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MOROCCO SHELTER SECTOR ASSESSMENT

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AGENCY FOR INTERNATIONAL DEVELOPMENT

OFFICE OF HOUSING

SHELTER SECTOR ASSESSMENT:

MOROCCO

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WASHINGTON D C 20523

FOREWORD

This study was conducted in 1981 by the National Savings and Loan League (NSLL) for the Office of Housing of the Agency for International Development. The purpose of this study was to develop information and make recommendations relating to the shelter sector in Morocco.

The study team was led by Ed Robbins of the NSLL staff. Ms. Sonia Hammam and Mr. Stanton Davenport, consultants to the NSLL, were other team members.

The findings and recommendations of the report have been reviewed in detail and discussed with representatives of the Government of Morocco. Special thanks for their participation are due Mr. Osman Chami, Director of Housing and Mr. Ben Omar, Director of the Agency for Slum Improvement, Ministry of Housing and Regional Development.

While the report results from close cooperation of the team and its Moroccan counterparts, it is not to be interpreted as the official position of either the Government of Morocco or the Agency for International Development. We hope, however, that the Government of Morocco will find the report and its recommendations useful as it formulates and implements future shelter programs.

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I. INTRODUCTION: SUMMARY AND CONCLUSIONS

A. THE NATIONAL SETTING FOR SHELTER PROGRAMS

The Shelter Sector Development Plan for the 1981-85 period reflects the GOM intention to begin a more investment-oriented development approach following three or four years of austerity programs. The national plan is also expected to direct GOM attentions to those areas of agricultural development, small business and social services (including housing) which have not received priority treatment in past development plans. The national plan is expected to follow the lead of the interim three year plan (1978-80) which indicated that efforts had to be made to develop poles of economic activity outside the Casablanca and Rabat zones. To some degree this is in response to analysis which suggests that population migration to these centers can be arrested if investments are focussed on the secondary city network around the country (see Figure I). To a considerable degree, however, the policy appears to result from the intention of the GOM to spread the wealth about the country and insure a broader base of political satisfaction.

During the 1978-80 interim plan a very determined effort was made to reduce the nation's reliance on foreign debt to fuel the national government deficit, and to reduce that deficit itself. The past three years have been marked by a credit squeeze which has apparently had the desired effect on these macro-economic problems. The effect of this squeeze, naturally, has been to hold down investment in the shelter sector. Analysis of the nation's financial markets makes clear that the existing institutional mechanisms for mobilizing domestic savings have been effectively employed to direct those savings to the national government, and in substantial degree, to reduction of the deficit.

It is not clear that the conditions which gave rise to the deficit have completely disappeared. Principal among these must be the military activity that has been taking place in the south of the country since 1975. It is obviously difficult to assess the impact of this activity on the budget, but it must have a substantial impact on government spending. Furthermore, a weakening of economic activity in Europe has affected the earnings of Moroccan workers resident abroad, and the tightening of credit appears to have led to some spending from capital and thereby reductions in the growth of savings. Thus, Morocco continues to have a high short-term foreign debt position (28 percent of export earnings go for foreign debt servicing) and when deliberations are completed on the next five year plan, presumably mid-1981, decisions may have been made which, in fact, will not greatly release the restraints on credit (e.g., no more than 12 percent per annum loan portfolio growth).

In any event, it has been agreed that housing is one of the high priority items for the next plan. The draft program prepared by MHAT indicates annual levels of investment by the government and its related agencies of $322 million annually, more than double the level set for the

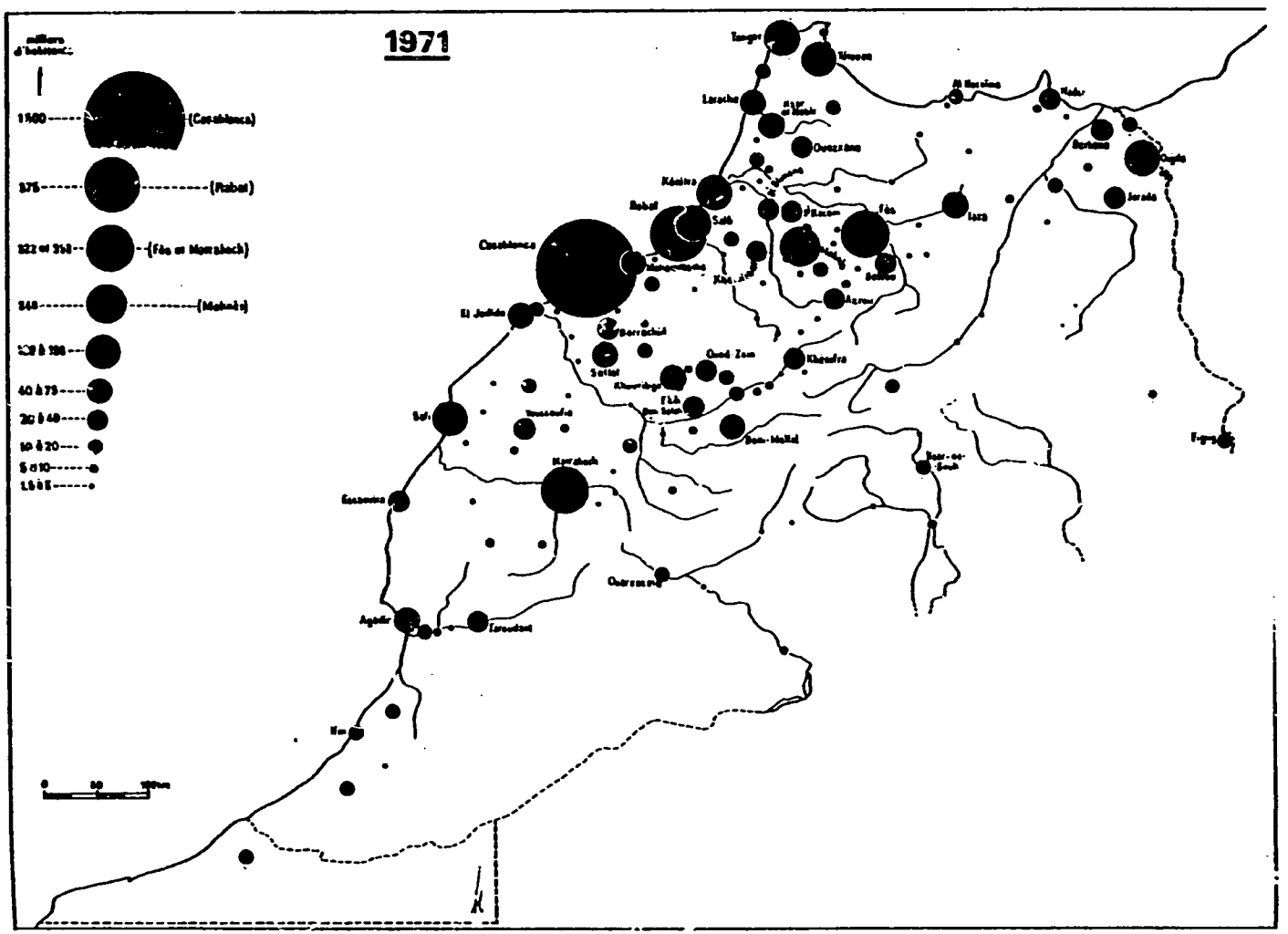

1971
(Casablanca)
(Rabat)
(Fès et Marrakech)
(Meknès)
Casablanca
Rabat
Fès
Marrakech
Agadir
Tanger
Tétouan
Larache
Kénitra
Salé
Oujda
Nador
Berkane
Jerada
Taza
El Jadida
Safi
Essaouira
Ouarzazate
Tiznit
Ifrane
Azrou
Khouribga
Khenifra
Beni-Mellal
Ouad Zem
Sidi Slimane
Sidi Kacem
Ksar-es-Souk
Figuig

Figure I

1978-80 period. The plan is directed at continuation and expansion of the work in both large and smaller slum areas (bidonvilles). Programs for large bidonvilles are envisaged in 5 of the nation's principal cities; the small and medium size bidonvilles program covers some 122 localities in both primary and secondary urban centers. The draft plan also calls for continuation of a rural housing program begun under the 1978-80 plan, extension of the HBM (Habitat Bon Marche) program which relies on prepayments by the eventual home purchaser to fund land preparation and infrastructure investment, extension of the social housing programs begun in the 1973-77 plan and completed but not extended in the last three year plan and, finally, work on some of the mechanics of shelter delivery including the combination of savings and lending, easier land transfer and land acquisition, and a program of incentives for private sector investment.

B. THE HOUSING PLAN, AND PRIORITY FOR LOW-INCOME FAMILIES

1. Current Programs

The data available suggest that during the past three years the GOM has been able to realize no more than one-third of the numerical objectives set in the housing component of the 1978-80 plan. The period, nevertheless, has been one of considerable progress on a variety of fronts, principally as relates to institutional formation. The land development process has been revitalized through recourse to down-payment financing. The upgrading of bidonvilles has been accepted, as a priority area for investment and work has begun on the development of new subdivision standards appropriate for low-income neighborhoods.

Interest rates were adjusted to more accurately reflect national and international conditions both in 1978 and 1980 and major lending institutions such as the CIH (Credit Immobilier et Hotelier) and the BCP (Banque Centrale Populaire) were encouraged to adapt their operations to the needs of the low income populations. The FNAET (Fond National d'Achat et d'Equipement de Terrains) was given life during this period and has served to facilitate the development of land for residential use by providing a steady source of funding for land acquisition and infrastructure investment. This use of home-owner down-payments has reduced pressure on the GOM budget, and providing evidence for the nation's housing planners that there is a class of moderate income families whose resources can be mobilized and directed at the solutions of their housing problems. During the past three years, and partially as a result of the success of the "pre-financing" program carried out through the use of the FNAET, the ERAC's, or regional construction companies have been given a new lease on life and should be in a position to carry out the middle income housing programs included in the up-coming plan. These actitivities represent real progress although actual levels of output have not yet begun to achieve program targets.

With respect to the nation's slum communities, the programs for Casablanca and Rabat, have resulted in the formation, within the MHAT, of a cadre of professionals who understand the importance of dealing with these population centers, and have been introduced to the mechanics which will

permit increasingly effective GOM interventions in this type of community. MHAT is in the process of establishing an office to deal exclusively with bidonville programs, and has placed this type of intervention as its first priority. At present, there is upgrading and construction activity only in the Rabat bidonvilles covered by the first IBRD program. Studies are under-way in the Ben M'Sik project in Casablanca. The GOM is finalizing plans for a second project to intervene in slum areas in Meknes and Kenitra.

MHAT has also begun two pilot shelter programs that extend beyond the nation's two principal urban areas. A program to provide for upgrading in small slum settlements in towns and cities throughout the country has begun with the selection of some 38 sites in 9 cities and the investment of some $7 million. This program now shows work in progress at sites in all nine of the towns or cities selected. The principal problems uncovered to date relate to land title assignment, due to the variety of forms that ownership can take in Morocco, and the difficulties of getting a stable labor supply through the "Promotion Nationale."

The other pilot program begun by MHAT during the last plan period is a rural area housing program designed to improve the housing stock in market towns which already reflect population and economic growth as the result of other GOM investments and private sector activity. Five different towns were selected for the first stages of the project begun during the 1978-80 plan and the program has subsequently been expanded to 41 centers requiring an investment of about $12.5 million. The objective of the rural program as presently defined is the construction of 50 to 100 moderate cost housing units in the selected towns. The target population has not been clearly identified. At the present time, MHAT officials expect that the beneficiaries will be local residents who have the financial where withall to improve on their present housing conditions. The housing units will serve as the core of a land development effort which will also include the preparation of serviced sites. MHAT officials expect that the completed units will serve as models which may be followed by purchasers of the serviced lots. MHAT officials have left a clear impression, nevertheless, that the standards to be applied in the market town program may be adjusted if evaluation indicates that a different kind of population would be the most appropriate beneficiary. They emphasized that the sole purpose of the project at present is improvement of the housing stock in the market centers.

2. Plan Priorities

MHAT officials have made clear that the bidonville program has been given high priority for near-term consideration. The large size bidonvilles, in major urban centers and those smaller and medium-sized bidonvilles with populations of up to 5000, identified as petit et moyen bidonvilles, will require a total investment of $233 million. Of this $163 million is to be devoted to the large bidonvilles and $70 million is for the smaller slum areas. Of the projected investment in the large bidonvilles, roughly $70 million is accounted for by the existing or planned IBRD or AID

assisted programs. Work on another five large slum areas has been projected to cost a further $93 million.

Following the slum area programs in priority is the market town (rural) housing program for which the Plan projects construction of some 15,000 solutions in 300 towns with a total expenditure of approximately $184 million. As mentioned earlier, the details relating to solution type and cost have not been worked out with as great a specificity as those for the slum area program.

The three other major components of the shelter plan are the "Programme Social," designed to deliver 50,000 core units ($30m^2$) over the five-year period with an investment of $650 million, the HBM program, designed to deliver 200,000 lots on which can be constructed three storey apartment units and a mixed program of shelter development in the Sahara calling for investment of about $464 million.

The "Programme Social" investment has been calculated on the basis of DH 50,000 ($12,900) as the unit cost, a very high figure considering that it is intended for families with monthly incomes of between DH 600 and DH 1,500 ($155 - $388). This program accounts for the largest projected expenditure of funds and yet does not carry the priority of the bidonville and rural programs. MHAT planners are depending on creation of a social housing trust fund (Fond Social de l'Habitat) to finance this component of the Plan.

The HBM program is directed at the same income range, but is designed to be used exclusively for the three unit apartment building which has proved so popular in Morocco's larges cities. Financing will come from the FNAET process, and construction may be handled by the ERAC or private contractors (usually small entrepreneurs). The long term financing will be provided by the existing subsidized Credit Immobilier or Banque Populaire programs. Depending on the value of the unit constructed the GOM may absorb up to one-half of the interest expense.

The Sahara Provinces program is designed to provide improved shelter infrastructure in the southern provinces, and will apply a broad mix of Programme Social, HBM and higher cost ERAC-produced solutions.

MHAT officials have made clear at this point that they do not expect to receive funding for many of these programs if the funding does not come from international donor resources. Completion of existing commitments, including some programs begun under the guidelines set by the 1973-77 plan, will apparently consume those funds that MHAT can expect to receive from budget allocations. For this reason, MHAT officals expect that the bidonville and rural programs must receive support from international donor agencies such as IBRD and AID if these innovative components of the MHAT program are to go forward.

3. A Commentary on Shelter Plans

a. The Socio-economic context: Morocco is already a highly urbanized country with 40 percent of its population residing in urban areas. The rapid rate of urbanization at 5 percent annually is fed by a steady stream of migrants from rural to urban areas. Over 60 percent of this shift is directed towards cities with more than 100,000 inhabitants. While these cities have been growing at a somewhat slower rate than average urban growth, they account for more than two-thirds of the urban population, and the problems of inadequate housing and urban poverty conditions are therefore most acute within these centers.

Medium size towns have also been growing rapidly. They have therefore also suffered the consequences of rapid expansion of demand for services and housing in the face of an insufficient supply with the consequent spread of the bidonvilles phenomena and overcrowding of older settlements in these centers.

MHAT planners appear to have made general use of migration-related information as a basis for their sector plans but only in combination with political anlysis. The decision to focus development outside of the principal centers in order to arrest migration has been mentioned, but is not supported by any detailed analysis that would suggest that Moroccans will have more success than have other countries in arresting the flow to the primary centers. In Morocco, the rapid urbanization process is initially the result of a sharp increase in population and then the consequence of migration from rural areas.

The gap between demand and supply translates into a housing deficit presently estimated at over 700,000 units with over half of these represented by the shortfall among the urban poor. Bidonvilles already house 25 percent of the urban population and have been increasing at twice the rate of urban population growth. Rural housing conditions are not well documented. However, the inadequacy of services in both rural areas and bidonvilles, as well as the low-income of both sets of populations makes it clear that in focusing programs to serve both the urban poor and the rural populations the GOM is concentrating its new policy on the most disadvantaged segments of the Moroccan population.

