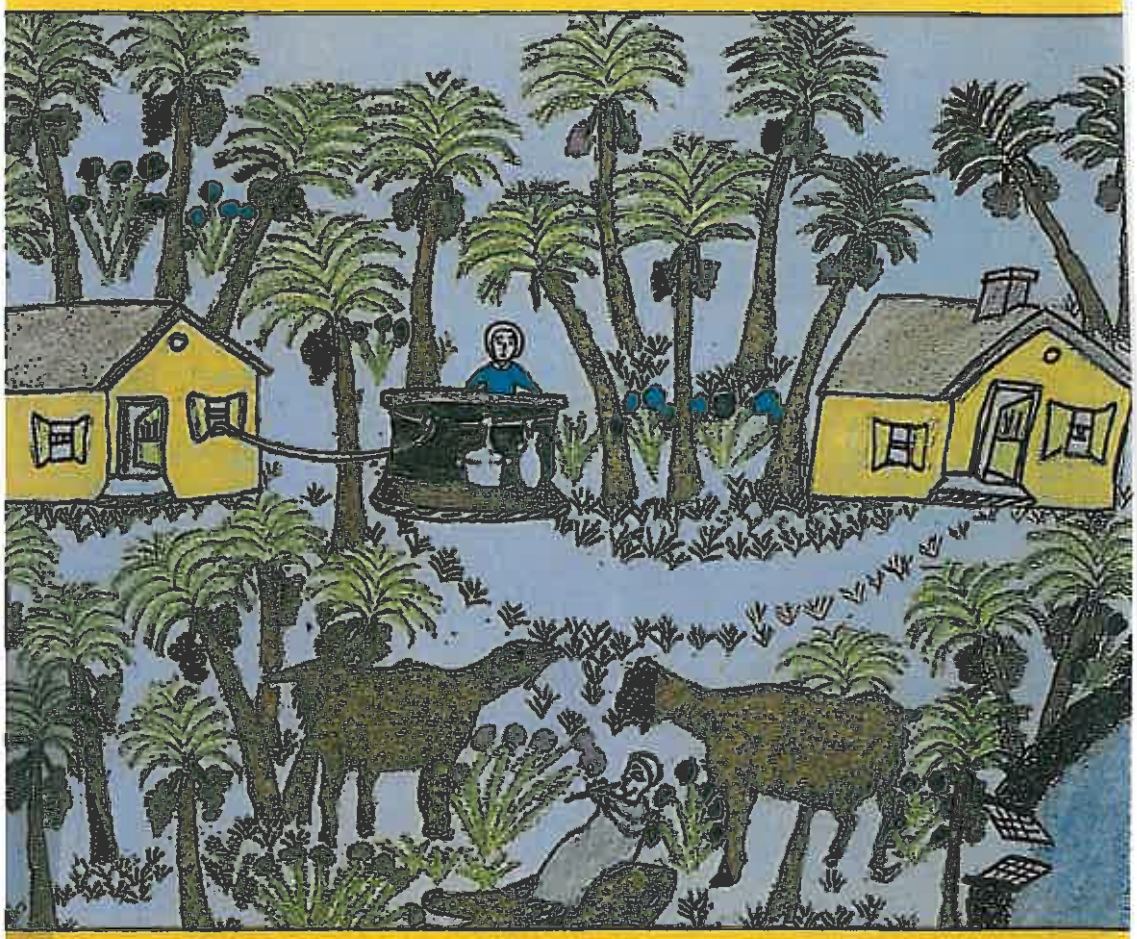
11 SUCCESSFUL HOUSING PROJECTS

An inventory of implemented housing improvements in the Third World



IYSH·1987

SAIDEL

SWEDISH ASSOCIATION FOR DEVELOPMENT OF LOW-COST HOUSING

SMR

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housing improvements in the Third World

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Work and Village Life by Fawzy, aged 12,
of India from the compilation *Livets träd* (The Tree of Life)
by Silvia Lindström, published by Save the Children, Sweden

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We met great interest and patience among those who answered our questions and provided us with material. We are very grateful for this, particularly considering that many of those who helped work with modest resources.

Also, we would like to give special thanks to John and Bertha Turner for valuable opinions and access to their considerable project archives.

Bo Johansson
Cecilia Pering
Johnny Åstrand

Foreword

The United Nations "International Year of Shelter for the Homeless" (IYSH) in 1987 increased awareness about the enormous need for housing in developing countries. The purpose was also that activities during the year should result in increased commitment both in developing countries and in the supportive efforts of industrialized countries.

The view that it is "a hopeless situation" is quite widespread. Foreign aid efforts are often presented as meaningless, sometimes even harmful.

Experience shows, however, that it is possible to improve the housing conditions of the poorest if the interventions are correct. In many cases organizations and individuals "from outside" contribute in a constructive way to get the operations started and to make them successful.

In this publication, which came about on the initiative of the Swedish Mission Council/Office for International Development Cooperation, we have gathered eleven examples of successful housing projects in developing countries. They represent different parts of the world, countries, cultures and economic systems. What they have in common is that both the inhabitants themselves and outsiders have assessed them as successsful.

The publication serves as a collection of examples for studying how different methods have functioned and the experiences that have been drawn from widely different approaches. In the conclusions the authors have tried to identify what the eleven projects have in common and what possibly can be seen as general prerequisites for successful housing projects.

Our compilation is meant to inspire further commitment, based on respect for the difficulties involved when tackling the problems of the homeless in a foreign environment. We believe that it can be studied without enticing readers into ready-made solutions when, on the contrary, it is a question of starting with what is unique in every situation.

Kenneth Larsson
Chairperson
Swedish Mission Council/
Office for International Development Cooperation

Sven Thiberg
Professor
Royal Institute
of Technology

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1 Introduction

In Chapter **1, Introduction**, the housing situation in developing countries and United Nations aims for the International Year of Shelter for the Homeless (IYSH) are briefly presented. The background to this report and the approach to carrying out the study are presented and, finally, there is a summary.

In Chapter **2, Projects**, 11 projects from different countries that have led to housing improvements are described. Basic facts about each project, and the country in which it takes place, as well as a chronological description of its development, are given. The address of each information source is found in Chapter 4.

In Chapter **3, Conclusions**, observations from the successful projects are presented, as well as an attempt to formulate recommendations for housing projects.

In Chapter **4, List of Projects**, there is a compilation of some 40 projects about which we had extensive information at the end of 1987, with the basic facts about each and their distinguishing features.

IYSH

In 1982 the UN General Assembly declared that 1987 should be designated The International Year of Shelter for the Homeless. The reasons for directing attention to the housing situation in the world included:

- More than a billion people, a quarter of the world's population, either totally lack a dwelling or live in abominable conditions.
- By the year 2010, for the first time in history, there will be more people living in urban than in rural areas.
- Almost 90 percent of the total increase in the urban population is expected in the developing countries.

The problems are well-known and conjure up many pictures of people living crowded together in sheds that are falling apart in slum areas of the large cities without access to drinking water or toilets. The World Health Organization (WHO) has estimated that 18 million people die each year because of inadequate housing. Diarrhoea, bronchial diseases and other illnesses are easily transmitted where sanitary conditions are sub-standard or non existent. Only too common also are refugee camps all over the world where people live long periods in makeshift conditions, facing an uncertain future.

The purpose behind IYSH is not only to provide information about the problems that so many people experience owing to poor housing but also to

Mercato, part of Addis Ababa

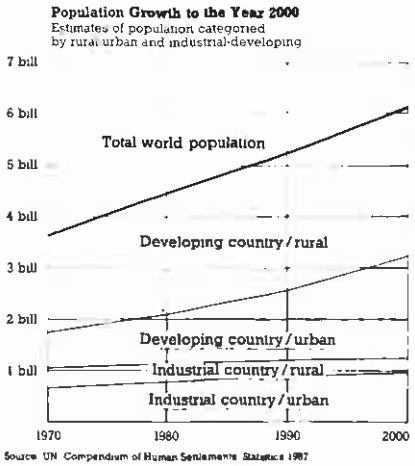
show how these problems can be solved. By shedding light on political, economic, social, organizational and technical aspects, it is hoped to increase awareness among decision-makers within governments and state and voluntary aid organizations as well as their commitment to solving the problem.

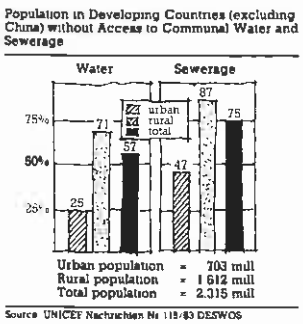
It is the hope of the United Nations that, in the short term, housing shall be improved, at least for some of the very poorest and most exposed parts of the population. In the longer term it is hoped to show that there are methods for efficiently solving developing countries, housing problems. A specific UN aim is that the governments concerned shall come to grips with the worst housing needs before the year 2000. That means that 150,000 people must receive new homes each day.

A Swedish contribution

What can be done to turn the situation of the homeless into something better? Without those themselves affected being given the chance to act, the problem is surely insoluble. It is a question of liberating their resources and giving them the opportunity to participate in the creation of their own homes. In this process we in the industrialized countries can act only as part-provider of resources and lend support.

The ambition and wish to contribute to the improvement of the situation of the homeless is strongly stated within many organizations and groups in Sweden. The Swedish Mission Council/Office for International Development Cooperation is an umbrella organization for coordination of the SIDA-supported aid work of most Christian churches and mission organizations. The Swedish Pentecostal





International Relief and Development Agency (SPIRDA) is the equivalent organization for all Pentecostal congregations in Sweden. SMC/AS and SPIRDA have through their member organizations gathered a long experience of aid work in some 50 countries.

For the interventions to have any value they must be built on knowledge of what is realistic and which methods function in the local environment. For this purpose, experiences from successful housing projects are invaluable.

Against this background SMC gave the Swedish Association for Development of Low-Cost Housing (SADEL) the task in 1987 of taking stock of housing projects that have been carried out in developing countries. SADEL is an altruistic association that works with housing questions in developing countries and whose members are linked to the Institute of Science and Technology at the University of Lund.

The main purpose of this study has been to select some successful projects and present them in the form of a compilation of examples for future housing projects. On the basis of these successful projects we have also tried to formulate recommendations as to how housing improvements can be carried out. The 11 selected projects have been studied by a reference group consisting of:

Dorotha Blazejevicz	SIDA Swedish International Development Authority
Varis Bokalders	KTH Royal Institute of Technology, Sweden
Karl-Erik Lundgren Study Leader	SMC Swedish Mission Council/ Office for International Development Cooperation
Lennart Nolvall	SPIRDA Swedish Pentecostal International Relief and Development Agency
Sven Thiberg	KTH Royal Institute of Technology, Sweden

The reference group has continuously followed the inventory work and contributed views concerning the selection of successful projects as well as the organization of the study.

Inventory methodology

To have access to information about implemented housing projects in developing countries, some 60 organizations, mainly in Europe, were contacted. The organizations were either governmental or non-governmental aid agencies, building research institutes, universities and high schools or organizations working with appropriate technology. Some 20 organizations were then visited and asked to submit proposals for "successful housing projects" that they themselves have carried out or contributed to. By successful projects are meant primarily projects that have

- resulted in improved housing standards for the poorest;
- used methods accepted by the local population;
- contributed to improving the health situation, hygiene, human wellbeing and the environment.

SADEL, with the reference group, selected 11 examples of successful projects from the total of about 40 that were proposed by the various organizations. They were selected from different countries, cultures and standards of housing and consist of a representative group of the most interesting projects.

The purpose of the study has not been to obtain information about as many projects as possible but rather to bring forward the most interesting ones, using the knowledge that exists within each organization. The method of selecting the projects is thus based more on the personal experience of those interviewed than a scientific assessment of the projects.

A street scene in Mercato, Addis Ababa

Growth of the Cities
By the year 2000 about half of the world's population will live in cities

Mexico City	26,3 mill
Sao Paulo	24,0 mill
Tokyo	17,1 mill
Calcutta	16,6 mill
Bombay	16,0 mill
New York	15,5 mill
Seoul	13,5 mill
Shanghai	13,5 mill
Delhi	13,3 mill
Rio de Janeiro	13,3 mill
Buenos Aires	13,2 mill
Cairo	13,2 mill

The percentage of the city's population living in slums.

Kinshasa	60%
Mexico City	46%
Calcutta	67%
Manila	55%

Source UNESCO Courier January 1987

Slum housing in Mercato, Addis Ababa

Doctors and Health Personnel in Selected Developing Countries

	Population Covered per	
	Doctor	Health Personel
India	3 690	5 460
Columbia	1 710	800
Ethiopia	58 490	5 440
Hondouras	3.120	700
Phillipines	7 970	6 000
West Germany	450	170

Source Weiterwicklungsberichte 1984 DESWOS

We therefore would like to point out that the study is in no way comprehensive but rather should be seen as an initial study. It is also important to emphasize that information about the various projects, in the form of reports, evaluations, designs etc. has varied in quantity and character and therefore it has been difficult to present unified and comparable descriptions of the projects.

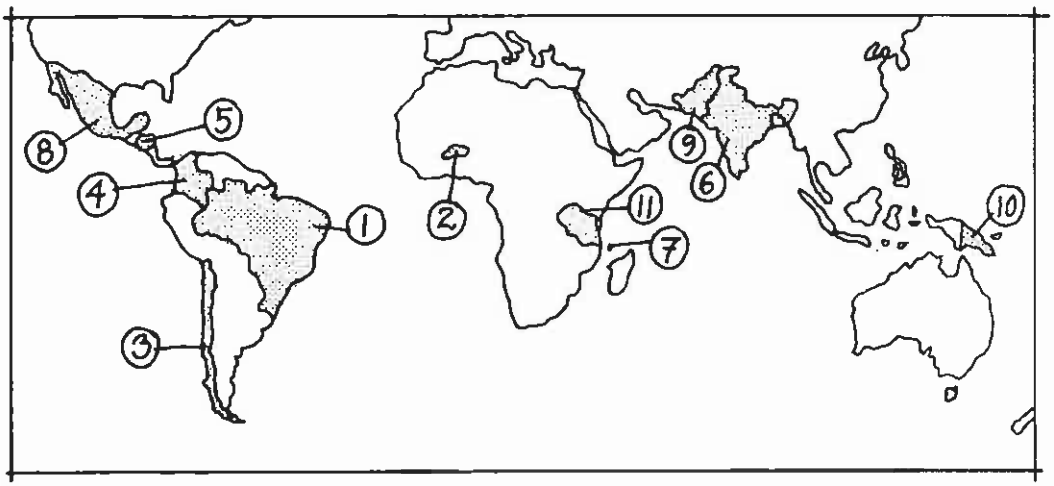
Summary

Housing improvements must be made at low cost if they are to meet existing needs. For this to be possible, it is necessary to use resources available on the spot to an ever larger extent. The successful projects show how this has taken place in different ways and to a varying extent by, among other things, self-help building and use of local building materials.

In the projects that have been studied, the aid has consisted more of transmitting knowledge about organizing, planning, construction etc. than giving direct support to housing construction. Continuous increase and transfer of knowledge is probably the most efficient way of contributing to an improved housing situation in developing countries.

Here the non-governmental organizations (NGOs) have a vital role to fulfill as an important transmitter of knowledge to authorities, organizations and individuals. The local ties that many NGOs have is invaluable in such a process.

2 Projects



1	**Population Resettlement**	Brazil
2	**Upgrading of Spontaneous Housing Areas**	Burkina Faso
3	**Quakeproof Housing with Local Materials**	Chile
4	**Self-Help Building with Prefabricated Materials**	Colombia
5	**Roofing as Housing Improvement in the Countryside**	Honduras
6	**People Upgrade Their Housing Area**	India
7	**Organized Large-Scale Self-Help Housing**	Mayotte Islands
8	**A Cooperative Form of Self-Help Housing**	Mexico
9	**Improvement of Sanitary Conditions**	Pakistan
10	**Self-Help Building Becomes Government Strategy**	Papua New Guinea
11	**Improved Housing Through Transfer of Knowledge**	Tanzania

2.1 Population Resettlement

Street scene in the settlement, 1964

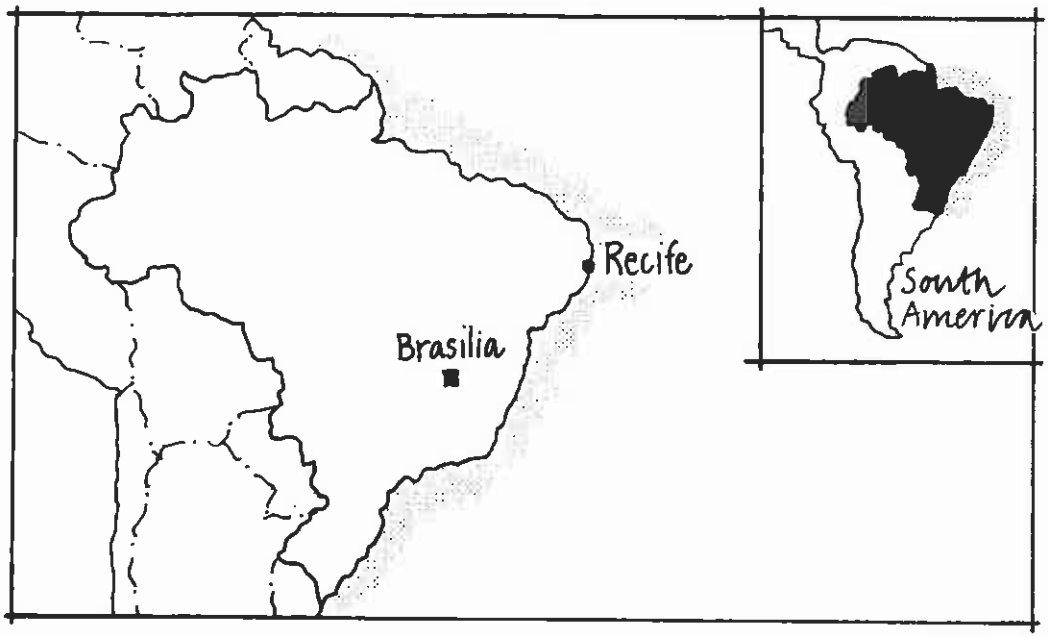
The project shows the importance of carrying out thorough investigations of the inhabitants' economic and social conditions. An important conclusion is that you have to stimulate people's ability to work in a group in order to achieve improvement with the limited available resources.

The project — moving people who had settled in an attractive park to a new housing area — was carried out by a public housing authority during the years 1963—1964 and was financed by the government.

Thanks to the project, the inhabitants obtained title deeds to their plots. Infrastructure was provided and communal buildings constructed. But it was the families themselves who built their own homes, with advice from students at the technical high school.

The brakes were put on the project after the military coup in 1964. In spite of this, the inhabitants continued to improve their situation on their own, thanks to the community spirit that had grown up between them.

Brazil



Project

Title: Projeto Cajueiro Seco

Area: Spontaneous housing area in Recife

Source: Frank Svensson

Local organization: SSCM (Servico Social Contra Mocambo)

Financed by: SUDENE (Superintendence of Development of the North-East)

Time period: 1963–1964

Documentation: –

Number of families affected: 142

Area per dwelling: 30 sq.m. (average)

Construction cost per dwelling: –

Construction cost per dwelling as percentage of per capita GNP: –

Country

Inhabitants: 135.56 million (1985)

Population growth: 2.3% (1973 – 1983)

Infant martality rate: 68/1,000 (1984)

Average life expectancy: 64 years (1984)

Urban population: 72% (1984)

Literate population: 77.7% (1985)

Per capita GNP: 1,720 US dollars (1984)

Building for communal use

Recife — a town vith early urbanization

Recife is a harbour in the state of Pernambuco. The town was planned and founded by Dutch colonisers where three rivers meet the sea. Some areas along the river banks are in the danger zone for flooding when the rivers overflow. It is in these areas that the poorest people have put up their dwellings.

