

Lucie Colvin Phillips, Ph. D.

Consultant, Etudes Socio-économiques

American Embassy (Casa)

APO New York 09284

*Mrs. Willie Mirador
Aire d'Anfa
Anfa Supérieure
Casablanca, Morocco
Tel. 36 29.21*

Casablanca, le 4 juillet 1986

à

M. Rharbi, C.E.R.A.U. et son équipe
M. Berrada, A.N.H.I.
M. Benjelloun, A.N.H.I.
M. Laraichi, A.N.H.I.
M. Belkhat, D.R.H.A.T., Tétouan

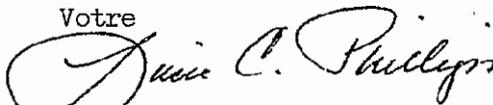
Cher collègues,

J'aurai bien voulu vous voir en personne pour parler des conclusions tentatives de mon rapport préliminaire, dont vous trouverez copie ci-jointe. Je voulais vous voir aussi pour vous remercier en personne pour vos accueils si généreux et amicaux et pour l'esprit de dédication qui nous a permis de travailler intensivement ensemble sous la pression du temps.

J'espère que vous pourriez commenter le rapport d'ici la première semaine du mois de Septembre. Je serai de retour à Rabat à partir du 1 Septembre et souhaiterais qu'on se réunisse pendant cette semaine. Je profiterai de vos commentaires pour apporter des corrections au rapport--avant de partir à l'aventure au Burundi.

Je vous souhaite bonne continuation dans le travail et d'agréables vacances d'été. Je vous prie, chers collègues, de croire à l'expression de mes sentiments respectueux et amicaux.

Votre



Lucie Colvin Phillips

Lucie Colvin Phillips, Ph. D.

Consultant, Etudes Socio-économiques

American Embassy (Casa)

APO New York 09284

*Rio. Villa Marada
Aire d'Anfa
Anfa Supérieure
Casablanca, Morocco
Tel. 36.29.21*

Casablanca, July 4, 1986

Mr. Robert Adams, RHUDO
Mr. Harry Birnholz, Director, RHUDO
Mr. Charles Johnson, Mission Director

Dear Colleagues,

Enclosed is the preliminary report of the HG001 Tetouan socioeconomic baseline study. I would appreciate any comments or suggestions you have to offer. When I return the first week of September, I will prepare an executive summary, a data sheet, and any additional improvements that you suggest.

As we discussed in the debriefing, I think that the results of the socioeconomic study warrant rethinking the cost recovery plan. I would be interested in collaborating in that work, or undertaking it alone, working with A.N.H.I. if the occasion is presented.

It has been a pleasure working with you. Have a good summer!

Sincerely yours,

Lucie Colvin Phillips

Lucie Colvin Phillips

DRAFT

LIVING ON THE MARGINS IN TETOUAN:
A SOCIOECONOMIC STUDY OF INFORMAL SECTOR HOUSING
IN DERSA AND SAMSA NEIGHBORHOODS

Baseline Data for the Tetouan Urban Upgrading Project
USAID Loan Guarantee HG-001

by Lucie Colvin Phillips,
Consultant*

June 1986

*This is a review of previous socioeconomic data and preliminary interpretation of the 8% sample survey conducted by the Institut National de l'Aménagement Urbain (INAU) of Rabat in April 1986. I want to thank the team at INAU for their fine work under great time pressure. They include L. Rharbi (leader), T. Belhoucine, A. Berrady, N. Bouchanine, C. Crepeau, F. Debbi, M. Lemaamer, A. Lehzam, G. Olivero, and G. Rerolle. The methodology also benefitted from the careful thought given by urbanist Driss Benjelloun and demographer-statistician Abdallah Berrada, who, together with myself served as consultants for the study.

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1. Introduction

On the steep hillside above the city of Tetouan and stretching westward from it are poor suburbs housing nearly half the city's population. The residents themselves and the RDE utility company have made great progress in converting these squatter's settlements from precarious shanty towns to solid housing, partially equipped with water, sewer, and electricity. The city and the Ministry of Housing and Regional Development (MHAT) now have an innovative project to legalize the land tenure situation, upgrade services and provide access roads. Two additional elements of the project would provide low-cost equipped lots nearby, 70 ha. developed by MHAT and 130 ha. by private developers. Their purpose is to reduce further growth of squatter areas.

This preliminary report is to analyze the socioeconomic situation of the population of the two neighborhoods concerned in the project, Dersa and Samsa I. It is based on: 1) a review of existing studies of Tetouan, 2) results of the 1982 national census for Tetouan and for Dersa-Samsa, and 3) raw data from a socioeconomic survey of Dersa and Samsa conducted in April 1986 by the Institut National de l'Aménagement Urbain (INAU) for USAID and the Agence National pour la Lutte Contre l'Habitat Insalubre (ANHI/MHAT). The purpose of this report is to provide timely analysis of the socioeconomic impact of the upgrading project, particularly the cost-recovery proposals, and to set out baseline socioeconomic data against which future evaluations can measure social changes. This consultant's report was scheduled before the INAU team could complete its research. A more complete report of the baseline socioeconomic situation will be written by the INAU team, integrating the full results of the April 1986 survey with two additional phases of their research on informal sector housing in Tetouan. It is expected in late 1986.