As mentioned earlier, the population to be served by the rural housing program has not been clearly defined. Discussions of the possible beneficiaries generally rule out active farmers or farm labor except in the irrigated zones where incomes are higher and small semi urban areas that have been growing rapidly. It is expected, however, that the families living in these units will keep some animals on the property, implying that the program has a definite orientation towards rural lifestyles. It has also been suggested that the rural program be directed at lower income professionals such as teachers, nurses, and government officials who will be attracted to market centers as investment in infrastructure is completed, and who are needed to bring services to the rural populations. Given the rapid growth rate (6 percent, for example) of many of these towns, it is evident that the housing stock is insufficient. The rural program as

presently designed does not make clear in socio-economic terms who will occupy the units, as no through analysis of demand in rural areas presently exists.

The units that are now being constructed with the GOM budget funds will definitely cost more than could be afforded by the majority of the rural population given an average rural income of DH 739 ($191.00) and a median level of DH 562 ($145.00). GOM officials have indicated, however, that the standards or criteria now being applied in the pilot projects may be adjusted as socio-economic analyses make more clear the needs and capacities of the target population in the target areas. One of the trends which is made clear by the existing analysis of migration is that the smaller urban centers definitely suffer from a loss of the professional population or educated population to the larger urban areas. It may be appropriate for the rural housing program to be directed in such a way that it provides an opportunity for local professionals to obtain the kinds of living conditions which they feel make the difference between staying at home or moving to a larger city.

It appears that the decision to invest the nation's resouces more equitably across the nation's territory is motivated by a decision to spread some of the nation's wealth outside of the principal centers. This distribution is being coupled with an effort to decentralize the machinery of government. The next census will be undertaken in 1981 and should provide an excellent opportunity for detailed analysis of migration and its impact. The political context in which the present plan has been prepared, nevertheless, does not appear unreasonable.

b. A Gap in What is Offered: The empahsis put on the rural, bidonville and HBM programs by GOM officials leaves unclear how the government plans to deal with the population whose financial capability falls between the minimal sites and services and the complete two bedroom apartment unit (HBM). The GOM evaluation of past plan performance has directed the shelter sector planners to simplify the HBM program to focus exclusively on the production of apartment units, usually three apartment units labelled R plus 2 (one apartment unit per floor for three floors). This decision was made in order to assure the most efficient use of increasingly expensive urban land, however, the unit cost of over DH 100,000 ($26,000) will be above that which could be afforded by the intended beneficiaries whose monthly incomes range between DHs 600 and 1,500 ($155-$387).

The "Programme Social," calling for the construction of a core unit of approximately 30 square meters on a 100 square meter lot, would appear to be the program best designed to fill the gap. Given the MHAT officials' pessimism regarding their ability to fund much of their program with internally generated funds, it would appear possible that the "Programme Social" will only receive the funding required to complete the previously begun projects and will not serve in the future as the major producer of shelter solutions for families earning incomes around the median level.

There will undoubtedly be use of the pre-financing format for some of this program. The experience with the ZED-5 and 15 program areas and the unsanctioned construction throughout major metropolitan areas suggest that there are many of the target population whose savings will permit them some down-payment, but it is not clear how the nation's housing planners expect to deal with the disparity between projected costs and the needs of this mid-range of income levels. Using credit terms of fifteen years at 7 percent interest and 25 percent of income as an appropriate level for mortgage amortization, the DH 50,000 ($12,900) core unit proposed for the social program would have to be sold to families with incomes of around DH 1550-1742 ($400-450) or over the 80th percentile of the urban income distribution. This relates to an eligibility level of DH 1,500 ($388) and an urban median income of around DH 988 ($255) per month. It is expected that the HBM apartment programs will run considerably higher. Only the bidonville programs will be set up specifically to provide solutions affordable to urban low-income groups. Therefore, cost savings and price reductions through tailoring design standards and materials choices in the solutions offered through the "Programme Social" could fill an important gap in GOM program offerings.

c. The Relationship to Finance: The plan suggests that the GOM position on the relationship of shelter provision and the various financial mechanisms is not yet clear. The respective ministries are certainly in communication, and unquestionably some formal decision will be reached in the near future. Nevertheless, the Plan which supports small and medium-sized bidonville projects and the rural or market town housing development project, has been prepared without detailed consideration of the financial mechanisms which will be necessary, or would be appropriate. In fact, the MHAT planners, who have shown considerable innovation with respect to their field of activity have not suggested any questioning of the current policy of having an interest rate subsidy applied by the government over a wide range of residential lending programs. Discussions with MOF officials suggested that the GOM is not ready to consider any substantial reduction in subsidization of loans to what can be called "middle class home buyers," those with incomes at the 80th percentile of the urban income distribution.

Recently, to reflect national and international rates, official interest rate guidelines were issued which reflected across-the-board increases. The interest discounts which are applied to residential loans, however, have not been changed and represent about 50 percent of the rate. While there has been considerable discussion of the establishment of a new Savings and Loan institution or a mechanism to better focus the housing finance effort in Morocco, it would appear that a higher priority might be given to the subsidy policy and the possibility that resources which might best be focussed on families with weak financial positions are in fact made available to families who probably do not need them. The substantial financial strength of any Moroccan middle class families has been re-emphasized by the success of the pre-financing program which works through the FNAET.

d. Land Banking: Among the proposals in the MHAT plan that deal with the mechanics of housing delivery is the creation within the ministry

of a new land purchasing and control agency. This agency, which might be referred to as a land bank, would have jurisdiction over all publicly controlled land and thereby greatly facilitate the allocation of such land to shelter projects as necessary. The Plan proposal reflects the Ministry's concern that the current GOM land agency, the service des Domaines in the Ministry of Finance cannot cope with the volume of work produced by the current programs, and because of the lack of a tie to MHAT planning, is not adequately oriented to the problems of urban development that lie at the core of efforts to increase the government's shelter program output. The scope of control promoted for the new agency covers every form of public land registration now in operation in Morocco, including land owned by the military, municipal land, certain categories of religious institution land and all land registered in the name of the government ministries.

MHAT officials indicate that this project has widespread support throughout the government. It seems overly optimistic, nevertheless, to expect government agencies to readily give up their land control to a sister agency.

C. A STRATEGY

1. The Strategy in Context

The history of GOM intervention in the shelter sector suggests a wide range of experience with different kinds of housing programs designed to relieve the shortage and to meet the needs of low-income populations, and yet very little continuity of, or long-term benefit from, that experience. Thus, reinforcement of the present positive efforts should be the principal objective of the GOM shelter strategy. Innovation, in concept or technique, should be stressed but in a way that permits the concepts and techniques to become truly integral parts of GOM policy and operations.

2. Strategy Components

a. A Low-Income Focus: A policy focused on low-income populations and reduction of the shortage of shelter options available to those populations continues to be appropriate. While all present GOM policy statements and plans make clear that the nation's low-income populations are the targets of GOM programs, the definition of the groups needing assistance is still very broad and, as a result, these programs are directed at a very large segment of the population and require resources well beyond GOM capabilities.

The government is very conscious of the shortfall, especially as it affects the low-income population, but it appears appropriate to press for a narrower definition of the government's target, in order to assure service with the existing resources. The step into rural market towns suggested by the new Plan, for example, offers an excellent oportunity for the government to refine its objectives and offer appropriate solutions within the reach of a population which has hitherto not been able to benefit greatly from GOM housing intervention.

b. Continue the bidonville attack: Though the effort to improve living conditions in the nation's slum areas has been the focus of government consideration during the last half of the 1970's, the attack on bidonville problems is only just getting underway. Construction of replacement housing for those families who will have to be relocated in the Rabat projects partially financed by the World Bank has not yet been completed, so that in fact there has been no physical work within the bidonvilles themselves. The AID-assisted Ben M'Sik project is still only in the analysis stage, and the government's petit en moyen bildonville program in 38 small areas (some of these are in large cities, but the program will spread across the nation) is, at its most advanced, only in the early stages of infrastructure placement.

Reinforcement of the bidonville programs would appear to be most important at this time. Bidonvilles both large and small are still the most common form of housing for the low-income groups throughout the nation's urban areas. They are likely to grow in number and size if government housing programs do not begin to offer the type of shelter solution accessible to families with incomes well below the median.

The GOM should continue its efforts to make the mechanics of slum upgrading and minimum shelter production an integral part of GOM operations. The institutionalization of the inter-ministerial relationships, the standards, the supporting social action and the training of personnel will require a great deal of innovative work by GOM officals. It is particularly appropriate that the attack on bidonvilles is being taken nationwide. In this way the successes and failures of individual large projects, which have been the focus of much attention but which are limited to the principal cities and rely heavily on external assistance will not be the sole determinants of whether or not the GOM institutes slum upgrading as a priority. The small slum area program offers an excellent opportunity for such an extension.

Finally, reinforcement of the work with minimal shelter is important because many GOM officials, as well as many in the private sector it can be assumed, continue to believe that there is a standard housing unit which represents a minimum and below which it is not socially correct to build. This does not result from a lack of technical understanding but from a reluctance to really fit the unit to an income without relying on subsidy.

c. Institution Building: In recent years, with help from AID and IBRD negotiations and program discussions, GOM officials have made considerable progress within MHAT, the principal shelter program design and implementation agency. The improvements include:

- Coordination of the various physical aspects of shelter production through the regional construction companies (ERAC's) and the FNAET which has also served to bring in private sector financing;

- creation of the Bidonville Department within the Ministry;

- and proposal of projects to simplify land acquisition.

MHAT also intends to create a revitalized building standards division. This area needs considerable further attention as not only are the standards for moderate costconstruction work out-dated (most date from the early 1950's), but there is also no provision for a formal review of the use of local materials and less expensive infrastructure standards in order to satisfy the needs of slum areas or hold cost to a minimum.

It may be possible to improve the impact of GOM intervention in the shelter sector through closer coordination of the government's financial institutions and those dealing with shelter program design. Shelter policy seems to be developed, at least initially, with little input from the Ministry of Finance. Though institutions such as the CIH (regulated by the MOF and Central Bank) have a mandate to deal with the shelter financing problems of low-income families, their conceptualization of these shelter problems and their role in their resolution has not followed the re-direction that has taken place at MHAT. There does not appear to be strong support for comparable innovation in financial aspects of policy directed at resolving the housing problems of low-income groups.

An example can be drawn from the interest rate issue. There does not appear to be any pressure to change the point of view that an interest rate subsidy is a necessity if the nation's middle class is to be housed in units which are appropriate to its social standing. The result is a subsidy program spread over a very broad range of the population in principle with only a small, relatively high income group benefitting from its provisions in practice. This group could probably be served by the private without any allocation of government resources, thereby leaving those resources for application to socially oriented programs where private sector intervention is unlikely.

It is especially interesting that this broad but thin subsidy approach remains in the face of the experience of the recent years with the FNAET approach to land development. The clear message of this experience is that the nation's moderate income families can amass the savings necessary to take care of an important component of housing costs once the institutions are in place. It would seem that the GOM could build on this experience by asking these populations to take on the full cost of the long-term financing. It is probable that some institutional adjustment would be required, such as the lengthening of loan terms, if such an approach is to attract the support of middle income populations.

The present interest rate discount program also makes it difficult to argue from a social equity viewpoint that shelter programs for the poor should be set up on a full cost recovery basis given that higher income families receive substantial subsidies. From an economic viewpoint the low interest cost has fostered very high construction standards for middle and upper income groups. They have been partially responsible for the fact that while investment in housing has risen sharply, program targets in terms of units constructed have fallen far short of the mark.

d. The Rural (Market Town) Housing Program: Though titled a rural housing program, the target will be market towns, many of which are classified as urban through designation by the Governor, or have been classified as urban for purposes of the census. The present pilot program deals with communities which have population of between 5,000 and 10,000.

The program offers an opportunity for continuation of GOM efforts to reduce the nation's housing deficit. Many of the towns which could be selected for this program would be those that demonstrate the highest rates of population growth. There is no question that the housing stock in these areas is deficient. MHAT does not have any figures on the shape of the housing demand in these specific towns so that the program will need considerable further analysis. In effect, it appears that the rural program offers the possibility of reinforcement of GOM efforts to focus housing programs on lower cost units and lower income populations. In some ways, the program could complement the small bidonville program in that the emphasis would be on the provision of minimal shelter solutions in areas where there is no production of affordable housing for the lower to medium income families and where bidonvilles may have already sprung up or could be expected to do so in the future.

II. TARGET POPULATION AND SHELTER NEED

A. GENERAL POPULATION BACKGROUND

Morocco's population at the beginning of 1980 was estimated to have reached 19.5 million, making it the most populous of the Maghrebian countries. It has been increasing rapidly largely as a result of a decline in mortality and continued high fertility. Average annual growth rate was estimated at 3 percent since 1971, compared to 2.6 percent during the 1960s. If present trends continue, Morocco's population will double in size by the end of the century.

The population is characteristically youthful with 46 percent under 15 years of age, reflecting the persistence of high fertility rates. Consequently, age-dependency ratios have also increased, exacerbating the problems of poverty in both rural and urban areas. Household size is large, due in large part to the youthfulness of the population. In 1971 it averaged 5.5 persons overall, with 5.8 persons in rural areas and 5.0 persons in urban areas. Presently, household size is estimated at an average of 6 persons in urban areas, assuming that household size has continued to grow at the same rate during the 1970's as it did in the 1960's.

Spatially, population growth has been unevenly distributed across the country largely as a result of strong internal migratory trends and regional differences in natural growth rates. It is the urban areas in Morocco which have been growing fastest, fed by steady streams of migrants from rural areas. Presently, 41 percent of the population lives in urban areas with one out of every four Moroccans living in cities of 100,000 or more inhabitants. (Table I provides a breakdown of the population in the sixteen largest urban centers, estimated and projected populations.)

This rapid increase in urban population has bypassed the capacity of cities to provide jobs, basic services and shelter to accommodate the in-flow of migrants. The magnitude of the problems of poverty in urban centers is revealed by the fact that an estimated 28 percent of the urban population have incomes below the World Bank defined absolute poverty line of DH 1,516 (US$400) per person per year and an estimated 25 percent of the urban population lives in spontaneous settlements, a combination of shanty towns and clandestine permanent construction on illegally subdivided and occupied land.

1. Human Settlement Patterns

Spatially, Morocco's population settlements, while widely dispersed, are unevenly distributed largely as a result of the physical features of land and climate. The High Atlas mountains running diagonally from the southwest to the northeast divide the country's broad and well-watered coastal plains of the north and west from the mountainous and more arid zones to the south and east. The former regions are more densely populated

TABLE I

SIXTEEN LARGEST MUNICIPALITIES

City	Estimated * 1980 Population (000's)	Projected 1985 Population (000's)	Average Growth Rate %
Casablanca	2,145	2,610	4
Rabat	542	672	4.39
Fes	455	547	3.75
Marakesh	431	490	2.6
Meknes	327	380	3.05
Sale	279	386	6.71
Tangier	237	269	2.57
Oujda	228	269	3.36
Kenitra	205	250	4.05
Safi	188	234	4.47
Tetouan	180	207	2.83
Mohammedia	123	169	6.56
Khouribga	118	156	5.74
Agadir	112	155	6.71
Beni-Mellal	91	119	5.51
Taza	87	111	4.99
Total	5,748	7,024	4.46

Percent of Urban Population	72
Percent of Total Population	30

Source of population estimates and projections based on Direction de la Statistiques estimates of annual growth rates and urban population projections in 1981.

and economically developed while the latter have traditionally been sparsely settled and economically less privileged parts of the country. Population density estimated at 41 persons per Km^2 in 1978 varied significantly from region to region. The most densely populated area, the Central region, had an average of 352 persons per Km^2 with 1402 persons per Km^2 in the prefecture of Casablanca alone. At the other extreme, the Southern region had an average density of 26 persons per Km^2 with only 2 persons per Km^2 in the province of Tan Tan.