The spontaneous housing areas have had an explosive development in Recife. The problem was recognized already in the 1930s when a new and dynamic governor came to power. This created optimism among the poor as people in government started to discuss housing improvements.

In 1939 SSCM (Servico Social Contra Mocambo) was created in Recife. This was the first public housing authority in Brazil. Later, others were created on the Recife pattern.

A spontaneous housing area emerges

In the beginning of the 1960s a spontaneous housing area grew on the outskirts of Recife, almost overnight. One hundred and forty two families built their homes in a beautiful park near the airport. The park was classified as a public monument, commemorating the Portuguese expulsion of the Dutch, and also housed a popular chapel.

The authorities were concerned to "save" the park and SSCM was given the task of resettling the squatters in another area. SSCM began by mapping the families' social and economic situation, investigating the reasons for them settling in the park.

Sixty percent of the people were men with low and irregular income. Many were blacks or mulattos, who have low status in Brazil. There were only few older people and 63 percent of the squatters were under 21. Only half of them

were literate. The average number of people per household was five and 26 percent lived alone.

Most of the squatters originated from the rural areas and had migrated to Recife in the 1950s. The reasons given for the move were jobs, schooling, health care and access to information. Many felt alienated in Recife. The structure of the society they came from was based on the nuclear family.

The most common reason they gave for settling in the park was that it gave them the chance to "own" a house of their own; that is, they were not obliged to rent a room, or a part of a room, in the central slum areas. Many stated that the rent was too high where they had lived before. There were also those who had been completely without a roof over their heads.

Optimal participation of the squatters

Having carried out these thorough surveys, in which 664 of the area's 668 inhabitants participated, the SSCM drew the following conclusions:

"New housing or loans and grants for building do not on their own automatically lead to better living conditions. An integrated development is necessary of which housing is part along with education, employment and culture."

To achieve such a development in the new housing area it was necessary to stimulate the inhabitants' ability to work in a group and to exploit the structures and the potential leadership that existed.

With the help of social workers, neighbourhood groups were created that elected their own leaders. In this way a hierarchical structure was established that could be coupled to SSCM.

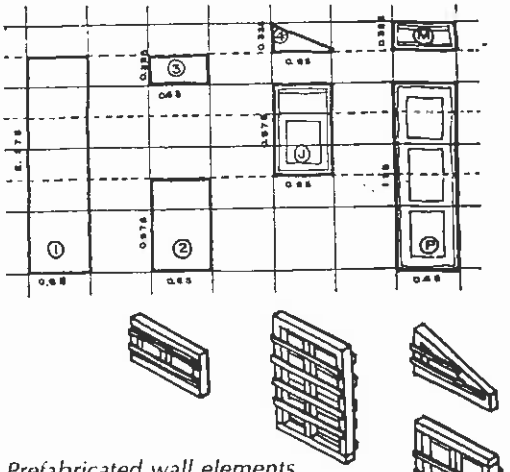
A health centre was then set up and a vaccination campaign started. A teacher of nutrition gave advice on diet.

A school, workshops and communal washrooms equipped with toilets, showers and laundry facilities were built. In the workshops 100 sewing machines were installed and a shoe repair shop. The communal buildings were constructed with assistance by students of the technical high shool in Recife, using discarded materials, such as railway tracks.

Legalizing of plots was important

Parallel to the construction of the communal buildings, infrastructure for the new housing area began to be installed. Excavations were made for an unpaved road network and systems for water, sewage and street lighting were installed. The plots were 8×16 metres and 20 plots made up a block. On each plot a tree was planted for which the occupants took responsibility.

SSCM opened an office in the area to issue contracts and hold sales of surplus materials. The wish to settle in the new housing area spread beyond those who originally squatted in the park, and SSCM had to find ways of handling the demand. In order to gain the right to a plot, a household would have to fulfill the following criteria:



Prefabricated wall elements

- be able to prove ability to construct a house
- be former squatters
- have a minimum income adequate for home building
- not have too high an income

Points were attributed according to how each criterion was fulfilled and to each applicant's existing standard of housing, so as to arrive at an order of priority for allocation of the plots.

When a new contract was signed the construction work would have to start within 90 days or the contract would be annulled.

The circumstances of the project changed when the military coup took place in April 1964. One of the responsible architects at SSCM was put in prison because the activity was seen as too progressive.

In spite of this, several activities other than housing improvement continued. A mothers' association was created with the help of a female high shool student. The association decided to start making children's clothes. It was also in contact with a doctor for nutritional advice during pregnancy and care of infants.

The workshop with the 100 sewing machines foundered because of the lack of raw materials. The group feeling among the women had grown strong, however, and they discussed how they themselves could get hold of raw materials in order to start a workshop for 30 women. The possibilities of basket-work for men were also explored.

Twenty-three years later

Frank Svensson worked as an architect in Recife from 1963 to 1970. His tasks were the planning of schools and housing at the regional authority, SUDENE (Superintendence of Development of the North-East).

In April 1987 Svensson, today a researcher at Lund University, made a return visit to the project and made the following assessment:

"There is a noticeable difference in the character of the settlement compared with the original ideas. The communal workshops and washrooms are no longer there. My impression is that the area has been privatized. But there seems to be a spirit of togetherness and security among the population. It also seems as if speculation has not taken place to any considerable degree, which is unusual in Brazil.

The area has now grown together with Recife. All housing has access to electricity and water but some dwellings lack sewage. The original building materials such as wooden planks and palm leaves have been replaced by better materials such as bricks, tiles and paned glass windows. It is remarkable how much vegetation exists now, both useful and decorative growth."

2.2 Upgrading of Spontaneous Housing Areas

Aerial photo of a spontaneous housing area in Ouagadougou

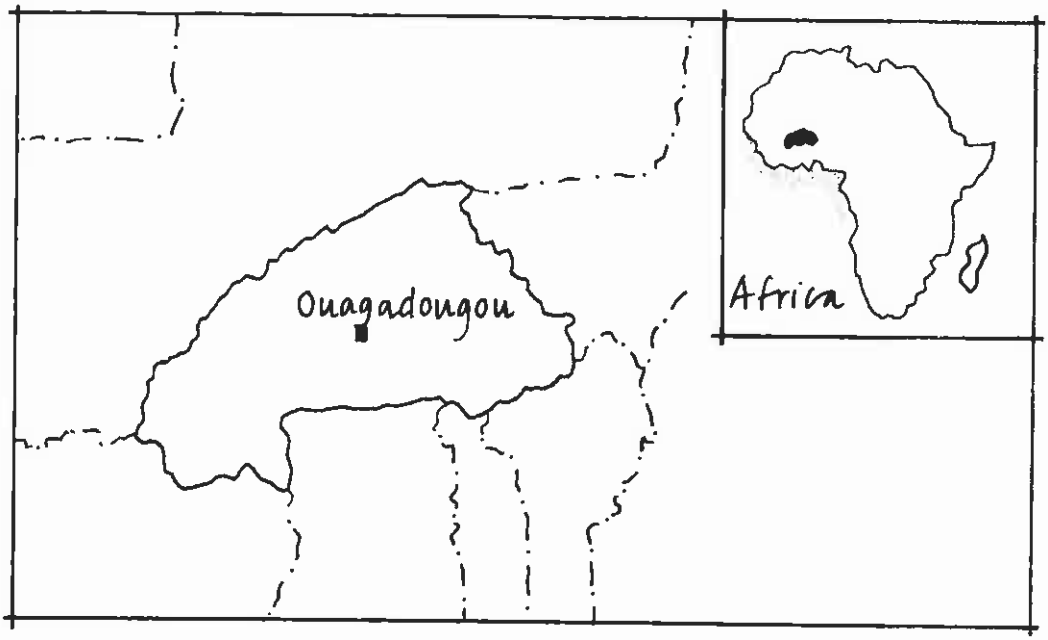
The project shows the importance of being sensitive to the people's wishes, of optimally exploiting their ability to make improvements and of providing adequate information about the project's implications.

About 40,000 families living in spontaneous housing areas have improved their living conditions at very low cost. The project has been carried out by local authorities in cooperation with the University of Amsterdam and with economic support from the Dutch government.

The economic and social conditions were carefully investigated and the occupants asked about what improvements they wanted. The reallocation and legal registration of plots and siting of roads and stand-pipes were made according to their wishes.

The inhabitants have individiually and at their own cost moved or improved their dwellings once a legal contract giving them ownership of their plot had been drawn up.

Burkina Faso



Project

Title: Programme d'aménagement des zones d'habitat spontané de la ville Ouagadougou

Area: Ouagadougou, town settlement, spontaneous housing area

Source: University of Amsterdam

Local organization: Ministry of Public Works/Urban Planning Department

Financed by: Netherlands government

Time period: 1982–1989

Documentation: —

Number of families affected: 40,000

Area per dwelling: —

Construction cost per dwelling: Cost per plot, first phase, 80 US dollars (infrastructure only). Construction cost per dwelling varies from 500–5,000 US dollars

Construction cost per dwelling as percentage of per capita GNP: —

Country

Inhabitants: 6.64 million (1985)

Population growth: 1.9% (1973 – 1983)

Infant mortality rate: 146/1,000 (1984)

Average life expectancy: 45 years (1984)

Urban population: 11% (1984)

Literate population: 13.2% (above age 15, 1985)

Per capita GNP: 160 US dollars (1984)

Aerial photo of a spontaneous housing area in Ouagadougou

Heavy growth of spontaneous housing areas

After Burkina Faso became independent in 1960, there was a surge of population into the towns. People mainly moved into the three larger cities: Koudougou, Bobo-Dioulasso and Ouagadougou. In 1960 there were a little more than 60,000 inhabitants in Ouagadougou. In 1980 this figure had increased to 300,000. Ouagadougou's population is expected to continue to grow at the rate of 7—8 percent per year.

In 1980 more than 40 percent of Ouagadougou's population lived in spontaneous housing areas totally lacking infrastructure. It has not been possible for the authorities to plan for this rapid urbanization. Ouagadougou has an uncontrolled growth, without possibility of either planning the street network or locating industries and services in relation to housing areas. During the period 1960—80, the authorities managed to stake out 1,040 hectares as housing plots while the area covered with spontaneous housing grew by 2,000 hectares.

Spontaneous housing areas were for a long time ignored by the authorities, who stated that they are illegal and therefore should be torn down and replaced by "modern" housing. At the end of the 1970s attitudes towards the housing problem changed and the authorities looked for help from different aid organizations. It was in this context that cooperation with Amsterdam University's Town Planning Department began.

Inquiry into the population's needs

A project group was created consisting of advisers from Amsterdam University and representatives of the local authorities. Studies were made in the spontaneous housing areas af the number of inhabitants, composition of the population, rate of growth, infrastructure, housing standards, etc. A simple strategy for attacking the housing problems was then formulated:

"Town planning and housing improvement should be a social activity that benefits the largest possible number; it should be developed by overall actions based on a realistic housing policy that has its starting point in the socio-economic conditions of the majority of the population."

In straightforward language, this meant that the authorities accepted the spontaneous housing areas and asked themselves how conditions in different areas could be improved and how they could be integrated into the rest of the city.

The dwellings were usually constructed of earth walls with a roof of corrugated iron and wooden doors and windows. The proportion of local building materials involved was estimated at 85 percent. The cost for each dwelling varied between 500 and 5,000 US dollars. Toilets and water pipes were totally absent, the plot sizes varied considerably and the road network was quite unplanned.

As a first step the occupants were asked what kinds of improvements in their housing situation they wanted most. Families expressed their priorities in the following order:

1. Security of tenure of the plot
2. Access to clean drinking water
3. A planned road network

The overcrowded families could even envisage moving into another area if they would get a larger plot. People also underlined the importance of having the same road system as in the "real" parts of town.

Traditional adobe dwelling

Sun protection for cooking and rest

Legalizing of plots

The project group thereafter began to draw up a plot map with a more just distribution of plots and a rational road system. To the largest possible extent they tried to maintain the existing dwellings. The new permanent plot areas were then marked out and contracts were drawn up for each plot that gave the family a legal right to it. Families then had one year in which to move those dwellings that were wrongly placed, according to the plot map.

Most families had moved their dwellings already after 9—12 months and generally the standard was considerably higher in the new dwellings. Many also moved their dwellings within the area of their own plots in order to have them better placed. About 80 percent of the building materials of the dwellings that were moved could be used again. Boreholes were constructed while the families moved home for the installation of standpipes. After they had moved, levelling of the main streets was started.

The project comprises 30,000 plots, which means some 40,000 families or 200,000 people. The costs are about 80 US dollars per plot for the first phase and this sum is payable by the households. So far about 70 percent have paid back. The money goes into a revolving fund to finance other, similar schemes.

The project is carried out by the central and local authorities in Burkina Faso with the support of advisers from Amsterdam University. The Netherlands government finances the project to the extend of five million Dutch guilders (about 2.5 million US dollars) and also provides advice.

Making adobe blocks

The family's own ability is the most important resource

Inquires that have been carried out show that the population in Ouagadougou appreciate the way that the project has been carried out. The rebuilt and newly-built dwellings were of a higher technical quality. This is explained by the fact that the families are more motivated to invest in housing improvements when they have security of tenure of their plots, according to Coen Beeker, the person in charge of the project at Amsterdam University.

He considers that the project proved a success because the dwellings were legalized and that the starting point was the individual family's ability to improve its own situation. This differs from other methods of upgrading, for example in Tunis.

Storage of adobe blocks

The main difference is that in Ouagadougou legalising and distribution of the plots was the starting point of the rehabilitation programme. This means that the private area for the families was given the highest priority.

Upgrading of the public area (roads, standpipes, sewage, electricity, etc.) was given priority in the rehabilitation programme in Tunis. Redistribution of land in the private area has been neglected. There the authorities tore down part of an existing housing settlement in order to make tarred roads and paved sidewalks, install piped water and a sewage system; that is, relatively costly infrastructure. It was then necessary to build new housing for hte families who had been forced out by the new roads.

Another important difference is that in Ouagadougou the population has continuously been informed in advance of what will happen and exactly what the terms and conditions are. In Tunis the population was often informed afterwards and contracts guaranteeing the families' plot tenure were drawn up at a very late stage.

The Tunis type of upgrading was perceived as very expensive by the population, who did not participate in the implementation.

Realistic cost levels are important

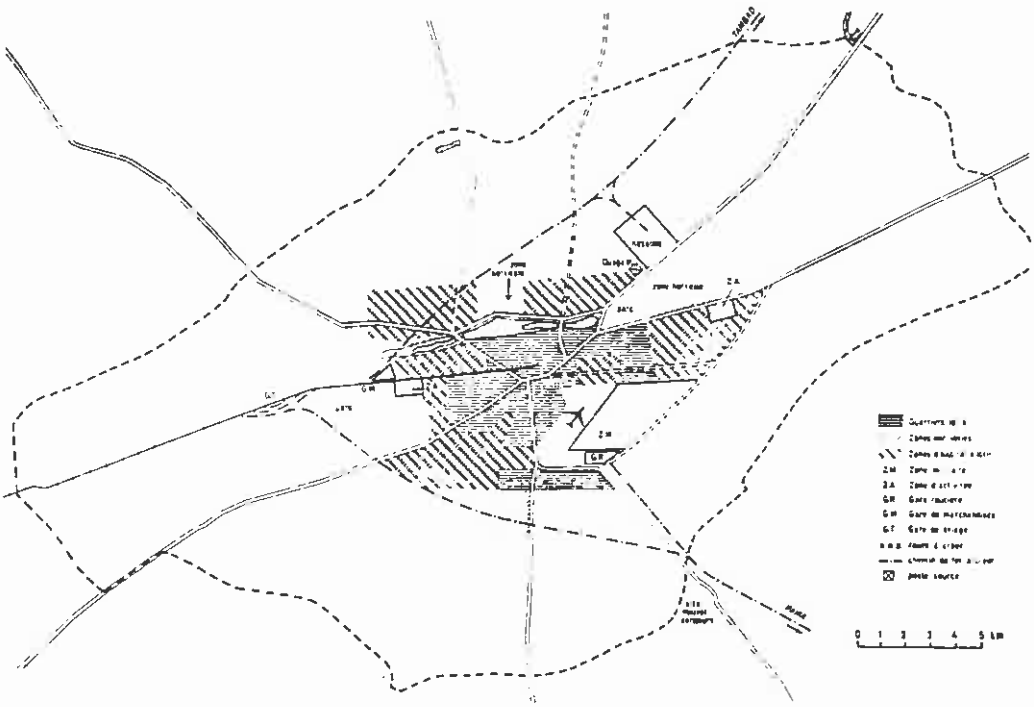
Coen Beeker says that "it is important to catch up with urbanization using the resources available. You have to act fast; it takes too long and costs too much money to build an infrastructure in the way it was done in Tunisia. Legalising the private area for the selected families should be given a higher priority; this means that these families could start their own programme of housing improvement. Upgrading of the public area is a step-by-step process and depends largely on the real spending level of the families involved. Upgrading of these spontaneous areas should be realistic without loans from abroad. Only a starting fund could be

Building new dwellings

useful for mapping, preparing of upgrading proposals and legalising of the area by plotting. You need to work on a large scale to restore the offer and demand balance for legal plots."

The project in Ouagadougou concerns the whole population within a couple of spontaneous housing areas. Household income varies. Hardly anyone is well off; the large majority belong to the poorest groups. It is remarkable that the project has been able to bring about such considerable improvements within both areas in such a short time and at such a low cost.

The project leadership opted to put all resources into restructing the settlement and in establishing very simple infrastructure in order to reach as large a part of the population as possible. In retrospect, they consider this was correct, even if they today wish they could have assisted the families with building advice — in particular how best to position a dwelling, e.g. the possibilities of joining buildings on adjacent plots.



Zonal map of Ouagadougou

2.3 Quakeproof Housing with Local Materials

Wood-frame housing construction.

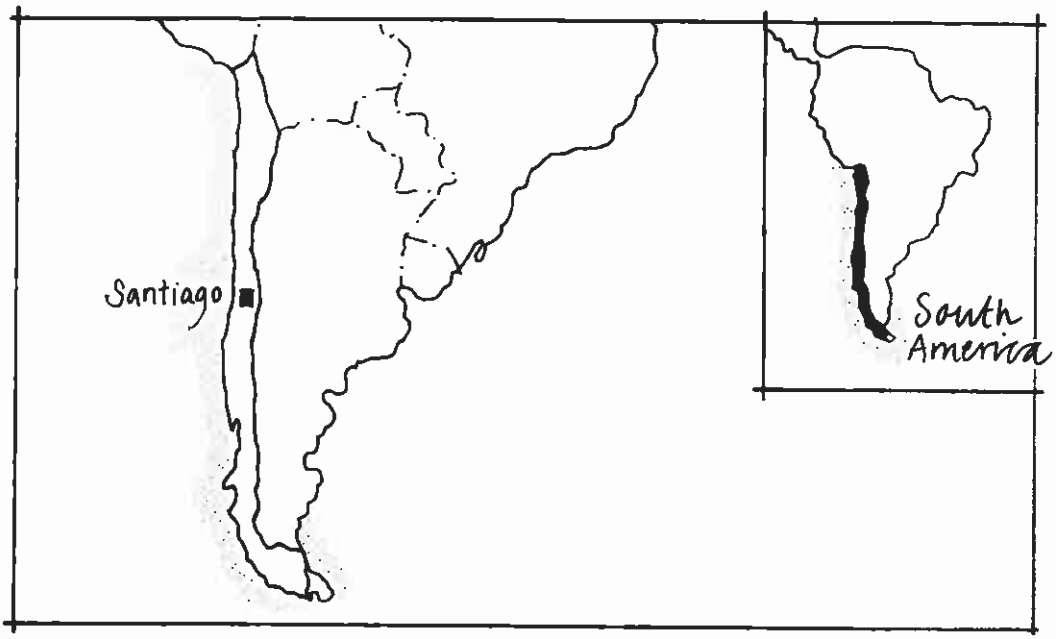
The project shows how better knowledge about the possibilities for carrying out housing improvements was achieved by small-scale experimental construction. This, in its turn, led to an expanded self-help building activity with emphasis on advice, credit and bulk purchasing of building materials.