The earlier studies used here include the Schema Directeur de l'Aménagement Urbain de Tetouan (henceforth SDAUT, Dar al-Handasah, Rabat, June 1984) and two pre-project studies done by the Delegation Regionale du Ministere de l'Habitat et de l'Aménagement Urbain (DRHAT), one on Dersa in 1983 and one on Dersa and Samsa dated 1985. The socioeconomic data for all three studies was collected in 1981. The 1982 census data are also used.

Tetouan has a particularly high proportion of informal sector housing, due in part to the inability of the formal sector to keep pace with urban growth and in part to the generally depressed economy. Prices of basic commodities in Tetouan average 20 to 30 percent below Moroccan urban norms, and incomes, depending on the figures used, are estimated at 20 to 45 percent below national averages. The cost and income analyses below suggest that self-built squatter housing exists, and will persist unless subsidies are provided, because the majority of Tetouan households could not afford equipped lots if they were available.

2. Background

Tetouan has roots stretching to Libyan-Punic antiquity. The city flourish during the classical Arab-Andalusian period of the eighth through tenth centuries, and again as a corsair base during the Early Modern age of Mediterranean piracy. From 1912 to 1956 it was the capital of the northern zone of Morocco, a Spanish protectorate. Reintegration with the French speaking center and south at independence marked the beginning of a long period of relative economic decline for the North.

There was little growth in employment after independence, as Spanish investors in Tetouan's embryonic industrial zone lost contact and the Spanish speaking civil service languished. The majority of jobs are, and have been since independence, in commerce, administration, services and construction. Smuggling became an important activity, as Tetouan is the first Moroccan city on the road inland from the duty-free port city of Ceuta (which remained under Spanish administration). Marijuana has become an important cash crop in the impoverished Rif mountain area, and an unknown number of Tetouanais are involved in its marketing. Ironically this clandestine activity occurs among former Rif mountain people otherwise known as strict Muslims, hones, frugal and hard working. It is the result of geographic circumstances. In the last decade dynamic tourist development on the nearby coast from Restinga to Cabo Negro has offered employment to some Tetouanais, and attracted some outward resettlement.

Tetouan is built on the hillside of Dersa Mountain where it slopes down to the Oued Martil. Nine kilometers further on the River flows into the Mediterranean, near the resort town of Martil. Tetouan is Morocco's thirteenth largest city, with an estimated 1982 population of 199,615. (Moroccan National Sample Census) The population of the total settled metropolitan area may be slightly larger, as the census done in 1981 for the Schema Directeur d'Aménagement Urbain de Tetouan (SDAUT) arrived at an estimate of 213,025 population. The 1982 Census figures are based on legal city limits. With a 3.3% annual growth rate, the 1986 population would be 227,000 or 251,000, depending on which census base is used.

Tetouan province is one of the most densely populated, with 117 people per square kilometer overall. It is also more urbanized than the average, with 52% as compared to 42% urban residents nationally. The city's period of most rapid growth came immediately after independence, when police measures that Spanish authorities had used to prohibit rural-urban migration were relaxed. Since 1971 Tetouan's 3.3% annual growth rate has been moderate compared to the 6.8% averaged by other medium sized Moroccan cities, or the 4.4% overall urban population growth rate in Morocco.

The period of rapid growth in the late 1950s and the 1960s

saw squatter settlements mushroom. In 1956 they comprised only 16.2 percent of Tetouan's housing, but by 1971 they constituted 47.8 percent, and by 1981 that had increased to 53.6%. (MHAT, 1983: 5).

3. The Project Area

The main "clandestine neighborhood," as it is termed in French, is Dersa, which stretches up the mountain from the city center on land so steep that stairs and ravines take the place of streets and sidewalks on the vertical axis. It grew up around a Municipal Bloc of 400 houses built near the end of the colonial period for poor Muslim families resettled by a slum clearance project. For the purposes of this project, two adjacent neighborhoods, Sidi Talha and Barrio Malaga, are considered part of Dersa. The arcade in the Municipal Bloc became the commercial center for the whole area, and the primary school was built behind it.

Samsa I adjoins Dersa on the west, extending along the main road to Rabat and Tangier. The 70 ha. area of Dersa which is proposed for upgrading houses 39,033 people in some 6791 households on 7539 plots of land. Current plans are to facilitate private development and upgrading of 130 ha. of land in Samsa I, about half of which is privately owned. That area is less densely populated. It currently houses 15,104 people in 2465 households on 2165 plots. The two areas together have an estimated 54,000 residents, or about one fourth the city's population. (Attach an amended PP map. Statistics on Dersa and Samsa throughout the report are from the 1986 INAU survey unless otherwise specified. The 1985 MHAT study also estimated the combined population of Dersa and Samsa at 54,000.)

The MHAT will develop sites and services plots on an additional 62 ha. of municipal land farther out in Samsa II, which currently has only scattered housing. Eight hectares of land belonging to the MHAT, also in this outer area, will be used to resettle 400 Dersa households displaced for street construction.

The character of these neighborhoods is in sharp contrast to the usual image of shanty towns. Solid housing predominates, with foundations of stone and mortar, walls of plastered stone, brick or concrete block. Only one small ward along a ravine between Dersa and Samsa is what is usually called a shanty-town. It consists of precarious housing of wood with corrugated metal roofs. The land on which it is built belongs to two private owners, who plan to work with the upgrading project.

More than half of the households of our sample have running water (57%), electricity (72%), and indoor plumbing connected to a sewer (78%).

