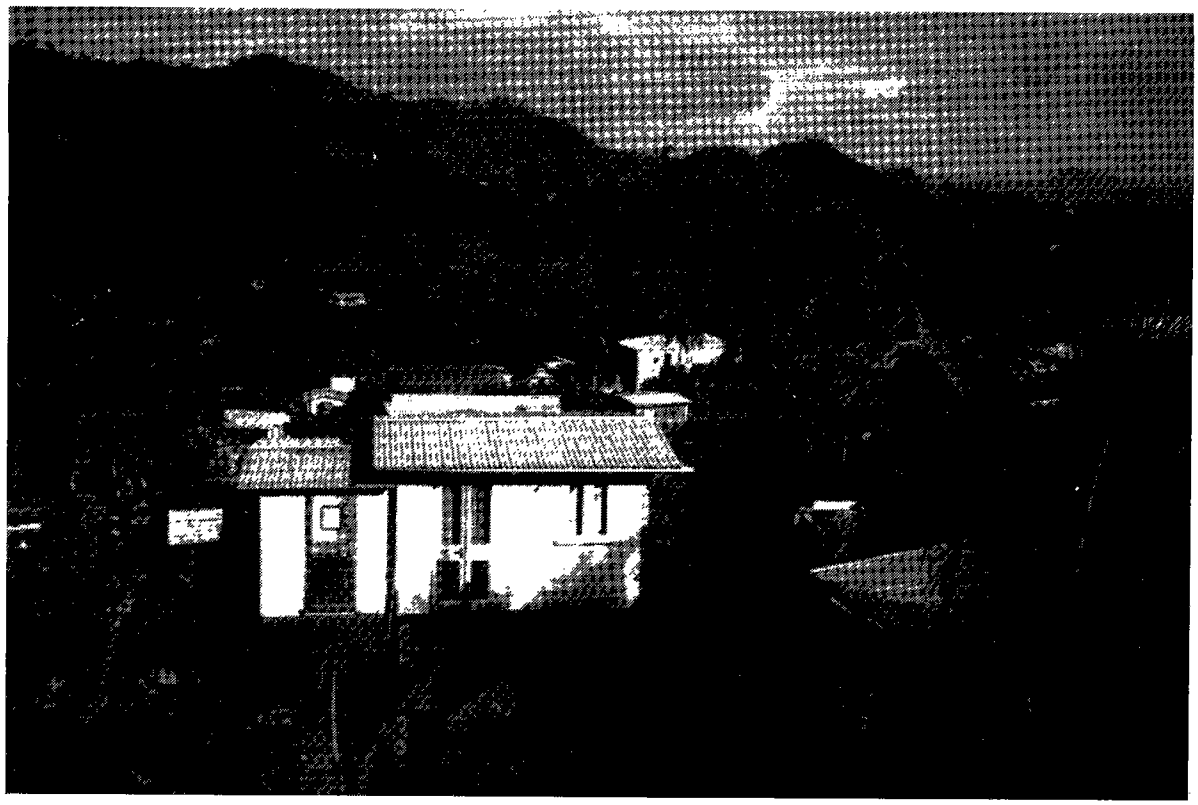


Fig. 38. Saint Vincent: Housing Development Corporation house.

Kingston in order to build 110 housing units. This project has been made possible by a loan from the Taiwanese government.

Description

The houses will have two bedrooms. They will be built of cement blocks and have galvanized iron roofs. The floor space will be of 504 sq.ft. and the lots will be 3500 sq.ft.

Actors

This project is being managed by the Ministry of Housing as the HLDC was having financial difficulties at the time the project got under way. The government public works department will create the infrastructure and the Taiwanese government will pay the contractors who do the building. The National Commercial Bank will be responsible for mortgage finance arrangements. The planning department has taken care of the overall planning.

Infrastructure

Roads, drainage, septic tanks, electricity and telephone connections will be provided.

Cost

The houses will cost approximately $3500 EC to build and $17000 EC for the infrastructure and land. The total cost will be between $50000 EC and

$55000 EC. The future owners will be able to finance the purchase of the houses with mortgages at an interest of 10%. They will have to pay about $400 EC a month for 20 years. They must have an income level of $15000 EC per year to qualify.

Outcome

The construction of these houses was just beginning during this study. However, it is clear that these houses can only be purchased by middle-income households. At least 60% of the population is excluded.

No. 11 : The Government Programme to Upgrade Muller Village

Source

The area that is now Muller Village used to be 278.500 sq. ft. of rocky, steeply graded sloping terrain that was part of Arnos Vale, an estate acquired by the government for development. It was considered to be too rugged for immediate use. It was settled in the early 1970's by about 80 households (approximately 500 people) who came from nearby and from rural areas as far as 22 miles away. The houses were built out of timber by organized self-help groups. In time, some squatters built more permanent dwellings made of concrete blocks with stone foundations and galvanized sheeting for the roofs. In 1977, some of the squatters applied to the Ministry of Agriculture for the purchase of the lots they occupied. The Lands and Surveys Department made a survey of the area and in 1978 the Cabinet decided to have the Housing and Land Development Corporation upgrade and then sell the land on a deferred payment basis to the 80 squatting households.

Description

The programme to upgrade the area consisted of :

(a) surveying the site and the lots officially allocated to the residents ;

(b) cutting and stabilizing the roads ;

(c) relocating the houses that were in the way of the new roads ;

(d) furnishing most of the houses with electricity ;

(e) providing the lots with water ;

(f) cutting drains for 25% of the lots.(26)

Actors

The Housing and Land Development Corporation was the government agent responsible for the upgrading. The residents, once they were able to purchase the land, often renovated the buildings. Some even rebuilt the houses completely. The lots were also improved with retaining walls, fences and kitchen gardens. A study concerning the occupation of the

Fig. 39. Project No. 11: a view of the squatted area of Muller Village.

squatters shows that 30% worked for the government or for private business, 40% were employed in the informal sector, 15% worked for a government operated stone quarry and crushing pit and the other 15% were unemployed or self employed.

Infrastructure (see description)

Cost

The government planned to sell the land at $1.00 EC per sq. ft. to cover the total cost of the upgrading estimated at $225.000 but later reduced the price to $0.65 EC. As the lots mesure from 2000 sq.ft. to 5000 sq.ft. the cost per inhabitant is $1300 EC to $3250 EC.