Ten families settled in a spontaneous housing areas have experienced radical improvements in their housing standards. The project is a pilot project and has been carried out with economic assistance from a private French aid organization.

It started with a study of the technical and economic prerequisites for constructing new housing for a small group of the poorest families in Santiago de Chile.

An inexpensive type of building, made mainly from local materials, adapted to the family's level of income and suitable for self-help building under the guidance of instructors, was developed.

Chile



Project

Title: Techa abrigo y bienester social

Area: La Pintana, a district in Santiago de Chile

Source: La Cimade

Local organization: Taller Norte

Financed by: La Cimade

Time period: 1985—1986

Documentation: —

Number of families affected: 10

Area per dwelling: —

Construction cost per dwelling: 4,000 US dollars

Construction cost per dwelling as percentage of per capita GNP: 235

Country

Inhabitants: 12.07 million (1985)

Population growth: 1.7% (1973 — 1983)

Infant martality rate: 22/1,000 (1984)

Average life expectancy: 70 years (1984)

Urban population: 83% (1984)

Literate population: 94.4% (1985)

Per capita GNP: 1,700 US dollars (1984)

The original dwellings in La Pintana.

La Pintana — a spontaneous housing area

La Pintana is a district in Santiago de Chile that consists mainly of spontaneous housing. According to official statistics, there are 26,485 dwellings (1986) in the district, 565 of which are assessed as "good", 15,534 "not satisfactory", and 10,386 "very bad".

The families living in La Pintana belong to the poorest groups in the city and lack economic resources to improve their dwellings themselves. In 1984 ten families joined together to try to build new homes for themselves. They contacted Taller Norte, an altruistic Chilean organization, which works to improve housing in cities.

Taller Norte was created in 1983 to give professional advice to local groups and cooperatives wanting to improve their housing. There was a large need for this, as the government had neglected the task. Taller Norte's staff today consists of 10 people: 3 architects, 2 technicians, 2 social workers, 1 adult educator and 2 secretaries. They run a number of projects to improve housing and to construct new dwellings.

Taller Norte contacted La Cimade, a French religious aid organization, to finance a project for the 10 families in La Pintana. La Cimade supports a number of projects in Latin America, often in the housing sector.

Pilot project — development of a new construction method

A working group was created to study the technical and economic prerequisites for constructing new housing. The families lived in sheds made of sheet metal and other scrap materials. To build new housing in bricks or hollow concrete blocks would be too expensive, considering the families' income. The purpose was to develop a low-cost construction method that also could be used by other families without substantial economic aid.

There has been a tradition of earth-built housing in Chile, which was low cost and gave good climatic protection. The problem is that these houses were not quake-proof; many were destroyed by the March 1985 earthquake.

In spite of this the working group decided to use earth as a building material so as to keep construction costs at a reasonable level. La Cimade commissioned Craterre (see the project 2.7 Organized Large-Scale Self-Help Housing) to develop a modern technique that is more quake-proof. Craterre developed a type of wood-frame building using stabilized earth blocks between the beams — a simplified version of a traditional cross-beam construction.

The project, christened TEBISAL (Techo arbigo y bienestar social), was started in 1985 and in June 1986 ten dwellings were ready for habitation in La Pintana. The families had themselves built their homes with the help of instructors and artisans from Taller Norte. The project was financed by La Cimade and the families will pay back the cost of construction to a revolving fund, which will enable new projects to be carried out.

Newly-built housing with stabilized earth.

Newly-built housing with stabilized earth.

The ten families in La Pintana have experienced a radical improvement in housing standards. Many other families are now lining up to build houses using earth as the main building material.

When the project began, the local population was very sceptical about using earth, even with the new methods. The working group has placed a lot of importance on information and practical demonstrations in order to overcome this psychological barrier.

The purpose from the start was to continue housing construction with the help of the instalments that the families paid into the revolving fund. But this has not worked out, although other possibilities have emerged.

The project continues on a larger scale

In Chile individual families have the possibility to borrow a limited sum from the state to build a home. This sum is not enough to build a dwelling to a normal standard and therefore the poor population at La Pintana has not taken advantage of it. But these loans are sufficient to construct the low-cost houses that have now been developed in the TEBISAL project.

In order to obtain a state housing loan, two things are required: a cash contribution and knowledge of how to apply for the loan. For a family with three children a cash contribution corresponding to about 65 US dollars is needed — an amount that is fully feasible for the poorest families to pay. What is a real

problem is making the application, as most poor families are not literate and the bureaucratic process is very complicated.

Taller Norte has now, with Cimade support, started a new project stage that consists of:

- setting up an advisory bureau where families can go to get advice concerning their loan applications;
- courses and guidance in do-it-yourself building;
- construction of a central building that contains a carpentry workshop and a warehouse. The purpose is to allow low-price bulk purchase of building materials, which are then resold on credit to the families.

2.4 Self-help Building with Prefabricated Materials

Newly-built houses in La Trinidad.

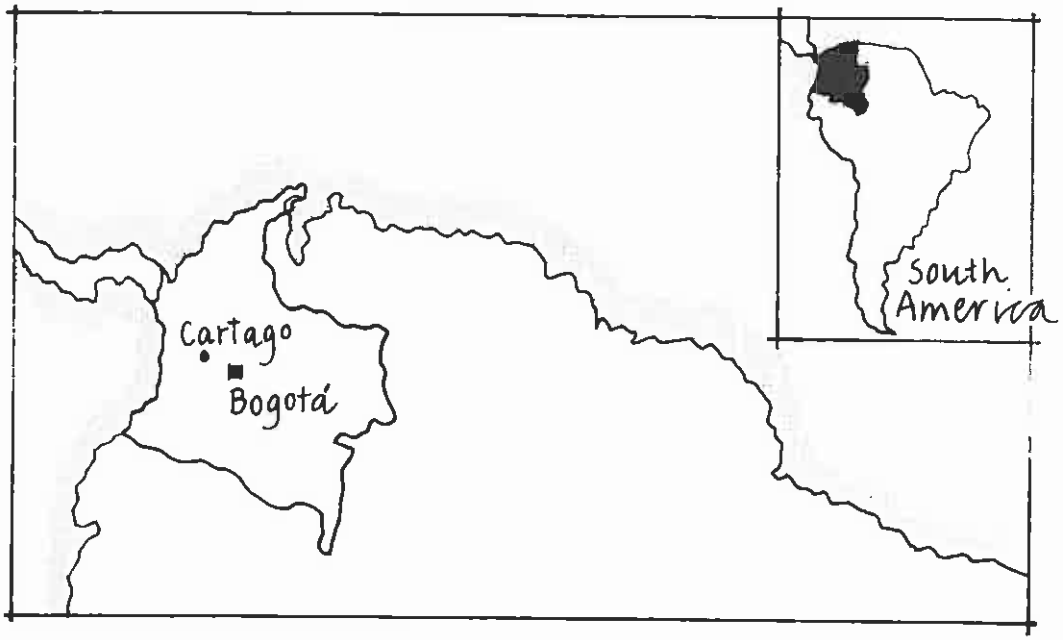
This project shows how a non-governmental organization (NGO) can contribute to improved housing by applying a certain approach. Through organized self-help building 44 families have been able to build new homes for themselves.

The project has been carried out by a domestic NGO in cooperation with local authorities. It has been partly financed locally and partly by a West German NGO.

Great weight has been given to group work and joint discussions concerning house size, personal labour contribution, financing, and so on. The families pay back the loans to a revolving fund, which finances further house construction.

A construction method suitable for self-help building has been developed that combines traditional methods with the use of prefabricated elements. The families were divided into teams, who worked under a foreman employed by the project.

Colombia



Project

Title: La Trinidad

Area: Cartago, Valle de Cauca

Source: DESWOS (Deutsche Entwicklungshilfe für Soziales Wohnungs- und Siedlungswesen)

Local Organization CDCC (Corporación Diocenana Pro-Comunidad Cristiana)

Financed by: DESWOS

Time period: 1981—1985

Documentation: DESWOS case study ("La Trinidad" in Cartago/Kolumbien)

Number of families affected: 44 (233 persons)

Area per dwelling: 49 sq.m.

Construction cost per dwelling: 1,780 US dollars

Construction cost per dwelling as percentage of per capita GNP: 128

Country

Inhabitants: 28.62 million (1985)

Population growth: 1.9% (1983)

Infant mortality rate: 48/1,000 (1984)

Average life expectancy: 65 years (1984)

Urban population: 67% (1984)

Literate population: 88.1%

Per capita GNP: 1,390 US dollars (1984)

Newly-built housing.

Natural disasters often strike Cartago

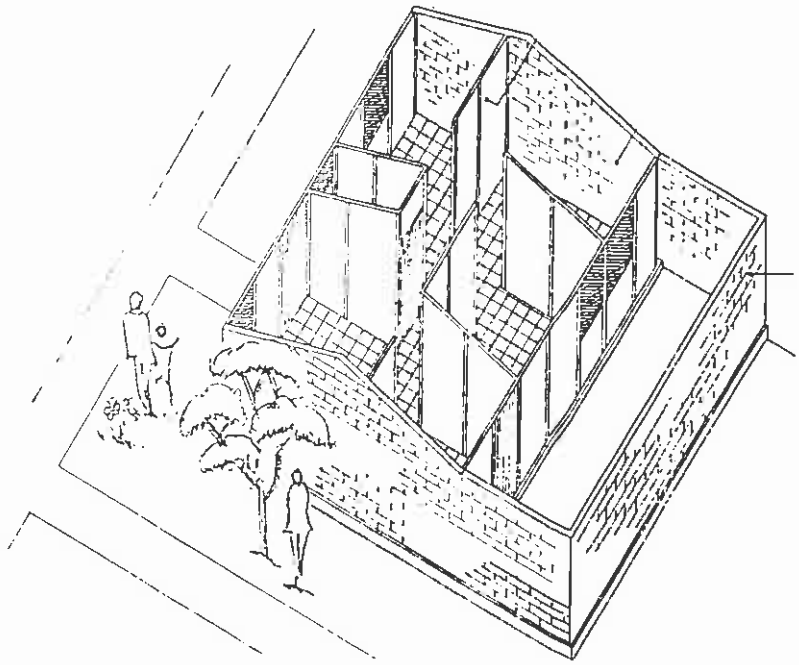
The town of Cartago is situated in the northern part of the province of Valle del Cauca, almost 400 kms from Bogotá. In 1985 the number of inhabitants was 96,865, out of a total population of 28 million for all of Colombia. The climate is hot and dry with an annual average temperature of 24 degrees Celsius. La Vieja, the river that borders the town, often overflows its banks and the area is also affected by earthquakes.

During the last decads the population growth in Colombia has declined, while urbanization has increased. In the beginning of the 1980s about 65 percent of Colombians lived in towns. The urbanization leads to increased demand for infrastructure, but the authorities lack resources to provide it. Thirty percent of the population live in the four largest cities, which together account for 40 percent of unfullfilled demand for housing in Colombia.

In Cartago the need for housing has increased considerably during the last years and is estimated to be about 7,500 dwellings. But only 582 dwellings were built between 1959 and 1980, according to ICT (Instituto de Crédito Territorial), which is the state agency for the promotion of house construction.

CDCC is created to improve the housing situation

In 1970 La Vieja river burst its banks and over 70 percent of the families in the affected part of town were made homeless. It was then that CDCC (Corporación Diocensana Pro-Comunidad Cristiana) was created to devote itself to building and



Type of dwelling developed by CDCC.

education. CDCC set up the construction of new dwellings in the housing areas Las Colinas (220 dwellings) and El Guadual (70). The financing was arranged through annual collections from the parishes in Cartago (about 1.5 million pesos/year), voluntary contributions, help from private organizations and profit from sales of self-made building materials.

The families of La Trinidad lived in greatly overcrowded parts of Cartago. Most families consisted of 5—6 people, who only had one room in some decrepit house and shared kitchen and bathroom with several other families.

In 1979 CDCC decided to start a building project in La Trinidad based on the good experiences from Las Colinas and El Guadual. Funds for the construction were contributed by DESWOS (Deutsche Entwicklungshilfe für Soziales Wohnungs- und Siedlungswessen), an altruistic West German organization involved in financing and carrying out housing projects for poor families in developing countries. This aid was given as building credit to the 44 participating families in the project. The funds were administered by CDCC.

The town administration in Cartago, with its town planning department, and the provincial department of public works were the authorities concerned. They approved building plans and supervised the building of roads, other infrastructure and communal areas.

Families selected according to definite criteria

After home visits by a CDCC social worker, the families were selected according to the following criteria:

- Family income in the range of the official minimum salary (with priority to the lowest-income families)
- No assets, especially property
- Settled in Cartago for at least five years
- Living in very bad housing conditions
- Intact family structure
- Big family with many members
- Honest family that would function well in a collective
- Wish and ability to participate in collective work.

CDCC organized the participants. The first step in the collective work consisted of so-called weekly work meetings. Before construction began the following were discussed: sketches, house size, building methods, family labour contribution, financing, possible sanctions against families who did not fulfill their work quotas, etc. Another important part of the group integration was the social work conducted by the CDCC. This included home visits, talks, family care, courses, seminars and other activities. The courses included cooking, nutrition, cloth painting, sewing and cutting, first aid, human relations and leadership training. This social work has been very effective.

Housing built of durable materials

CDCC was responsible for carrying out the project. It received some help, e.g. staking out of the plots, which was carried out with the town planning authorities. There was help also in selecting building systems from SERVIVIENDA, a private Colombian organization that develops simple building systems.

The 44 families were divided into five work teams, each with a foreman employed by CDCC. The working group appointed a person to be responsible for, among other things, tools. Characteristic of the building method was a combination of traditional materials with prefabricated elements. The foundation was cast in concrete and massive bricks used for the gable walls. Other outer as well as inner walls were built of prefabricated cement sections ($97 \times 97 \times 3.2$ cms). The roof was covered with traditional tiles and the floor was made of cement. The bathroom contained a shower, W.C. and hand basin.

The town authorities were responsible for the maintenance of water pipes and the electricity system, and the users were charged in the usual way.

During construction, no-one knew who would get which building. Not until a certain number were ready were occupants chosen by lottery. When the project was carried out, the average monthly salary was 5,700 pesos (about 81 US dollars).This corresponded to 77 percent of the official minimum wage, which only 10 percent of the families actually reached. The rent became 1,000–1,500 pesos, which on average accounted for about 20 percent of a family's income.

In cooperation with DESWOS a revolving fund was established to finance construction work. Repayments to the fund have reached 98 percent and have contributed to finance another self-help housing project, San Pablo, which was carried out in 1983–1985.

The project has been instructive

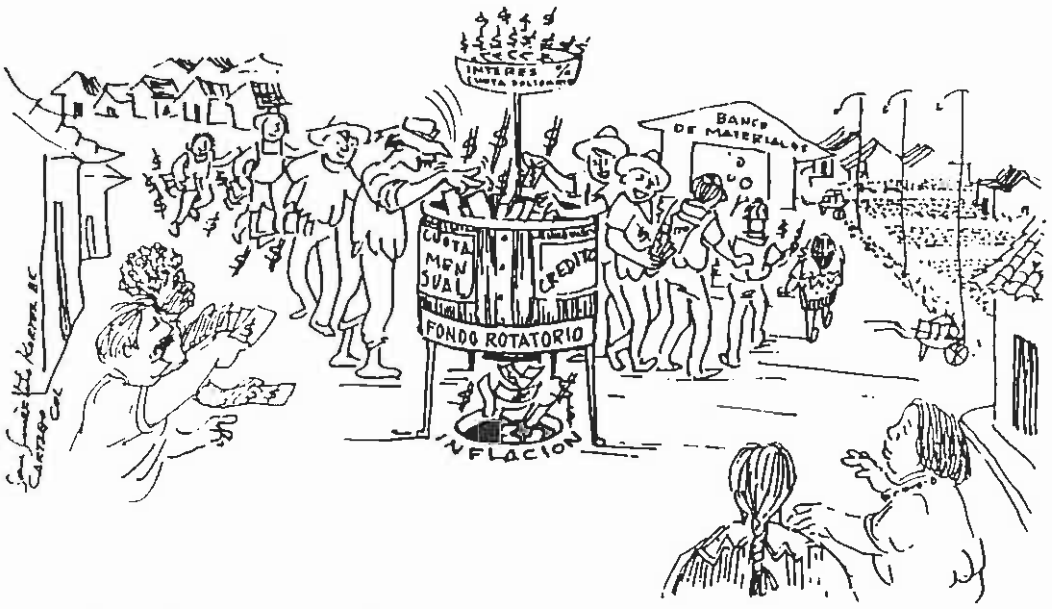
Experiences from the project have been as follows:

- Poor people are often unable to improve their housing conditious due to a lack of education, time, information and contacts. They therefore depend on experienced and reliable organizations.
- The project in La Trinidad is proof that self-help, low-cost construction is a realistic alternative to professional building. But the project is no model for how people can improve their housing situation all on their own.
- CDCC is gathering experience in organizing self-help housing and can therefore continuously improve its activities.

To achieve a good result from the housing construction project, the following points were important in La Trinidad:

- to gain the cooperation of the relevant authorities;
- to obtain external (DESWOS) and internal (revolving fund) financing;
- to optimally exploit the families' possibility to contribute labour and funds;
- to reduce construction costs by production of good quality building materials.

By taking all this into account, it has been possible to show that self-help housing is realistic. This is perhaps the most important lesson from La Trinidad.



Extract from information material for the population.

2.5 Roofing as Housing Improvement in the Countryside

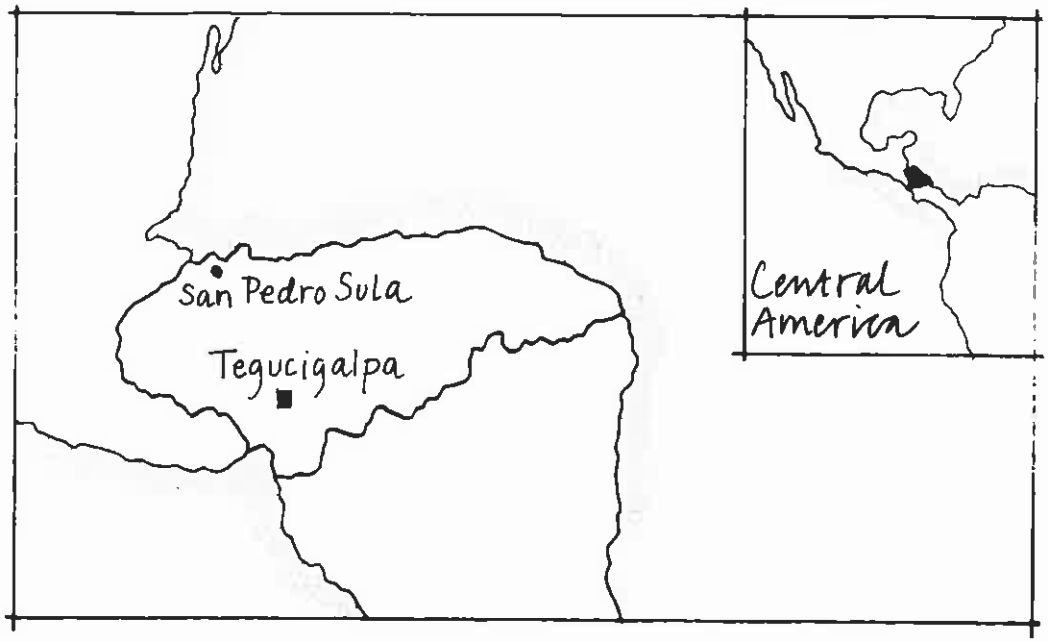
Housing completed with wall section.