These rather good statistics should not mask the very real problems of the neighborhoods. Most of the area is inaccessible

to vehicles, which means people die when ambulances and fire trucks cannot reach them. It also makes trash collection so difficult that much garbage is dumped in paths or open ravines, posing a health hazard. Bacteria, insects, and wild dogs and cats feed on it, and rain water washes it down on the city center. The construction of one main thoroughfare and fourteen lesser streets is therefore a key component of the upgrading plan.

Most of the sewer connections (87 percent) are to makeshift secondary networks, constructed and maintained by local community organizations, that empty into open ravines. Only 10 percent of houses are connected to a municipal system, and 22 percent have no sewage system. Unplanned, unregulated construction means buildings go up overnight, sometimes closing off access ways. Conflicts among neighbors have escalated. Life on the margins also means that city authority in the area is informal--there is little or no police protection or tax collection. Most water connections are rudimentary, and existing reservoirs run dry in the summer, leading people to stock water in unsanitary conditions and/or draw it from a very polluted source. Houses above the highest conduit at 180 m. altitude cannot have piped water. Electrical wiring is also minimal and there is no public lighting, which has led to complaints of insecurity after dark.

The upgrading project will provide two new reservoirs, one with a capacity of 400 m³ at 184 m. elevation, and another of 1500m³ capacity at 240 m. elevation. This will service the highest areas on the mountain and, if rainfall continues adequate, end the summer shortages affecting the whole area. A primary sewer system will be built, and an offsite treatment plant for the whole Tetouan region. Public lighting will be provided by the RDE, which will also offer trunk lines to the remaining unserved areas. Municipal and social services are to coordinate their efforts to upgrade schooling, health and social services.

Single family houses of two to four rooms are the norm in Dersa-Samsa. Eighty-four percent of the buildings in our sample were occupied by a single household, ten percent were unoccupied, and only five percent had two or more households.

Renters are only 23 percent of the population of Dersa-Samsa, while they constitute 50 percent in Tetouan as a whole. Proprietors are 68 percent of Dersa-Samsa residents, while another 8 percent is housed free of charge.

Rents are less than 200 DH per month for 83 percent of renters. The modal category is 50-100 DH, and 13 percent pay less than 50 DH per month. The 1983 DRHAT study of Dersa found a median rent of 103 DH. The 1981 figures in the SDAUT show that rents in poorer neighborhoods were only slightly below the citywide average of 195 DH/m. Surprisingly, renters in the unequipped areas paid virtually the same level of rents as those in serviced low-income housing, although incomes in the serviced

areas average nearly twice those in self-built areas.

Once families are established residence is very stable. The average length of residence in our sample was 17 years. Sixty-eight percent of residents are proprietors, 23 percent rent, and 8% are housed free (often with relatives, sometimes by people to whom the occupants have furnished building capital). Nearly half the household heads were either born in Tetouan (21%) or arrived before 1960 (28%). Upon arrival most of them (76%) settled in the project area, in Dersa-Samsa or immediately below them on the hillside in the neighborhoods of Sidi Talha and Barrio Malaga. About one fourth acquired a plot and built within their first five years of arrival, but one half waited fifteen years or longer.

Within two years of acquiring a plot proprietors generally built one room and moved their family into it. Other rooms were added bit by bit over a decade or more. They did most of the work themselves and as much as possible used scavenged materials (local rock is abundant). Most of those who built before 1970 reported initial investments of less than 1000 DH, and only a scattering spent more than 4000 DH. From 1970 to 1980 the modal category for those who reported spending on construction was 4000 to 10,000 DH, but 75% of households reported no cash investment at all in that period.

Electrical and water connections have been provided piecemeal by the RDE. Ninety percent of households with electricity spend less than 60 DH per month, which covers only minimal lighting. Most households have no refrigeration, and use either wood, charcoal or gas for cooking. Total expenditures on energy were less than 40 DH/mo. for 62 percent of households.

Water is also used sparingly, even by those who have indoor plumbing. Fifty-seven percent of households have piped water, but thirty-five percent are dependent on public taps. There are long waits, and sometimes long distances to go to public taps, as only five exist in all Dersa. Eighty percent of households spend less than 30 DH per month on water, and half spend less than 10 DH.

Sewer systems have been even more problematic, both because of the rugged terrain, and because the area was not officially incorporated into the city. Gradually neighborhood groups were formed to construct and operate a number of makeshift communal sewer systems. Maintenance is poor, there are many broken pipes where rains have eroded covering dirt on the steep pathways, and the neighborhood networks empty, in any case, into open ravines.

4. Land Tenure and Site Development

The land on which Dersa is built originally belonged to the national domain, and was used for gardening. Anyone who developed it (through clearing and cultivating or building) could claim a use right, known as zina. Most proprietors bought their

plots from people with use rights, confirming the transfer by a transaction known as mulkia. In mulkia transfers ten men must serve as witnesses, while the Qadi seals the claim either orally or with a written acte adoulaire.

A few large proprietors, such as the one owning the shantytown area, acquired registered khalifian titles under a system established by the Spanish. The procedures were less rigorous than for title registry in former French areas, however, and in 1978 the khalifian system was ruled invalid. Khalifian titles throughout the North must, theoretically, be converted by the Service des Domaines in order to be recognized. The process takes two years and more, however, and few owners have gone through it.