Outcome

An evaluation made by two members of the Housing and Land Development Corporation is very positive about the results of the programmes. : "This exercise not only helped to enhance the areas of Arnos Vale and Muller Village considerably, but also to upgrade the standards of the houses that were relocated... The results achieved by the upgrading of Muller Villages squatters settlement show clearly the benefits that could derive from a well planned and implemented upgrading project. These projects :

- do not deplete the housing stock ;
- provide a breathing space whilst new housing is provided for the increased population;
- protect and perhaps enhance the delicate community relationship ;

- can be carried out on a scale which makes a major impact on the problems ;
- can be carried out at a cost the government can afford ;
- can be carried out with relatively simple technology ;
- can be staged over time to give a basic level of services initially the promise of gradual improvements in the future."(27)

No. 12 : The Building Materials Programme of the Government

Source

The government decided that the Housing and Land Development Corporation should be responsible for making and providing material to encourage the construction of decent homes.

Description

A government plant produces cement blocks and the elements for latrines. It buys and stocks other imported building material such as timber, galvanized sheets. This material is sold to anyone who needs it at prices slightly below those of the commercial market. It is also sold to future home builders who are given a loan on easy terms for half of the material needed. One half a million EC dollars worth of material is given away each year to very poor households who otherwise could not afford them.

Actors

The HDLC is responsible for the warehouse. The households acquire the material individually.

Cost

Material is sold at slightly below current rates but is not delivered.

Outcome

We have not enough detailed information to be able to judge this programme. The recipients of the loans and of the free material no doubt have much better houses as a result. The reservations expressed concern the efficiency of the production and management of the warehouse. The donation of material can be criticized as leading to a form of electioneering. The material sold at the government warehouse is of good quality and is of a competitive price, however, the fact that the material is not delivered deters some from using it.

No. 13 : Barrouallie Housing Project

Source

When the HLDC was established in 1975 to succeed the Central Housing and Planning Authority, an analysis was made of all the various methods of aided self-help used in the Third World (28). An effort was made to devise

a system for providing housing that was truly at a cost that low income families could afford and that was also resistant to hurricanes and to earthquakes. The HLDC was assisted by the Building Research Establishment of the Department of the Environment of the U.K. Overseas Development Mission. The project planned to use community groups for planning and implementing a scheme of "core housing" that would be hurricane resistant and would use local materials. The site for the project was a fishing village, Barrouallie, situated 12 miles to the north of Kingston, the capital city of St. Vincent.

Description

This project concerned the construction of 70 "core houses" of between 20 and 45 sq. m. The "core" consisted in a hardwood structural frame with rigid galvanized steel brackets connecting the frame to the purlins and the rafters. There was a galvanized sheet roof and a hardwood floors. In the original plan, the future inhabitants were to complete the house, enlarge it and make improvements gradually according to their means.

Actors

The HLDC, with help from the Building Research Establishment conceptualized and managed the scheme. The Overseas Development Administration of the U.K. provided 61,131 pounds sterling to carry it out. The original idea was that the local inhabitants and particularly the young people were to be involved in planning and in building the components. They were to be paid for the construction of infrastructure but were to contribute "sweat equity" in lieu of a down payment for the house. Community buildings were also to be built with unpaid labour. The self-help aspect was abandoned and the government paid contract labour to finish.

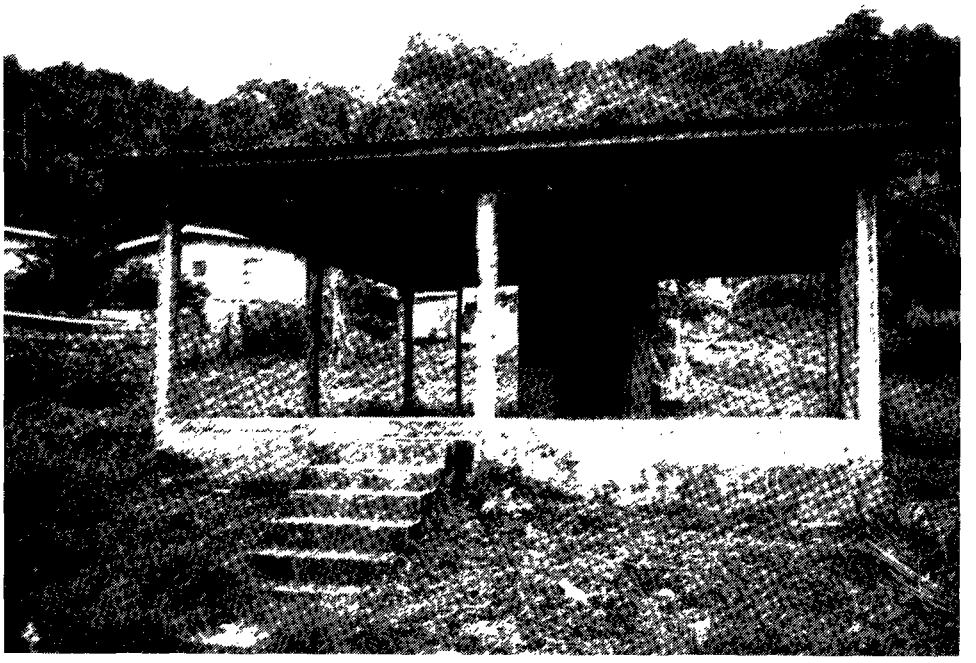


Fig. 40. Project No. 13: The "core" to be finished by the inhabitants.

Infrastructure and Services

The project called for building surfaced roads, storm drains, and for bringing in electricity and piped water.

Cost

The ODA provided 61,131 pounds sterling for this project. There is no available information on how much it cost the government of St. Vincent. The cost to the future owners varied depending on the state of the building provided. The core that contained only a roof and a foundation was originally priced at $5.000, however, the price increased rapidly and was more than double several years later. In 1986, some had still not been sold. The delays , the lack of self-help and the rapidly rising price of the chief building material, greenheart lumber caused much higher costs than planned. The result was that the houses were no longer low-cost when finally built and "outside the price that those originally eligible could afford" (John Harrison, British Development Division in the Caribbean in a letter to the author).