The project shows that a considerable improvement to housing in the countryside can be achieved at low cost by guaranteeing tenure of land and optimal exploitation of the family's own resources.

Thanks to the project, 94 families in rural areas, previously marginalized and without housing, received new dwellings. The project was carried out by a local parish with advice and economic support from the Swedish Pentecostal International Relief and Development Agency.

Local artisans erected housing frames and put on the roofing, after which the families themselves completed their dwellings. The same principle — that is, to provide those parts of the building that are most difficult for the families to put up themselves — has also been applied when building latrines.

Honduras



Project

Title: Village improvement

Area: Villages in the surroundings of San Pedro Sula

Source: Swedish Pentecostal International Relief and Development Agency

Local Organization: Swedish Pentecostal International Relief and Development Agency

Financed by: Swedish Pentecostal International Relief and Development Agency

Time period: 1980—1981

Documentation: —

Number of families affected: 94

Area per dwelling: 25 sq.m.

Construction cost per dwelling: 2,020 Swedish kronor (about 340 US dollars)

Construction cost per dwelling as percentage of per capita GNP: about 50

Country

Inhabitants: 4.37 million (1985)

Population growth: 3.5% (1979—1983)

Infant mortality rate: 77/1,000 (1984)

Average life expectancy: 61 years (1984)

Urban population: 39%

Literate population: 59.5% (1985)

Per capita GNP: 700 US dollars (1984)

Dwelling in its original state.

Honduras — an agricultural country

Honduras is situated in the middle of Central America, south of Guatemala, east of El Salvador and north of Nicaragua. The country is very hilly, with the Central Cordillera mountain chain stretching across almost the whole country. There is lowland in the north, where San Pedro Sula is situated, also in the widespread plains of the south and in the river valleys. The terrain causes great communication problems.

The climate varies a great deal. The tropically hot and humid climate of the coast becomes considerably milder in the mountain areas, where there is a pleasant, temperate climate. The population, mainly *mestizo* (descendant of white and Indian), is unevenly distributed over the country. Most live in the inland highland region and on the tropical coast.

Agriculture employs two thirds of the working population and is of two types: self-sufficient cultivation and plantations, which are owned by large landowners or foreign companies. Typical of Honduras are the banana plantations mainly owned by the two US giants, United Brands and Standard Fruit.

In 1974 northern Honduras was struck by the hurricane "Fifi". The people in the region lost all their possessions and about 10,000 were killed.

Survivors who settled in San Pedro Sula and surroundings built their rough-and-ready housing with walls and roofing of plastic bags or, in the best of cases, bamboo and sheet metal. People had been pushed from pillar to post before they ended up in these villages, where they managed to obtain plots. Most of them

Newly-built housing frame with roofing.

were unemployed and there were many single mothers. During harvest time there are a lot of temporary farm jobs available around San Pedro Sula.

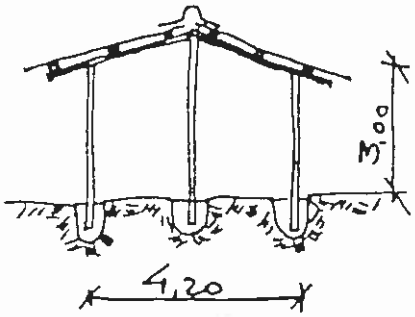
In 1965 the Swedish Pentecostal International Relief and Development Agency began operations in San Pedro Sula. A technical school for carpentry, a home economics school for girls and a children's home have been built within the mission compound.

Roofing as aid

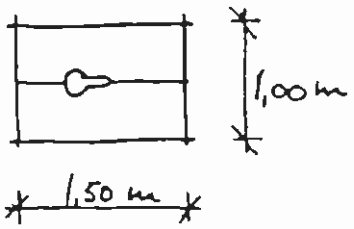
The Pentecostal mission in 1980 took the initiative of starting a "roofing project" to improve the housing conditions of 94 families in four villages around San Pedro Sula. The roofing project included the erection of wooden poles as housing frames and roof covering with corrugated iron. Each dwelling area was 25 sq.m. and the floors were made of cement. The families themselves had to build the walls. Once they had dug pits for the toilets they were given latrine lids made of concrete. The families also built the toilet walls and roofs.

The roof constructions were put up in one village at a time. The Pentecostal mission was responsible for the purchase of materials and control of construction. The mission's local carpenter led the roofing team and the families helped with the heavy work.

In most cases the women were given ownership of the houses. This was done so as to guarantee that the woman who takes care of the children shall not be thrown out if the man, for one reason or another, wants to get rid of her. The



Sketch of a housing frame.



Sketch of latrine lid.

villagers gained congenial and human living conditions, by Honduran standards, thanks to the roofing project. To live in your own house on a plot that belongs to you is like a dream for these people, who have been pushed on and off land owned by big landowners.

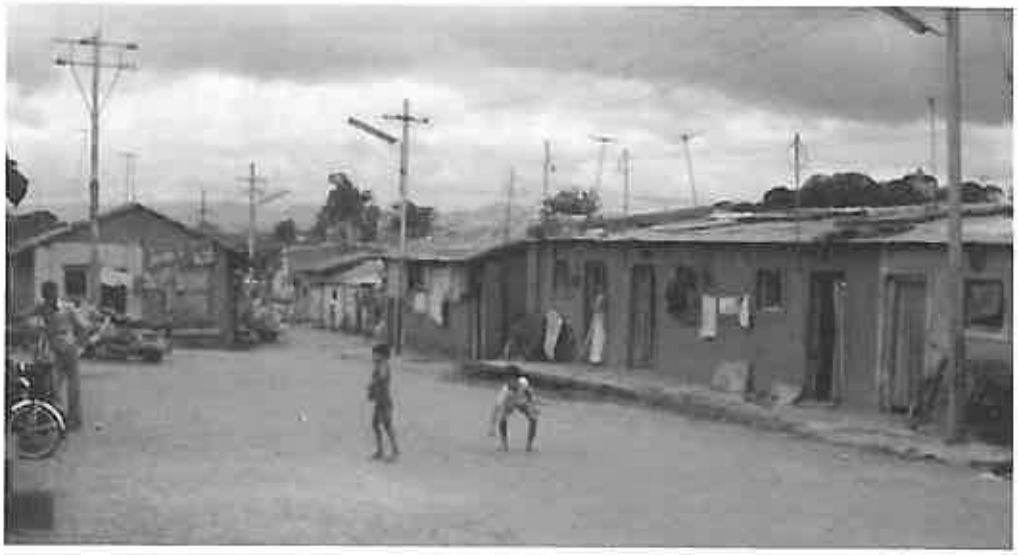
By limited economic aid to providing roofing, building costs were kept low and advantage was taken of the families' ability to contribute labour. The building costs for a completed roof on poles amounts to SEK 1,500 per roof (about 250 US dollars), excluding the cost of supervision.

The same method has been applied to the toilets; that is, the project has contributed that part of the construction that is most difficult for the families to obtain or build themselves. The roofing project is an example of an efficient way of achieving considerable housing improvement in the countryside at low cost.

Hans Alsbo, project leader, says: "We have seen many of these people, who seemed more dead than alive, gain a new life. They have woken up, started to keep things clean around themselves, take care of their children and find new energy to tackle their survival. Development aid at the right level, which helps the people you work with, is a great blessing."

View of a completed housing area.

2.6 People Upgrade their Housing Area



New streets planned so as to give more space.

The project shows how people, through their own organizing ability and commitment, have attained basic rights and access to services that satisfy their basic needs.

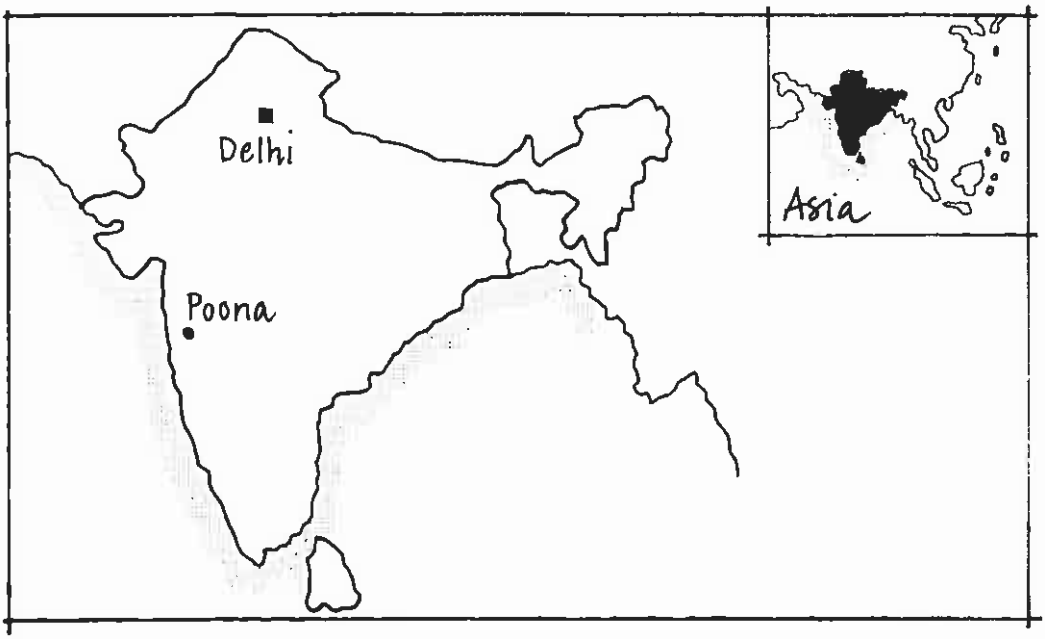
Thanks to these self-help efforts 1,250 families in a spontaneous housing area have obtained improved living conditions. The improvements have been carried out by the people themselves, with the support of a local authority.

Through a rentstrike, the families succeeded in forcing the illegal landlords to hand over the land at a low price.

Then they organized themselves, forming a steering committee so as to obtain legal status, and set up a plan for the area that included new plot limits and the provision of infrastructure.

In less than a year, 80 percent of the plots were built on. The maintenance of communal premises was achieved by the committee collecting voluntary contributions to pay for employing ten women from the settlement.

India



Project

Title: Ganeshnagar Settlement Improvement Programme

Area: Yerawada quarter in Poona, Maharashtra

Source: Habitat International Coalition NGO Project IYSH 1987
S.K Mohandas
CDSA Centre for Development Studies and Activities, India

Local organization: PMC (Poona Municipal Corporation)

Financed by: Self financed with some help from municipality

Time period: 1970–

Documentation: Contributors to Habitat International Coalition's NGO Habitat Project for the International Year of Shelter for the Homeless 1987
and
Building Community, A third world case book, edited by Bertha Turner, Habitat International Coalition 1988

Number of families affected: 1,250

Area per dwelling: 20 m²

Construction cost per dwelling: –

Construction cost per dwelling as percentage of per capita GNP: –

Country

Inhabitants: 730.9 million (1985)

Population growth: 2.3% (1973 — 1983)

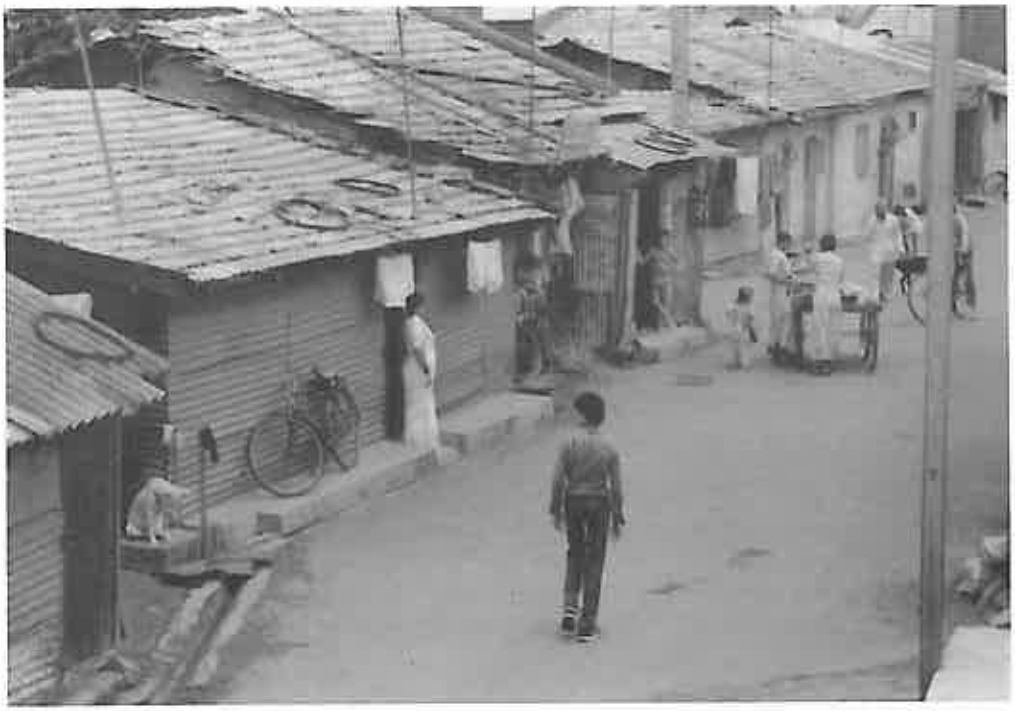
Infant mortality rate: 90/1,000 (1984)

Average life expectancy: 56 years (1984)

Urban population: 23% (1984)

Literate population: 43.5% (1985)

Per capita GNP: 260 US dollars (1984)



Street scene in Ganeshnagar.

Ganeshnagar — a spontaneous housing area

Poona is a large industrial city in Maharashtra state in western India. The population has grown from 597,562 (1961) to 1,203,351 (1981). One third of Poona's inhabitants lived in 327 spontaneous housing areas in 1976 — and these areas are expected to accommodate half the city's population by 1991. Ganeshnagar spontaneous housing area has about 1,250 families and is situated in the Yerawade quarter.

In 1968 an ammunition factory in Poona exploded and many of the families affected moved to Yerawada to set up new homes. The authorities did not bother about them. For this reason, illegal landowners occupied the land and built huts to rent out to the new arrivals. The whole area was controlled with violence by these illegal landlords.

The people organized themselves

In 1979 some families formed a group to fight the landlords. Not long after they received strong support from the other families. They started to refuse paying rent and the landlords subsequently lost control of the land and were forced to sell it cheaply to their former tenants. At the end of the year the whole area was freed.

In 1971 the leadership decided to formalize the group and make it a legal entity, Poona Municipal Corporation (PMC), by installing an elected board. The settlement was divided into nine districts. The new board's first task was to work

Front room converted into a small shop.

out a town plan for Ganeshnagar. It included streets, plot limits and also a big open space at the entrance to the settlement. The aim was that the families would retain their plots and as few as possible of the dwellings would be destroyed. The city authorities were asked for more land so that the plan could be carried out. Within less than a year, 80 percent of the plan had been realized.

In 1973 — 1974 PMC was forced to install pipes for drinking water, drainage and sewage pipes and a garbage tip. In 1975 it also installed water tanks, street lighting and public toilets, and built small roads.

Soon problems occurred with the upkeep of the new infrastructure. The Board then collected voluntary contributions to employ ten women from the settlement to do the maintenance and for PMC to install further latrines and water tanks.

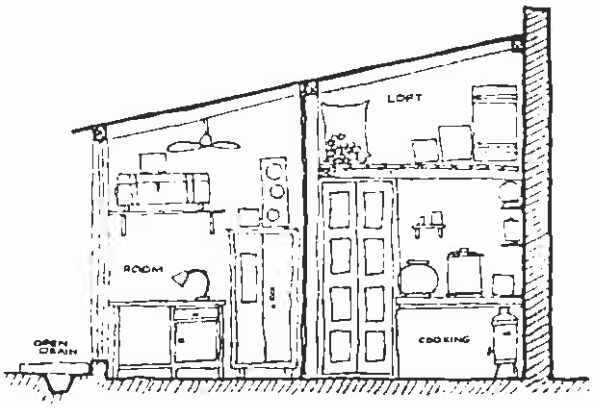
The project has led to several improvements

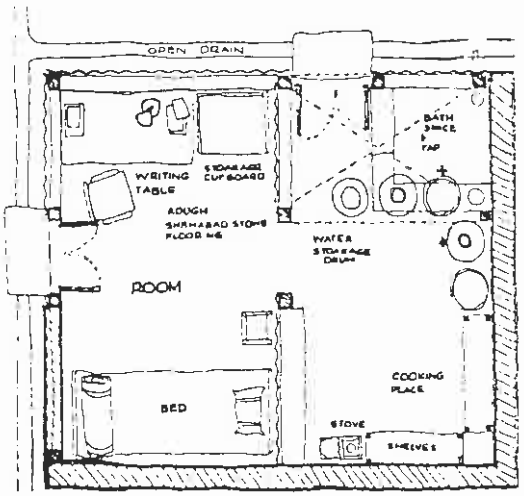
In 1976 PMC obtained the requested land from the state authorities. This led to greater security for the inhabitants and encouraged them to contribute money for housing improvements. In 1979 — 1980 PMC took over complete responsibility for maintenance of the settlement as part of a larger political agreement.

After PMC's achievements, several other projects followed. In 1979 a nursery was built. A women's organization was founded that ran a day care centre as well as a canteen for needy children. Sewing machines were obtained to give some women income possibilities. In 1980 the building of a temple was begun, which was ready four years later, along with a high school and a nursery school.

A full-scale programme to upgrade the housing was begun in 1976. Bricks and stone were used for the walls and a number of second-hand materials for the rest of the house. The improvements continued and by about 1985 almost all dwellings were built of permanent materials. Many families had transformed their front rooms into small shops or artisanal workshops, while the most well-off among them built a second storey to their homes.

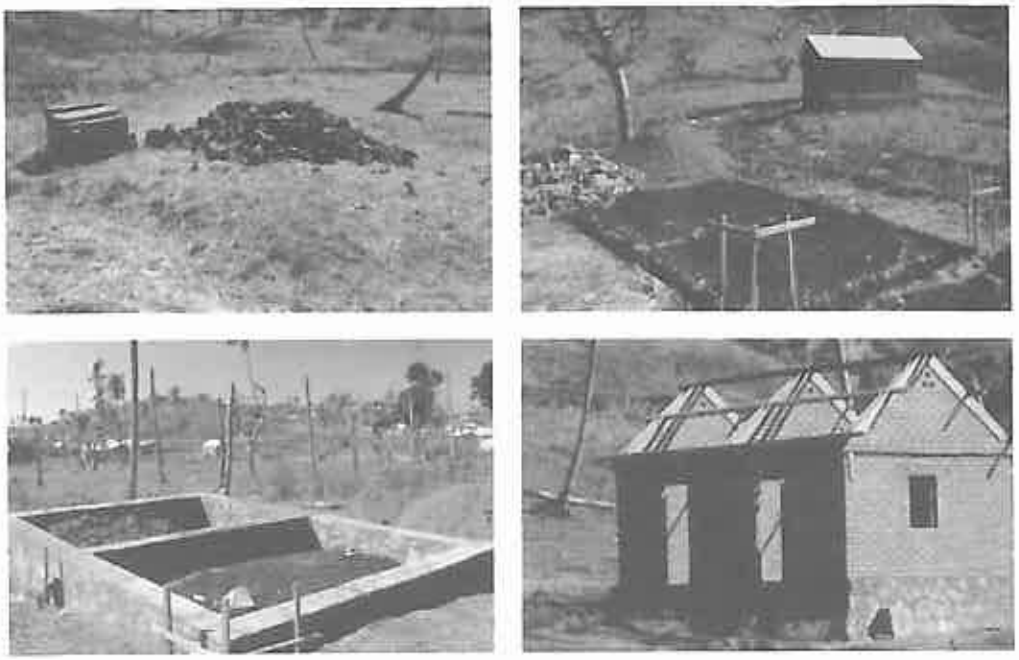
"Eighteen years after its creation, Ganeshnagar is no longer an illegal squatter settlement in its original meaning," says John Turner. "Through their own organizational ability, the people, with support from PMC, have struggled to attain basic rights and access to services that fulfill their basic needs".