Reflecting the imbalances in the geographic distribution of human settlements is the concentration of almost half of the total population in the regions of the Center, North and Northwest on what is only 20 percent of the total land space. These regions not only account for almost two-thirds of the urban population, but also over a third of the rural population since they are the agriculturally richer zones in the country.

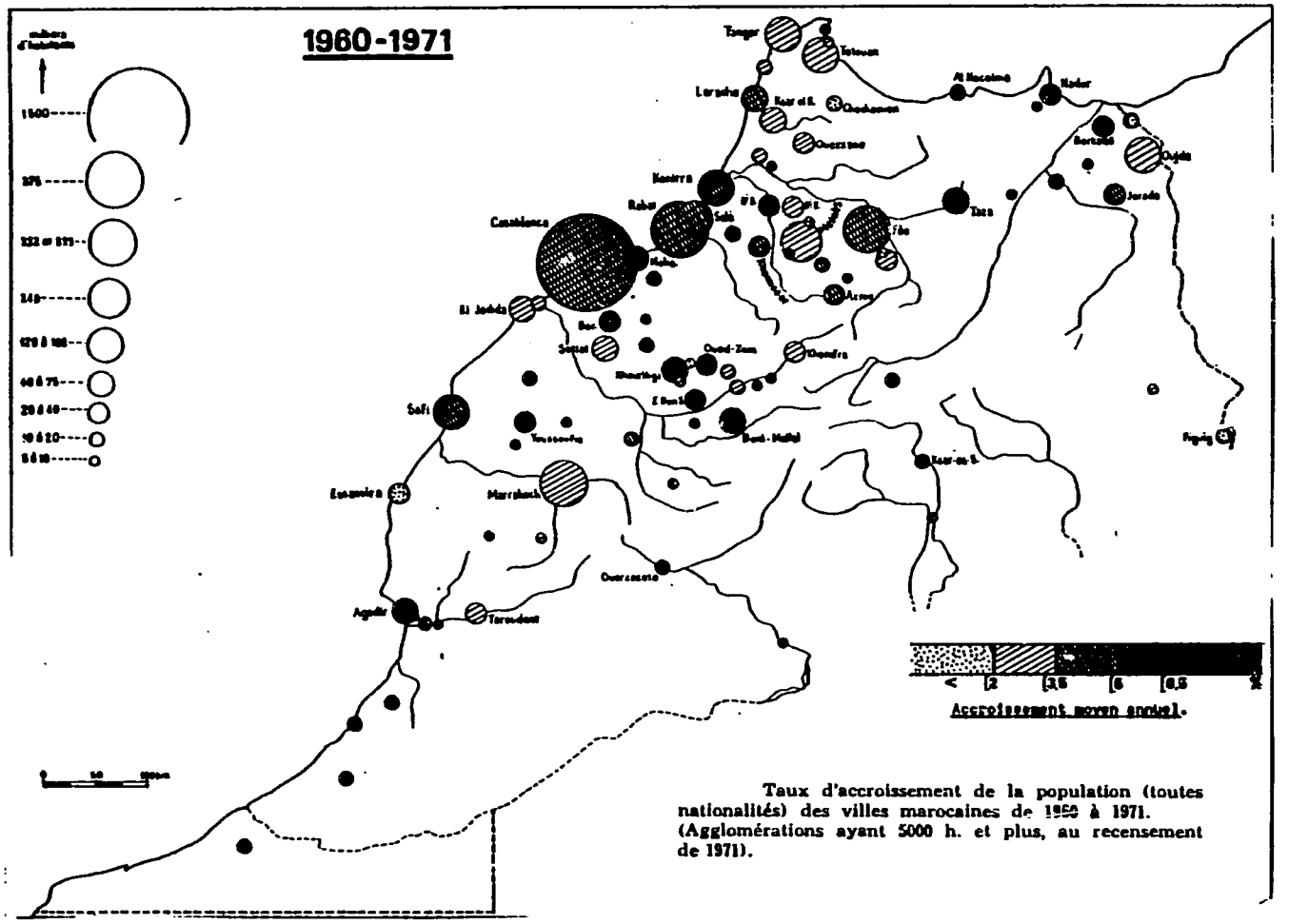
2. Urbanization Trends

In the 1960s, urban areas were growing over twice as fast as rural localities with the rates of annual increase estimated at 4.3 percent and 1.8 percent, respectively. In absolute terms, over the last decade, the increase in urban population has been twice the comparable number of additional residents in rural zones. This pattern is expected to continue so that, by the beginning of the 1990s, the urban population will have increased by an additional 7 million persons compared to only 3.5 million new rural residents.

The population in urban areas is presently estimated at 8 million or 41 percent of the total, compared to 5.5 million or 35 percent of the total in 1971. Urban growth, since the last census was taken in 1971 is estimated to have been at an average of 5 percent per year. It is expected that the high urbanization trend will continue over the next ten years so that by the beginning of the 1990s, half of Morocco's population, an estimated 15 million persons, will be living in urban areas.

This rapid process of urbanization is changing the pattern of settlement and creating great difficulties in the delivery of shelter, services and jobs for an increasing number of urban residents, particularly the urban poor, many of whom are rural migrants.

Historically, urbanization in Morocco has always been concentrated in a few large urban centers. This pattern continues to prevail, as evidenced by the dominance of Casablanca and Rabat-Salé which together presently represent 40 percent of the total urban population. More recently, however, under the growing pressure of the rural exodus rapid urbanization has become a more generalized nationwide phenomenon. Even the relatively un-urbanized southern and eastern regions which have traditionally supplied large migrant populations to the agriculturally richer and economically more developed provinces of the northwest and center have been affected by an increase in the size of their urban centers. (FigureII provides a graphic presentation of countrywide urban growth patterns.)



Taux d'accroissement de la population (toutes nationalités) des villes marocaines de 1960 à 1971. (Agglomérations ayant 5000 h. et plus, au recensement de 1971).

Figure II

The urban sector in Morocco consists of municipalities, autonomous centers and localities administratively classified as "other centers." These definitions do allow for considerable variation in the populations of localities classified as urban which, in some instances, are smaller than some of the rural douars. The urban designation therefore does not always reflect urban function nor population size, though a certain minimum level of social and physical infrastructure must exist before a locality can be counted in the general category of "other centers" by the census. While these definitions may appear to overstate the share of the population that is urban, it should be noted that the vast majority of the population (some 88 percent) classified as urban lives in large and intermediate size centers. In effect, the urban sector in Morocco shows the same imbalances of concentration characteristic of other North African countries, with Casablanca's 2.5 million accounting for over 25 percent of the total urban population and more than twice as many inhabitants as the next largest urban center of Rabat-Salé.

In 1971, the urban hierarchy was dominated by one large metropolitan city of over a million inhabitants, and the ten other grandes villes with over 100,000 inhabitants each. It could be classified into three categories according to size.

a. Small Towns: The majority of urban centers according to the 1971 census were very small towns of less than 20,000 inhabitants, with most of these containing less than 5000 persons. These localities had been growing at the rate of 5.5 percent per year, or more rapidly than the overall urban rate of increase. This expansion is due in large measure to the administrative designation of several small market towns as urban centers. Despite the numerical majority and rapid rate of growth of small urban centers, they only accounted for 13.5 percent of the total urban population, marking a decline from previous years in their share of the urban sector. Many of these towns are only nominally urban in function and they have been selected as sites for some of the rural housing efforts currently under way.

b. Intermediate Centers: At the next level, in the urban hierarchy, are the intermediate towns with populations of 20,000 - 100,000. In 1971, medium-sized centers had experienced the most rapid rate of increase at 6.4 percent per year and had also increased their share of the urban population to 17.6 percent.

Six of the 25 intermediate cities had over 50,000 inhabitants in 1971 Among these were some of the fastest growing cities, notably Agadir, Beni Mellal, Khouribga, Taza, and Mohamedia, all of which have by now achieved the status of grandes villes since they have almost doubled in population.

c. Grandes Villes: In 1971, the 11 grandes villes with populations of 100,000 or more contained 70 percent of the urban population and had been growing at a somewhat moderate rate of 4.19 percent compared to smaller and intermediate localities. Their dominance, however, has not been tempered by the increased dynamism in the growth of intermediate and smaller centers. They still account for the majority of the increase in urban

population and the tendency has been for the large-sized cities to grow in number, having increased from 11 in 1971 to the present 16. Not all of these cities have experienced the same dynamic expansion, the extremes being Marakes , growing at only 2.8 percent per year and Salé, which has been growing at the rate of 6.7 percent.

Migration: The rapid rate of increase in urban population is attributable to a significant level of internal migration predominantly from rural to urban localities. Population change due to net in-migration to Morocco's cities is equivalent to 52 percent of an already high rate of natural increase among the urban population. Concommitantly, rural out migration relieves the equivalent of 36 percent of the natural growth in rural areas.

It is estimated that the rural exodus contributed 90,000 new urban residents on an annual basis during the decade of the sixties. The pervasiveness of the rural exodus is further underscored in the 1971 census results indicating that one out of every three urban residents is rural born. Among those between the ages of 25 to 65 years, at least one out of every two urban residents migrated from a rural locality. By way of contrast, inter-urban migation affected only 9 percent of the urban population of all ages, and 11 percent of those between the ages of 25 to 65 years. Most of this flow among urban born residents to other urban centers was directed towards the larger coastal cities of Kenitra, Casablanca and Rabat-Salé.

The rural exodus has affected all of Morocco's urban localities in some measure, but it has been principally directed towards the larger urban centers, particularly the coastal cities of the Northwest and central provinces forming a triangle between Casablanca, Rabat-Salé and Kenitra. These areas attracted approximately 60 percent of total urban net in-migration, with Casablanca, alone, being the direct destination of one out of every four rural migrants.

On a provincial level, only the provinces of Kenitra, Agadir, Khouribga, Nador, Beni-Mellal, Salé and, naturally, the prefectures of Casablanca and Rabat did not experience a net loss of population due to out-migration. All of the grandes villes experienced high rates of gross in-migration, however, only Casablanca and Rabat-Salé had very low rates of out-migration. This suggests that these cities tend to be terminal points for the country-wide migratory flow from both rural and urban centers. The other grandes villes act in some measure as intermediate centers which both attract migrants from their surrounding rural areas while also contributing from among their own urban population to the flow towards the two coastal cities.

The data available is not very helpful in determining specific migration patterns. There is evidence, however, that suggests that the bulk of the migration is a one-stage process to the larger centers. The existence of urban centers close to rural populations does not seem to have had a significant effect on the rate of migration towards the larger coastal cities. Additionally, the predominant movement towards the 11 large urban

centers in 1971, tended to be direct without any intermediate stops in other smaller urban centers. In one of the few surveys of internal migration, limited to Taza and Fez, the Institut National des Sciences Economique Appliques (INSEA) results indicated that migration to both those cities was directly from surrounding rural areas. In the case of Taza province, 40 percent of rural migrants headed directly to Taza while the balance headed to urban areas outside the province. The 1971 census provides supporting evidence of this one-stage migratory process, indicating that only 5.5 percent of the urban population had moved once before settling in the city in which they were enumerated.

Most of the urban to urban migration, it can be surmised, affects the educated and upwardly mobile groups from smaller provincial centers and the other grandes villes to Casablanca and Rabat, notably. The INSEA data support this assumption. They indicate that interest in moving away from Fez and Taza among rural-born residents was significantly stronger among those who were economically more privileged rather than those living in the bidonvilles and medinas.

While rural to urban movement is by far the predominant pattern of internal migration, there is some flow of population between rural areas. The 1973-77 Plan estimates placed the number of people who would settle in the irrigated zones at 90,000 during the 5 year period. The 1971 census results do seem to corroborate the assumption that certain rural areas attract migrants from less privileged rural zones. While all rural areas experienced some loss of population, the provinces where there were extensive irrigation projects, (e.g., Nador, Beni Mellal, Agadir, Kenitra) experienced the lowest levels of net out-migration. It should be noted that the zones with extensive irrigation projects account for only 20 percent of the total rural population and therefore the inter-rural movement affects only a small proportion of the migratory flow. Additionally, the effect of extensive agricultural development in certain rural zones is not limited to an in-flow of population from less favored agricultural areas, but also contributes to the growth of adjacent urban centers within these zones. These are estimated to have grown at the rate of 6.2 percent per year compared to only 3.9 percent for small urban centers surrounded by traditional agricultural areas.

The causes of migration are numerous and include both economic and family reasons as the INSEA data reveals. There is a perception on the part of rural migrants that earning opportunities are higher in urban areas. This perception would seem to be validated by the average income differentials between urban and rural localities. However, it must be noted that, according to the 1971 Expenditure and Consumption survey, the rural-urban income differential is minimal for the lowest strata of the urban population. One-quarter of urban residents incomes were not much higher than the average rural income.

Migration seems to be spurred more by a push factor from rural areas than by the attractive pull of cities on the rural born. The differences in perceived opportunities refer to more than the purely immediate economic concerns. Opportunities for advancement in rural areas are limited by the

lack of resources among 40 percent of the population which does not own the and it works on, very low educational levels and the fact that the majority of the population is engaged in traditional low-return agriculture.

The net effect of the high incidence of migration on Morocco's cities is a relocation of many of the problems of rural poverty into an urban setting. High urban unemployment rates affect the rural born, who in 1971 were estimated to account for 60 percent of the unemployed. Similarly, the high rate of rural iliteracy, estimated at 88 percent, has acted to lower overall rates in urban areas where only 50 percent of the population was estimated to be literate in 1976, with only 36 percent literacy among females.

Reflecting the rural origins of much of the bidonville populations are lower than average literacy rates among the heads of households. Literacy rates increase when the total bidonvilles population is taken into account since the opportunity for schooling among children of rural migrants in the bidonvilles is much greater than it is in rural areas. Thus, despite lower than average overall school enrollment ratios in the bidonvilles, there is some reason to believe that seeking increased educational opportunities for the younger members of the family is a contributing factor to the migratory process.

4. Living Conditions Among the Urban Poor

Improvements in shelter conditions and services in Morocco's urban areas have generally lagged behing the demand arising from rapid population increase. Despite the generally better level of physical services, educational opportunities and social infrastructure available in urban areas, living conditions for the urban poor are marked by high densities, poor quality shelter and inadequate access to basic urban services.

a. Shelter Conditions and Densities: Unsatisfied housing demand is presently estimated by the MHAT at 722,800 units with over half of these (400,000 units) reflecting the deficit among the urban poor. Taking into account the increase in that segment of the population, the GOM estimates that 86,000 additional units will be needed for new households over the next 5 years, or the equivalent of 17,500 units per year.

In the past, the need for housing among this low-income population had largely been met by rental of rooms in Medinas, resulting in an increase in the built-up areas in these localities and an extreme saturation of the habitable space. The spillover has been directed to squatter settlements in peripheral zones where both shanty-type construction and the clandestine construction of units in durable materials can be found. Many of these spontaneous settlements in the large urban centers date back 30 or 40 years and have consequently been absorbed within the city limits even if they remain in contravention of existing land-use ordinances.

In the absence of an adequate supply of land and production of housing affordable by low-income groups, a clandestine housing production market has grown on undeveloped land. It is estimated that the informal housing market

produces an average of 11,000 newly constructed units per year, or 20 percent of the number of authorised starts. This rate of production satisfies only 60 percent of the demand for housing arising from new household formation among the low-income population, and does not begin to address the existing deficit evidenced by doubling up and overcrowding, in both aged structures and spontaneous settlements. This informal housing production market relates to both lotissements clandestins built in durable materials on illegally subdivided and "informally" purchased land as well as shanty-type construction on land that is more often than not rented, or simply occupied in the case of publicly held areas.

The growth of these settlements not only reflects the increased population pressure arising from migration and natural population increase, but the inadequacy of the delivery ststem to provide affordable shelter. Thus, while a greater proportion of the population in the bidonvilles is rural in origin, compared to the overall urban population, a significant proportion is urban born. This latter group has taken refuge in the bidonvilles in the absence of affordable alternative shelter opportunities. There is also some evidence that the majority of the migrant population in the bidonvilles has lived in urban areas for an average of at least 10 years. Contrary to the common assumption that bidonvilles are the reception area of recently arrived rural population, there is evidence which suggests that spontaneous settlement, particularly when permanent clandestine construction is undertaken, is more characteristic of those who have been able to integrate themselves economically in the urban sector. While it is difficult to generalize about the bidonville residents, it would seem that the factors affecting the type of units constructed (permanent or shanty-type dwellings) are not limited to income and the degree of urban economic integration but include perceived security of tenure and location.