Outcome

An evaluation of this project carried out by the ODA concluded that it was not a success. Officials of the HLDC agree with this opinion. The main findings were that it had not been successful in involving the low-income families. Many of them had female heads of household who were too occupied trying to support and care for young children to have time to work on a construction site. Furthermore the coordination of the community development was minimal. There was a lack of understanding as to who was responsible for monitoring and taking decisions. On the other hand "the project had demonstrated how very satirfactory cheap housing could be produced from local materials ... and cost effective techniques for improving hurricane resistance in low cost housing had been evolved", but at the same time, the special design required certain building skills. Some of the houses had still not been occupied or completed in 1986. Symbolically the community centre was an empty skeleton, looted and vandalized by the local children.(29)

No. 14 : The Barrouallie Glebe Development Project

Source

This project is also situated in Barrouallie on 13 acres of land that belonged to the Anglican church. Small housing lots were either squatted or rented to local families for $8 per year. The houses were in such poor condition that the Church helped by Cadec (Christian Action for Development in the Caribbean) a NGO sponsored by the Christian Council in Barbados, decided to initiate a low-income housing project there. It differed from other housing projects in that the beneficiaries were already living in the area. It was realized that the villagers would need to participate and therefore there should be a community development component as well. It was realized that, if the earning power of the population was not increased, they would not be able to pay for the houses or lots or even to maintain the houses once built. Thus the organization of home industries became part of the project.(30)

Fig. 41. Project No. 14: Community Centre at Barrouallie.

Description

The original project called for the construction of 125 two-bedroomed houses of 489 sq.ft. with a sanitary core and the possibility of adding extensions. The houses were to be built by aided self-help. The land which was to be surveyed divided into lots and sold to the inhabitants at below cost, was to be serviced with water, drainage, electricity and roads. A coordinator was appointed to organize the self-help of the population. As the project got going, the creation of income-generating employment and the use of appropriate technology were the aspects that were emphasized. These activities included experiments with reinforced wattle and daub, the production of cement blocks, a sewing and smocking group, the construction of a skills training centre out of adobe blocks and the construction of a community centre. For this construction, twelve local people were taught to make adobe in a ten-week training period. By 1986, 54 houses had been built, ten of which were of the improved wattle and daub. The Christian Council and CADEC together sponsored the project. CADEC organizeo an appropriate technology workshop and contacted the Caribbean Development Bank for support. For the implementation, a Committee was set up comprised of representatives of the Church, of CADEC, of the government and of the community of Glebe. The local inhabitants were involved in the income generating activities and in the construction. Loans were made through the Church. A volunteer from the U.S. Peace Corps and an expert sent by the British Development Division also helped in the project.

Infrastructure and Services

The project included the development of infrastructure but the implementation was very slow. The area had not been surveyed when the

first houses were set up and two houses were built on one lot. The area has electricity, the roads and the paths have been improved but the other elements of infrastructure are still lacking.

Cost

The cost of the material for the first houses built was from $5000 EC to $7000. The estimate for the total cost of the project at the outset was $1,534,000 EC or $12,272 EC per house including $2,300 EC per house for the sweat equity of the labour provided by the householders. Difficulty in obtaining the necessary financing made it necessary to reduce the scale of the project.

Outcome

This project has had a certain amount of success and some failures. Improved housing has been built by the inhabitants at a price they can afford. There is a community centre and a skills training centre. However, the difficulty of developing a self-help project initiated outside the community is exemplified. The people of Glebe did not respond with enough enthusiasm to the idea of self-help from the point of view of the Christian Council. Their attitude was said to be too passive and to lack initiative. They were quoted as saying "Why can't it be a scheme where they set up the houses for you?". On the other hand, the local people had complaints about the attitude of the landlord, the Anglican Church. They had wanted to use the community centre to show video films but the Church had vetoed the idea (as it disapproved of the content of most video films in circulation). The group making cement blocks lost all their material because they put it on a lot the Church had said it would acquire, but as the owner of the lot was never paid, he confiscated the material and began to produce blocks himself. There is difficulty in collecting the payments; this is at least partly due to the fact that the lots have not been surveyed. On the whole, this project illustrates the many pitfalls of organizing community development. It shows that even with considerable effort, all the problems do not always get ironed out and that there must be a great deal of "savoir faire" in making community development work.

No. 15 : Grenada House Repair Project

The situation of human settlements in Grenada is not very different from that in Dominica or in St. Vincent. A large percentage of the population live in small ramshackle houses. The GNP is slightly higher than in Dominica, no doubt because of a more flourishing tourist industry, but many Grenadians live at a bare subsistance level and have few resources with which to improve their housing. When the New Jewel Movement took power in 1979 (with Maurice Bishop at their head), there was an intense effort to develop the self sufficiency of the island and at the same time to improve the living conditions. Housing was one of their priorities. Two different programmes were undertaken, the Sandinista factory for building prefabricated houses, and the House Repair programme. The latter has been reintroduced by the Blaise regime with only a few minor changes as it was considered successful. It is this House Repair Project that we have selected to study.

Fig. 42. Project No. 15: Rebuilding by self-help.

Source

The programme was originated by Maurice Bishop's government. It was devised to reach as many of the poorly housed low-income households as possible with the very limited resources available to the PRG.

Description

Building materials are provided to the households that have been identified by the local village committee. Teams of the local villagers are mobilized to help with the work which can vary from simple repairs to completely rebuilding the house. Each case was treated individually, the state of the house and the means of the household both being taken into account.

Actors

The Ministry of Housing provided the materials and the transport using two warehouses, one situated in the North and the other in the South. Each village had a contact person and a committee which helped to select the applicants. A local carpenter made an estimate of the material needed. The team of builders went from site to site regularly helping each household with the rebuilding or repairs. The contact person is responsible for collecting the monthly payments.

Infrastructure

None.

Cost

The cost varied according to the repairs necessary. The households were asked to repay from $5 EC to $17 EC monthly depending on the resources of the household and the repairs done. They had from two to six years to repay the loan.

Outcome

This programme had just gotten under way when Maurice Bishop's regime came to an untimely end. It had been so popular and so effective in improving the housing of the rural villages that the programme was reintroduced by the Blaise government. The National House Repair Programme, as it is now called, is similar to the former programme, but more centralized. A staff of 34, including two house managers and sixteen local coordinators implement the programme. Applications are accepted from low-income households and an estimate is made about the materials needed with the help of the local coordinator. In 1986, there were 1000 beneficiaries. The materials used are Honduras pitch pine, galvanized iron sheets for roofing, wooden window frames and doors. The popularity of the programme is indicated by the large number of applications received. The officials of the programme also insist on the need, in Grenada, for its continuation. A maximum number of households are reached with a minimum of funds. The use of collective self-help for building is also considered a very positive aspect of the programme.