Sketch of a typical house interior.

2.7 Organized Large-Scale Self-Help Housing



Housing constructed the do-it-yourself way.

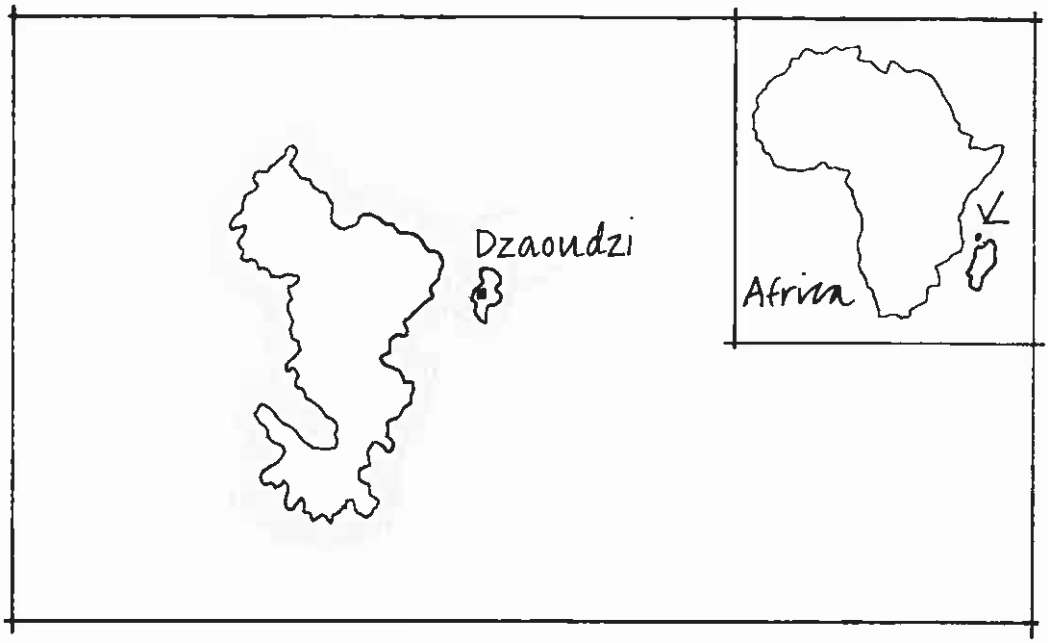
The project shows that it is possible to carry out organized self-help building projects on a large scale and, at the same time, develop economic building methods using local materials.

The project was started by local authorities with the technical assistance of a French non-governmental organization, CRATerre, and has later been taken further by the local authorities alone. It began with an investigation of traditional building methods and the availability of materials. The production of stabilized earth blocks was started in several small factories.

Parallel to the block production, a style of house was developed, in close collaboration with the local population, wich gave better climatic protection, a higher standard of hygiene, and which had a longer life than traditional housing. The new dwellings were built by the families themselves with the advice of instructors from CRATerre.

The production of stabilized earth blocks has created many jobs and led to a boost in the economy of the Mayotte Islands. So far over 5,000 families have obtained new homes.

Mayotte Islands



Project

Title: Habitat social à Mayotte

Area: Mayotte Islands

Source: CRATerre

Local Organization Société immobilière de Mayotte

Financed by: Ministère de l'équipement (France)

Time period: 1979—

Documentation: Aménager, équiper et construire pour le plus grand nombre — Ministère de l'urbanisme, du logement et des transports

Number of families affected: over 5,000 (10,000 planned for 1990)

Area per dwelling: 40 sq.m.

Construction cost per dwelling: 32,000 French francs (about 5,250 US dollars)

Construction cost per dwelling as percentage of per capita GNP: —

Country

Inhabitants: 67,167 (1985)*

Population growth: 3.1% (1985)*

Infant martality rate: —)

Average life expectancy: —

Urban population: about 25% in densely populated areas*

Literate population: —

Per capita GNP: —

*According to Ministère de départements et territoire d'outre mer, France

Housing could not resist climatic pressures

The Mayotte Islands consist of two small islands in the Indian Ocean between Madagascar and the African mainland. The population originates from Africa (Bantu people) and lives exclusively from agriculture and fishing. In the fifteenth century the islands were colonized by Arabs and Islam introduced as the religion. In 1841 the islands became French by decision of the Sultan Andrian Tsouli, and in 1976 a referendum was held in which the popoulation chose to remain part of France.

The climate is tropical, with a dry period from June to November and a rainy period from December to May. During the end of the rainy period tropical low pressure zones and sometimes cyclones pass over the islands. In 1976 there were 10,053 dwellings, almost all built of impermanent materials — that is, unprotected earthen walls and roofing of grass or palm leaves. Only three percent of the dwellings had electricity and ten percent their own wells for drinking water. Public water and sewage systems did not exist and only a small number had access to simple toilets.

The dwellings are individual and consist of one or several huts around a yard, which are used for sleeping, resting and receiving guests. Everyday life takes place in the yard, which is used both for cooking and eating. Only relatives are allowed into the yard, and they have to announce their visit clearly and request permission to enter.

CRATerre promotes earth construction

CRATerre (Centre internationale de recherche et d'application pour la construction en terre) is a French organization linked to the school of architecture and the university in Grenoble, which promotes earth construction. It was created at the end of the 1970s and the members are architects and engineers. At the end of the 1970s some of CRATerre's members visited the Mayotte Islands, on invitation, and noted that the population had dismal living conditions.

Making stabilized earth blocks.

The housing situation was the same as for many developing countries, despite the islands belonging to France. The administration was in the town of Dzaoudzi on the smaller of the two islands. There, people had considerably better housing than the majority of the population on the larger island. CRATerre made various proposals to the local authorities of ways to improve housing conditions on the islands but evoked no interest.

So Craterre began investigating on its own the possibilities of improving housing standards with the resources available. First an inventory was made of local building materials. Sand was available on the coast only to a small extent and was needed to fight erosion. Chalk was not available. Wood was also available only to a small extent and there were no durable materials to use for roofing.

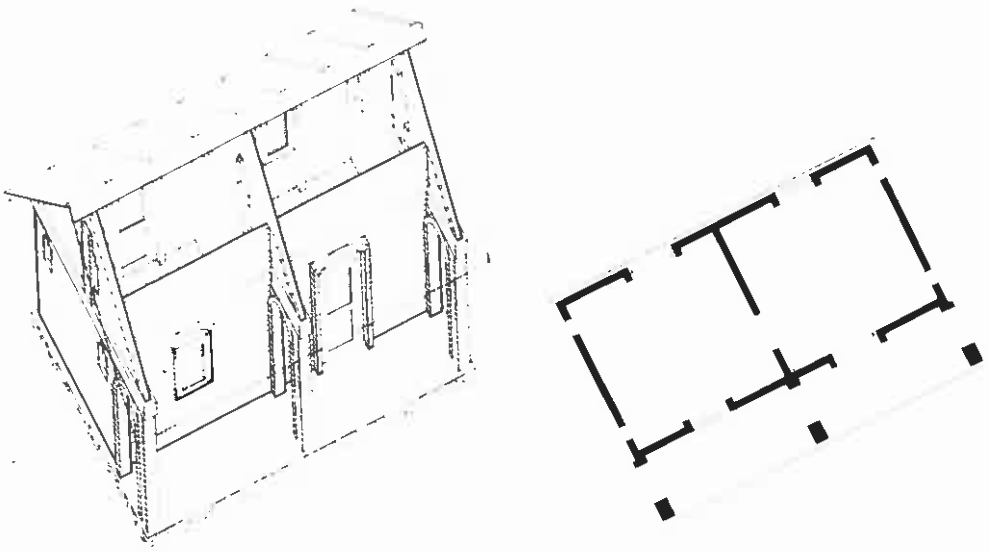
Low-investment block production

The conclusion from the inventory was that earth was the only material available for building durable dwellings. It was, however, necessary to import a binding agent. With earth as the raw material it was possible to start production of stabilized blocks that could be used for constructing houses as well as the schools and other public buildings that were needed. CRATerre's next move was to analyze the soil and compose a mixture of 70 percent fine clay and 30 percent volcanic earths (*puzzola*). To this mixture 6—8 percent cement was added, which gave a strength of 30—40 kp/sq. cm., which was considered to be more than enough for buildings of 1—2 storeys.

A simple and solid block press of the mark Terstaram was chosen that did not involve any large investment. Production capacity was about 600 blocks per day and four workers were needed at each machine. The presses were placed under metal roofing so that the blocks could be produced and stored away from rain and sun.

In 1980 there were two block factories where 30,000 blocks per year were produced. Seven years later more than 8 million were produced in 19 block

Producing stabilized earth blocks.



Housing design developed by CRATerre

factories. The factories were transferred to private ownership as soon as possible; that is to say, they were run by local artisans, who sold the blocks to self-help builders as well as to the authorities for construction of public buildings. In 1985 the blocks were sold for 2.20 French francs per block, out of which the cost of cement was 0.85 francs per block.

Organized self-help building

Parallel to the block production, two house designs (40 and 80 square meters) were developed that were suitable for self-help building. The houses were given a stone foundation and the floor level was raised from the ground so as to improve the hygienic conditions. The walls of cement-stabilized earth blocks were erected and the roof covered with corrugated iron. The families were instructed throughout the building phase, first by CRATerre's members and later by local instructors.

As the production of blocks increased and families completed their homes, so the interest of the authorities grew. Now a social housing project is under way in the Mayotte Islands that incorporates the stabilized earth construction method. Nowadays the authorities meet the major part of the cost of materials and the families contribute with their labour, materials for the foundations and a cash contribution of 11.5 percent (4,200 French francs — about 700 US dollars).

In 1987 construction costs for the smaller house (40 sq.m.) amounted to 32,000 francs (about 5,250 US dollars). A total of over 5,000 dwellings have been built since 1979, which corresponds to housing for about 30 percent of the population.

Newly-built housing of stabilized earth blocks.

Strong motivation among the people

The project developed at a fast pace thanks to the large interest of the local population. When they saw that it was possible to build housing using cement-stabilized earth blocks that was considerably better than their old dwellings, many queued up to build their own homes. The quality of the buildings also shows that the advice to the self-help builders and the control of the completed houses have been well conceived and carried out.

The basic philosophy of the project is to use local materials and simple methods of construction combined with controlled self-help building. CRATerre has had a mutually trustful collaboration with the local population throughout. In the beginning of the project, it had several of its members on the spot to develop methods of construction and to instruct the builders. Nowadays, however, CRATerre sends out apprentices from France for them to learn about earth house-building and practical aid work.

The new housing has also meant sharp improvements for the islanders as far as hygiene and climatic protection are concerned. Production of cement-stabilized earth blocks has also created many new jobs, especially during later years when the authoritites have begun to provide economic support for house improvement. The local authorities not only run an extensive programme for housing improvement, but have also extended it to include provision of infrastructure. The question is if the programme would have existed without CRATerre's determination and the population's commitment.

2.8 A Cooperative Form of Self-Help Housing

Self-help housing groups organized by the cooperative.

The project shows how the inhabitants have improved their own situation with only minimal aid well adapted to their needs.

Thanks to the project 189 families have new dwellings, mainly throgh self-help housing. The project has been carried out by the housholders themselves in cooperation with a Catholic priest and with economic start-up support from a West German aid organization.

The inhabitants founded a cooperative and, by registering it officially, they received a legal right to a piece of land. It was decided to construct housing before installing infrastructure. A local building organization was engaged to plan the area and design housing suitable for self-help housing.

The project led to legislative reform in Mexico making it easier for other cooperatives to carry out similar housing improvements.

Mexico

Project

Title: Union de Vecinos de Palo Alto

Area: Cuajimalpa

Source: Habitat International Coalition
NGO Project IYSH 1987
Rocio Lombera G
Copevi. Mexico

Local organization: Palo Alto Cooperative

Financed by: Misereor and others

Time period: 1975 — 1981

Documentation: Contributors to Habitat International Coalition's NGO Habitat Project for the International Year of Shelter for the Homeless 1987
and
Building Community. A third world case book, edited by Bertha Turner, Habitat International Coalition 1988

Number of families affected: 237 (1,330 persons)

Area per dwelling: 52 sq.m.

Construction cost per dwelling: —

Construction cost per dwelling as percentage of per capita GNP: —

Country

Inhabitants: 78.52 million (1985)

Population growth: 2.9% (1973 — 1983)

Infant mortality rate: 51/1,000 (1984)

Average life expectancy: 66 years (1984)

Urban population: 69% (1984)

Literate population: 90.3% (1985)

Per capita GNP: 2,040 US dollars (1984)

Group solidarity increased as the project progressed.

Palo Alto — a spontaneous housing area

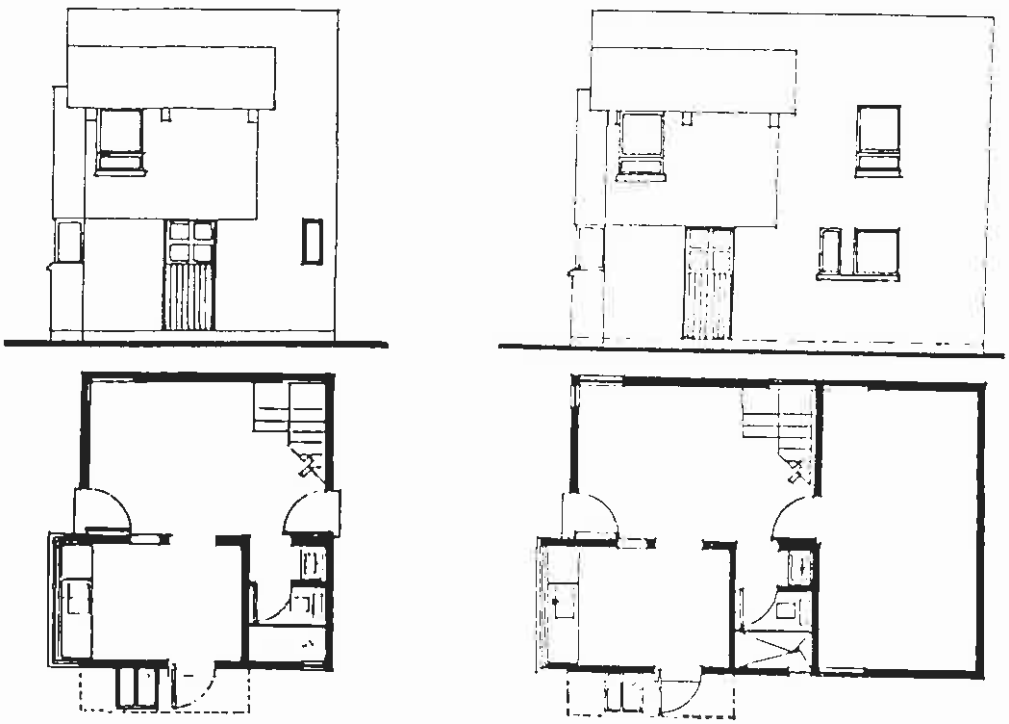
Palo Alto district is situated close to Mexico City in a very hilly area, 2,455 metres above sea level. The agricultural land covers 57.8 square kilometres, while buildings cover 15 sq. kms. In 1940 some dozens of peasants arrived in Palo Alto and settled in caves until they started to build themselves dwellings with local materials such as stone and mud. The dwellings lacked access to water, sewage and electricity.

In 1969 the landowner decided to sell the area for a luxury housing development. The inhabitants joined together and created Palo Alto Neighbourhood Union and received support from a Catholic priest who, with a group of social workers, tried to arrange for services to be provided.

The inhabitants found a cooperative

In 1972 the inhabitants organized themselves into a cooperative and received support from COPEVI (Centro Operacional de Vivienda y Problamiento A.C.) a Mexican non-governmental organization. Palo Alto Cooperative was officially registered and an area of 46,715 square metres was established as a project area for 237 families.

The landowner tried to prevent the project but, following a compromise, an agreement was worked out that allowed it to go ahead. The cooperative members decided to construct their own houses together. COPEVI was responsible for the planning.



House designs.

The surroundings were not the best. The owners of an adjacent luxury housing area built a high stone wall and the settlement was hemmed in on other sides by a busy motorway, high-tension electricity cables and a shooting range. The inhabitants in Palo Alto preferred using permanent materials to build their homes. They also wanted them put up before roads and other infrastructure.

COPEVI contributed technical advice

COPEVI worked out an overall plan for the area as well as basic house designs. Each plot was 9×11 metres and the dwelling had an area of 52 square metres. As the majority of the families consisted of at seast six people, there were dicussions about the size of the dwellings. Some families built additions to their houses after the first phase. The dwellings were of two storeys: a living room, kitchen and toilet on the ground floor with bedrooms above.

One hundred and forty three of the 189 families built their own houses using the technique proposed by COPEVI. For example, very simple prefabricated elements, which had been developed in Uruguay, were used. In 1977 a small factory was started by the cooperative to produce cement blocks, doors and metal window frames. This gave eight of the cooperative members steady jobs. There was great interest in the construction among the families, some of whom spent 80 percent of their leisure time building. The strong motivation led to a high level of participation, which in turn kept building costs low.

There is a special area for everyday chores.

The project influenced legislation and financing

First a demonstration building was put up and then the construction work was divided into three stages. By the end of 1985, 189 dwellings out of the total 237 were ready. A day-care centre, a health clinic, a communal hall, a chapel and a school were constructed and work had begun on a sports ground.

COPEVI had reserved one-third of the total area for future expansion. The intention was that young parents, children of the original "pioneers", would receive preference for plots here. But this caused trouble. Some people were enthusiastic but others considered that the so-called technical group would see to it that they were allocated the plots. The cooperative idea was even put into question. The final result of the conflict, however, was a reinforcement of group unity.

The West German aid arganization Misereor gave economic support to get the project started. The financing had previously been a problem for the inhabitants of Palo Alto, who have an average income that correspnds to only 75 percent of the official minimum wage. To begin with the banks did not want to give loans to the cooperative's members. The West German financing, however, led to several Mexican credit institutions giving many groups in other spontaneous housing areas hope of obtaining similar loans. This was the first time in Mexico that loans had been made to a collective.

In addition to contributing new possibilities for financing housing improvements for the poorest, the cooperative has also brought about a general legislative

Basic infrastructure is installed and the streets paved.

reform. Settlements for low income earners can now benefit from a special law protecting their interests. Here also Palo Alto has played an important role as a pilot project.

2.9 Improvement of Sanitary Conditions

Home schools for women.