There is a striking difference in quality of construction between those areas where people believed they had a secure use-right and those where they knew the title belonged to another. On the domainal land people occasionally started out in a shack, but immediately began building solid housing. On the private lands, housing remains insubstantial and the population more mobile. This implies that people only invest in solid housing where they believe that they have secure tenure.

In Samsa, fifty to seventy four percent of households, depending on sample district, say that they have written actes adoulaires to support their titles. On the more recently settled fringes of Dersa, contracts of sale (contrats de propriete) are becoming common. Seventeen to 64 percent of proprietors in the upper row of our sample districts reported having such contracts. The totals for our sample show the following reported land tenure situation:

Table 4.1 Land Title Status of Households

Status	Households	Percent
No Title	1412	15
Do Not Know	167	02
Not Relevant	3430	37
Acte Adoulaire	2405	26
Contract of Sale	1548	17
Other title	207	02

If one leaves out renters and others for whom the question was irrelevant, seventy percent of proprietors claimed to have one type of title or another, while 29 percent either have none or do not know.

Cheap land within walking distance of the city center has

clearly been the main attraction for Dersa-Samsa residents. In an effort to understand to what extent and how residents mobilized capital for housing in the past, we asked detailed questions about the acquisition and construction process. Eighty-four percent of proprietors acquired vacant land and built on it. Another sixteen percent acquired land with the building already on it. Ninety-three percent of land-owners paid less than 10,000 DH (1986 \$1111) for their plots. The modal category was less than 2000 DH, and 21 percent paid nothing. The latter includes those who inherited or received land as a gift, as well as squatters. Somewhat surprisingly, the figures are similar for owners who acquired building and land together. Seventy three percent paid less than 10,000 DH, and twenty-nine percent paid nothing.

When asked how they mobilized the capital to buy land, only half of our sample replied, but the results are still interesting. Savings from their earnings working in Tetouan was the most common answer, that of nearly half of the respondents. The only other significant replies were the sale of livestock, the sale of rural land, and migrant labor. Bank credit was insignificant.

Families continue to save and build over the years. With 17 years average residence, the cumulative investment in housing averages 17,500 DH (in Dersa 17,000 DH; in Samsa 19,000 DH).

The historical process reviewed above, the seventy percent of proprietors who claim to have legal title, the stability of residence and the substantial investments in solid housing by very low income families all suggest that this area should not be considered "clandestine" in the same sense as other, more recent squatter areas. These people built when they were outside the city limits, acquiring title by customary law. There are islands of true squatters among them, who conform to neither customary nor formal law.

The cadastral survey and title registration that will precede this project will have to clarify the situation before any cost recovery plan based on "sale of land" to its current occupants can be devised. The 1981 MHAT study of Dersa proposes a differentiated payment schedule for the title regularisation aspect of the project, depending on whether a customary law title exists or not. This will certainly be necessary, as charges to those who already have a title will be the least acceptable part of this project to the participants. Current project documents indicate that the municipality is to buy the land from the Domain National at 1 DH per square meter and resell it to the occupants at an average of 5000 DH per plot.

Market prices in 1985 for lots in the Dersa project area ranged from 200 DH/m² to 600 DH/m². In Samsa they ranged from 100 DH/m² for an unequipped lot in an outlying area to 300-350 DH/m² nearer the road and the built-up area. Plots average 102 m² in Dersa, 211 m² in Samsa. Thus customary title holders,

although they have never had any significant amounts of capital, are sitting on lots worth 20,000 DH to 40,000 DH on average. Their situation is as precarious as that of farmers in the United States. Few could ever afford to move, and the project must be very careful not to destabilize them. Their current revenues, which are discussed in detail below, will permit only a modest fee structure for the most urgently needed aspects of the project.

The Project Paper describes 4200 Dersa residents as living on privately owned land, and 3300 on municipal land. Our sample, which deliberately excluded the already equipped Municipal Bloc described in the introduction, found all residents to be on National Domain land except those on the large land-owners' bidonville area. The proportions of title-holders vs. non-titled plots in our survey was only slightly higher, but the latter are scattered throughout the area.

The 1983 Dersa Project study by the Regional Delegation of the MHAT (DRHAT) is more precise: 1) the former Domainal land, which comprises 50 ha. of the 70 ha. total, has been bought by the Municipality, and is being transferred to the DRHAT for the project. 2) On the topmost 7 ha. of Dersa mountain, construction has encroached on the Forest Domain. 3) Municipal lands are limited to the Municipal Bloc, where residents have lease-purchase agreements with the city. 4) Some residents have encroached on Habous (Religious Trust) land, 1.5 ha. of the upper part of Sidi Talha cemetery.

The legal confusion caused throughout the North by the 1978 abolition of the khalifian title system could be a major constraint for this project. Title registration via the Service des Domaines is often a multi-year process that is sometimes unsuccessful. The Ministry's tenure study and cadastral survey are to begin in late 1986. This will enable it to decide how to handle the tenure question well before borrowing funds for other elements of the project. Potential legal entanglements should not be allowed to delay work once interest charges have begun.

5. Participant/Beneficiary Profile

The households in Dersa-Samsa average 5.6 persons. The mode is a five person family, but a full 18 percent of the sample are large households of nine or more members. Single person households are extremely rare--only 3 percent. Most households (57%) have a single breadwinner, 18 percent have two and only nine percent have more than two. More important for the question of the affordability of improvements are the 11.7% of households who have no breadwinner. Some of these are surely the families of emigrant laborers, but we found few who claimed to be receiving remittances from migrants. More common were unemployed, widows and widowers, and families with other serious problems.