AFFORDABLE, DECENT, DURABLE, APPROPRIATELY SITUATED HOUSING

The basic problem of housing the poor is the availability of decent, durable housing situated appropriately at a cost that the poor can afford. These case studies underline one of the most insurmountable difficulties which is that even heavily subsidized housing that is decent and durable is too expensive for the needy families because of the high cost of land, of material and of labour that go into providing the housing. In the region we have studied, between 50% and 60% of the population cannot pay for any form of housing in keeping with the planning regulations. Of all these examples of "low income" housing projects, only three were able to improve the housing of the poorest sectors of the population. Those were No. 7, the Giraudel Housing Committee's Project, No. 14, the Glebe Project in St. Vincent, and No. 15, the House Repair Project of the PRG in Grenada. Two other projects were able to improve the immediate environment of the communities served, No. 11, the Muller Village Squatter Upgrading Programme and No. 4, the Squatter Removal Project in Dominica.

To help elaborate the most effective strategies for housing the poor, a comparative analysis will help define those elements of the programmes that prevented them from attaining their goal and those elements that had a positive impact. The method used will be to analyze three aspects : (i) affordability, (ii) decency and durability and (iii) location. All these aspects wil be studied in relation to the five resources necessary for improving housing : land, labour, material, finance and know how. In the light of the information provided by the projects studied and our research concerning Dominica, we will attempt to single out those aspects of the programmes which were responsible for their success or failure.

AFFORDABLE HOUSING

If we start with the criterion of affordability, it is clear that the very low-income households the programmes are meant to benefit cannot afford to spend much on housing. Most of the government housing programmes, in fact, produced housing for which the lowest income households were not eligible for financial reasons. To draw up a programme it is essential to know exactly how much each household could spend on housing without jeopardizing their standard of living which, by definition, is very close to subsistence level.

It is very difficult, if not impossible, to calculate the resources of poor families as they are very aleatory. Furthermore, the relationship between affordability and willingness to pay should be examined. The amount available for purchasing or improving a home will depend to a high degree on the motivation of the household and on support from friends and relatives, both of which factors are hard to translate into precise figures. For these reasons, the only programmes which came close to having an idea of how much the beneficiaries could pay, were those with a great deal of input from the communities where the local committee or contact person knew the families well enough to work out with them an accurate estimation, as in Giraudel and the Grenada House Repair Programme.

The importance of motivation in relation to affordability has to be understood in context. Very poor people can only spend for housing what is left over when they have fed themselves and their families. All sorts of

other needs compete with housing such as water, medecine, clothing, etc. It is understandable that they need to be highly motivated to be willing to pay money back to anonymous institutions considered to be rich, such as the Church, the government or a foreign government. A reaction that was mentioned several times was that the population felt that the houses should be free because the programme was backed by the Church. The willingness to pay back to a revolving fund which will be used by others in the community was notably superior as recorded by the low rate of default. Political considerations also affect motivation. In Grenada, after the disappearance of Maurice Bishop, the rate of default rose considerably.

Affordability and willingness to pay are both quite obviously related to the elements which have gone into the housing or improvements. A person whose house is situated in the desired neighbourhood, on land over which he has security of tenure, which is built well and of materials he approves of will be more willing to pay than if any of these conditions are lacking. The recipients of the core houses in Dominica complained bitterly of the high cost, at the same time they pointed out the faults in construction. This programme had a high rate of default on loan repayment. In the Glebe Project, the problem of collection was related to the lack of title.

The cost of the house can sometimes be reduced or the quality obtained improved, by a judicial use of local materials, thus creating employment locally. This is the case in Dominica with the use of local timber by the North East Timbers Coop and Superior Timbers Ltd. Greater savings are made by the type of labour used. Labour hired from the informal sector is cheaper that from the formal sector, and, of course, the various sorts of self-help, and mutual aid lowered the cost. This is illustrated by the Scots Head and Giraudel Housing Scheme and by the House Repair Programme in Grenada.

The resource which has the most obvious influence on affordability is credit. Housing and improvements were affordable for the very poor in Giraudel, the Grenada House Repair Project and for the upgrading of Muller Village because credit was arranged on easy terms for small sums and for little or no collateral.

As far as affordability goes, it is important to realize that there are two ways of making housing affordable to a given community - one is to bring down the price of the housing - the other is to raise the revenues of the population so they they can afford to spend more on housing. Only the project at Glebe, Barrouallie, made a real effort to raise the income of the community.

In many of the projects, it was apparent that the low revenues of the households were due to the large percentage of female heads of households whose earning capacity was much lower than that of males because of descrimination in employment, because women are paid less for the same work and because of their responsibilities as mothers prevent them from working regularly. When drawing up programmes, this basic socio-economic factor in the Caribbean is not considered. The projects are made for the traditional nuclear family which explains in many cases why they were not affordable for the lowest income households. In Barrouallie, for instance, this was cited as one of the main reasons that the local participation in the project did not work. Single women struggling to raise a family with no real income are not likely to have much time to contribute to self-help projects unless their situation is taken into consideration.

The notion of affordability can also be applied concerning the promotor of the project. Funds for building low-cost housing, whether from the government or international aid, are extremely limited in this region. The higher the subsidy per unit, the fewer the number of units produced. There is also a limit to the amount of subsidy that is tolerated per unit. On the other hand, much of the difficulty over the Dominican core house programme between the donor, Trinidad and Tobago, and the Dominican government was due to the much higher cost of the houses for the beneficiaries than originally planned.

It is also very clear that housing built by the private sector for the government will be more expensive than housing built by the informal sector for individuals or a community. In Dominica, the formal sector tended to charge what the traffic could bear, often lowering their prices for the poor.

Affordability also concerns the economy of the country. A study made for the government of Dominica concerning the Pound Area indicated the negative impact on the economy if housing was built that relied upon imported materials because the financial effort required would go to materials and indirectly to labour abroad rather than to create jobs at home. Furthermore, building with a high percentage of imported materials puts a heavy strain on the balance of payments. Whether a government believes it can afford to build housing depends as much on the policy of the party in power as on the state of the economy. The labour party in Dominica and each of the governments in St. Vincent accept to finance losses in government housing. The Freedom Party in Dominica finds this inadmissable.