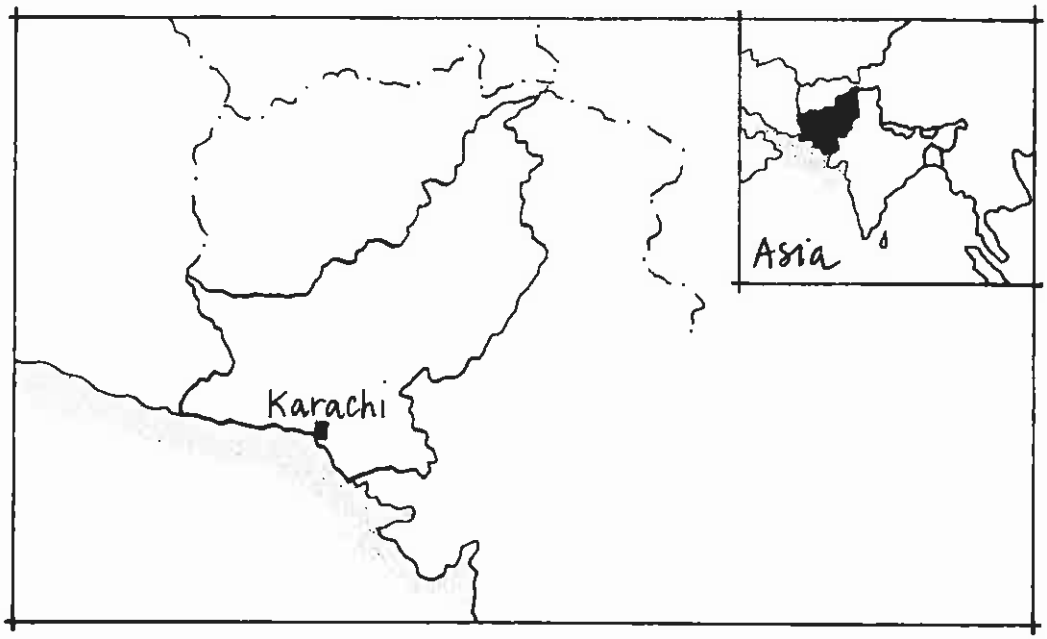
The project shows that even a very long preparation pays off at grass-roots level and can lead to extensive improvements even with limited inputs. By living in the area the project team gained the confidence of the community, leading to very rapid large-scale development.

Thousands of families have received radically improved sanitary facilities. The project has been carried out by local organizations in cooperation with Amsterdam University and with the economic support of, among others, UNICEF.

The project team began by studying conditions in the area. After that, a large number of demonstration toilets were built. The construction of toilets then spread via the groups that had sprung up spontaneously in the area.

These activites led to several other projects in health and education. Together, they improved the situation and status of women.

Pakistan



Project

Title: BSPP (Baldia Soakpit Pilot Project)

Area: Baldia, Karachi

Source: Habitat International Coalition NGO Project IYSH 1987
Quaratui Ain Bakhteari, Laique Azam
c/o UNICEF, Karachi University, Department of Social Work, Karachi, Pakistan
and
Free University of Amsterdam
Jan van der Linden

Local organization: BSPP

Financed by: UNICEF (Dutch Government), NGOs and the Community of Baldia

Time period: 1979—

Documentation: Contributors to Habitat International Coalition's NGO Habitat Project for the International Year of Shelter for the Homeless 1987
and
Building Community, A third world case book, edited by Bertha Turner, Habitat International Coalition 1988

Number of families affected: 28,000

Area per dwelling: —

Construction cost per dwelling: —

Construction cost per dwelling as percentage of per capita GNP: —

Country

Inhabitants: 96.18 million (1985)

Population growth: 3.0% (1973 — 1983)

Infant mortality rate: 116/1,000 (1984)

Average life expectancy: 51 years (1984)

Urban population: 29% (1984)

Literate population: —

Per capita GNP: 380 US dollars (1984)

The women's strong participation was an unexpected effect.

Dismal sanitary conditions

Baldia Soakpit Pilot Project and Orangi Pilot Project have both tackled the improvement of sanitary conditions in Karachi. They have succeded well. In the Baldia project women played an exeptionally important organizing role.

Baldia is a district of Karachi consisting of 28,000 households: 200,000 people spread over an area of 430 hectares. It was created in 1947, at which time the dwellings were built of local materials. During the last 25 years, the materials have been improved, with earthen walls being replaced by concrete blocks.

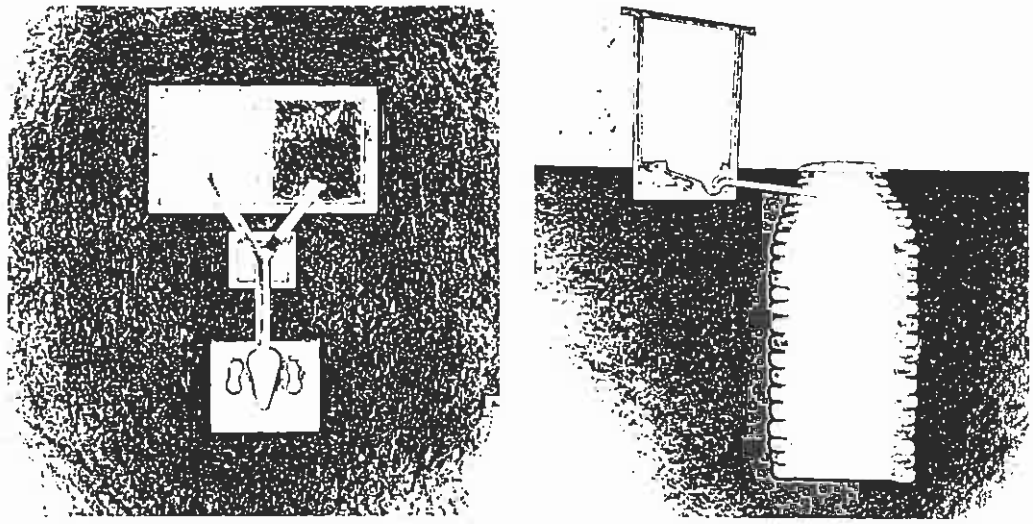
Before 1979 infant mortality was high: one child out of nine died before the age of five. The sanitary conditions were dismal: bucket latrines were used. Garbage was emptied out through a hole in a wall and collected for disposal irregularly. Urine and drainage water ran out onto the unpaved streets. This led to epidemics and high infant mortality.

Thorough studies of the conditions

The project team spent the first year visiting households under the guidance of Mrs Quratui Ain Bakhteari at Karachi University. They lived simply during this time, and didn't even set up an office. An English engineer had given them the idea of soakpits. They presented the project proposals to local organizations and potential leaders in the area, asking for help with the implementation.

It took 18 months to organize the first sanitation committee. The project team concentrated their efforts on a small area, relying on the enthusiasm of the population to spread the idea to others. In three years it had spread to 20 other areas in Baldia with a total of 40,000 inhabitants.

By constructing 1,000 demonstration toilets with economic support from UNICEF, the population was inspired to build a further 4,000 at a cost of 800



Sketches showing a soakpit latrine.

rupees (about 64 US dollars) each. BSPP saw to it that 60 bricklayers were trained and 100 families received instruction in building the toilets. The same methods were taken up by people in other areas outside Baldia.

When new sanitation committees had been created, the mayor of Karachi was persuaded to visit Baldia. After that, Karachi Municipal Corporation assisted by paving roads and making pavements, and by improving the water supply and street lighting etc.

Situation for women and children improved

Illiteracy is high in Pakistan: 78 percent of women are unable to read or write. A Women's Organization of Home School Teachers was started. This organization trained teachers to run 107 of these schools in their own homes. In 1985 3,000 children received education in home schools, half in Baldia and half in other areas. The teachers were paid by the local community.

In addition, 12 primary health care centres were opened and 13 school-teachers were trained to be health workers. Among other things, they vaccinated 1,500 children. Also, the government started three family planning centres.

It took time before BSPP was able to make contact with women in Baldia. Traditionally, women are not allowed to work outside the house but now they run schools in their homes and are involved in education work within and outside Baldia. Women act as administrators as well as health care workers and teachers.

It is safe to say that the sanitary improvements have brought about many changes for the people in Baldia. Among them is the changed relationships between men and women; the women feel more valued and have gained in self-confidence. The children, also, benefit from the changes.

2.10 Self-Help Building Becomes Government Strategy

Ranuguri in 1979. The project is almost complete.

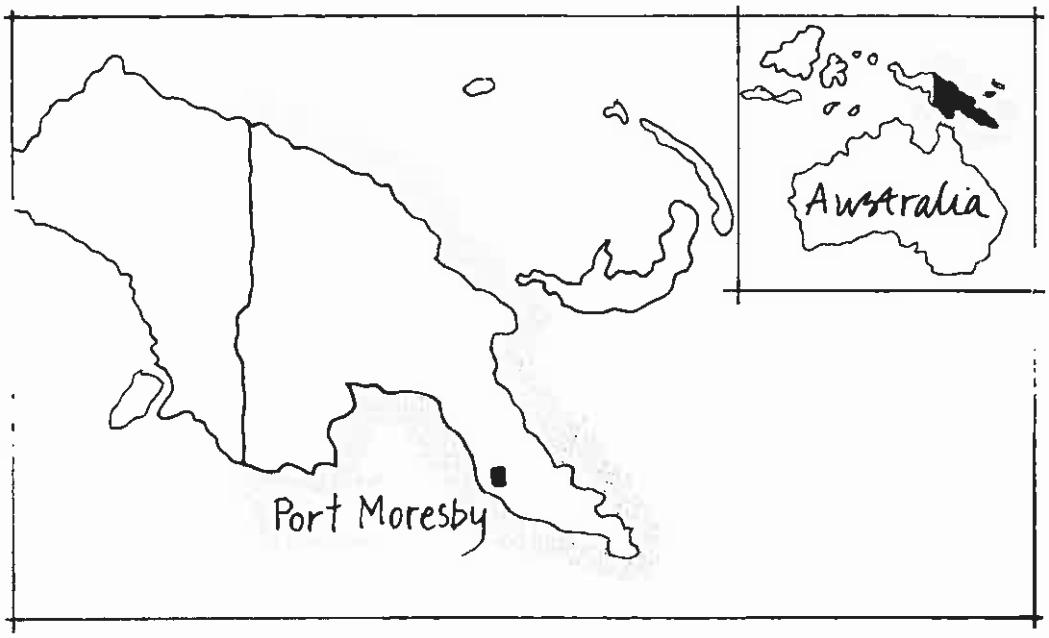
The project shows that considerable housing improvement can be carried out efficiently when a government body delegates responsibility to a spontaneously-organized local community.

Some ten thousand people have had the possibility of improving their housing situation. The operations have been carried out by local communities in Papua New Guinea and are supported economically and administratively by several state authorities.

In 1973 the government realized that it could not afford to provide standard ready-to-move-in housing for new arrivals to the towns. Legislation was therefore changed to make it possible for local communities to carry out upgrading projects on their own.

Different government bodies provided infrastructure, gave technical advice and loans for purchasing building materials.

Papua New Guinea



Project

Title: Settlement Improvement Programme

Area: Port Moresby (capital)

Source: —

Local Organization: Several committees in local communities

Financed by: Central government funds

Time period: 1973–

Documentation: Experiences with settlement improvement policies in Asia, BIE Forum

Number of families affected: 32,400 live in the affected area

Area per dwelling: 35–54 sq.m.

Construction cost per dwelling: 6,000 US dollars (35 sq.m.); and 9,500 US dollars (54 sq.m.)

Construction cost per dwelling as percentage of per capita GNP: 845 (35 sq.m.); 1,340 (54 sq.m.)

Country

Inhabitants: 3.33 million

Population growth: 2.1% (1973–1983)

Infant mortality rate: 69/1,000 (1984)

Average life expectancy: 52 years (1984)

Urban population: 14% (1984)

Literate population: 45.5% (1985)

Per capita GNP: 710 US dollars (1984)

Each family gained access to a standpipe.

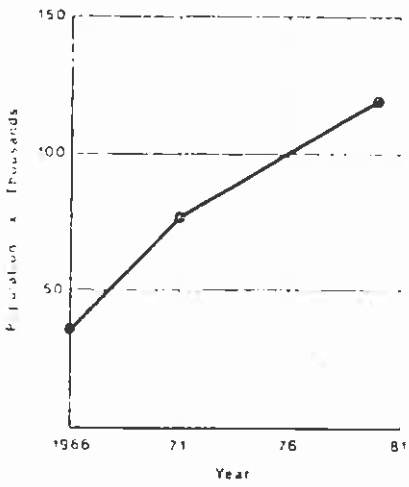
Port Moresby — a town in transition

Port Moresby is Papua New Guinea's capital. Originally the town was built as a centre for the colonial administration of British Papua and until the Second World War it was inhabited mainly by colonisers. Between 1946 and 1977 the population increased from 5,000 to 77,000. During this period there was also a change in the composition of the population, from colonisers to mainly local people moving in from the densely-populated rural areas.

The new urban population did not have the possibility of building the same type of houses as the colonisers; instead, they settled on non-occupied land, owned either by the state or privately. Unlike the older part of town, these areas are characterized by self-help building and have very simple infrastructure.

The government land that had been settled on consisted of difficult terrain — marshland and mountain slopes. These areas have had great difficulty in obtaining access to infrastructure and services.

The standard was considerably higher in the other, privately-owned areas. More recently, poor arrivals from the countryside have been allowed to live in parts of these areas. However, the government has not been able to help people on privately-owned land under its housing programme.



Population growth of Port Moresby, (1966 – 1980).

Government housing policy changed

In 1973 the government started to give considerable weight to different self-help strategies so as to reduce housing problems. The reasons for abandoning the previous strategy – construction of standard housing – were:

- it was expensive, both to build and to maintain, therefore the government could offer only a small number of dwellings;
- in spite of large subsidized loans, the majority of the poor could not afford it;
- the government programme did not succeed in mobilizing the family's resources, such as its professional knowledge, labour and savings.

The key to the new help-to-self-help strategy is the allocation of land, installation of minimum infrastructure, loans for buying building materials, and revision of different building plans and laws that were found to be hampering.

So as to obtain quick results, the government started to carry out the project on government-owned land in direct cooperation with the existing local communities. The upgrading includes installation of infrastructure, registration of plots, loans for building material and technical advice. The help-to-self-help programme also emphasizes the need for an efficient local community to which people can turn with their different problems. The local community is required to:

- assist the government in selecting families;
- encourage the families to self-help building;
- be responsible for distribution of water and electricity and the maintenance of infrastructure.

Optimal participation of the inhabitants

The main aim of the programme was to reduce housing density and provide families with a plot of about 400 square metres that would be enough both for a house and a small garden. In the areas where the project was started the existing

The toilet is cleaned by the tide.

buildings were kept, while for the new areas plans with streets and plot divisions were drawn up. When the new plots had been staked out, they were handed over to families on the basis of recommendations from the community organizations. A leasehold contract was made that runs for 99 years. The cost was 29 US dollars plus 5 percent of the value of the plot (undeveloped). The land was not to be sold but had to be handed back if the lease holder wanted to move.

The services that were provided meant, among other things, that:

- each family obtained access to a standpipe that could later be joined to the house;
- the families were encouraged to separate their garbage. Part of it was used as compost and the rest was collected by the community. On each plot a deep pit latrine was built;
- storm water drainage was installed along cycling roads and open ditches along walking paths;
- a limited number of roads for motor traffic were built, mainly for emergencies. Most plots bordered on walking paths;
- street lighting was installed and electricity could be connected to the houses at the owners' request.

The programme was financed by central government funds. The Land Development Authority provided land, prepared the plans and gave technical advice, while the Departement of Urban Development offered loans and guarantees for the construction work and also credits for building materials. The initial loan covered half the total cost and was to be repaid within three years.

The programme has led to other improvements

The programme has also had a big effect on the economic and social integration into the town of the new arrivals. Those who have been employed for the construction work were recruited from the settlements, which also helped to reduce unemployment.

The families have also gained experience of taking loans and the regular repayments have helped their economic thinking. Many families started to keep a household budget. Later the programme also provided schools, health centres and other communal buildings.

According to the government, the local communities are important for decision-making and play a key role in:

- creation of a detailed plan for the settlement;
- selection of families who will move to the new plots;
- organizing of the unemployed within the settlement;
- contacts between builders and credit institutions;
- maintenance of infrastructure, and just distribution of plots, communication with the authorities and demands for further assistance.

2.11 Improved Housing Through Transfer of Knowledge

Modern, traditional and improved dwellings.

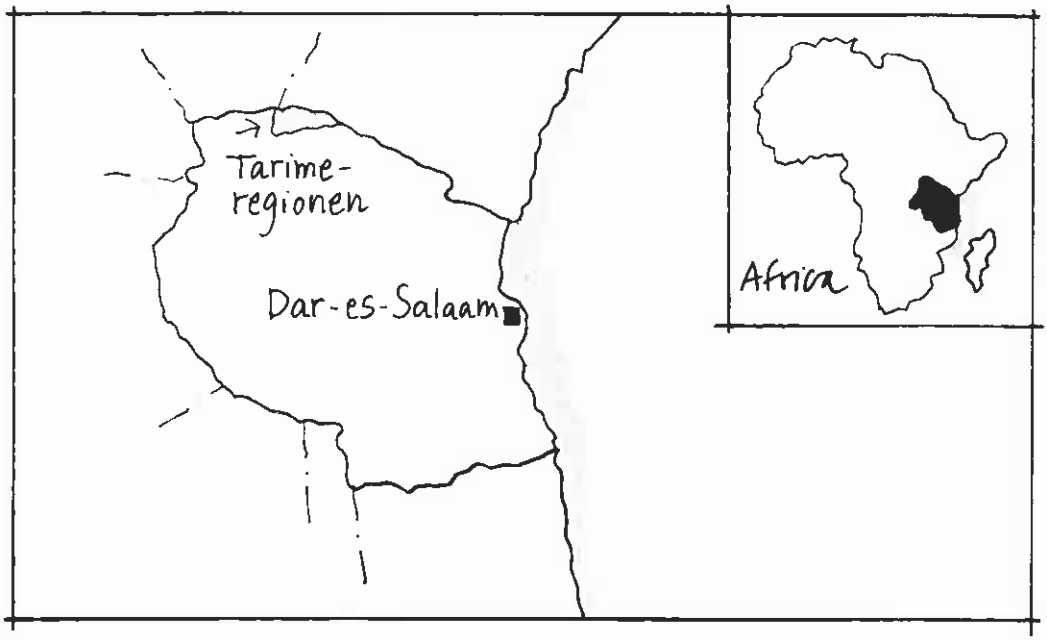
The project shows that non-governmental organizations can function as a link between central authorities and the affected inhabitants and in that way achieve concrete improvements.

About 600 families in the rural areas have built new homes. The project has been carried out by a local non-governmental organization (NGO) in coorperation with a Belgian NGO.

A survey of traditional construction methods was carried out and then training in practical building techniques began. Tools and a lorry were provided and building materials sold to the villagers at fixed prices.

In the second phase of the project, production and use of local building materials were increased as well as the amount of labor contributed by the villages themselves, so as to reduce costs.

Tanzania



Project

Title: TARDEP (Tarime Rural Development Project)

Area: Tarime district (1,000 kms from Dar-es-Salaam)

Source: Habitat International Coalition NGO Project IYSH 1987
Paul Bottelberg
c/o COOPIBO, Naamsestenweg 573
3030 Leuven, Belgium

Local organization: TARDEP

Financed by: COOPIBO (IBO Development Cooperation), Belgium
and
CTPF (Community Development Trust Fund) Tantzania

Time period: 1979–

Documentation: Building Community, A third world case book, edited by Bertha Turner, Habitat International Coalition 1988

Number of families affected: 300 in 10 villages

Area per dwelling: –

Construction cost per dwelling: –

Construction cost per dwelling as percentage of per capita GNP: –

Country

Inhabitants: 21,73 million (1985)

Population growth: 3,3% (1973 – 1983)

Infant mortality rate: 111/1,000 (1984)

Average life expectancy: 52 years (1984)

Urban population: 14% (1984)

Literate population: 43,3% (1978)

Per capita GNP: 210 US dollars (1984)

Typical rural dwelling in Tarime.