The age and sex structure of the population is similar to that for Morocco as a whole. (National Census, 1982) It is a

generally young population, with an average age of 23.2 years. Sixty-four percent of residents are under 25 years old.

The ratio of males to females is 99.4, compared to 96.9 for Tetouan as a whole. This accords with our finding that emigrant labor is less important than expected, and less common than in the North as a whole. Where male emigration is customary, the ratio can fall to the low nineties or below.

Total reported household income averages 944 DH/mo., but the median is only 730 DH/mo. (\$81.11/mo. for 5.6 people) The modal category is 500 DH/mo. to 750 DH/mo. This is up slightly from the 1981 base figures reported by the DRHAT of 794 DH/mo. average income, 600 median income and 480 modal income. This represents, however, only a 3.5-4.5 percent rate of inflation in incomes, whereas the project paper had assumed an 8 percent rate. Only thirteen percent of households could be considered middle income or better, with 1500 DH/mo. or more, and most of those are still below the national average. Twenty-six percent must be considered among the poorest of the poor, with incomes under 500 DH/mo. (\$55.55) The implications for the affordability of cost-recovery proposals are discussed below.

Heads of household span the full range of ages from 25 to 65+ fairly evenly. The average is 47.2 years. The average age of the active population (those having earned income) is 33.5 years.

Twenty-seven percent of households are headed by persons of formal retirement age (55 years or older). One quarter of households headed by persons over 65 fall into the poorest income category, earning less than 500 DH per month. This, however, does not indicate a trend to dropping income after 65. Younger household heads have similarly low revenues in the lowest quartile. Most older persons continue to live with their children, and their total household income can be more substantial than among fragmented nuclear families.

Most heads of household have earned income (71%). Twenty percent are retired or disabled, 2 percent are unemployed and seeking work, and 6 percent are housewives.

A total of thirteen percent of households are headed by women. Some of these are surely also households with no breadwinner, as the number of women with earned income is small. There is a very strong tradition that a male heads the household, regardless of age, if there is one available. The census indicated that only 9 percent of females in Dersa-Samsa had earned income, as against 38 percent of males. Twenty-seven percent of the female-headed households who responded to the question on household income indicated that they fell into the poorest category, earning less than 300 DH per month.

The regularity of income also has a bearing on the cost-recovery program. The twenty percent of individuals in our

survey who had any income were fairly evenly divided between those for whom it was regular (55%) and those with irregular incomes. An insignificant number indicated receiving any complementary income from rural property, urban real estate, or migrant laborers. Some 1124 persons receive pensions, generally in the range of 250-750 DH/m. This is a surprisingly large proportion of the older residents, 55 percent of all men over 55 years of age, and 23 percent of the combined male-female elderly. Possibly some of the pensioners are younger people receiving social assistance.

According to the census, 52 percent of school aged children (5-19 years) in Dersa-Samsa were in school, compared to 61 percent citywide. Of the population over 10 years of age, 31.2 percent have had some schooling, but only 7.7 percent have gone beyond primary school.

Dersa residents have had inadequate schooling opportunities. The DRHAT study notes an average of one primary school for every 5326 residents in the city. Dersa, with 39,000 residents, had just one school. It had places for 2485 students. Families who could not enroll their children there either sent them farther away, boarded them with relatives, or did without. A new primary school is being built, to relieve some of the pressure. Construction will have to continue at a rapid pace to keep from falling ever farther behind the increase in school age population.

6. What the People Want

The participant/beneficiary population for this project includes the city of Tetouan as a whole, as well as the residents of Dersa Samsa. The priorities of both have to be taken into account. For city authorities, the project is an opportunity to relieve the health hazard represented by open sewers, enlarge the tax base, and improve administration and services to the poorer population. It is also an essential step toward more rigorous prevention of wildcat construction. Until the city can offer low-cost legal alternatives to those who want to build, authorities hesitate to be absolutely rigorous in enforcing the building permit system.

The priorities of Dersa-Samsa residents for different aspects of upgrading reveal that the primary concern is road access and improved transport, which was the top choice for nearly half of the interviewees. After that came a potable water supply, public lighting, and a clinic. The full list of first choices was:

Table 6.1 Residents' Priorities for Upgrading

Road/transport	48%
Potable water	12%
Public lighting	10% (with police protection)
Clinic	8%
Sewer	4%
Garbage Collection	3%
School	2%
Secure property title	<1%
Other (market, police, etc.)	4%
Do not know/care	9%

The raw data tabulated only first choices, but many people listed several needs. The final report should include a weighted table of priorities.

The DRHAT study gave the population a slightly different list of choices in 1981, with the following results:

Desired social facilities:

- 37% School
- 18% Market
- 13% Clinic
- 6% Security/police

The decline of "school" as a top priority from 37% in 1981 to 2% in 1986 probably reflects satisfaction with the new school being opened. The lack of interest in sewers and garbage collection suggests that the informal systems already worked out satisfy much of the population. The complete disinterest in a secure property title suggests that people are happier with the customary law situation which prevails. It has, after all, given them stable homes and allowed the market value of their property to keep pace with better equipped areas. These are self-reliant Rifians, with a long tradition of preferring their own arrangements to those of any central government.