If we take into consideration all these points, it becomes clear that the notion of affordability is very complex. Simply calculating the reported income of a household does not give an adequate view of how much they will be willing and able to spend on housing. Many other considerations have to be made. To sum them up, we can say that affordability of housing for the inhabitants is related, among other things, to:

1. Accurate information on household income;
2. Willingness to pay ;
3. Local leaders whom the community trusts ;
4. Satisfaction with the produce ;
5. Motivation to improve housing :
6. A judicial use of building material ;
7. Access to credit ;
8. The employment situation ;
9. Family structure ;

If we analyze the affordability of housing for the sponsor, a state or a non-governmental organization, it is not only related to the resources of the country, but also to :

1. access to international finance ;
2. the type of work force employed ;
3. the local building industry ;
4. the balance of payment of the country ;
5. its indebtedness ;

6. the political philosophy.

Decent, Durable Housing

The criterion of decent, durable housing is related to the structure and also to the services with which it is equipped. In practice, most people end up with the only sort of shelter that they can afford. The essential problem with it is that it is ramshackle, overcrowded and unhealthy. Furthermore, the area is subject to hurricanes, earthquakes and volcanic eruptions. Situated in a tropical climate, buildings are susceptible to attack by insects and rot. All these hazards submit housing in this region to rapid deterioration.

Decent housing thus implies the use of building materials that are made to resist a tropical climate, for instance, wood that has been treated and galvanized sheets resistant to corrosion. The example of the prefabricated houses built out of beaverboard in Grand Bay illustrates how essential adequate material is. They were already severely deteriorated five years after they were built. Each of the programmes studied had to make a compromise between the quality and durability of the material and the cost.

As we saw in Part I, the "know how" or technical expertise of the builders obviously helps in the building of resistant and attractive homes.

Durability and thus decency in the long run is influenced by the hurricane resistance of the houses. Here again, it is a question of the relation of cost and efficiency. The French model house in Dominica and the St. Vincent government programme in Barrouallie both developed hurricane resistant structures but these improvements added to the cost of these houses. In other cases, traditional techniques for the hurricane resistance are used, and depend on the skill of the builders for their effectiveness. Rightly or wrongly, cement blocks are considered more resistant and in particular, more hurricane proof and were used in Scots Head and in Fair Hall.

The resource which contributes most to decent and healthy housing is no doubt the infrastructure and the services and they in turn take on more importance proportionally as the lot is small and the setting urban. There is a direct relation between the size and location of the lot and the services necessary ; the more rural one is the less essential they become. In a rural village, where each house has an adjacent garden lot, the need for drainage, sewers or public facilities is not a major concern, whereas it becomes one in a crowded shanty town. Garbage is not a problem in rural settings either as it can be fed to the pigs, burned, composted or buried ; on the other hand, water is essential everywhere for healthy living.

Many of the programmes dealt only with housing, leaving out any consideration of infrastructure and services, thus only dealing with part of the question. The squatter removal in Dominica on the contrary illustrates the significant improvement in living conditions that is accomplished by moving a small hut from a crowded slum to a serviced lot, even when the services are minimal.

Situation

The location of housing has an important impact on the quality of life, the access to employment and the cost of the land. Recent studies have underlined the rapid increase in the price of urban land thus making it

more and more difficult to find available lots for housing. This problem, although basic to providing housing at low cost, has not been dealt with effectively in any of the countries studied. St. Vincent does have a policy of acquiring land, but the land is occupied immediately so does not constitute a land reserve. Making cheap land available for low-cost housing is certainly one of the priorities of any long-term housing strategy.

CONCLUSION

This analysis of the small islands of the Caribbean teaches us much about addressing the colossal problem of housing the poor in Third World countries. It can help us draw some general conclusions and recommendations about the best ways of approaching the problem of developing effective policy that reaches the populations most in need of them. However, it must be remembered that each country, each region, and community has its own specific characteristics to which policy must be adapted. From the study made, we can suggest the following general recommendations for upgrading human settlements.

1. The improvement of human settlements must have high priority for governments, bilateral and international aid agencies, and NGO's. This implies the commitment of expertise and resources. Without sincere and persistent efforts, the physical environment of the poor will not improve. Worse, it will rapidly deteriorate.

2. Agencies involved in housing policy must concentrate on making the most efficient use of their scarce resources in order that the efforts that are made bare fruit. In a general way, we can say that Government action is most efficient when it provides a framework for action. It is least efficient when it tries to act as general contractor and manager of housing. Our study has made this point very clearly as have many other analyses of housing policy all over the world. Often, however, the wrong conclusions are drawn, i.e. that because governments are seen to be inefficient as providers, therefore they should not try to tackle the problem at all, whereas there are areas of activity which can only be the responsibility of government, for instance, making appropriate legislation, preventing extreme land speculation, providing for a redistribution of income, and making regulations concerning land use, housing tenure, infrastructure and housing finance. Putting effort and resources into these areas should prove much more productive than actually building and running housing estates. The low productivity of the Housing Development Corporations in the Antilles (in fact all over the world) means high costs, which the target population will not be able to afford unless there is a subsidy heavier than most Third World governments can afford. On the other hand, the private market left to its own devices cannot be expected to improve the situation of the lowest income percentile groups.

3. "Housing" is not merely a problem of decent shelter, but must include the physical and sanitary environment. Upgrading infrastructure has been one of the most efficient ways of improving housing and has been an area of efficient government and NGO action as in the case of Muller Village and the Glebe Estate.

4. Suitable land for housing must be provided. Devising policy for making land available at prices that the lowest income group can afford should be a major area of government policy. In the Lesser Antilles, the few attempts made have not been successful ; on the other hand, high land prices, delays and difficulties in procuring land or title to it have seriously hampered several of the projects, particularly in Scots Head and the Dominican Core Housing Programme. Making land reserves is one among a variety of possible policy options. Recently in other Third World regions, another policy has been cross subisidization whereby land developers are only given the

privilege of developing high cost plots if they include small lots at below cost for the poorly housed. Innovative policies of this sort need to be developed.

5. Credit must be provided on very easy terms. Lack of collateral for traditional bank loans is a major problem for the poor. Our study shows a high rate of reimboursement of low-income families when the programme is controlled by local people in whom they have confidence and when they feel that the price is fair as in Giraudel and the House Repair Programme in Grenada. Loans made directly by the central authorities were harder to collect especially when the product was believed to be shoddy as was the case for the core houses in Dominica. This indicates that local participation is an important factor when considering loan schemes for the very poor. There is a serious problem financing this sort of loan funds. Unfortunately international aid organizations and NGO's are rarely willing to make grants or loans simply for the purpose of making credit available as there is no visual produce as a result ; yet it is these loans that have proved to be the most efficient. Changes in the policy of aid agencies should be sought that encourage them to make this type of loan.