The increased population pressure has led to an extreme densificaton of the medinas and the growth of spontaneous settlements which now characterize the majority of Morocco's large and medium-size urban centers. Densities in the medinas of large urban centers are uniformly high, averaging over 1,000 persons per hectare in such cities as Fez, Meknes, and Rabat-Salé. They tend to be more varied in spontaneous settlements, ranging from 600 to 1,000 persons per hectare, depending largely on the age of the settlement and its physical characteristics. However, some of the bidonvilles, both large and small, have also attained comparable density levels of over 1000 persons per hectare, notably in the large urban centers. There is also evidence that in many of the older more centrally located bidonvilles the absorption of new households has been accomplished through a resubdivision of both lots and housing units. Both plots and housing units have grown smaller in dimensions over the years in such older settlements as Douar Doum and Hajjah in Rabat, or Ben M'sik in Casablanca.

Room occupancy rates are another measure of the crowding which exists in urban areas, particularly in the bidonvilles. Overall, there is an average of 2.3 persons per room in urban dwelling units, with 71 percent of all urban households living in one to two room units. For this group room occupancy rates are over 3 persons per room. In the bidonvilles-type dwelling units, the average number of persons per room is even higher since 53

percent of these units consist of one room and another 40 percent have 2 rooms for households averaging between 5 to 6 persons. Proportionately, the level of crowding in bidonvilles does not show an improvement over living conditions in rural areas where 76 percent of the units have one to two rooms. Compounding the problem of such high densities is the small size of the rooms and lot sizes in bidonvilles. Average plot sizes range between 40-100 m^2 in various bidonvilles, while the baraques average $20m^2$ to $40m^2$.

A measure of the magnitude of the shelter problem is illustrated by the fact that in 1977 there were a total of 1,370,000 dwelling units, of which 25 percent were in spontaneous settlements. This marks a considerable increase in the number of such units since 1971, when they accounted for only 10 percent of the total housing stock. In effect, the bidonvilles population has been increasing at an estimated rate of between 7 to 10 percent per year compared to the 5 percent average annual urban growth rate.

The problems of spontaneous settlements are greatest in Morocco's large urban centers where the majority of the urban poor are located. In 1971, the two largest urban centers, Casablanca and Rabat-Salé, contained 45 percent of all the shanty-type dwellings in the country. (See Table II for breakdown of shanty population). Considering the fact the these two cities attract a significant stream of migrants, their share of the shanty-town populations is, at best, likely to have remained unchanged. However, as has been previously noted, the effect of rapid urban growth on many of the medium-sized and small-sized urban localities has resulted in the growth of spontaneous settlements, as both public and private shelter production have lagged behind demand. An illustration of the effect of 4 to 5 percent annual growth rates on the settlement patterns is provided by the town of Larache; in 1971 there were a total of 8,950 households in this municipality, an increase of 2,797 households since 1960. Approximately the same number of households representing 25 percent of the population lived in non-masonry type construction, indicating that much of the increase in population has been absorbed in spontaneously settled zones. Not all spontaneous settlements, it should be noted, are of the shanty-type and over the years, there is a notable transformation to construction in more durable materials in the bidonvilles.

The informal market produces units which are constructed in durable materials (cement block) on illegally subdivided or occupied land, as well as shanty-type units made of salvage materials. However, the materials utilized in shanty-type units have tended to become more standardized as tradesmen have taken to producing and selling recycled aluminum and metal sheeting from canisters for this type of construction.

The construction process is fairly rapid where recycled materials are used. The units consist of a wood frame made of poles supporting either mud or wooden walls. The exterior exposed surfaces are often covered by the corrugated iron sheeting. The roof is also made of corrugated iron sheeting secured with large rocks. The use of metal sheeting is preferred to construction entirely in wood since the latter material is more flammable and the risk of fire is high in the bidonvilles.

TABLE II

PERCENTAGE DISTRIBUTION OF URBAN HOUSEHOLDS
LIVING IN SHANTY
AND
POPULATION IN NON-MASONRY CONSTRUCTION
@ 1971

City	Percentage distribution of total urban households living in Shanty units	Percent of population living in non-masonry construction in each Grandes Villes *
Grandes Villes		
Casablanca	31	14
Rabat	16	23.6
Sale	5	24.8
Kenitra	6	28.9
Tangiers	5	18.7
Meknes	5	25.4
Marakesh	.2	71
Oujda	.3	18.5
Tetouan	.5	11.4
Safi	.5	8.9
Fes	1	14.8
Total Grandes Villes	70.5	
Other Urban	29.5	
Total	100	
Total number of urban households in Shanty units	110.980	
As a percentage of total urban households	10	

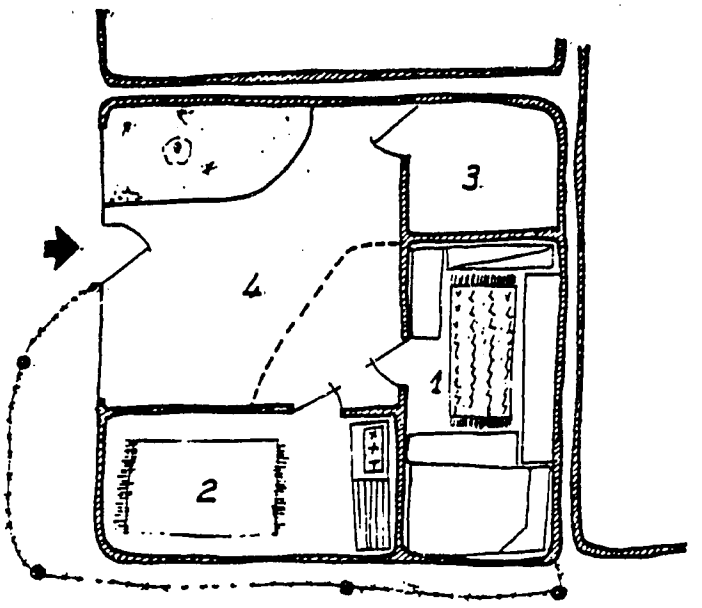
* Non-masonry construction includes households in shanty, mudbrick and stone dwelling units.

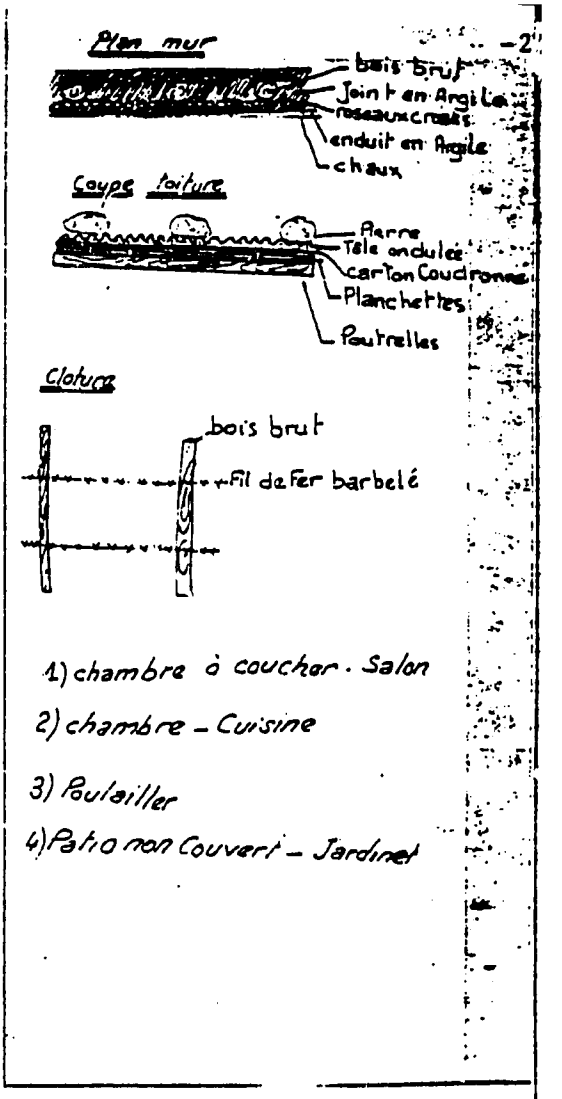
There is a tendency to replace other materials with scrap metal or aluminum sheeting for both walls and roof supported by wooden poles in the interest of minimizing the fire hazard. A choice of more durable materials for construction is largely conditioned by income constraints, but perhaps equally important, a perception of security of land tenure, a condition which is not always easy to attain among many of the bidonvilles residents who in the past were moved frequently. The need for such security has often led to concerted action by residents to establish their right to land by building in more permanent materials and refusing to pay land rental.

The unit starts out as a traditional rectangular multipurpose room with an uncovered patio/courtyard in the front. As resources permit, all or part of the patio may eventually be covered and a cement slab floor put in to form a second room. Over time there is considerable reduction or total elimination of the traditional private courtyard space, which in rural areas and in some bidonvilles remains enclosed in the form of a zriba. A small terrace space directly in front of the house substitutes to serve the same functions of the traditional patio, as social gathering place for the collective functions of the household and as the central space for the housewife's chores of washing dishes, laundry and cooking. The kitchen is normally in this open space and may be only partly covered. Where the patio is eliminated altogether, the various rooms become integrated into a "modern" type unit. (See Figures III, IV and V). This gradual process of gaining built-up space, at the expense of the traditionally multifunctional larger spaces, is a function of both an increase in household size and income constraints. However, the appropriation by individual households of greater built-up space is somewhat illusory, as the density figures for both land and room occupancies indicate. In effect, increased population pressure and limited incomes have led to a densification through resubdivision of both plots and unit sizes to accommodate new households. Thus while average household sizes have tended to increase over the years, reflecting a permanent stabilization of migrant families in individual dwelling units and natural population increase, plot sizes have, as has been previously noted, also tended towards a definite and sizeable reduction in the bidonvilles.

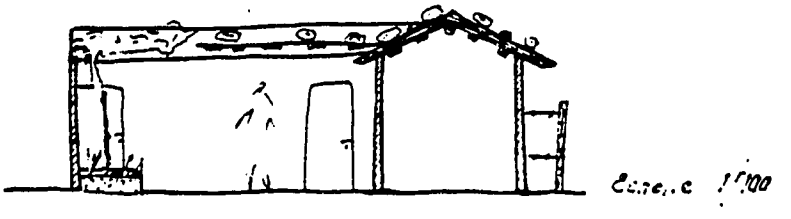
However varied the conditions of individual units in terms of construction types and improvements over time, services remain uniformly inadequate within these settlements.

b. Services: The majority of residents living in the bidonvilles have no access to water or other basic services. According to the 1971 census, only 4 percent of the residents in the bidonvilles, compared to 48 percent of all urban households, were connected to the piped water system. This level of service seems to have improved slightly. According to a more recent survey conducted by ONEP in 1975, 10 percent of the households in the bidonvilles had access to piped water, compared to 62 percent of the urban households. The remaining 90 percent were served by public fountains which, in 1975, served an estimated 32 percent of all urban households, and a few still make use of wells. Access to public standpipes, however, is limited by distance. Approximately 57 percent of the bidonvilles residents have to travel more than one hundred meters to reach the closest public fountain often serving more than 2000 users, or alternatively, they must purchase





Surface de la parcelle		42,90 m.2
Surface construite		25,26 m2
Disponibilité	Eau	F. P.
	Egoût	DEMI BUSE
	Eléctricité	E.P
Loyer ou loyer imputé		
Valeur de remplacement		



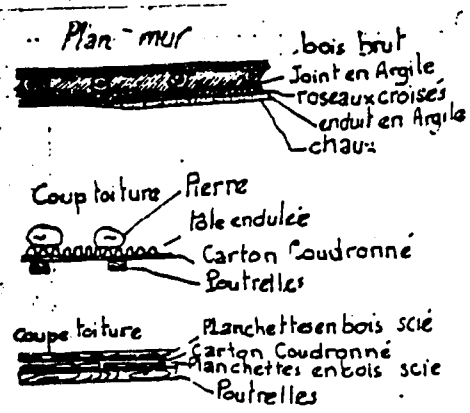
Douar Jdid G 4 n° 84 B . M . O

Nbre de ménages : 1 Nbre de personnes : 2

Figure III

All figures from Meknes MHAT Delegation report on 2nd Urban Development Project

Figure IV



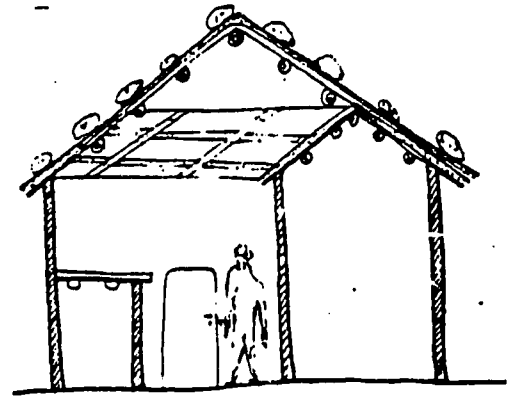
Materiaux employes	P.U	
Tole ondulée	5 DH	(ml
Roseaux	10 DH/centaine	
Bois brut	3,50 DH le bois	
Bois scié	5 DH	ml
Carton goudronné	35 DH le rouleau	
Chaux	0,5 DH	kg
Plastique	4 DH	m

1) Salon

2) Chambre à coucher

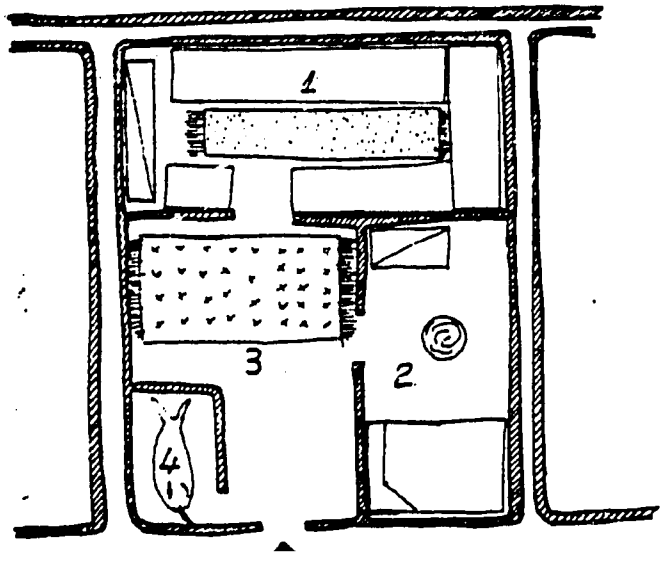
3) Patio couvert. cuisine

4) Veranda en roseaux abritant un âne



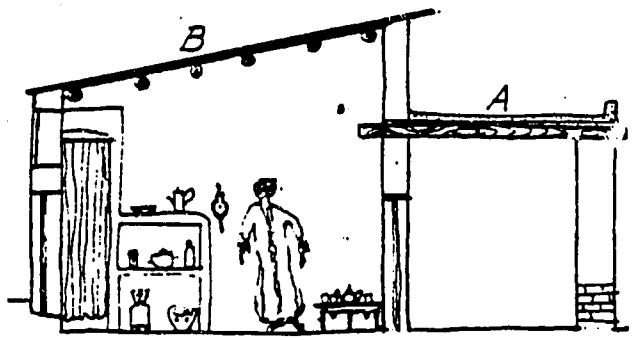
Douar Jdid G 6 n° 29 B . M . O

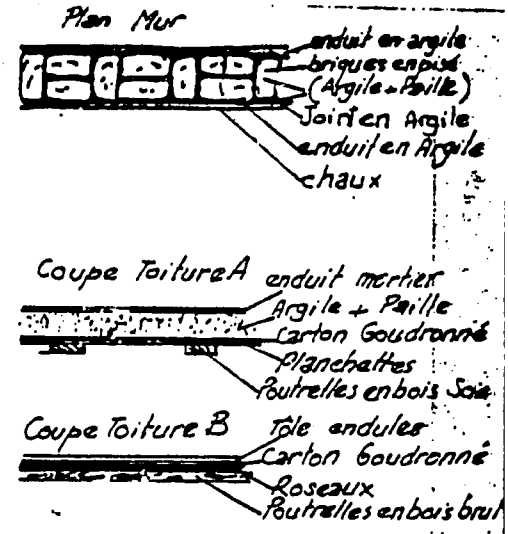
Nbre de ménages : 2 Nbre de personnes : 5