Social science studies of the introduction of formal land titles where customary titles have prevailed suggest that their instincts may be sound. Registration is an expensive process relative to the economic situation of poor families. While it may put an entire area on a more secure legal basis, there are inevitably certain destabilizing side-effects. Families quarrel over how shared property is to be registered. People who cannot pay the fees may lose their property. Those who are away or temporarily incapacitated are unable to defend their interests. Afterwards grown children frequently have to wait much longer to come into a share of property. (See University of Wisconsin Land Tenure Center, Land Tenure and River Basin Development in Africa, USAID/Washington, 1986; the Center also publishes a worldwide bibliography on land tenure questions.)

*land
study
issue*

If protections are not built into the program, moving

informal sector housing into the formal market economy may unleash real-estate speculation. Poor families can be tempted or obliged by a crisis to sell their or mortgage their only significant asset, their land and homes. Dersa mountain should be carefully sheltered from this--the high hillside sites are unattractive to the wealthy so long as one has to climb on foot and haul water, supplies and waste manually. But the air is clean and the view spectacular. In a fully serviced city, this would likely be the high-rent district.

7. Cost Recovery and Household Budgets

With new detailed information on household incomes and expenditures, the assumptions in the Project Paper concerning cost recovery can be tested. The new data, like all previous and comparative income data available has the weakness that it is based on declared incomes. People everywhere tend to declare less than their total income, and among poor populations declared expenditures on basic needs often exceed declared incomes. This contradiction is no obstacle to using the data. One can still compare incomes in Dersa-Samsa with those elsewhere in Tetouan and Morocco, because the comparative data was collected by related methods and can be assumed to be flawed in similar ways. There are some indications that this new data is, in fact, better than earlier surveys. The expenditure data is much more detailed, so one can cross-check responses. Questions on investment in land and housing were historical as well as contemporary. And interviewers asked detailed questions on expenditures before asking about incomes, which resulted in a much higher response rate on gross household income (95%, cf. 70% in the 1981 DRHAT study).

Table 7.1 shows the distribution of households according to income category. This should be compared with Table 7.2, from the 1981 SDAUT, showing the distribution of household incomes for all of Tetouan. The categories in Table 7.2 have been inflated 4%, to update them to 1986.

Table 7.1

Distribution of Households by Monthly Income in Dersa and Samsa
Proprietors, Renters and Other Occupants
in 1986 DH (9 DH = US\$ 1)

Income Occupancy	<300 499	300- 499	500- 749	750- 999	1000- 1499	1500- 1999	2000- 2999	3000+	%
Proprietors	695	797	1861	753	964	525	241	184	68
Renters	295	362	401	214	126	54	60	62	23
Housed free	164	135	183	115	76	32	0	0	8
Total	1154	1294	2606	1269	1254	682	295	244	8797
Percent	13	15	30	14	14	8	3	3	100
Cumulative %	13	28	58	72	86	94	97	100	

Table 7.2

Distribution of Household Incomes in Tetouan
(From 1981 SDAUT, categories updated to 1986 at 4% inflation)

Income	<304	304- 607	608- 911	912- 1215	1216- 1823	1824- 2432	2433- 3648	3649+
Percentage								
of HHs	1	12	20	15	23	13	10	6
of income	0	4	10	10	22	18	18	17
Cumulative %								
of HHs	1	13	33	48	71	85	94	100
of income	0	4	14	25	47	65	83	100

This shows that about 80 percent of the households in Dersa-Samsa are below the median for Tetouan. In fact, the per capita income of nearly all Dersa-Samsa residents is probably in the bottom half of the Tetouan range. Many of the households with larger incomes are families of seven or more members and more than one worker. The poorest of the poor, the lowest 13 percent in Tetouan, is nearly half the population of Dersa-Samsa. Tetouan, in turn, is below national averages. The SDAUT computed the per capita income of Tetouan in 1981 at <180 DH/mo. compared to the World Bank's 1980 estimate for Morocco of 330 DH/mo.

Incomes are compared to expenditures for basic needs in the following table:

Table 7.3

Average Monthly Expenditures of Dersa-Samsa Households (in DH)

Income group	<300	300-	500-	750-	1000-	1500-	2000-	3000+
Item	499	749	999	1499	1999	2999		
Food	669	565	775	1047	1004	1317	1497	1556
% of total	82	79	80	83	80	83	81	86
Transport	12	3	10	18	17	27	9	2
% of total	1	<1	1	1	1	2	<1	<1
Housing/utl.	81	76	89	98	112	126	141	156
% of total	10	11	9	8	9	8	8	9
Health/Cloth	49	75	89	101	117	123	190	97
	6	10	9	8	9	8	10	5
Total (incl. Health & Cloth.	811	719	963	1264	1250	1593	1837	1811

The figures for food expenditures for the lowest categories of income need to be reexamined, as the average is clearly above the capacity of the households. Part of the problem is that it is derived by extrapolating the previous day's expenditures (which most respondents knew) to a monthly basis, because most respondents could not give a figure for the month. Slightly more reasonable results should come from using the reported weekly food expenditures. A preliminary tabulation of those figures indicates that 52 percent of the households surveyed reported spending less than 600 DH/mo. on food, and nearly half of those spent less than 300. This also fits better with the DRHAT estimate that Dersa households in 1981 spent an average of 250 DH/mo. on food. The national index of the cost of food has risen x percent since 1981, which would bring that to x for 1986.