6. The greatest effort should be made to promote local community action. A community that is prepared for concerted action is one of the best assets for developing projects. The authorities should therefore develop expertise in community action. One of the most obvious results of the evaluation has been that the programmes managed by the local communities were the ones that produced the best housing from the point of view of quality/cost. Even more important, they produced housing that the beneficiaries could afford since it was geared to the individuals' specific needs and pocket book. One characteristic of successful local participation should be noted. In the two projects where the idea was introduced by the external authorities sponsoring the project, in Scots Head and Barrouallie, the local participation was a failure. The difference between these projects and those where it succeeded was that in the latter, in Giraudel and Grenada, a local group from the area had all or most of the responibility for the project. It failed in the projects in which the participation was created by an external group. In other words, it is not enough for outsiders to say that there has to be participation. It is best when the idea comes from the local group or when the local group becomes part of the process from the beginning and makes the project theirs.

7. Training in community action must be developed. Dedicated and charasmatic members of the local population are an asset, particularly when they have skills in community organizing. One cannot create charismatic individuals but one can train likely organizers in community development skills and encourage their efforts at organizing. Individuals from the communities tend to obtain local support much easier than outsiders, therefore the training should be done with the local inhabitants.

8. Appropriate building materials must be available at a reasonable price. What is appropriate varies greatly from region to region and from urban to rural settings. Local building materials may help create jobs and improve the balance of payments but are not appropriate for the lowest income levels unless they are cheaper than imported materials. If governments want to encourage the use of local materials, they must make use of fiscal policy to make them competitive on the market. Masking soft loans available for the purchase of materials has had a positive effect on housing in Grenada and St. Vincent.

9. The techniques used for building and the production of building materials must be accessible to the local builders. The improvement of housing may require new techniques but if they are not assimilated by the local builders, the techniques will remain experimental. One reason the cement block has been so successful as a building material all over the Third World is that making blocks and building with them are techniques that are easily learned and can be operated on a small scale. Producing baked bricks and building with them requires greater skill and more expensive equipment and is more difficult to introduce in low-income communities. Because so much construction is done by large numbers of semi-skilled, part-time builders, it takes a long time to introduce new techniques no matter how appropriate they are.

10. Collective self-help should be encouraged but only when the circumstances are favourable. Both a better environment and large economies can be achieved when the work is done by mutual aid if the conditions are appropriate. That means there exists a community which is cohesive, which is motivated to work together and which has certain human resources at its disposal such as semi-skilled workers and capable organizers. On the other hand, if efforts are not made to ensure there is an acceptable climate for collective self-help, the chances of success are slim.

The task of improving the human settlements of the poor is colossal. Housing problems are growing much faster than the solutions partly because the solutions are not well though out and are inefficient and partly because of a lack of concern and commitment, both in the First World and among some leaders in the Third World. Let us hope that it is not in vain that the United Nations has dedicated a year to be devoted to the problem of shelter for the homeless.

BIBLIOGRAPHY

Banks E.P.	A Carib Village in Dominica mimeo, Roseau Public Library
Bouvier, Leon	Dominica Yesterday, Today and Tomorrow
Barthelemy, Gerard	Habitat Rural du Sud Est d'Haiti. Fonds d'aide et de coopération de la République française, 1985
Berthelot, Jack & Gaumé Martine	Kaz Antiyé, Caribbean Popular Dwelling Editions Perspectives Créole,Pointe à Pitre, 1982
Caribbean Agro-Economic Society	Proposals for the Development of the Geneva Estate mimeo
Caribbean Council of Churches	Disaster Emergency Relief and Welfare: A Programme of the Caribbean Council of Churches, 1981
	Annual Report of Cadec
Cracknell, Bazil	Dominica Stackpole Books, Harrisberg,Pa. 1973
Douglas, Rosie	Chains or Change
Eastern Caribbean Central Bank	Economic and Financial Report 1984
Guengant, Jean Pierre	Caribbean Population Dynamics : Emigration and Fertility Challenges. Conference of Caribbean Parliamentarians on Population and Development, Barbados, 1985
Government of Dominica	Proceedings of the Inter-Caribbean Workshop on Low Cost Housing, 1984.
	Commonwealth of Dominica Report on the National Survey of Settlements, 1980
Caribbean Development Bank	Housing Sector Policy Paper, CDB Barbados, 1981
Government of St. Vincent	The Housing Development Corporation, mimeo 1984
Branch, Stanley	Aided Self-Help for Low-Income Families in St. Vincent, West Indies, mimeo

Cato, Randolph	Land, Homes and People : Towards Self-Development through Community Action, Cadec, Barbados 1977
Government of Dominica	Redevelopment of the Pound Area prepared by the Economic Development Unit with the assistance of UNCHS/UNDP Project Team December 1981
	Action Area Plan Proposal for Redevelopment of the Pound Area, Blazejewics, Schonning Dorota, Physical Planning, Division EDU, UNCHS/UNDP Project Team
	Commonwealth of Dominica Report on National Survey of Settlements, 1980, Vol I and II, EDU, UNCHS/UNDP Project Team
	Facts about Women (mimeo)
	Housing in Dominica, the Facts - Housing Developmet Corporation, 1979, Tropical Printers
	Infrastructure at the Geneva Estate - Housing Development Corporation 1979
	Greater Portsmouth Physical Development Plan - 1982-1985, Physical Planning Unit, 1984
	Canefield Checkhall, River State Development Plan - June 198
	The Dominica Story, The Dominican Institute, Roseau, 1984
Honychurch Lenox	Our Island Culture - Tropical Printers Ltd 1982
Mintz Sidney	Caribbean Transformations, John Hopkins Press, 1982
National Commercial & Development Bank of Dominica	Annual Report and Statement of Accounts - 1981
Newtown Reconstruction Committee Survey	Survey of Newtown and Citronier November 1980, Monica Green
ORSTOM	Nutritional Survey in Dominica by F. Delpeach, J.L. Dyck, Ph. Chevalier, C. Alphonse, E. Mattew, U. Jones, 1982