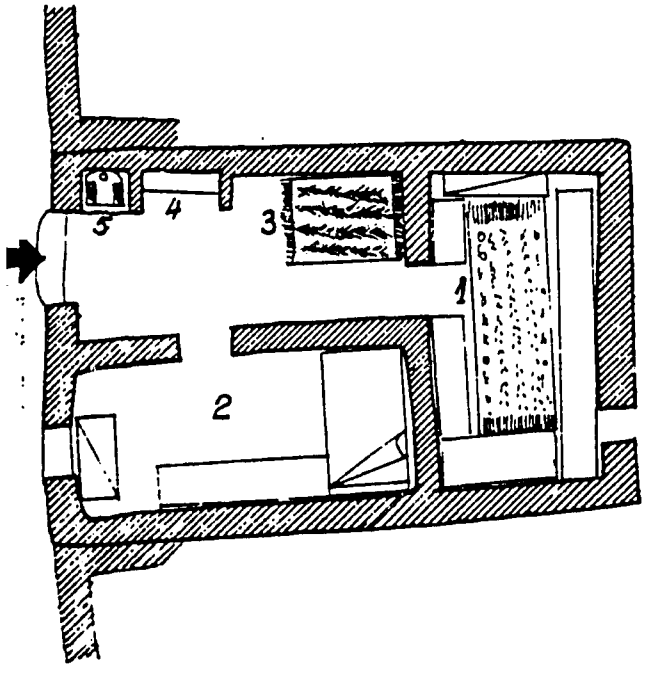
Echelle 1/100

Superficie parcelle		39,2 m²
Superficie construite		39,2 m²
Disponibilite	eau	F.P
	égout	1/2 buse
	électricité	neant
Loyer ou loyer imputé		100 DH
Valeur de remplacement		





1 Salon
2 chambre a coucher
3 Hall
4 Cuisine
5 W.C



Superficie parcelle	44,3 m²
Superficie construite	44,3 m²
Disponibilite Eau	F.P.
Egoût	existant
Electricité	néant
Loyer ou loyer imputé	
Valeur de remplacement	5000 DH

Derb el Hammam n° 26 SIDI BABA

Nbre de ménages : 2 Nbre de personnes : 12

Figure-V

Echelle 1/100ème

water from vendors. The latter source for the provision of water, however, is relatively expensive for many of the residents. The water sold costs .25-.50 DH per 10 liter container, compared to an average of .60 DH per m^3 for households with individual connections to the public water system.

Households with incomes of 500 DH (the average income in many of the bidonvilles of Morocco's urban centers) reportedly can spend over 10 percent of this income on water alone when purchased from vendors. Not all households can afford 45-50 DH per month on water purchased from vendors and many are forced to walk several times a day to fetch water from public fountains.

Both the cost of puchased water and the distances from public fountains are likely causes for the very low average level of consumption, estimated at between 10 and 20 liters per capita per day, or not much higher than comparable estimates in rural areas. This average figure constrasts quite markedly with the overall national average for water consumption of between 60-260 liters per capita per day.

The effect of low water consumption levels, combined with the extreme lack of sanitation, are clearly seen in the high incidence of diseases such as typhoid, T.B., measles and skin diseases among children in the bidonvilles.

Exacerbating the problems related to low water consumption levels and high densities is the virtual lack of sanitation facilities. According to the 1971 census, 65 percent of shanty-type units had no W.C.'s. Where individual units have such facilities, they normally rely upon pit latrines. Septic tanks, however, were found in the less densely populated peripheral shanty or clandestine subdivisions where plot sizes averaging 60 to 100 m^2 and perceived security of tenure prevails.

The existence of storm and water drainage networks depends in large measure on the local initiative of the residents in digging up canals and ditches. Municipally provided services of this sort are not easily accessible since the settlements are overlooked by most master-plans' determinations of needs and land-use.

Solid waste disposal which is the responsibility of municipal authorities appears to be inadequately performed, due in some measure to the narrowness of the streets to allow for vehicular traffic. Residents complain of the woeful lack of trash removal and the problems it presents as a breeding ground for rats.

Electricity is equally lacking. Only 7 percent of the shanty-type units in 1971 had access to it. Most residents are forced to rely upon candles and gas lamps for lighting, both of which account for the high risk of fires in neighborhoods where units are constructed of a combination of scrap metal and wood. Street lighting is almost always non-existent, which presents a problem in terms of security within low-income neighborhoods.

5. Rural Population's Living Conditions

While the 1971 census limited itself primarily to the housing conditions of the urban population, it is known that room occupancy levels in rural areas are 2.8 persons, or at a comparable level to those in bidonvilles. The difference however is that the out-door spaces are larger and land-use densities are much less of a problem in rural areas.

Service levels are lower than those for the urban population the majority of which has access, however limited in the bidonvilles, to potable water. In rural areas 5 percent of the population has access to running piped water and an other 10 percent has access to standpipes. The remaining 85 percent uses wells and rivers with serious consequences on the population's health.

Electricity is even more limited with only 6 percent of the population having access to it. Programs for rural electrification are expected to increase the service levels to cover 50 percent of the rural population by 1983.

Other services are generally concentrated in the rural chefs lieux where schools, clinics and other social services are located to serve both populations that are dispersed and those located within these rural centers.

B. SOCIO-ECONOMIC CHARACTERISTICS OF TARGET POPULATION

The target population, defined as the poorest half of urban households, shares many of the demographic characteristics of the Moroccan population. It is characteristically youthful, reflecting both the migration from rural areas and the rapid population growth. Among that segment of the target population which lives in bidonvilles, household size has, in the past, tended to be less than the average urban household size. In recent years, it has been marked by a general increase as migrant families become complete. This increase is also an outcome of the phenomenon of the migration of completed family units. More recent studies in various bidonvilles note this increase in size so that the average household in the bidonvilles reportedly contains between 5 to 6 persons. Nuclear family units are more common than either incomplete or extended family units so that among at least half the population, the household overlaps with the family unit.

In the grandes villes, bidonvilles residents tend to be more heterogenous in origin, particularly in the cities of Casablanca and Rabat-Salé. However, in the medium-size towns and other grandes villes, there is a distinct local representation of migrants from the surrounding rural areas. The majority of the residents in bidonvilles, are rural in origin. Thus, while approximately a third of the urban population is rural-born, in the bidonvilles at least half and up to two-thirds of their residents are rural born. The only other locality where a comparable proportion of residents is not urban in origin is the medina.

Reflecting the rural origin of heads of households are the low levels of literacy and skills which translate into both low and irregular incomes and employment patterns.

1. Incomes and Expenditures

The most recent data on overall income distribution in Morocco dates back to a 1971 Household Consumption and Expenditure Survey. Median income in urban areas at that time was 5490 DH per year ($1419 at DH 3.87 to the dollar). Average annual household rural incomes, on the other hand, were about half the average urban income, or 4003 DH ($1034) compared to 8057 DH ($2082). This differential is unlikely to have changed over the course of the past 9 years, given that agricultural productivity seems to have been growing at a much slower rate than overall GNP. In fact, between 1960-1971 the poorest segment of the rural population increased more sharply than did the comparbly most disadvantaged segment of the urban population which owed its increase in some measure to rural-urban migration. The rural population which has been able to benefit most from economic growth is that located within the irrigated zones.

Despite the fact that this data is somewhat old, the team's estimate of incomes depends largely on an update of the 1971 survey's results to 1980 values, rather than basing it on national income accounts. It also assumes that expenditures closely approximate income levels at least for the poorest half of the population. Income has been further multiplied by 8 percent, the average rate at which it had been growing during the course of the 1970's. Taking these factors into account, present median household monthly income in urban areas is estimated at 988 DH ($255). This is a much higher estimate of incomes than that previously provided in the 1978 SSA of only 646 DH per month. Results of recent surveys in three of Morocco's grandes villes justify the representativeness of this higher figure in urban areas. These household surveys, while taken at different intervals, establish the median income at 1016 DH ($263) in Meknes, 743 DH ($192) in Fez and 700 DH ($181) Beni Mellal. The latter city is likely to be representative of some of the faster growing medium-size cities, whose population still has strong rural links and is without the extreme concentration of wealth at the top income levels found in Casablanca. By the same token the poor in Beni Mellal share the same characteristics of the poor in Morocco's large urban centers with income levels that are not much greater than the average rural income level.

Several characteristics such as the wide disparity in incomes revealed in the 1971 survey are unlikely to have changed dramatically over the course of the past 9 years. This disparity in wealth is not limited to the urban/rural differential, but is also prevalent in the urban income distribution. Approximately 20 percent of the urban households in 1971 lived in relative poverty, i.e., at or below one-third of the average urban household income level. The share of expenditures of the poorest half of the urban population amounted to only 17.6 percent of total expenditures while the richest 10 percent captured 35 percent. In effect, over one-third of the urban population and two-thirds of the rural population had incomes equal to, or less than, the average rural income. Thus, for the poorest strata of

urban households the rural/urban average income differential is not as wide as the overall two-to-one ratio would seem to suggest.

More recent surveys in several of the bidonvilles of Morocco's urban centers underscore the persistence of a wide disparity in incomes. Average incomes in the bidonvilles often amount to not more than half the overall urban median. In Meknes, for example, where median income closely approximates the overall urban median, 95 percent of bidonville residents had incomes below that city's median income of 1016 DH ($263) per month. In 1977, the majority had incomes at about half the median level. Similarly, in Fez, median income was reportedly 743 DH ($192) per month while average income in the bidonvilles was only 487 DH ($126) per month in 1979.

GOM officials generally categorize household with incomes between 150 DH and 600 DH ($41-155) with the bidonville population and estimate that 38 percent of the total population falls within this income category. These low levels of income affect expenditures on housing. In the most complete study available, the 1971 Household Consumption and Expenditures Survey, the share of housing expenditures represented 23 percent of total expenditure. Rents and utilities accounted for 60 percent of this expenditure category, or the equivalent of 15 percent of total expenditures for the lower income groups.

Despite the absence of more recent comprehensive data on housing expenditure, a variety of sources and smaller surveys suggest that total expenditure on shelter rarely exceeds 20 percent of total income among the urban poor. It should be noted that the majority of bidonvilles residents do not pay rent for their housing as they tend to be owners. Rents are more commonly incurred by the poor living in the Medinas of Morocco's cities.

In the bidonvilles, rents reportedly range from DH 31 in Casablanca for a one room $18m^2$ shanty to 100 DH ($26) per month for a baraque of $40m^2$ in Meknes. In Rabat, the housing expenditures in the bidonvilles ranged from 35 DH to 100 DH per room ($9-$26), representing 20 - 25 percent of income. Average rental paid by households according to a variety of surveys seems to be 50 DH ($13).

Owners have no permanent expenditures on housing apart from maintenance, and in many instances land rents. The latter reportedly ranges from 10-20 DH ($2.6-$5.2) per month for lots of not more than $40m^2$ - $60m^2$. Maintenance, on the other hand, is generally for the roof which can amount to an average expenditure of 20-40 DH ($5.2-10.5) per year according to some sources. Construction of the baraques reportedly cost from 500 DH to 4,500 DH ($129-$1163). The average value seems to be around 2000 DH ($517), indicating a certain savings capacity since this represents 4 to 5 months worth of income expended over a relatively short period of time. Recent construction of baraques averages around the higher estimate of 4,500 DH, leading some authorities to claim that the market for this form of non-permanent construction has become quite competitive with similar types of construction using more durable materials. Prices in this market tend to be highly speculative and there has been an escalation in the price of both scrap metal and wood as demand by bidonvilles residents has increased.

Expenditures on utilities are equally difficult to quantify because so few of the households in the bidonvilles have access to piped water. For many of them, water is free from the public fountains while others resort to purchasing it from vendors incurring an average cost of 35 DH-50 DH per month (almost 10 percent of income for the average bidonville household).

On a per unit basis, the cost of water for households with individual connections to the public water system is at a rate which is 1/35th the cost of water purchased by bidonvilles residents from vendors who normally obtain their water free of charge. Thus, monthly charges for an average size household consuming an average of 55 liters per capita per day is 6 DH. A similar consumption level of water purchased from vendors would cost the bidonvilles residents at least 216 DH per month. It is small wonder that consumption levels are well below half this average level, and that most households prefer to fetch their own water from the public fountains. While individual hook-ups, when that option is available, are by far a cheaper means of gaining access to adequate amounts of water, not very many households can afford to pay the initial costs of installation and related charges which can run up to 800-900 DH ($210-$237). More recently, several cities have allowed households to pay for installation on credit. Yet due to the often illegal land-tenure status of bidonvilles' dwellers not very many of them have been able to benefit from these programs.

The pattern of expenditures in bidonvilles on shelter not only reveals a great variability between owners and tenants, and between those who purchase water and those who fetch it from the standpipes, but also emphasizes the fact that, for most residents, regular monthly payments for shelter are the exception rather than the rule. The regularity of expenditures depends largely on dwelling unit tenure status. The 1971 census results indicated that "owners" of dwelling units represent 60 percent of bidonville residents while another 10 percent are lodged for free. Only the bidonvilles' residents who are tenants (30 percent) are compelled to pay a fixed share of income for housing on a regular monthly basis. More recent surveys in various bidonvilles indicate that these tenure patterns have not changed substantially. Owners still outnumber tenants even in older central city bidonvilles such as Ben M'sik in Casablanca or Douar Hajjah in Rabat. While this "ownership" refers solely to the dwelling unit and not to land, rent paid for land is a significantly smaller percentage of income than that paid for the dwelling unit.

2. Employment

Morocco's urban centers provide most of the commercial, administrative and industrial jobs and salaried employment opportunities. Nevertheless, unemployment in urban areas affects between 10 to 15 percent of the active population, while underemployment affects another 18 to 23 percent. Additionally, salaried employment, which occupies a little over half of the urban economically active population, tends to be proportionately much less significant among residents of the bidonvilles. Instead, the occupational categories among shanty-type residents are more likely to be in the informal sector. These categories include unskilled and semi-skilled laborers (both permanently and regularly employed) small-scale self-employed artisanal and

commercial tradesmen. Even in Rabat, where a significant proportion of the population is employed in public service salaried jobs, the residents of the bidonvilles tend not to be as representative of the city's occupational structure.

There is a definite link between occupational category and income. Thus, while minimumin industrial wages are set at 292 DH ($77), a significant proportion of urban wage earners do not earn much more than this minimum. The 1971 household expenditure and consumption survey revealed that the lowest incomes were associated with household whose heads were employed in agriculture, artisanal trades, commerce and nonclassified workers (presumably, occasional laborers and self-employed tradesmen). All of these categories are heavily represented in surveys of the occupational structure of bidonville residents.

These traditional employment refuges of the urban poor translate into a disposable income which is about half that found in the modern sector of the economy. Compounding the problem of low-income levels among the unskilled laborers and the traditional artisans is the instability of the stream of income.

While comprehensive data is unavailable, several surveys suggest that the number of wage earners per household increases among the poorest households. The bidonvilles seem to be characterized more significantly by the problems of urban underemployment than unemployment pe se with a number of households members employed irregularly in low-wage earning jobs. This is not meant to belittle the very high levels of urban unemployment, but rather to suggest that the traditional definitions of employment do not adequately describe the situation in the bidonvilles.