Regardless which figures are used for food expenditures, some general observations about these data are relevant to the affordability of cost recovery proposals. First, for all categories of income, food expenditures absorb an overwhelming

>80 percent of total expenditures. This is characteristic of only the poorest households in most socioeconomic surveys. The SDAUT calculations for all of Tetouan showed the following percentages devoted to basic needs:

Table 7.4

Household Expenditures for Basic Needs in Tetouan

	Food %	Transport %	Housing %	Other %
Low-income (250-499DH/m)	81	18	2	0
Mod-income (1200 DH/m)	57	16	2	24
Hi-income (3000+)	35	10	2	53

The fact that even the upper range of household incomes in our sample of Dersa-Samsa has an expenditure pattern typical of poor households reinforces the conclusion that the upper incomes reflect mainly larger households, with only a slightly more comfortable lifestyle. Nearly half of the households with over 1000 DH/mo. income have seven or more members.

The international rule of thumb for affordability of housing is that 25% of declared income can be allocated to housing, including utilities and maintenance. This was the assumption in the Project Paper. Yet this probably cannot be applied to the lowest income categories. It clearly is not the current practice in Tetouan. In our Dersa-Samsa sample the norm was 8 to 10 percent, and most of that was devoted to utilities. The figures hide a sharp differential between renters and owners, since for renters (who are a minority of the sample) housing expenses are quite a bit higher. Owners' expenses are almost exclusively for utilities, and are less than 10 percent. The SDAUT figures must count utilities with "other" expenses, which makes them hard to compare. For the final report INAU should provide separate calculations of renters' and owners' housing expenditures by income category. X

The high percentage of income spent on food is the best explanation for the current low expenditure on housing. Considering the marginality of their incomes, this population has built itself a remarkably good quality low-income housing. People clearly built on low-cost land near the city center to economize on transportation and housing. The investment histories described above bear this out.

No matter what one considers a reasonable estimate for the cost of food, one cannot escape the conclusion that few

households with less than 1000 DH/mo. (\$111/mo.) income can contribute more than token cash payments to the cost recovery scheme. Their food budgets have to be considered inelastic. They are already living on bare staples, complemented as a treat by small fish and mint tea. If they bought two chickens a year for the Id festivals, they told us about it. Their declared expenditures surpass declared incomes--even if that is logically impossible, one has to accept that there is no surplus.

The SDAUT's calculations of the population's capacity for saving is another indication of this. Its overview of household budgets (again with the income categories updated to 1986, assuming 4 percent inflation of incomes) is as follows:

Table 7.5

Household Budgets in Tetouan

Incomes	<608	608- 1215	1216- 2432	2433- 3648	3649+
Households					
Number	5034	13340	13924	3654	3632
% of total	13	35	37	10	6
Cumulative %	13	48	85	94	100
Expenditures as % of income					
Food	73	70	62	53	50
Lodging	16	19	22	21	17
Transportation	2	2	2	4	5
Clothing	3	3	5	8	9
Health/Leisure	7	7	10	15	20
Total	100	99	84	81	68
Savings, as a % of ave. income	0	1	16	19	33

Households with less than 1000 DH/mo. income comprise 72 percent of the total in Dersa-Samsa. If the cost recovery plan is to be enforced without destabilizing this population, they will have to be able to make most of their contribution in labor and/or irregular payments. A token payment schedule should be established for the sake of principle, so that the idea of paying for municipal improvements is not lost by either the government or the population. It may cost more to administer than it collects, however.

For incomes over 1000 DH/mo., the payment schedule can

attempt to raise lodging expenditures from 8-10% of total expenditures to 25%. This would yield the following calculations:

Table 7.6

Potential Cost Recovery from Middle-Income Dersa-Samsa Households

Income	25% of Housing Expenditures	Current Housing Expend.	Potential for Cost Recovery	No. of Hh	Gross Cost Recov.
1000-1499	313	112	201	1254	252,054
1500-1999	398	126	272	682	185,504
2000-2999	457	141	318	295	93,810
3000+	453	156	297	244	72,468
				Total	603,836

If one assumes that the token payment imposed on households with incomes under 1000 DH/mo. would amount to raising their housing expenditures by 50 percent, the following additional amounts would be raised:

Table 7.7

Potential Cost Recovery from Low-Income Dersa-Samsa Households

Income	Current Housing Expend.	50 %	No. of hh	Gross Cost Recovery per Month
<300	81	40.5	1154	46,750
300-499	76	37	1294	47,878
500-749	89	44.5	2606	115,967
750-999	98	49	1269	62,181
			Total	272,776
			Grand total	876,612 (\$97,401)

Another 15 % should be deducted from that for households that have no breadwinner and other derelict situations.

The PP optimistically estimated that residents could afford monthly payments of \$17.30 (156 DH) for title-holders and \$23.50 (209 DH) for non-title-holders on average. A careful study of earlier income estimates would have cast doubt on this, and the current data are conclusive.

The PP and PDF also assume that all resident households will somehow come up with an initial 5000 DH "moving in tax" (taxe de premier établissement). The justifications for this assumption are that people have already invested a lot in housing despite their poverty, that the project will raise their property values, and that people in similarly low-income areas (Ben Msik in Casablanca and Douar Doum in Rabat) have come up with such payments.