Tarime district — an agricultural area

Tarime district is situated about 1,000 km from Dar-es-Salaam and borders on Lake Victoria. The area has 300,000 inhabitants, of whom 96 percent live in villages and support themselves mainly by agriculture. Many people live in mud-and, wattle houses with thatched roofs, which have a life of seven years at the most. There is beginning to be a shortage of traditional building materials and the villagers are demanding modern housing built of industrial meterials.

The government in Tanzania has made some concrete efforts to improve the housing situation and has set up a national building research institute. These efforts, however, have been too formal and inappropriate, and the results have been meagre. The reasons for this are lack of building materials, too tough conditions for borrowers, poor information to villagers, shortage of staff and inadequately motivated employees.

In 1979 two NGOs came together to assist the local authorities, one Belgian, COOPIBO (IBO Development Corporation) and one Tanzanian, CDTF (Community Development Trust Fund). This collaboration resulted in the formation of TARDEP (Tarime Rural Development Project). COOPIBO helped both economically and with volunteers. The project team, which consisted of foreign and local staff, cooperated with the authorities all the way from the preparation of the project to the final evaluation. One of the aims was that the local organization would carry on when the Belgians left the country.

Organized self-help building

The team selected villages, inspected the dwellings and interviewed the inhabitants. A section concerned with the supply of industrial materials was set up and the villagers used a revolving fund for purchasing these materials at fixed prices. Carpentry and bricklaying tools, also a lorry, were purchased for staff use. Training in building methods was begun.

The form of financing was a novelty as the Tanzanian Housing Bank mainly lent to town dwellers. To give a loan to the project the Bank demanded that income-generating activities be part of it. In addition, building costs were to be kept down, for example by self-help building and savings on materials.

By the end of 1982 about 300 households in ten villages had built permanent homes. On top of that TARDEP had trained local building foremen and artisans, as well as showing that the project could function as a link between villagers and central authorities. Previously there had often been conflicts between the two; as a result, communication had ceased and there was a complete deadlock.

The country's economy declined

Following a general decline in Tanzania's economy, TARDEP decided to change its housing construction policy. It concentrated on spreading information about how local materials could be used and on increasing the participation of the affected people. TARDEP's new programme, which also is supported by

Local production of bricks.

Spreading information was one of the aims.

COOPIBO, was carried out from 1982 to 1987. This programme met with certain scepticism as the use of local materials was not accepted by the population, who expected that foreign organizations would not bother with "second hand" technology.

TARDEP began by organizing the population into village groups. Activities then depended on the type of housing existing locally — mud-and-wattle walls, adobe blocks, bricks. The following issues were tackled:

- motivation (the reasons for self-help building)
- materials (small-scale production of earthblocks and sisal-cement sheets; reforestation)
- transport (solutions that reduce fuel and other running costs)
- knowledge (training in house construction skills and also in nutrition)
- finance (including advice on economic use of materials and self-help methods).

Three years of work have given positive experiences. The number of dwellings constructed has reached the previous level and the programme is now adapted to the needs of the majority of the rural population. TARDEP is also well aware of the problems that can arise when COPIBO withdraws and is in the process of securing its independence as an NGO vis-à-vis the central authorities.

NGOs can be flexible

"As 'modern', industrially-produced materials are at first sight considered more desirable by village people, says John Turner, "there is a great need to provide information about the availability of local materials and to demonstrate their use, especially as regional resources are limited.

"Although Tanzanian policy is based on participation, a rigid and centralized approach was imposed on people from above. A 'foreign' NGO working at a local level could stimulate a consistent participative approach, enabling a more effective implementation of policies. As a neutral, impartial body, TARDEP was free to comment, for exapmle on the severe scarcity of resources.

"When housing policies are carried out in Tanzania, use should be made of NGO assistance in dealing with problems that the government has not been able to solve alone. Existing village organizational structures should be considered, but not used unquestioningly. The Building Research Unit, the Centre for Housing Studies and government departments should operate as a network, to disseminate information obtained through research into local materials and their related techniques."

3 Conclusions

Observations from successful projects

If you try to analyse what basic prerequisites are needed for tolerable housing conditions to develop in a country, you can distinguish the following list of features:

Democracy

The government should promote social development and take overall responsibility for the provision of housing in the country. This means that legalislation should be designed so as to simplify the legal formalities surrounding housing improvement initiatives, both private and public. The government should also, as far as possible, make resources available for housing improvements.

Organization

There should be an organization at the local level that takes responsibility for the planning of new housing and for installation of infrastructure in the form of streets, drinking water, sewage and so on. Also, as a second priority, the organization should be responsible for financing and constructing new housing.

Participation

It is necessary to exploit the inhabitants' own resources of knowledge and labour. Doing this is a guarantee that the improvements that are carried out correspond with the people's real needs. By optimizing their participation, less aid is needed and more people can be reached.

Land

It is of crucial importance that the people be given legal possession of the plots for their dwellings. This minimum security is necessary if the inhabitants are to become motivated to invest their scarce resources in better housing.

Materials and knowledge

To achieve permanent housing at reasonable cost, knowledge about building and access to suitable building materials are required. It is particularly important that there be readily available knowledge about how to exploit local building materials optimally in rational and modernized construction.

Aid and construction work

It can seem obvious that democracy, organization, participation, land, materials and knowledge are prerequisites for the carrying out of housing improvements. Clearly it is not self-evident for many of the decision-makers in government or representatives of non-governmental organizations who are responsible for housing construction.

The projects presented here were possible because the five basic prerequisites were met. The aid has consisted of meeting those prerequisites that have been lacking for housing improvements to be carried out.

Often the aid has consisted rather of transfer of knowledge about organizing, planning, constructing etc. than of giving direct economic support for house-building. Continuous development of the transfer of knowledge about housing improvement is probably the most effective way of contributing to an improvement of housing in developing countries.

Here non-governmental organizations have an important role to play, as an independent transmitter of knowledge to authorities, organizations and individuals. The local ties that many NGOs have are invaluable in such a process. It is also valuable to exploit the possibilities that many NGOs have of collating experiences from many different countries.

Possible routes

The projects presented here have been carried out either by the inhabitants themselves, by NGOs or by governments. It could be imagined that the ideal form of housing improvement is that which is fully run by the people themselves. This, however, demands a lot of commitment, knowledge, organizational ability and patience. Housing problems in developing countries are so extensive that you can't follow only one road but must exploit all existing possibilities via housing cooperatives, NGOs and governments. The various projects also show that different organizational forms are appropriate for different countries and circumstances.

It would probably have been very difficult for the families in Chile to have carried out the project all on their own and it is hardly likely that the government would have done so. But it was possible to carry out these housing improvements thanks to an NGO with international connections.

It can be seen that the projects in Burkina Faso and Honduras represent two very interesting methods of achieving improvements in urban and rural areas. In both cases, radical changes were achieved at very low cost. The interventions were limited to the absolute minimum. In Burkina Faso: legalization of land tenure, equal distribution of plots, a rational street network and stand-pipes. In Honduras: legalization of land tenure, housing frames and roofing, and concrete lids for latrines. These interventions have exploited the population's own resources effectively by providing help to self-help.

Recommendations for future housing projects

The eleven projects presented here differ in several ways. They have been carried out in different countries with different climates and cultures, in cities and in the countryside.

In addition they have been carried out with different methods and resources either by the inhabitants themselves, by NGOs, state authorities or a combination of these. The projects are also different in thrust and extent. The question then

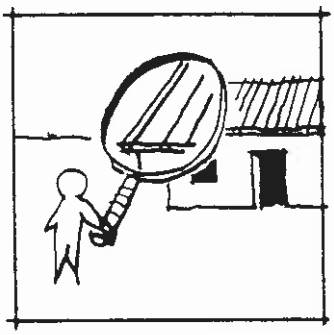
arises of what conclusions can be drawn of practical use for future housing improvements.

One should be careful not to draw detailed conclusions about which technical solutions are most appropriate for housing construction in developing countries. The projects under study where improvements have been carried out vary too much as concerns climate and so on. In addition, economic conditions and access to building materials vary over time.

To formulate general rules of thumb for practical construction work would not only be difficult but also hazardous for those in the field. The risk is that if one has too large a belief in such recommendations, or if a situation arises where they are inadequate or incorrect, this could lead to negative consequences.

On the other hand, you can probably draw quite far-reaching conclusions concerning the appropriate method to use when carrying out housing improvements. There is a distinct recurring pattern of how housing problems have been tackled: it recurs from project to project, no matter how different they are. What follows is an attempt to bring out this pattern, which should be useful to take into consideration in future housing projects.

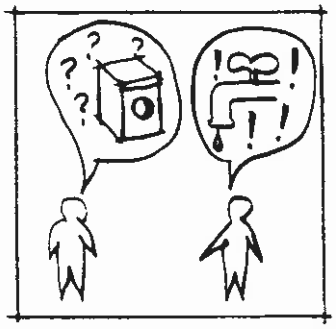
Make thorough feasibility studies



In all projects a thorough feasibility study has been carried out to find out the local conditions. The emphasis of the studies has been on social, economic or technical questions, depending on the thrust of the intervention. In those cases where a long time has been devoted to feasibility studies, it has been possible to achieve effective improvements at low cost at the same time as a fast development of the project.

Clear examples of this are those projects in Brazil, Burkina Faso, Chile and the Mayotte Islands. The fast development of the toilet project in Karachi, Pakistan, is probably due to the fact that one year was spent in visiting a large number of families to study the problems on the spot, face to face.

Find out what the inhabitants want

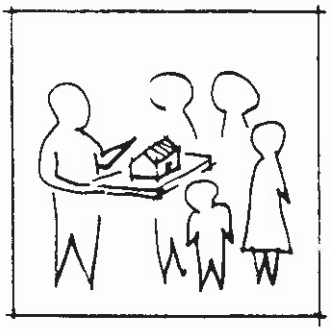


In connection with a feasibility study, the inhabitants should be asked what improvements they want, in which order they put their priorities and what resources they are prepared to contribute. There are plenty of examples of projects where the wishes of the inhabitants are taken for granted and inappropriate interventions have been made.

The project in Burkina Faso is an example of the opposite: it has been carried out exactly in accordance with the wishes of the inhabitants, which is probably one of the most important reasons for the project's fast development.

Also in the projects in Brazil, Colombia and Pakistan great weight has been given to the inhabitants' wishes. This of course also applies to those in India and Mexico, where the inhabitants themselves run the projects.

Give clear information

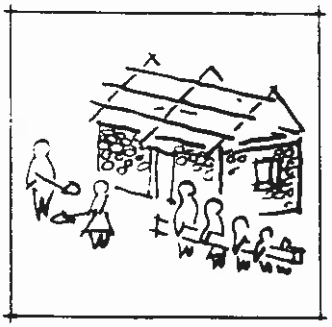


It is important to provide information all the time about what will happen so that the inhabitants are not taken by surprise, leading to feelings of insecurity and scepticism about the project.

Similarly, it can be important to provide information for an educational purpose, as was the case with projects in Chile and Tanzania. There, where stabilized earth was introduced as building material, information was given for a double purpose: to show the material's economic advantage and to overcome suspicions about using earth for construction.

In Brazil, the thorough information was probably a key factor allowing the project leadership to move the population from an attractive park to a new housing settlement.

Optimize people's participation

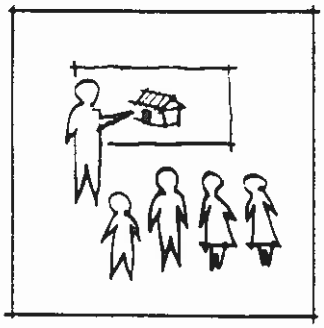


It is important that costs for improving housing are in reasonable proportion to the householders' incomes. In Papua New Guinea the government realized that the housing programme for construction of standard housing was too expensive. It could not afford to build dwellings for more than a few of those who needed them.

Legislation was therefore changed and people given a larger role to play in carrying out the improvements. The government made loans available for purchase of building materials, assisted with technical advice and provided infrastructure. In this way participation of people in construction work could be optimized.

All other projects have also striven to optimize the people's own contribution of labour, either through organized self-help building, as in Colombia, or, as in Burkina Faso, individual self-help building.

Develop and disseminate knowledge

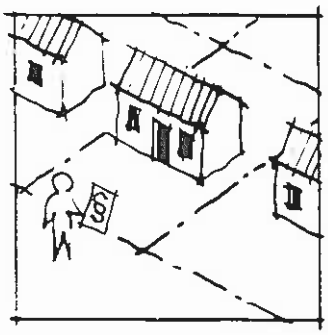


In connection with the introdution of new methods, it is important to train those who will be responsible for the work, so that they can apply the new methods.

This has been the case in the projects carried out in Chile, Colombia, Tanzania and on the Mayotte Islands, where there have been instructors to guide the self-help builders. These instructors have also been important sensors who assessed how the

building methods were accepted by the people and how they functioned technically. This allowed a continuous improvement of the methods.

Guarantee security of tenure

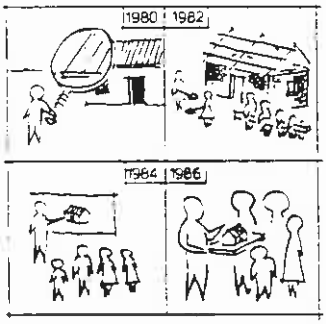


In Burkina Faso the effects of formerly illegally-held property becoming legal have been clearly felt. Once people received title deeds to their property, they immediately invested in housing improvements, including the very poorest among them.

The same applied in Honduras where, in addition, the project leadership decided that women would be the owners of the new housing, so as to increase their social and economic security.

Yet, it is not clear that ownership is always the form that offers the best security of tenure. In some situations it can, on the contrary, lead to speculation, which favours the better-off against the interests of the poor. In such cases it would probably be more appropriate to have leasehold contracts that are difficult to transfer.

See that there is continuity



Several of the projects studied have continued more than ten years and are still developing. This shows that those that deal with housing improvements are seldom short-term interventions but rather need to stretch over longer periods of time.

It is important that organizations dealing with housing improvements are able to work continuously over long periods, partly to enable them to further develop different methods and solutions, but also to follow up as far as maintenance of the new housing is concerned. This is particularly important when new methods or materials that were not previously known are introduced.

4 List of Projects

What follows is a compilation of implemented projects in developing countries, about which SADEL had full information at the end of 1987 and from which the projects in this book have been selected.

Those who provided the information about these projects, mainly people in Europe, consider them successful. We in SADEL have analysed all the project descriptions and have in some cases discussed them with the informants.

The purpose of this compilation is to make the information available to all those who are interested. Further details can be obtained via SADEL or directly from the address/contact person listed for each project.

SADEL aims to continuously update the list; therefore, we would be grateful if those who have information about what they consider a successful housing project that is not included in the list would inform us about it.

• Argentina

Project title: Villa Chaco Chico — Cooperativa 20 de Junio.
Area: Cordoba, urban settlement, spontaneous housing area.
Numbers affected: 70 families.
Time period: 1970—1986.
Type of intervention: Installation of infrastructure; technical advice; financing.
Distinguishing features: People have organized themselves into a cooperative so as to improve their standard of living by, among other things, new housing.
Responsible organization: Cooperativa 20 de Junio.
Source: Bertha I.B. Turner and John F.C. Turner
51 St. Mary's Terrace
Hastings
East Sussex TN34 3LR, England
tel: (424) 715 796

• Bolivia

Project title: Housing project, Mataco Indians, Villa Montes.
Area: Villa Montes, urban settlement.
Numbers affected: 31 families.
Time period: 1980—1983.
Type of intervention: Construction of housing frames in bricks and corrugated iron roofs. The families themselves added doors and windows.
Distinguishing features: The dwellings were put up for the Mataco Indians, the only group remaining of the original population in this part of Bolivia. Helping them to retain their distinctive culture and their independence has been one of the purposes of the project.
Responsible organization: Swedish Pentacostal International Relief & Development Agency.
Source: Swedish Pentacostal International Relief & Development Agency
Box 503, 101 26 Stockholm, Sweden
tel: (08) 24 57 80

• Botswana

Project title: Old Naledi, Squatter Upgrading Project.
Area: Gabarone, Old Naledi, spontaneous settlement.
Numbers affected: 8,600 people.
Time period: 1976—1980.
Type of intervention: Distribution of plots and provision of some infrastructure; financing.
Distinguishing features: The first priority was to guarantee possession of the plots. The housing was constructed mainly by self-help building. The cost per dwelling became relatively low compared to other areas in Botswana.
Responsible organization: Government of Botswana and Canadian International Development Agency (CIDA).

Source: Old Naledi, the Village Becomes a Town. (An outline of the Old Naledi Squatter upgrading project.)
John van Nostrand
Gaborone, Botswana

• Brazil

Project title: Projeto Cajueiro Seco.
Area: Recife, urban settlement.
Numbers affected: 142 families/688 persons.
Time period: 1963–1964.
Type of intervention: Upgrading of spontaneous housing area on the outskirts of Recife. Integrated development project: healt, education and job provision.
Distinguishing features: Thorough pre-project studies of the health status and income breakdown of the population; self-government in a cooperative form.
Responsible organization: SSCM (Servico Social Contra Mocambo).
Source: Frank Svensson
Architecture III
Box 118,
220 00 Lund, Sweden

• Burkina Faso

Project title: Programme d'aménagement des zones d'habitat spontané de la ville Ouagadougou.
Area: Ouagadougou, urban settlement, spontaneous housing areas.
Numbers affected: about 40,000 families.
Time period: 1982–1989.
Type of intervention: Restructuring of spontaneous housing areas so as to achieve a practical street network and equal land distribution among plot-holders; legalization of plot ownership; installation of stand-pipes and excavation for roads (but no paving).
Distinguishing features: Fundamental to the project is that families become more motivated to invest in housing improvements when they are sure of title to their plots. Also, it was shown that families who obtained the title deeds to a new plot were willing to move and rebuild their homes. The project does not provide any loans for housing improvements. In spite of this, the new dwellings are constructed fast though the quality and building costs vary considerably, depending on the family's income.
Responsible organization: Ministry of Public Works/Urban Planning Department
Source: Coen Beeker
University of Amsterdam
Jordenbreestraat 23
1011 NH Amsterdam, Netherlands
tel: (20) 5254-4040

• Chile

Area: Bio-bio region (8th region).
Numbers affected: —
Time period: 1987–1990.
Type of intervention: Integrated development project involving biodynamic cultivation, alternative energy sources, conscientization. Regular courses are offered in self-help building. During each course participants construct a pilot dwelling. Only representatives of social organizations can participate in the courses. So far five pilot dwellings have been constructed.
Distinguishing features: Fundamental to the project is the self-help idea, and local building materials have been used throughout. The house construction has aroused a lot of interest locally and many people have shown interest in learning the technique.
Responsible organization: Pastoral Obrera de Arzobispado i Concepción.
Source: Inger Johansson
Diakonia
Älvsjö Gårdsväg 3,
125 30 Älvsjö, Sweden
tel: (08) 749 15 00

• Chile

Area: La Pintana, a Santiago suburb.
Numbers affected: 10 families.
Time period: 1985.
Type of intervention: Development of cheap and lasting housing; technical advice; financing.
Distinguishing features: Pilot project aiming to provide affordable, good quality housing for the poorest groups of the population in Santiago who don't receive support from the government. With the help of Craterre, it develops traditional earth house construction methods so as to make the new dwellings more climate- and earthquake-resistant.
Responsible organization: TEBISAL (Techo y Bienestar Social).