III. SHELTER DELIVERY SYSTEM

A. OUTPUT

1. Institutional Responsibilities

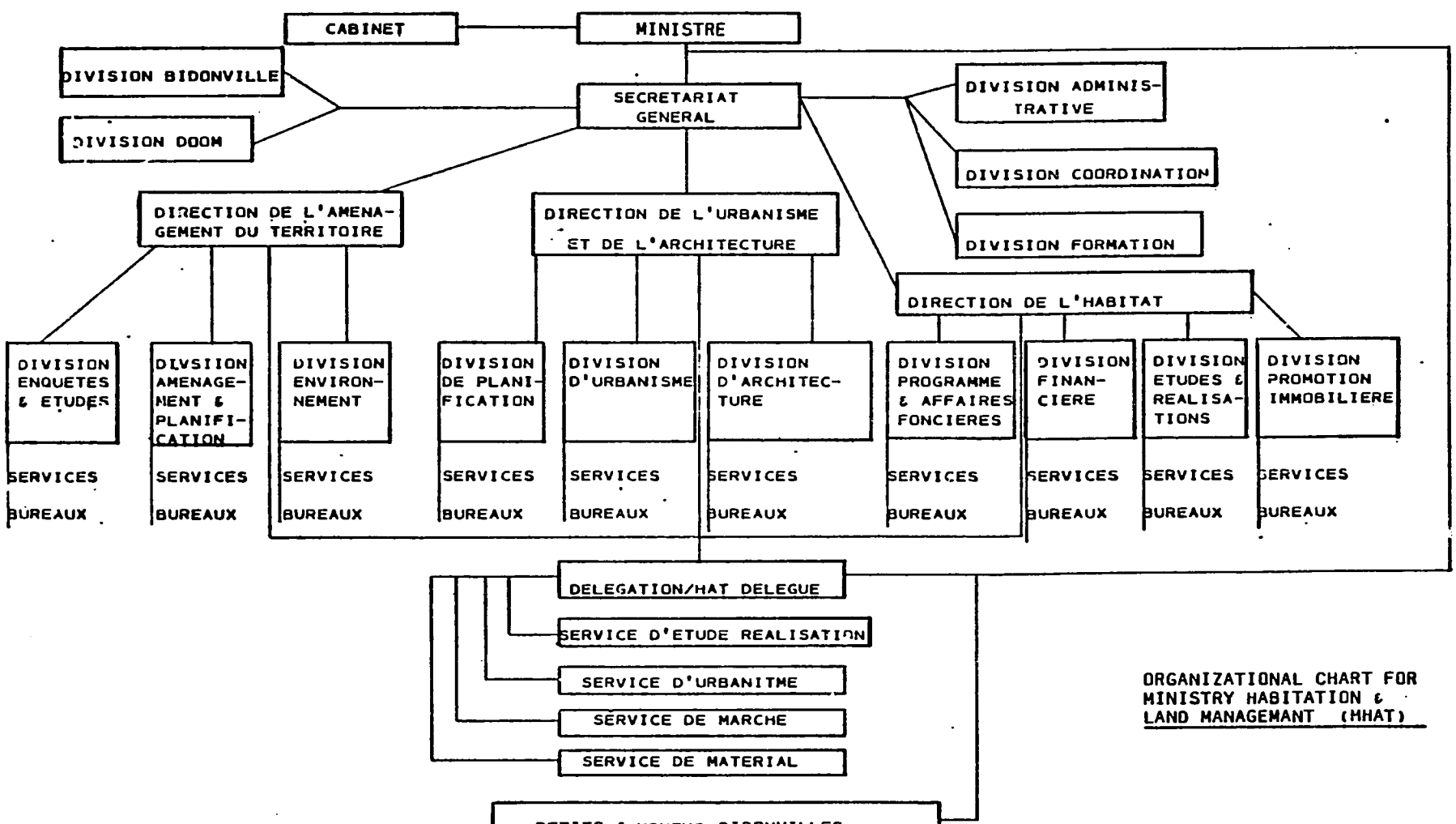
The bulk of the shelter produced in Morocco in recent years is the result of a highly fragmented production system dominated by small contractors and cash-oriented financing. The shelter sector has not drawn the interest of large construction organizations, and government programs have only slowly built up steam.

There has been plenty of land speculation around the nation's major urban centers. Much of this speculation is carried out in violation of the existing urban development regulations but it has traditionally provided the best outlet for the housing demand of the middle and lower middle class populations. As has been mentioned earlier, the slum areas (bidonvilles) have also grown in area and population in recent years and represent the principal outlet for the housing demand of the poorest strata of the Moroccan urban population.

The GOM effort to deal with the nation's housing problem, a problem which is grossly defined as a housing unit deficit of over 700,000, has been marked by a number of highly innovative programs which, nevertheless, do not seem to have been tied together in such a way as to result in a continuously increasing output over time. Programs experimenting with sites and services and self-help construction, for example, were being implemented in Morocco well before the international lending agencies began to focus on this kind of approach to low cost shelter production. Changes in politicals orientation and national economic conditions appear to have intervened to prevent the incorporation of these experiments into an ongoing and consistent national shelter program. A review of the experience beginning with the 1973 to 1977 development plan and continuing through the present reflects the ever changing nature of the government's approach to the shelter problem.

Today GOM-promoted shelter delivery programs are directed by the Ministry of Housing (Ministere de l'Habitat et de l'Amenagement du Territoire - MHAT). This institution was created in 1971 under a slightly different name and remains one of the younger GOM ministries. MHAT is charged with the development of a national shelter policy and the programs that are necessary to implement that policy. Its divisions include Habitat, dealing specifically with shelter production, Urbanisme dealing with physical planning and physical planning standards (zoning and infrastructure standards) and Amenagement du Territoire, the regional planning division which has environmental analysis responsibilities as well. (See Figure VI). From this division come the regional planning documents which form the base for future land development efforts nationwide. The Ministry is also establishing a division to deal with construction standards and controls. The focus of this division will be an updating of the nation's body of building standards, most of which have not been changed since adopted in colonial times.

Figure VI



ORGANIZATIONAL CHART FOR MINISTRY HABITATION & LAND MANAGEMANT (MHAT)

The MHAT programs are incorporated into the overall GOM development plans and therefore are placed in the context of the national development issues as defined by the country's leaders. Another ministry which has a direct day-to-day bearing on the shelter delivery system, nevertheless, is the Ministry of Finance (MOF). This Ministry is entirely responsible for the establishment of financing programs and for the analysis of capital markets and the determination of interest rates. Because Morocco's capital markets are carefully controlled by the central goverment, MOF decisions with respect to interest rates and lending terms have a fundamental influence on the progress of the nation's housing production programs. The Ministry maintains its control over capital markets through the intervention of a variety of agencies of a semi-public nature. These agencies will be described in greater detail later in this section, however, it should be noted at this time that their control of the resources which move in Morocco's capital markets is almost total and, therefore, the government policy with respect to the allocation of those resources determines the impact on shelter sector programs.

During the 1973 - 1977 plan period, the GOM set in motion programs to encourage the production of low and moderate cost housing which continue, though somewhat adjusted in format, to this day. The austerity budget set for the 1978-80 plan period dampened GOM direct investment in shelter production but did not stop the process of devising new programs and techniques to carry forward the shelter production program. Among the principle new efforts were the negotiation of major slum improvement programs with the international donor agencies (IBRD - AID), the creation of the national land development fund (FNAET) and the regional construction companies called ERAC's. The negotiations with the World Bank and AID have led to agreements to undertake projects in the two principal urban centers of the country, Rabat and Casablanca, with negotiations continuing for projects to be undertaken in Meknes and Kenitra. These negotiations have refocused GOM interest on the partial or minimal type of shelter solution as one approach to improvement of conditions in the nation's slum areas. The result of the negotiations and the implementation of these programs is expected to be formalization within the GOM of the slum upgrading process, a process tried heretofore only on an experimental basis. A Department of Slum Upgrading is being established within the Habitat Division of the MHAT and it is expected that this formal recognition of the importance of the slum upgrading program will assure that the experience gained throughout the country will be retained and will serve to formalize inclusion of this component of shelter production in future national housing programs.

Establishment of the FNAET has resulted in a highly productive mobilization of resources for use by the shelter sector. The FNAET is essentially a revolving fund managed by MHAT that takes downpayments made by future homeowners and converts them into the financing for the land development activity which must proceed any unit construction.

At a time when the GOM's sources were being allocated to other national development and economic priorities, the availibility of the FNAET mechanism to fund land development quickly became the primary resource for government

supported shelter programs. The creation of the ERAC's, essentially government owned and operated construction companies, permitted close coordination between the financing method provided by the FNAET and the program to develop increasing amounts of land for moderate cost shelter. Following selection of an appropriate site (often a government-owned piece of land), the ERAC would apply FNAET funds to land development, setting the base for subsequent residential unit construction by those persons who had registered under the FNAET program. Unit construction could be carried out by the ERAC's themselves or by small contractors. At a period in time when the private sector has been almost totally removed from shelter production activity, the creation of the FNAET and the ERAC's has led to greatly improved GOM shelter production activities.

2. Production

The emphasis on production is important, for the GOM has set ambitious targets during its official plan periods and has had great difficulty in reaching these objectives. During the 1973-77 program when production of low cost core units and serviced sites was expected to reach 142,000 units, production actually reached about 50,000. During the 1978-80 period that just ended, production of moderate cost sites and the related units was expected to total around 40,000 plots. By early 1980, 5,400-5,500 had been completed. Another 115,000 lots were in the process of development, an indication of the improved output which can be expected in the future if the GOM holds true to its word that the shelter sector is a high priority sector for the coming Development Plan. The fact remains that GOM programs have not reached targeted levels in the past and an extraordinary effort will be required if a convincing attack is to be made on the deficit which exists today.

The major government supported shelter programs of recent years have been the Habitat Bon Marche (HBM) or "Logement Economique" program carried out by the FNAET and the ERAC combination mentioned earlier, and the "Programme Social," the title given a program designed to deliver core housing units built on serviced sites with the understanding that, as family incomes permit, these units can be expanded, in some cases, to 2-3 storey units. (See Figs. VII and VIII). During the 1973-77 Plan, the program was labeled ZED-5 or ZED-15, because it was expected that the utilities would be applied to these sites in a gradual manner over 5 to 15 years as the family incomes permitted increased investment in the property. This deferred infrastructure investment program did not work for a number of reasons including the absence of a clearly instituted cost recovery mechanism and the political pressure which could be applied by program beneficiaries who had not received their infrastructure allottment. The program therefore was dormant during the 1978-80 plan period. It has been revived for the new plan with the understanding that the core house continues to be a viable solution but that the lot must be completely serviced at the time of transfer of title. In many of the areas where this program was carried out during the 1973-77 period, the majority of the properties have been developed by the proprietors to the full three storey height (R plus 2). The private sector construction dynamic is evident. The social dynamic is not so well understood as it has not been analyzed carefully, and it is not

ANNEXE 1bis

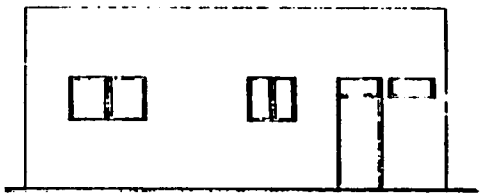
ROYAUME DU MAROC
MINISTERE DE L'URBANISME DE L'HABITAT
DU TOURISME ET DE L ENVIRONNEMENT
B.C.T.C

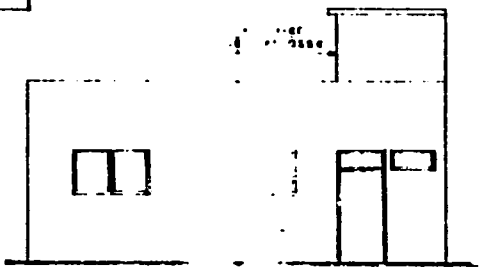
L.S.E

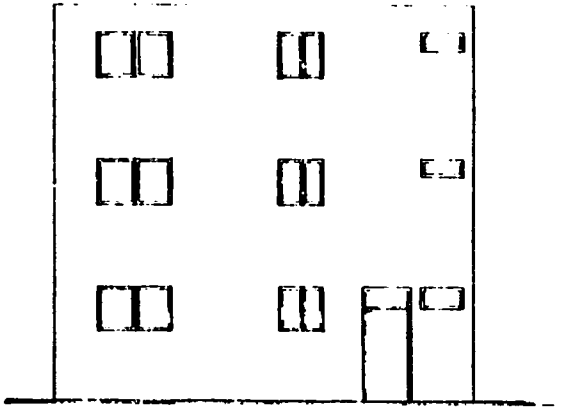
Logement Social Evolutif
CAMPAGNE 75/76
SOLUTION MOYENNE
EXTENSIONS SUCCESSIVES

ECH: 0.01 p.m. 31 MARS 1977

Figure VII



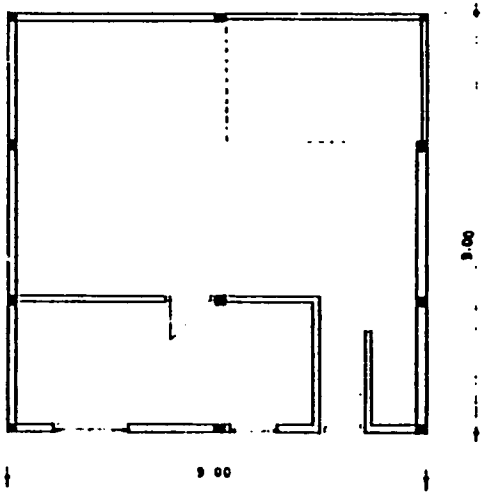


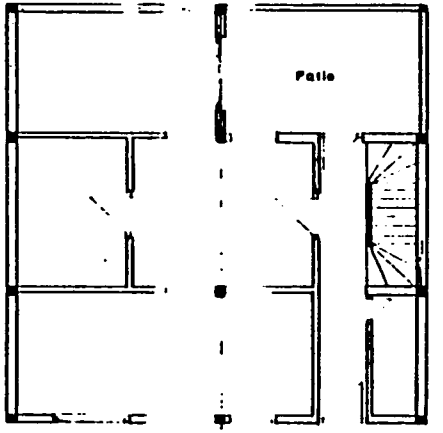


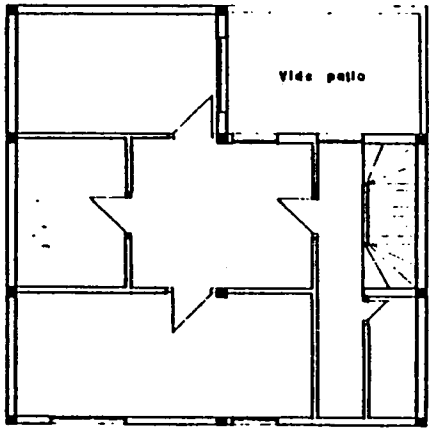
ETAT A LA LIVRAISON

EXTENSION A [illegible] HAUSSEE

EXTENSION : 1er ET 2ème ETAGES







RDC

Surface habitable 71 80 m²

Surface [illegible] 56 40 m²

ETAGE COURANT

Surfaces habitables R+1 = 112 20 m²
R+2 = 168 00 m²

Ces croquis ne sont pas des plans d'architecture ils servent à établir le quantitatif de l'annexe 2

Figure VIII

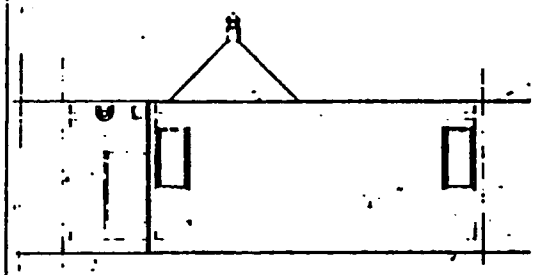
المملكة المغربية
وزارة السكنى وإعداد التراب الوطني
ROYAUME DU MAROC
MINISTERE DE L'HABITAT
ET DE L'AMENAGEMENT DU TERRITOIRE

البرنامج القروي
بناء 50 منزلا
شقة نموذجية
ب

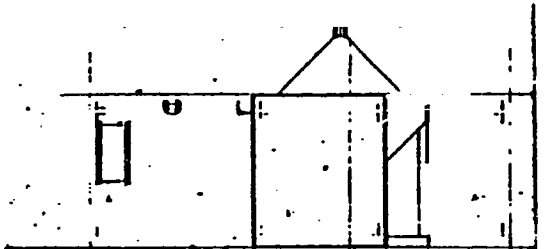
- PROGRAMME RURAL
CONSTRUCTION DE 50 LOGEMENTS
CELLULE TYPE
B

CENTRE DE.
PROVINCE DE.