ORSTOM	Recent Caribbean Migration, Neglibible or neglected Fact by Jean Pierre GUINGANT - 1984
Pan-American Health Organisation	Review of Communicable Diseases in the Caribbean - Caribbean Epidemiology Centre - 1982
Roseau Cooperative - Credit Union Ltd.	Report and Proceedings for the 31st Annual Meeting
WAND, Women and Develment, Extra Mural Dept.,Univ. of the West Indies, Barbados	Getting the Community into the Act - 72 Participatory Activities for the Field Workers and Trainers - prepared by Pat Ellis

Rapports de Mission - GRET/Habitat

Braun F.	Construction de "Newtown School" - Habitat Economique Programme Routiers - Coopération Technique -Infrastructures et habitat - Rapport de mission en Dominique MRE Octobre 1980,. 100pp.
Faure, C. Commissaire E.	Construction d'une école en Dominique Newtown School - Rapport de mission - MRE - décembre 190 - 30 p.
Cabannes Y.	Rapport de mission d'évaluation et de suivi - Dominique - Ecole Newtown et Industrie des Matériaux Locaux - MCD - mai 1983 - 63 p.
Chantry, G.	Inauguration Newtown School - Rapport de mission Dominique - mai 1984 - 7p.
Cabannes Y.	Rapport de mission Dominique - Barbade - MCD .- mai 1984, 7p.

FOOTNOTES

1. Eastern Caribbean Central Bank Economic and Financial Report, Dec. 1984

2. Jack Berthelot and Martine Gaumé, in Kaz Antiyé, Editions Perspectives Créoles, Nov. 1982, p.56

3. Lennox Honychurch in The Dominica Story, The Dominica Institute 1984, p.59

4. François Girod, Une fortune coloniale - La Famille Hecquet à St. Domingue, quoted by Gerard Barthelemy in Habitat Rural du Sud-Est d'Haiti, pp.4-5

5. Saniteau quoted in Berthelot and Gaumé, op.cit. p.51

6. Ibid, p. 51

7. Labat quoted in Berthelot and Gaumé, p.55

8. Berthelot and Gaumé, op cit p.24

9. J.P. Sainton in Berthelot and Gaumé, op cit p.49

10. Honychurch op cit p.96

11. Sidney Mintz, "Caribbean Transformations", John Hopkins Press 1984

12. Ibid.

13. Ibid.

14. Ibid.

15. Berthelot and Gaumé, op cit. p.81

16. Feraz Bedwei, A National Housing Policy for Dominica, UNCHS/EDU of the Government of Dominica, 1984

17. Facts about Women, a brochure compiled by the Women's Bureau of the Ministry of Home Affairs, Dominica, 1985

18. Honychurch op cit p.148

19. Facts about Women

20. Proposals for the Development of the Geneva Estate by the Caribbean Agro Economic Society (mimeo)

21. Ibid.

22. Housing in Dominica, the Facts Housing Development Corporation, Government of Dominica, 1979

23. Redevelopment of the Pound Area, UNCHS/UNDP Project Team

24. Survey of Newtown and Citronier, Newtown Reconstruction Survey, 1980

25. Mimeo of the Ministry of Housing, St. Vincent.

26. "Proceedings of the Inter Caribbean Workshop on Low-Cost Housing", 29 Nov. - 6 Dec. 1984, Dominica, W.I.

27. Ibid. p. 107

28. "Aided Self-Help for Low-Income Families in St. Vincent, West Indies" by Stanley Branch.

29. "Barouaillie Housing Project", St. Vincent, 1982 EV 307 Overseas Development Administration, London.

30. "Land, Homes and People - Towards Self-Development Through Community Action", by Randolph Cato, CADEC, Bridgetown, Barbados, 1977.

ANNEXES

ANNEX I

PROGRAMME FOR DEDENSIFYING THE OVERCROWDED SETTLEMENTS OF DOMINICA IN ORDER TO IMPROVE SANITARY INFRASTRUCTURE

1. PRESENTATION OF DIFFERENT STEPS

Step I. Preliminary Planning - The Most Overcrowded Areas Should be Designated First (so that funds for this programme are used appropriately)

Because the planning involves particularly overcrowded areas, it is essential that the local people be involved from the beginning. Their involvement is all the more important in that the solution will require their willingness to act. For this reason planning should begin with local community meetings and a programme of community development (1). A local committee should be created that has the confidence of as large a majority of the population as possible. The community development programme should discuss all matters thought important by the inhabitants but emphasis should be given to sanitation, health environment and better housing. The Women's Bureau is developing skilled personnel in this field and they would seem to be the appropriate office to organize this work, but, no doubt, as they are understaffed they would need reinforcement and technical assistance from environmental planners and community development personnel. Out of this programme of community development, possible solutions for improving the sanitation and the housing of the area should be drawn up that have the backing of the population.

Step II. Setting up a "Land Acquisition Authority"

Without prejudicing the results of the community development's solutions, it would seem inevitable that whatever the course chosen , more land will be necessary to improve the local sanitary environment. Parallel to Step I therefore a "Land Acquisition Authority" should be empowered to obtain land, by eminent domain if necessary, for rehousing the overspill of the designated area. It is important for land to be available and for the community development commmittee to be aware of it for they would be encouraged to develop feasible dedensification plans if they knew of the availability of land which was both cheap and nearby the overcrowded area. Those families with sufficient resources would be encouraged to volunteer to move and to build larger and sounder homes. My study suggests that there are families with sufficient resources for better housing who cannot move because land is not available.

Because of the very limited resources in Dominica for this type of action, the Land Acquisition Authority will need a loan from an international development bank of from foreign aid for both buying the land and putting the necessary infrastructure. The lots, once prepared, could be put up for a long lease or sold at a subsidized rate uniquely to those households in the designated area willing to move. The stimulus of cheap available land nearby should encourage the families to leave the overcrowded area when their removal is necessary for the improvement of the sanitation and the enlargement of other houses. Their old house could either be moved to the new site if it is in reasonable condition or sold to the development committee needing space. For these families to be willing to make the effort, certain advantages should be offered such as low cost land, cheap

building materials, cheap loans and technical assistance in building or a loan sufficient to buy a prefabricated house. They should be given a reasonable price for the land and the house they leave behind, or loans or subsidies to help move and repair their houses.