Given the investment and longevity of residence described in earlier sections of this paper, this assumption is inconceivable. People have invested a lot in their homes, but it was a little bit at a time over a long period, on average 17,000 DH over 17 years. Residents do want the project, and it will raise their property values, but it does not follow that they have sufficient capital assets or cash flow to bear the full cost. Moreover, calling the lump sum advance a "moving in tax" is politically unwise, considering that most households moved in before 1970 and believe that they already have title to the land. The smaller payment that can be levied on most households should probably be called a special assessment for roads, water and sewer (the first two being what the residents most want, and the latter a factual necessity.) The assertion that any substantial number of households earning less than 1000 DH/mo. made payments of 5000 DH in Ben Msik and Douar Doum could not be substantiated by any written documentation. The 1982 Ben Msik evaluation showed no cost recovery yet, and no more recent audit is apparently available.

8. Alternative Cost Recovery Options

It is beyond the scope of this paper to fully recalculate the cost recovery scheme, but the statistical basis for doing so now exists. It suggests that the "beneficiary" population has to be redefined to include a larger tax base for some elements of the project. Main roads and trunk water and sewer lines are considered expenses of the whole municipality by most cities. There is every reason to do so in this case. The sewer plant, in fact, serves a much larger region, and should be paid for by the larger regional population.

The interest subsidy provided out of central government institutional funds amount to amortizing part of the expenses by the national as a whole. The cost recovery plan seeks to minimize central government subsidies, as it leads to spending relatively large amounts on small populations while the number of needy grows ever faster than the capacity to assist. One must question, however, whether the place to be strict about.

eliminating government subsidies is in a project clearly serving the poorest of the poor. There are still many subsidies that benefit the bourgeoisie.

Other options that should be explored include:

1) Reducing or eliminating some project elements

2) Phasing construction

3) Extending financing over a longer time period. Lump sum payments should be required of those able to pay. Ten-year financing may be possible for the upper quartile of household incomes. Twenty and thirty year financing may be needed for the middle group.

2) Including a provision in the construction contract (starting at the request for proposals stage) that specifies job priority to local residents. The other side of this would be calculating how much of which kinds of work fulfill a household's assessment.

4) Increasing the internal cross-subsidies from the sale of lots in the Sites and Services component of the project.

9. Feasibility of the Sites and Services Component

This sites and services project is designed to prevent further growth of spontaneous, unregulated construction by providing low-cost serviced building lots. The flaw in the logic is characteristic of site and services projects. Designers assume that if one reduces costs to the minimum, the poor of the informal sector will be able to afford them.

This plan calls for lots averaging 80 m² to be sold for \$26/m², or an average of 18,720 DH. This is well below the 1985 free market price for equipped lots, which was 350 to 450 DH/m², even up to 600 DH/m² in the close in areas of Dersa. Yet it is not within the cash flow capacity of any significant number of current residents of Dersa-Samsa.

If the plan is implemented as indicated, the result is likely to be similar to what has happened in other low-income housing. Middle income groups will move into them. The new residents' housing costs will be similar to those of in Dersa-Samsa, but their incomes will be 60 percent higher. Comparative statistics from the SDAUT illustrate this pattern:

Table 9.1

Cost of Rent and Income Group Served, by Type of Housing

Type	Monthly Income ave. in DH	Rent ave. in DH
Villa	2360	505
Apt. Bldg.	1694	314
Medina*	961	123
Low-inc. dev.	1538	196
Spontaneous low-income	973	182
Shanties	593	47

Incomes of people in sites and services or low-income housing projects average 58% above those of those in low-income spontaneously built areas like Dersa-Samsa. Yet rents are only 8% higher.

The fundamental problem seems to be that people build on domainal land because they cannot mobilize the capital to buy equipped lots, nor do they have the cash flow to amortize the costs of land and equipment over twenty years.

Moreover, most Dersa-Samsa residents have no room in their household budgets for transportation. In their current homes they walk to work, school and market. The sites and services project area is much farther away, which is probably the main reason why it is still undeveloped. This may be a particular problem for the 400 households that are planned for relocation there, when their houses are demolished for roadways. Alternative sites scattered throughout Dersa, or some form of transportation assistance may have to be considered. Relocation should be kept to a minimum for this reason. The DRHAT study of Dersa indicated a plan to relocate 278 additional families to relieve congestion. If this plan has not already been dropped, it should be.

People will probably continue wildcat construction, because the alternative is a level of congestion that they cannot bear. Most households in our survey could not afford to rent (at 182 DH/mo.), so they would have to share housing or live in bidonvilles.

This means that the prognosis for preventing further growth of clandestine housing is not good. What more probably will happen is that middle-income (in the Tetouan context, i.e. still low-income by national standards) will move into the sites and services project. This will serve as a node of infrastructure

around which new spontaneous housing will grow up, where it can informally tap into the water, sewer, electricity and transportation available to legal residents.

This does not necessarily imply that the sites and services component is a poor concept, only that it will not work quite as expected. If one accepts that the average incomes of those in the sites and services project will be higher than those in Dersa-Samsa, it makes sense to graduate prices sharply, with the top at whatever the market will bear. Then the city can afford higher internal cross-subsidies, to offset some project costs attributable to insolvent households.

The zone slated for private development (ZAC) is similar in its socioeconomic implications to the Sites and Services component to be developed by the DRHAT. The main question is which forms of government/community/developer cooperation can develop the land most cost-effectively. Internal cross-subsidies that make room for lower income families are less likely to occur in private development schemes, but they can be built in through the policies of the government institutions involved.