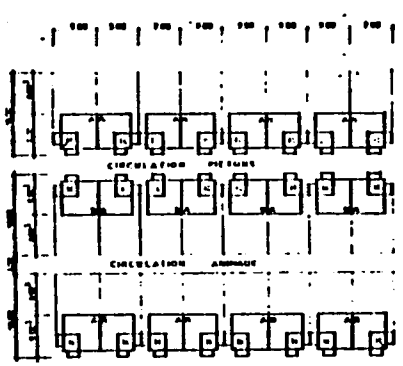
وزارة السكنى وإعداد التراب الوطني
مديرية السكنى
MINISTERE DE L'HABITAT ET DE L'AMENAGEMENT DU TERRITOIRE
DIRECTION DE L'HABITAT



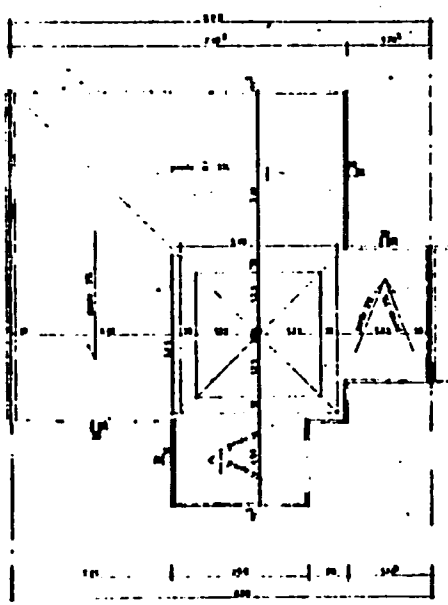
FAÇADE COTE COUR Ech:1/50



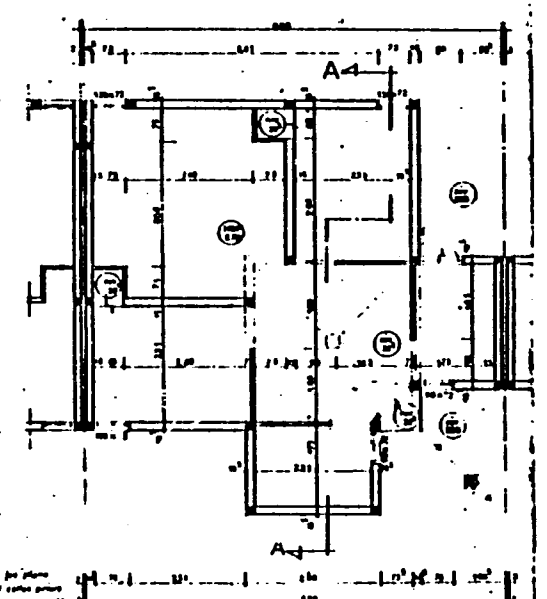
FAÇADE COTE RUE Ech:1/50



PRINCIPE DE GROUPEMENT
Ech:1/500



PLAN TERRASSE Ech:1/50



PLAN REZ DE CHAUSSEE Ech:1/50

known whether many of the original program beneficiaries have expanded their units or whether they sold out to more affluent families who could carry out the expansion visible today.

The slum upgrading programs, in both large bidonvilles and the newer small and medium-size bidonvilles program have only begun to show tangible results with the partial completion of the new site in Rabat. In all cases these programs are in the early stages of implementation and analysis of their impact will have to await future studies of GOM shelter production programs. To date government housing projects in the bidonvilles are expected to benefit less than 12 percent of the bidonvilles population nationwide.

3. Costs and Financing

A series of tax measures taken as part of the austerity program of recent years, have effectively removed private sector institutions from the shelter construction field. As a result, private sector production has continued to be virtually hand-craft in character with small groups of skilled labor moving from one unit to another depending on the availability of financing.

Construction costs for the HBM apartment units which have represented the bulk of GOM-sponsored production in recent years is estimated at 1,020 dirhams/m^2 ($264). The core housing unit which has served as the base for the Programme Social has a cost of 492 dirhams/m^2 ($127). Thus, in the cases where parcels of government land can be used for the Programme Social, a 27 m^2 completely serviced unit could be sold for approximately 20,000 dirhams ($5200).

Financing for the construction or purchase of shelter in Morocco is provided by a banking system composed of the central bank (Banque du Maroc), 14 deposit or commercial banks, the popular credit system (the Crédit Populaire) which is directed by the Banque de Crédit Populaire (BCP), and six special financial institutions which include the national economic development bank (BNDE), the Caisse de Dépot et de Gestion (CDG), the agricultural credit bank (CNCA), the Crédit Immobiliére et Hotelier (CIH), the postal checking system and the Caisse d'Epargne Nationale (CEN), the postal savings organization. As mentioned earlier, the banking system, and financial markets in general, are carefully controlled by the GOM. These controls are affected through dictation of interest rates and the imposition of reserve requirements. Other important institutions that provide the resources for the capital market are the national social security agency, the CNSS, and the insurance companies.

The CDG and the Crédit Populaire system are the two most influential institutions where public sector shelter programs are concerned. Nevertheless, Ministry of Finance officials estimate that the GOM and related autonomous institutions account for under 20 percent of the construction and home purchase financing made available each year with the private sector making up the remainder. During the 1973-77 plan period the formal financial system helped finance a total of 19000 units or less than 10

percent of the units constructed. Most of the private sector financing comes in the form of downpayments made by the prospective home purchasers i.e., household savings form the bulk of the financing available for housing. The commercial banks make few loans for shelter sector purposes, and those they do make are of a short-term at top interest rates.

Lending to the shelter sector has been restricted by the tight money conditions set by the GOM in recent years. Both the CDG and the Crédit Populaire system have been used to funnel resources to the treasury to feed the government deficit. The importance of the CDG to Moroccos's capital markets is made evident by the fact that, in 1978, over 90 percent of its resources where deposits, principally deposits from the social security system (CNSS) and the postal savings system (CEN). Sixty-one percent of the CDG's deposits came from the CNSS. For that same year, CDG deposits totalled 2.4 billion dirhams ($604 million), representing about 18 percent of all banking system, treasury and postal deposits. Almost one quarter of these funds went to the treasury on loan, while 50 percent were used for medium term loans to public sector institutions. The final quarter was applied to investments in the CDG's own subsidiaries.

The CDG and the Crédit Populaire system were the principle suppliers of the daily money market. The CDG invests in housing finance and the related urban infrastructure through a variety of mechanisms. One of these is the Fonds d'Equipment Communale, a fund which is designed to offer municipal governments the possibility of carrying out their own infrastructure projects. By the end of 1978 this fund had an approved level of 106 million dirhams ($27 million) in funds for projects, however, municipal governments were only able to come up with 36 million dirhams ($9 million) worth of projects. The CDG also has three subsidiaries with shelter sector objectives.

Among these are the Companie Générale Immobiliére (CGI), the Companie Immobiliére et Foncière Marocaine (CIFM), and the Societé de Promotion de l'Habitat Locatif (SOPHAL). The CGI and the CIFM will essentially be doing the same kind of construction. The CIFM also has property management responsibilities which date back to colonial times, but the future orientation of these construction companies will be towards the middle class housing unit which is financed by the HBM program. These companies produced about 4,000 units in the five year period leading up to 1978, occasionally using their construction experience to build for companies and other institutions which already had the land and the funds but not the construction capability.

The principle tool for intervention by the CDG in the housing finance market is the CIH. The CDG owns approximately 40 percent of the CIH stock and is also a major resource in the long and medium-term capital markets. In 1980 the CIH borrowed 240 million dirhams ($62 million) at 15 years at a rate of 8.5 percent from the CDG and the insurance companies. The CIH is, on paper, the nation's principal housing finance institution. Housing has gained an increasing share of its total loan portflio rising from about a third to well over half of total credit in the period between 1973 and 1979. This credit has helped in financing a total of 42,783 units during this

period, most of which went to households with incomes of over DH 2000 per month.

During 1978, the CIH made a total to 365 million dirhams ($92 million) in loans for housing. Of this total, 88 percent went to what is known as the "Régime Générale," a lending program which permits construction loans and also first mortgages. The mortgages could be made for up to 80 percent of the value of the unit, would normally carry a 10 year term, and would benefit from an interest rate subsidy program which was scaled according to the value of the unit with rates between 6 and 9 3/4 percent at a time when the market was around 12 percent. Modifications made in September 1980 set the top rate at 14 percent for long term loans and the Régime Générale program was modified to provide a 5 percent subsidy for loans up to 200,000 dirhams ($52,000), and a 3 percent subsidy for loans between 200,000 and 300,000 dirhams ($77,500).

The remaining 12 percent of CIH housing loans or a total of DH 44 million ($11 million) were granted according to the terms of the "Régime Special," a program established to permit lending to the lower income groups using public funds. The Régime Speciale was originally established to provide credit for purchasers buying units with costs of 60,000 dirhams or less ($15,500) with no more than 200 m^2 of built-up space, and for cases where family incomes did not exceed 1500 dirhams a month ($388).However, about half of these subsidized loans went to beneficiaries with more than DH 2000 monthly income according to data available for 1977.

The loans made under the special program had 15 year terms and could reach 90 percent of the value of the unit in question. The interest rate range was between 3 and 6 percent, but has now been adjusted to between 6 and 7 percent. The CIH has delegated all the lending to lower income groups, those covered by the Régime Speciale, to the Banques de Crédit Populaire. These banks are the regional arms of the Crédit Populaire system and have been the most effective at developing a wide-reaching branch network which covers the nation. The Crédit Populaire system has about 150 branches and at the end of 1979 reported 4.5 billion dirhams ($1.15 billion) in loanable resources.

The Crédit Populaire system accounts for about 30 percent of the banking systems deposits. The Crédit Populaire system also handles 90 percent of the remittances sent by Moroccan workers abroad. These remittances receive special treatment in that sight deposit accounts receive an interest of 3 percent per annum. The Crédit Populaire system makes loans to small-scale entrepreneurs and is fully familiar with the processing of small payments. Thus, the Crédit Populaire system offers the best means of dealing with Morocco's lower income families.

During the 1973-77 period the Crédit Populaire tried a contract savings and loan process. The program failed because the remainder of the banking system was able to offer loans to clients without the need for a special contractual relationship, thereby removing any advantage the Crédit Populaire system would have offered. Many GOM officials continue to believe

that some form of contract savings program would be the best way to increase resources for housing.

Interest rates for savings are controlled by the GOM, as is the case for lending rates. As of October 1980, passbook accounts earned 5.5 percent and fixed term deposits could earn from 4 percent per annum for one month and up to 9 percent for eighteen months. Arrangements for any longer term were not subject to GOM limitations. In addition to the Crédit Populaire system and the deposit banks, the CEN offers Moroccans an opportunity to open savings accounts. The CEN is a service of the Post Office and only a limited effort is made to actively solicit funds for deposit. The CEN did provide almost 400 million dirhams ($103 million) to the CDG in 1978. The system has witnessed a declining rate of growth throughout the latter years of the 1970's, but, nevertheless, remains an important contributor to savings mobilization in Morocco.

4. Infrastructure Institutions

Production and distribution of water is handled by a variety of institutions depending on whether the location of the systems is in urban, semi-urban or rural areas.

The principal agency responsible for the production and supply of water in urban areas is the Office National d'Eau Potable (ONEP) under the tutelage of the Ministry of Equipment. It also is responsible for the distribution of potable water in the semi-urban administrative centers of rural communes. The actual distribution of water to two-thirds of the urban population is handled by 10 autonomous municipal enterprises (regies) which serve a total of 22 urban agglomerations with each of the major cities having its own regie. The remainder of the urban population is served either directly by ONEP or by municipal water services. In the latter case these services are under the tutelage of the Ministry of Interior.

In rural areas outside of the administratively chartered centers of communes, water distribution is the responsibility of the Direction de l'Amenagement et de l'Equipment Rural of the Ministry of Agriculture. Actual operation and maintenance of these systems is however assured by the communes.

Most of the financing for infrastructure in major urban centers have traditionally come through the FEC which makes loans for sanitation, water and electricity. More recently, the FEC has been directed to assist the less privileged communes with their financing needs. The aim has been to make the FEC a bank for the local authorities and to provide its technical assistance to those communes which have not availed themselves of its services. To enable the FEC to assume its role, the GOM has authorized it to use external financing and raised its interest rate to 8.5 percent with the Treasury subsidizing this rate by providing a rebate of 2.5 percent to less privileged communes.

Other sources of funds for local infrastructure development are the Fonds de Development des Collectivés Locales et de leurs Groupements (FDCLG) managed by the Ministry of Interior and the Fonds Special de Developpement Regional (FSDR) under the State Secretariat for Planning. The latter has concentrated primarily on the poorest regions with more than 50 percent of its investment going to education, health, water supply, sewerage, rural electrification and roads.

5. 1981-85 Economic and Social Development Plan: Housing Component

Reflecting on the plans and achievements of the 1972-77 and 78-80 periods, MHAT officials have called for an ambitious attack on the housing deficit, which they place nationwide at over 700,000 units. MHAT planners organize this attack in four sections: first, the slum areas, both large and small, where they plan to reach families with incomes between 300 and 600 DH (US$78-155), second, the HBM Program carried out principally with the support of the FNAET pre-financing program and the "Programme Social," both for families with incomes between DH 600 and DH 1500 (up to $388), third, the upper income program which will be the province of ERAC's to some extent, but largely the province of the semi-public construction agencies and the private sector, and will deal with family incomes of up to 3000 DH ($775), and fourth, the rural program.

The draft MHAT section of the development plan suggests that such an ambitious program could only be carried out with the assistance of certain supporting activities. Among these are reform of legislation dealing with private sector involvement in residential construction, establishment of a coordinated savings and loan process, greater encouragement of participation by cooperatives in the housing construction and sales process, the establishment of a land bank controlled by MHAT, and the establishment of a special social housing fund. These reforms and governmental initiatives would also have to be supported by better coordination among the various government departments dealing with the shelter problem. These agencies deal with land acquisition, title transfer, and all forms of public utilility including water, sewer and electricity. The MHAT planners suggest that the Ministry should be permitted full control of the funding for and provision of infrastructure services in the slum area, social housing and rural programs. Finally, MHAT planners call for an increase in the subsidy provided to low income families and efforts to improve the productive capability of the building materials industry.

The action plan proposed by the MHAT calls for an attack on the nation's slum areas principally through upgrading these areas and through recognition of the fact that the GOM could not encourage the construction of enough units at low enough costs to relocate or rehouse all of the slum area dwellers. The bidonville program is divided into two components, one dealing with large bidonvilles in the nation's major towns, four of which are now the focus of joint efforts with the IBRD and AID. Five more such

slum areas would be added to the program between now and 1985. The second component, the small or moderate-sized bidonvilles program (petit et moyen) consists of efforts to improve conditions in small slum areas in 60 centers around the country. Some of these locations would be in the same large cities that may also be the focus of large slum area programs. The bidonville program is designed to produce about 130,000 units by 1985 and to receive an investment of approximately $239 million.