Step III - Construction of New Housing for those Relocating

Rather than building houses for the relocating families in a traditional housing scheme, it will be less costly to give the household (i) access to low cost building materials through a series of coupons (ii) soft loans to pay for the material and labour (iii) technical assistance free of charge. Every effort should be made to organize on an informal basis self-help teams to do as much of the building as possible. Each household, however, should be free to organize the building of the new house as they see fit or to put a prefabricated house if they prefer. It should only be possible for relocating families in the original designated area whose removal is deemed essential by the development committee to benefit from these loans.

Step IV . Improving the Sanitary Infrastructure

The different government departments and utility companies should be included in the planning of the rehabilitation of the area once the local population has defined their priorities in order that the technical aspects of improving the infrastructure be worked out. To lower the cost for the community, self-help activities ought to be developed, for instance, in building communal septic tanks or drains and soak aways.

As land is made available within the overcrowded area as families relocate, the local community development committee should make sure that the land is appropriated for the best use for the community according to the plans they have drawn up. It should be acquired or leased by the community or the utility companies needing the land for the development of infrastructure or by neighbours needing to expand their house and lot.

Loans must be available for the community to acquire the land they need for communal facilities i.e. communal septic tanks, showers, playgrounds, etc.

Loans must also be available for the households in the area in order that they repair, improve or enlarge their homes. Particular emphasis should be put on improving salubrity by having extremely cheap loans for sanitary equipment. Technical assistance should be available for the community and the households for their improvement.

CONSIDERATIONS ON THE FINANCING OF IMPROVEMENT PROGRAMMES FOR LOW INCOME NEIGHBOURHOODS

In most cases, the pilot projects, whether considered successful or not turn out to have cost the organization or agency involved much more money than was originally budgeted. It is very often for this reason that this sort of programme remains a pilot project and is not reproduced. On the other hand, the principal justification for these programmes is that they will be an example as to what can be done that should be generally adopted.

It is extremely important that this sort of programme be repeatable and particularly the financing. Therefore the costs must be kept down with as

much local and regional financing of the necessary loans as possible and little dependence on grants(1).

The community itself which, in the long run, will have to bear much of the costs itself should have a full say concerning the installation of expensive utilities. There should be the possibility of postponing certain costly installations until the community can afford them.

Projects funded by international aid tend to strive for costly perfection. There is an understandable desire to contribute to a project that is complete and well done. However these same funds would go much further if used for revolving loan funds or for training local people to continue the programmes the aid programme has initiated rather than offering finished goods.

As for the financial capacities of the target communities, there is a great lack of information concerning the amount of resources, finanicial and other, households have and are willing to put into improving housing and infrastructure. Very often calculations are made as to the resources of the households and then it is assumed the household will be willing to devote a specific percentage of that income on housing. This sort of calculation is very often misleading, as first of all, it does not take into consideration hidden sources of possible income or loans such as help from family abroad, non- financial capital, etc. Even more important, it does not take into consideration the motivation of the household nor their priorities concerning housing. These priorities can be very low or very high depending upon all sorts of subjective circumstances. According to its motivation, a household will find a great deal of money and resources or none at all for housing themselves. In subsistence level economies, the household budgets are not modelled on those of industrialized countries with a certain percentage for food and lodging etc. It is mroe a case of spending all one's cash on the object of consumer goods that has one's highest priorities, a radio, a T.V., a car or a new roof. It follows that if the priority for improving one's house is foremost, even very poor families can muster up certain funds. If, on the other hand, this priority is low, there wil be no money at all for improvement, or for paying the rent or taxes for that matter.

Possible causes for high priority of housing improvement :

(i) Pride in one's local community achievements ;
(ii) A desire to keep up with the neighbours ;
(iii) An understanding of the health risks or poor housing and lacking sanitary infrastructure ;
(iv) A desire for a better environment for one's children.

---

(1)According to the Urban Projects Manual by F. Davidson and G. Payee "Almost by definition the large number of poor people who require access to services and accommodation rule out the automatic assumption that subisidies can be paid on anything but a wholly insignificant scale. The alternate and preferred approach is to assume initially that the population for whom the accommodation and services are targeted cannot expect any subsidies and whatever is to be provided should be financed entirely from the resources at land, however meagre. P.64

Possible causes of low priority :

(i) Higher priority for modern consumer goods (T.V., a car, etc) ;
(ii) The belief that it is the government's duty to improve the environment or housing ;
(iii) Animosity or political rivalry with the Community Development Agency promoting housing improvement ;.
(iv) Lack of tenure on the land.

3. SUGGESTIONS FOR FINANCIAL AID

As we have seen, the cost for dedensifying schemes of this sort should be kept at a strict minimum. However, three types of aid will be necessary :

(1) Land acquisition loans at very low rates must be madeavailable for acquisition of land for the households moving out as well as for the community so that it can acquire the land needed for dedensifying the area.

(2) The programme would benefit immensely from technical assistance made available through bilaterial or international aid. Experts in community development, low cost housing design and environmental planning are particularly needed. A two or three person team with local counterparts in these fields should be able to carry out two or three programmes of this sort over a period of two years.

(3) There will not doubt be households in these designated areas that have no resources with which to accomplish the slightest improvement, especially the elderly, the handicapped, young mothers, etc. The local Community Development Committee will be in the best position to discover these households and to suggest special assistance for these cases as the need comes up. The local Social Welfare Department and possibly charitable organizations could be appealed to for financing these cases.

Along with this aid, local and central government and the utility companies should be willing to give priority to the needs of these communities and to provide or improve the essential infrastructure as required.

ANNEX II

Summary of the Characteristics of the Pound Area as a Whole (1)

Population in 1980 :	male 163 or 46%/female 191 or 54% Total 354	
Number of Households :	96 of which 63 heads of household were single	
Age of the Population:	over 64	15 or 6%
	21-64	144 or 40%
	15-20	71 or 20%
	5-14	91 or 25%
	0-4	33 or 9%
Size of Households :	Households with 1 person - 22	
	" " 2-3 persons - 22	
	" " 4-6 " - 38	
	" " 7 or more " - 14	
Water Supply :	56 households or 58% had no water in the house or on their lot	
Toilets :	72 households or 75% had no toilets	
Electricity :	39 households or 40,6% had no electricity	
Fire Service :	No direct service	

Open drains or pockets of vacant land for disposal of excreta.

(1)Redevelopment of the Pound Area, Roseau - EDU of the Dominican Government with the assistance of UNCHS/UNDP project team.

LIST OF CONTENTS

Page

LIST OF ILLUSTRATIONS