The second major plan component is the HBM Program designed to add 200,000 parcels to the 115,000 now being developed. These parcels would permit construction of three-storey apartment units (one dwelling unit/storey) with costs estimated at DH 12,000 ($3,100) per parcel. The HBM Program is carried out through use of the FNAET financing program, a program which depends on pre-financing through the use of downpayments by the program beneficiaries. As mentioned earlier, this program is directed that families with incomes between DH 600 and DH 1500 ($155-$388) and is also dependent upon the availability of credit from the CIH or the Crédit Populaire System. Much of the land development is carried out by the ERAC's, but unit construction may be carried out by the beneficiaries, private contractors, or hopefully, according to MHAT planners through use of housing cooperatives. MHAT planners feel that the cooperative movement has been successful in Morocco in organizing production in a variety of areas and could be effectively applied to the shelter sector. Reliance of the FNAET process to carry out this program means that little direct GOM budget allocation is required.

The third major component of the action plan is the social program. The plan calls for production of 50,000 units and an investment of $660 million. This is by far the largest budget outlay called for by the draft plan. The social program is designed to construct core units of roughly 30 m^2 on parcels whose size and infrastructure services will permit expansion of these units, both horizontally and vertically, to three storey units through the use of private sector contracting or self-help construction. The financing for this program, which is targeted at the lower of the family income categories listed above (up to $388/mo.) is expected to be drawn from an social housing fund (Fond Social de l'Habitat).

The fourth component of the action plan is the rural or Market Town program for which $183 million have been projected. This program would focus on agricultural development centers and administrative centers through out the country where two forms of dwelling unit would be constructed and provision made for develoment of serviced sites. The pilot program which is now under way in a number of rural centers limits construction to fifty units with provisions for up to 150 more. Financing is to be provided by the Crédit Populaire System. MHAT planners are using DH 50,000 ($12,919) as the unit value.

The fifth major component of the draft action plan will result in the construction of roughly 1500 units in the Sahara provinces. This is a special program designed to support GOM activity in the southern provinces and while it incorporates many of the features of the four components

described above, most of the units will cost more than $13,000. A total expenditure of around DH 87 million ($22.5 million) is projected.

The draft MHAT plan is ambitious and also makes rather substantial demands on the treasury. Although the social program is the largest, and would seem to offer the best form of solution for families with low incomes who will not be the beneficiary of slum area programs, it is not clear how this program will be funded. Finalization of the National Development Plan should make more clear the extent of GOM commitment to increased shelter sector activity during the coming five years. The unit prices quoted in the Plan appear high relative to the income levels known to predominate among Morocco's urban and rural population. The assumption which underlines the MHAT draft is that the GOM will decide to continue to heavily subsidize its shelter financing programs. Discussion of shelter financing in the MHAT draft indicates that the programs must be more realistic in their recognition of the levels of housing costs which will apply. At the same time, the plan also indicates clearly the need to greatly increase the production of shelter solutions for the nation's low income families. It is not clear how these two conditions will be matched in the final version of the economic and social development plan. GOM budget decisions will be of paramount importance to implementation of the proposed MHAT program.

B. CONSTRAINTS TO PRODUCTION OF LOW COST HOUSING

1. National Development Policy

There can be no question that the major constraint to increased production of low cost shelter in recent years in Morocco was the GOM policy decision to restrict investment and reduce the budget and trade deficits. This policy decision led to development of an interim three year Plan for the period 1978-80. The Plan called for a thirty percent cutback in the investment budget and a severe restriction on increases in credit to the private sector. For the year 1980, for example, lending institutions could only increase their portfolios by 12 percent. Limitations of this sort and limitations on direct government budget allocations have a very immediate affect on the production of low cost shelter as it is so heavily dependent upon government subsidy programs. Housing has been listed as a priority during the preparations for the next five year development (1981-85). Though efforts can be made to mobilize increased amounts of savings, or to obtain international credits, the GOM will have to allocate larger amounts of budget funds and permit greater flexibility in finance and private sector involvement if it is to achieve the objective of higher production levels.

At the same time, the direct government budget commitment to the shelter sector is substantial and is spread out across a wide range of income levels. Analysis of housing finance programs has led some agencies (principally the CIH), for example, to suggest reforms that set 120,000 dirhams ($31,000) as the ceiling price for units in the lowest, and therefore, most assisted category of loan. Using the 15 year term and 4 percent

interest rate suggested by this same document, one notices that repayment of the loan would require monthly payments of 885 dirhams ($229) which, at 30 percent of income, would require monthly income of almost 3,000 dirhams ($775). The reform suggestions would carry the interest rate subsidy up to units with prices of 300,000 dirhams ($77,500). With a median income estimated at slightly below 1,000 dirhams ($258), it is clear that these proposals call for a GOM subsidy over almost the entire income distribution. In fact, the first cut-off level, 120,000 dirhams ($31,000), permits subsidy coverage up to the 70th percentile of families according to income distribution information.

The 120,000 dirhams and higher levels suggested in the reform program reflect the impact of increased construction costs on the price of housing in Morocco. Housing producers find it increasingly difficult to produce a standard unit for anything less than 100,000 dirham ($25,800), and when to this fact is added the government's predilection to provide support for its own staff and the educated middle class, it seems probable that most of the construction in the country will be priced at above 100,000 dirhams. The effect should be continuation of the present circumstances in which the bulk of the government assisted housing production is not being directed at the mass of the population.

The broad spread of the interest rate subsidy when combined with the government's tightened budget has clearly resulted in the imposition of a constraint on the production of lower cost shelter solutions through government programs.

2. Taxation of Land Development

Another important constraint has been the steep taxation of land development activities imposed by the government over the past five years. During 1980 the government gave indications of recognizing the constraining effect this tax program has had on land development and reduced the tax on the land development capital gain tax from 25 to 15 percent. This tax on capital appreciation, however, has also been complemented by taxes on professional activities and the profits of professional enterprises (architectural firms, for example). These latter two taxes (known in code as IPP and IEE) when added to the capital appreciation tax have set the penalty for active involvement in the real estate sector at such levels as to virtually shut off all formal private sector involvement.

At the same time, the governent has realized that the private sector offers some very real potential as a partner in the process of increasing housing production nationwide. The success of the FNAET in gathering down payments which could be used to fund infrastructure expenditures has made clear that financial resources do exist and can be directed at the shelter problem. In addition, the expansion of the original one-story units in some of the ZED-5 and ZED-15 developments, much of this financed by cash payment, has also given further example of the financial capacity of the private sector where real property development is concerned. During the fall of

1980 the GOM was reviewing at the ministerial level a program which would exempt land developers from certain taxes, in order to stimulate greater activity in this sector. The new program reportedly has the full support of the king and should take effect in the near future, thereby removing an important constraint to added shelter production.

3. Land Acquisition

Land ownership and control over its use is complicated by a mosaic of laws and regulations developed over the centuries and reflecting the cultural mix which includes the interposition of Western European concepts during the colonial period. There are roughly six major categories of land ownership which may confront anyone planning the residential development of a parcel of land. There are the state-owned properties which may be directly allocated to the royal family or to one of the many agencies of the GOM; there are properties which have been formally registered in a process established in 1912 and drawn from an Australian model; there is private ownership which may have been developed traditionally according to Islamic law permitting ownership following ten years of working of the land; there is municipal ownership, which is generally supervised by the Ministry of the Interior; there is the "Guiche" form of ownership in which the land belongs to the state but its use and earnings are the prerogative of the recipient of the grant, traditionally the result of military favors; and there is the "Habous," a form of ownership which may be public or private and which has as its base a religious donation. The public habous lands are controlled by the Ministère des Habous, and any request for transfer of title of these lands must be processed through the Ministry which in consultation with the nation's top religious leaders will pass on a recommendation to the king who is the only one who can authorize the change of title. Habous lands may be developed for residential uses with rental income going to religious institutions. Private habous lands are donations which are set aside to maintain a particular family. The descendants of the donor may use the land but may not sell it. The land reverts to public habous classification when there are no longer any descendants of the original owner.

The acquisition of land by the GOM, and any subsequent transfer of control, is handled by the Service des Domaines, a branch of the Ministry of Finance. With the development of the FNAET program in the middle 1970's, and its expansion towards the end of the decade, it became clear that the Service des Domaines could not handle the volume of activity required. Expansion of the small slum upgrading program and the rural housing program during the next development plan period will add further to the problem.

In those cases where the MHAT requires acquisition of the land for public purposes (expropriation), the Service des Domaines works under a law developed in 1952. In the past, use of the expropriation process did not automatically guarantee rapid transfer of title as no transfer could be carried out until the final agreement had been reached with respect to price. Not only was it difficult to use such properties for housing programs in which a transfer of title to an ultimate beneficiary would be

involved, but it was also impossible to establish a price around which the project financing could be projected. During 1980 a law was passed which permitted transfer of title at the moment it was agreed that the property could be appropriately declared of public utility. It is hoped that this transfer of title provision will speed up the price negotiation process, but passage of the law represents real progress for the GOM housing program builders as they are now assured of clear title and the freedom to transfer that title.

The MHAT has also proposed to the government establishment of a land agency to deal specifically with housing programs. It has been proposed that this agency (Agence Fonciere pour l'Habitat) which may take the form of a land bank or fund, be given control of all government land not specifically allocated to other uses. It is also hoped that municipalities or tribes with land holdings could become shareholders in this new agency which would operate in the same way as a private sector institution. Although the MHAT has high hopes for the passage of the legislation required to bring such control into being, it seems an ambitious goal at present.

MHAT officials however, are concerned that the GOM does not have the flexibility to move its real property operations at the speed necessary to absorb the increased demands of an expanded national housing program. To date, MHAT planning has avoided use of non-government land whenever possible, and has even avoided the use of land not directly available to the Ministry itself. Even in the case of the 38 small slum areas currently being rehabilitated, where selection focused on the proximity to GOM-controlled land, the actual securing of title from the appropriate national government agency or municipality has caused some delay. It appears that some form of compromise will have to be drawn up by the MHAT and its sister ministries in order to arrive at a more efficient GOM approach to title transfer in the public sector.

Once the MHAT goes into the private sector for land purchase, a process which is clearly inevitable even though the GOM has a very large land bank, land prices will have a much higher incidence on shelter solution costs. It appears that the land issue is going to continue to be a factor of primary importance in the implementation of GOM housing programs.

4. <u>The Cost Implications of Standards, Building Materials, and Industry Practices</u>

The cost of housing and building construction in Morocco is high, relatively speaking, a fact which may be due to the heavy dependence on imported building materials and construction technologies. This characterization is particularly true for low cost housing programs. Many of the standards and building codes which govern construction reflect Western European culture and technology and have not been brought up to date from pre-independence times to reflect the conditions which apply to Morocco in the 1980's.

As mentioned earlier, MHAT is preparing to create another division of the ministry which will focus exclusively on building standards and codes. The standards and codes will have to place special emphasis on the unique requirements of low cost housing projects. In planning the small slum area upgrading program, MHAT officials have preferred a location on the periphery of metropolitan areas so that attachments can be made to infrastructure networks and so that plans and project implementation may be carried on outside of the limitations imposed by the formal urban plans and standards required of declared municipal areas.

The GOM has conducted numerous experiments with low cost shelter during the past twenty years, however, much of that experience remains in the minds of a few individuals and has not been incorporated into any overall planning format or training program. The core units designed for the ZED-5 and ZED-15 Programs offer a highly efficient and economic design for a modest shelter unit which could be expanded into a three-storey building over time. Subsequently, this design has been modified and has become more expensive in its very design at a time when all costs related to construction activity have also been increasing. The Market Towns unit offers no possibility for simple expansion and has an interior design which is complicated and requires the much greater use of cement. (See Fig. VII). The Market Town unit costs 20,000 DH (5,168 US$) to construct with a septic tank. This cost excludes land, water, electrical hook-ups and roads. Application of more efficient production techniques and building materials could result in the production of a core unit similar to the one used in the earlier social programs which would have the same cost but whose cost would include infrastructure and a moderate land cost.

The expandable core unit could be produced at a construction cost of around 492 DH/m2 (127 US$) as opposed to the 1,020 DH (264 US$) now being quoted for the HBM Program.

In addition, MHAT officials will have to pay close attention to effective site planning in order to hold costs to a minimum. Today Moroccan planners achieve effective use of about 43 percent of the site whereas the low cost programs ought to strive for around 60 percent land efficiency.

Serious earthquakes also play an important role in the selection of appropriate materials for shelter construction. Improved standards and design will have to incorporate careful consideration of materials if MHAT planners are to work against the steadily increasing cost impact of this component of housing programs.

The high cost of building materials and the reliance on materials with a high imported energy cost component such as cement, also have a negative impact on the construction of low cost shelter. Morocco's delicate position with respect to foreign exchange will require continued vigilance over those aspects of the shelter production effort which have impact on energy-related expenditures.

From a technical point of view, it appears that there have been few significant changes in the construction trades and occupations in recent years. Radical changes in skill requirement seem unlikely to occur in the near future and even large construction enterprises using advanced technology appear to prefer traditional training techniques.

In all probability the most important change that has occurred has been the development of prefabrication and the consequent mechanization of certain building operations. Where prefabrication techniques are widely applied, the composition of the labor force has changed and the proportion of unskilled and semi-skilled workers has diminished while plant and equipment operators as well as mechanics and electricians have increased. Industrialized construction methods also call for a higher proportion of professionals and supervisory staff.

Technical skill requirements other than those connected with prefabrication have arisen in the main as a result of the improvement and rationalization of traditional methods of work and construction. Much heavy work such as digging, earth moving, drainage, road making, and load lifting have been mechanized, raising the demand for plant operators and related mechanics and electricians.

In a number of trades, the skill requirements have blurred the demarcation lines between traditional trades and more modern activities (for example, between masons and concrete workers). Comparable changes have taken place for other trades but, essentially, most of these changes take place most slowly among those workers and small entrepreneurs dealing with low cost housing programs. These programs continue to provide important employment for the small entrepreneurs where a number of functions are carried out by one individual. While these smaller organizations may offer flexibility and, in many cases, lower labor costs, they also do not absorb changes in techniques and work habits which could lead to better project management and, consequently, lower waste and lower cost.

The lack of adequately trained manpower, therefore, remains one of the principle constraints to expansion of the production of low cost shelter solutions. To give an example that is perhaps a microcosm, the small slum area upgrading program was designed to permit a coordination between the MHAT and the Ministry of Manpower Development (Promotion Nationale) which would supply the basic labor group to carry out the infrastructure and construction. The early experience suggests that the labor group is unreliable and does not contain the skills which can be used to effectively complete the various projects. As a result, MHAT will begin to employ its own labor force.

Training for craftsmen or qualified workers in the construction industry has been neglected in vocational and technical training programs for many years. There have been occassional efforts but no continuous training of such skills as master mason, structural steel riggers, residential and industrial plumbers and electricians. It has been customary to

think that adequate training would take place through on-the-job programs but it appears that the necessary coordination of skills does not exist and the quality of constrution is lower at a time when the margin of error is narrow, particularly for low cost shelter.

With a few exceptions in the engineering field, upper level professionals and technicians are trained outside the country. The GOM has noted that relatively few Moroccan architects practice in the country, resulting in continued reliance on foreign architects in both the private and public sectors. It appears that the establishment of an architecture school at the University of Rabat will soon become fact. It is not clear how the annual production of roughly 80 new architects will compete for jobs with the 1500 who now st[illegible] abroad due to the absence of faculty. Some of these must return due to [illegible] conditions of their scholarships, and others will return becuase of emp[illegible]yment conditions in Europe.

At the para-professi[illegible] level the "adjoint-techniques" must also be the focus of educational and training programs. The MHAT is sponsoring eight regional centers to train 60 adjoint-techniques each year at each center. Though the need for this skill capability is great, it appears that reaching this level of output will be an ambitious undertaking for MHAT, an institution which, is itself in dire need of increased numbers of technically qualified staff members.

Finally, there is a need to improve the management skills of Morocco's contractors themselves. Contractors fall into three rough categories: 1) craftsmen who have no formal training and who have moved from their specialty to overall supervision of a small business; 2) engineers, trained overseas, who have left the strict practice of their profession and have also set up a small business; and 3) businessmen who have seen an opportunity for profit in the sector. Morocco's contractors, particularly the small entrepreneurs, will, therefore, usually possess either practical, professional or managerial skills but rarely the three in combination. There is no construction management training nor any mechanism for upgrading the skills of these entrepreneurs and their associates.