Source: Ricardo Parvex
CIMADE
Service oecuménique d'entraide
176 rue de Grenelle,
75007 Paris, France
tel: (1) 45 50 34 43

• Colombia

Project title: La Trinidad.
Area: Valle de Cauca, a quarter of Cartago.
Numbers affected: 44 families/233 persons.
Time period: 1981—1985.
Type of intervention: Advice; technical guidance; financing (loans and subsidies for self-help builders).
Distinguishing features: 100% self-help building and 70% use of local materials.
Responsible organization: CDCC (Corporacion Diocesana Pro-Communidad Christiana).
Source: Raimund Wegener
DESWOS (Deutsche Entwicklungshilfe für sociales Wohnungs- und Siedlungswesen)
Bismarkstrasse 7,
5000 Cologne 1
Federal Republic of Germany
tel: (221) 53 50 01

• Colombia

Project title: Juan XXIII.
Area: Zaragoza, small village some 5 km south of Cartago.
Numbers affected: 75 families.
Time period: 1986—.
Type of intervention: Advice; technical guidance; financing (loans and subsidies for self-help builders).
Distinguishing features: The project is intended for the poorest part of the population. The aim is that the cost per month of the dwelling should not exceed 25% of the family's income. Organized self-help building and a large share of local materials.
Responsible organization: CDCC (Corporacion Diocesana Pro-Communidad Christiana).
Source: DESWOS (Deutsche Entwicklungshilfe für sociales Wohnungs- und Siedlungswesen)
Bismarkstrasse 7,
5000 Cologne 1
Federal Republic of Germany
tel: (221) 53 50 01

• Colombia

Project title: Vereda Llanitos.
Area: In the neighbourhood of the town of Manizales.
Numbers affected: 35 families.
Time period: 1985—1986.
Type of intervention: Financing.
Distinguishing features: Reconstruction of dwellings for agricultural labouring families who were made homeless by an erupting volcano. Self-help building; fast results due to high motivation of the families.
Responsible organization: FUNDEMOS (altruistic organization consisting of engineers, architects, doctors, agronomists and others).
Source: CIMADE
Service oecuménique d'entraide
176 rue de Grenelle,
75007 Paris, France
tel: (1) 45 50 34 43

• Colombia

Project title: Proyecto de educación de lideres e investigación en autoconstrucción.
Area: Manizales, Caldas.
Numbers affected: —.
Time period: 1987—1988.
Type of intervention: Establishment of a school for training in leadership of self-help building projects (planning, administration, financing, building techniques and design). The school is a continuation of the organization's previous activities.
Distinguishing features: Practical training in housing construction at grass-roots level, development of low-cost building methods; production of tools and simple machines. The aim is that about 1,500 people, from 552 organizations working in low-cost housing, shall be trained in two years.
Responsible organization: Fedevivienda, ENA (Escuela National de Autoconstrucción).
Source: José Luis Ospina
203 Torridon Road,
London SE6 1RF, England

• Dominican Republic

Project title: El Caliche.
Area: Santo Domingo.
Numbers affected: 1544 families/9000 persons (when the whole project is implemented).

Time period: 1981–.
Type of intervention: Technical advice and training; financing of infrastructure; loans to self-help builders for housing improvements.
Distinguishing features: Integrated development project in which health, education, provision of jobs and upgrading of the housing area are all included; development of low-cost housing through self-help building.
Responsible organization: INVI (Instituto National de la Vivienda) and SODECA (Sociedad para el Desarollo de El Caliche).
Source: GTZ (Deutsche Gesellchaft für Technische Zusammenarbeit Gmbh)
Postfach 5180
Eschborn 1
Federal Republic of Germany
tel: (06196) 79-0

• French Guiana

Area: Several different places in French Guiana.
Numbers affected: 500 families.
Time period: –1987.
Type of intervention: Development of housing models using local materials and guidance in self-help building; financing. French conscripts, who have chosen aid work in lieu of military service, act as instructors.
Distinguishing features: Individual self-help building; rather expensive house models (100,000 French francs per 50 square metre dwelling).
Responsible organization: Département de l'Equipement de la Guyane.
Source: Ministère de l'Equipement du Logement, de l'Aménagement du Territoire et des Transports
Direction de la Construction
1 Avenue du Parc de Passy
75016 Paris, France

• Ghana

Project title: Gumale Town Development Committee.
Area: Tumale, rural area in northern Ghana.
Numbers affected: About 600 families.
Time period: 1975–.
Type of intervention: Rural planning as a tool for controlling migration to towns. With this aim, two areas were provided with infrastructure: Ward M and Gumale town. USAID financed the project in Tumale through the creation of the Technical Coordinating Committee (TCC). The project also included upgrading of two areas in Tumale. After a while, in 1983, Gumale Town Development Committee (GTDC) was created.
Distinguishing features: First, roads were built, and rainwater pipes, drainage and public toilets were installed. Plenty of cement was provided. The dwellings were built with stabilized earth blocks and corrugated iron roofs. Building knowledge was already widespread.
Responsible organization: USAID and Gumale Town Development Committee.
Source: SINA (Settlements Information Network Africa)
Case study on Gumale Town Development Committee, Tumale, Ghana, Dec 1986
Mazingira Institute
PO Box 14550
Nairobi, Kenya
tel: 47066/47097

• Guatemala

Project title: El Martinico.
Area: Guatemala city.
Numbers affected: 115 families.
Time period: 1983.
Type of intervention: Planning of a housing area; development of earthquake-proof low-cost dwellings; construction of demonstration houses; financing.
Distinguishing features: Good planning; record building time (about two weeks). The families came from different income groups and had different demands concerning dwelling standards. Father Márquez of Caritas knew the people well, which simplified implementation of the project. People have learned to cooperate and hopelessness has been replaced by optimism and self-confidence.
Responsible organization: Caritas.
Source: DESWOS
(Deutsche Entwicklungshilfe für sociales Wohnungs- und Siedlungswesen)
Bismarkstrasse 7,
5000 Cologne 1
Federal Republic of Germany
tel: (221) 53 50 01

• Honduras

Project title: Brias del Valle village improvement.
Area: Brisas del Valle (town settlement 15 km west of San Pedro Sula).
Numbers affected: 1,000 families/7,000 persons.
Time period: 1982—1985.
Type of intervention: Boring of wells, installation of reservoir and water pipes; construction of primary school; building of 400 latrines. The health authorities have run a course for the villagers to teach them how to make a good latrine. The project has contributed with cement covers for the pits and toilet bowls.
Distinguishing features: The families come from Los Grillos, where their dwellings were razed to the ground after they were evicted in 1981. There was a need for swift action and to give priority to the most immediate needs:
- water supply
- primary school
- latrines
- a health care building

After the project had been implemented, the same type of assistance was demanded by several spontaneous housing areas.
Responsible organization: Swedish Pentecostal International Relief and Development Agency.
Source: Swedish Pentecostal International Relief and Development Agency
Box 503,
101 26 Stockholm, Sweden
tel: (08) 24 57 80

• Honduras

Project title: Village improvement.
Area: Villages in the surroundings of San Pedro Sula.
Numbers affected: 94 families.
Time period: 1980—1981.
Type of intervention: Construction of 94 roofs, cement floors and latrines. The roofs were put up in one village at a time. The Mission's project leader was responsible for procurement of materials and building control, while the Mission's local carpenter led the construction work. The families themselves helped with the heavy work and afterwards built the walls on their own.
Distinguishing features: Considerable housing improvements have been achieved with small economic means. The project provided a humane existence: To live in your own house on a plot you own is like a dream for these people, who have been pushed from pillar to post by large landowners.
Responsible organization: Swedish Pentecostal International Relief and Development Agency.
Source: Swedish Pentecostal International Relief and Development Agency
Box 503,
101 26 Stockholm, Sweden
tel: (08) 24 57 80

• India

Project title: Geneshnagar Settlement Improvement Programme.
Area: Poona, urban settlement, spontaneous housing area.
Numbers affected: 1,250 families/8,000 persons.
Time period: 1970--.
Type of intervention: Installation of water, sewage, drainage; paving of streets and pavements.
Distinguishing features: The population has organized itself and pressed the authorities to legalize the settlement and to install infrastructure. Thereafter the community improved their dwellings and constructed communal buildings such as a school and health care centre.
Responsible organization: Ganeshnagar Settlement.
Source: Bertha I.B. Turner and
John F.C. Turner
51 St. Mary's Terrace
Hastings
East Sussex TN34 3LR, England
tel: (424) 715 796
also:
S.K. Mohandas
Centre for Development Studies & Activities
P.B. 843,
Deccan Gymkhana
Poona 411 004, India
tel. 518 26

• India

Project title: Chimmiribanda.
Area: Chimmiribanda, village in Andhra Pradesh.
Numbers affected: 50 families

Time period: 1980—1986.
Type of intervention: Technical instruction; financing; loans and subsidies, partly to construct dwellings, partly to set up milk production as an income-earning venture.
Distinguishing features: The local organization worked with small resources without building knowledge but still succeeded in carrying out the project.
Responsible organization: Acuro Candhra Christian Village Reconstruction Organization.
Source: DESWOS (Deutsche Entwicklungshilfe für sociales Wohnungs- und Siedlungswesen)
Bismarkstrasse 7,
5000 Cologne 1
Federal Republic of Germany
tel: (221) 53 50 01

• India

Project title: Bibiwewadi Rehabilitation Programme.
Area: Bibiwewadi, part of Poona.
Numbers affected: 8,000 families (August 1987).
Time period: 1982—.
Type of intervention: Families were ensured of 99-year leases on their plots, helped with the design of their dwellings and to obtain bank loans.
Distinguishing features: Those who were worst off didn't dare take part at first in this voluntary venture. Their participation increased over time. Emphasis on information, for example at weekly meetings. All building materials produced locally.
Responsible organization: Poona Municipal Corporation. Housing & Urban Development Corporation (Financing).
Source: S.K. Mohandas
Centre for Development Studies & Activities
P.B. 843,
Deccan Gymkana
Poona 411 004, India
tel: 518 26

• Indonesia

Project title: KIP (Kampong Improvement Programme).
Area: Kampong urban settlement, Jakarta.
Numbers affected: —.
Time period: 1969—.
Type of intervention: KIP was started in 1969, financed by taxes. Its priorities have been:
1 Roads, pavements, clean drinking water and health centres
2 Help for the poorest and those who suffer most
3 Help for as many as possible
4 Mobilization of people's abilities of self-help and cooperative work

The World Bank contributed a loan covering half the costs. The average cost per family was 65 US dollars.
Distinguishing features: Low-standard infrastructure. Out of 30 planned health centres, only 12 have been built. Hardly any schools at all have been constructed.
Responsible organization: KIP, Jakarta.
Source: Experiences with Settlement Improvement Policies in Asia: Four Case Studies (ed. Paul Baross)
Paul Baross and Parworts
BIE, Forum
Institute for Housing Studies
Weena 718
PO Box 20718
3001 JA Rotterdam, Netherlands
tel: (10) 40 95 40

• Jamaica

Project title: The Mustard Seed Community.
Area: Kingston, urban settlement, spontaneous housing area.
Numbers affected: —.
Time period: 1979—.
Type of intervention: Integrated development work to improve living conditions. Development of prefabricated building elements and instruction in practical methods. Start of small-scale industry and handicrafts in order to create jobs.
Distinguishing features: The project reaches the absolutely poorest groups in Kingston, who have accepted it and are very interested in continuing to construct dwellings in accordance with the innovative building methods.
Responsible organization: Brothers of the Poor/Mona Common Community.
Source: Dorothea Blazejewicz
Info-byrån
SIDA
105 25 Stockholm, Sweden
tel: (08) 728 51 00

Seminar report: Proceedings of the Inter-Caribbean Workshop on Low-Cost Housing (Dominica, 1984).

• Kenya

Project title: Mji Wa Huruma Resettlement Scheme.
Area: Nairobi (population 1.2 million).
Numbers affected: 500 families.
Time period: 1969—.
Type of intervention: Proposal for rebuilding an area devastated by fire; provision of loans.
Distinguishing features: The people were organized into different construction teams. The National Council of Churches of Kenya (NCCK) helped in providing loans, which, however, have not been fully repaid (only 29% in 1981). Construction costs have also sharply increased: in 1974 a 2-room dwelling cost 3,400 Kenyan shillings, in 1981 45,000 shillings (about 2,800 US dollars). The result was that NCCK could not help as many people as intended.
Responsible organization: NCCK (National Council of Churches of Kenya).
Source: SINA
(Settlement Information Network Africa)
Case study on NCCK's Mji Wa Huruma Resettlement Scheme, 1986
Mazingira Institute
PO Box 14550
Nairobi, Kenya
tel: 47066/47097

• Kenya

Project title: Langa-Langa.
Area: Urban settlement on the outskirts of Nakuru, Kenya's fourth largest city.
Numbers affected: Phase I: 320 families; Phase II: 300 families.
Time period: Phase I: 1965—1971; Phase II: 1968—1972.
Type of intervention: So-called site-and-service operations; first, allocation and staking out of plots; then infrastructure such as water supply, toilets and roads; finally, construction of health centre, school, churches and small shops.
Distinguishing features: Phase I: Cheap housing, units for four households (three 2-room dwellings plus 1 single-room dwelling), 1 toilet and 1 shower; Phase II: More expensive housing with more rooms, built mainly for the middle class, in spite of greater demand for cheap housing. Several of these multi-room dwellings remained unoccupied.
Responsible organization: NHC (National Housing Corporation).
Source: Langa-Langa: a case study of a site-and-service scheme in Nakuru, Kenya
Maria S. Muller
Institute for Housing Studies
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PO Box 20718
3001 JA Rotterdam, Netherlands
tel: (10) 40 95 40

• Mayotte Islands (France)

Project title: Habitat social à Mayotte.
Area: Mayotte Islands.
Numbers affected: 4,000 families.
Time period: 1979—.
Type of intervention: Development of cheap, long-lasting housing in local building materials, mainly earth; training in house construction and making of earth-blocks.
Distinguishing features: Craterre took the initiative in the project in close cooperation with the local population. Only several years later was the project accepted by the authorities, who now support it and present it as a succesful housing venture.
Responsible organization: Société immobilière de Mayotte.
Source: Lietar Vincent
Société immobilière de Mayotte
B.P. 91
97600 Mamoudzou
Mayotte Islands, France
also:
Hugo Houben
Craterre
Centre Simone Signoret
B.P. 53
380 90 Villefontaine, France
tel: 74 96 57 49 - 410

• Mexico

Project title: Union de Vecinos de Palo Alto.
Area: Cuajimalpa, urban settlement.
Numbers affected: 189 families/1,000 persons.
Time period: 1975—1981.
Type of intervention: Purchase of land for plots; planning; development of cheap housing models; start of cooperative for production of materials.
Distinguishing features: This is the first time that a loan has been given to a cooperative in Mexico. It has led to a change in the law.

The dwellings have been constructed by self-help methods.
Responsible organization: Palo Alto Cooperative.
Source: Bertha I.B. Turner and John F.C. Turner
31 St. Mary's Terrace
Hastings
East Sussex TN34 3LR, England
tel. (424) 715 796

• Mozambique

Project title: Maxaquene.
Area: Maxaquene, spontaneous housing area in Maputo.
Numbers affected: (10,000).
Time period: 1977—1979.
Type of intervention: Development of planning principles for street networks, communal and housing areas; mapping of the area using simple methods; installation of infrastructure: water supply, drainage, streets and street lighting.
Distinguishing features: Mozambique's first upgrading project; carried out in consultation with the people affected. Great weight given to discussion of changes and development of methods to illustrate and explain these changes to the local population.
Responsible organization: Ministry of Public Works/United Nations Development Programme/Direçao National de Habitaçao.
Source: Maxaquene, a comprehensive account of the first urban upgrading experience in the New Mozambique by Ingemar Sävfors, UNESCO, 1986

• Nicaragua

Project title: Linda Vista.
Area: Jinotega, town in northern Nicaragua with about 15,000 people.
Numbers affected: 70 families.
Time period: 1981—1983.
Type of intervention: Planning; technical advice; training of instructors for self-help building; financing; loans and subsidies to the builders. Repayment of loans is made into a revolving fund for new loans to other self-help builders.
Distinguishing features: The population was united and tried to achieve housing improvements since 1977, but received no response until the new regime came to power in 1979. After that the project was carried out at record speed in the period December 1981 — February 1983.

The housing project gave people enough confidence to start a small manufacturing industry so as to create jobs. The project shows that even a limited support in the way of training and financing can have large effects when people are motivated and well organized.
Responsible organization: FUNDE.
Source: DESWOS (Deutsche Entwicklungshilfe für sociales Wohnungs- und Siedlungswesen)
Bismarkstrasse 7
5000 Cologne 1
Federal Republic of Germany
tel: (221) 53 50 01

• Nicaragua

Project title: Nueva Esperanza.
Area: Managua.
Numbers affected: 72 families.
Time period: 1982—1985.
Type of intervention: Technical advice; financing.
Distinguishing features: The people have organized themselves and created a cooperative to construct new housing. The dwellings have been put up through organized self-help building. Working together has strengthened the families, who now plan new projects to improve health, schooling and technical training.
Responsible organization: COOPVINE (Cooperativa de Vivienda "Nueva Esperanza").
Source: CIMADE Service oecuménique d'entraide
176 rue de Grenelle
75007 Paris, France
tel: (1) 45 50 34 43

• Nicaragua

Project title: José Benito Escobar.
Area: Region II (León), Quatro Palos.
Numbers affected: 24 families/120 persons.
Time period: 1984—1987.
Type of intervention: Design of a village plan for 130 families; construction of roads, a school complex, a communal building, 24 dwellings and 2 communal wash-houses; tree-planting; well-boring; installation of pump and pipes to public standpipes.
Distinguishing features: Self-help

construction directed by local artisans. The village design was carried out under supervision by students from Sweden in cooperation with Nicaraguan authorities and the villagers themselves.
Responsible organization: The Nicaraguac Association, Sweden with Midindra — Ministerio de Desarollo Agropequario y Reforma Agraria (the Ministry of Agriculture).
Source: Nicaraguac
Nationsgatan 3
223 60 Lund
Sweden

• Pakistan

Project title: Baldia Soakpit Pilot Project.
Area: Karachi, urban settlement, spontaneous housing areas.
Numbers affected: 9,000 families/80,000 persons.
Time period: 1979—.
Type of intervention: Paving of streets and pavements; installation of drainage, water and toilets.
Distinguishing features: The project — especially the toilets — was explained and demonstrated to people so that they quickly came to accept the changes. The ideas therefore spread fast. The women's participation has been a determining factor.
Responsible organization: Central Government agencies, University of Karachi and others.
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John F.C. Turner
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East Sussex TN34 3LR, England
tel: (424) 715 796
also:
Jan van der Linden
Free University
PO Box 7161
1007 MC Amsterdam
Netherlands
tel: (020) 548 54 62

• Pakistan

Project title: Orangi Pilot Project.
Area: Orangi, Karachi, urban settlement, spontaneous housing areas.
Numbers affected: —
Time period: 1980—.
Type of intervention: Social work; education; development of simple sewage system; advice to the inhabitants on self-help sewage installation.
Distinguishing features: The project is run in the largest spontaneous housing area in Karachi (800,000 inhabitants). The sewage system was extended one street at a time once residents asked for assistance.
Responsible organization: Orangi Pilot Project.
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John F.C. Turner
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• Papua New Guinea

Project title: Settlement Improvement Programme in Papua New Guinea.
Area: Port Moresby (capital with 106,000 inhabitants in 1977).
Numbers affected: 32,400 live in low-income housing.
Time period: 1973—.
Type of intervention: Upgrading of existing housing and development of new areas. Key aspects of the project:
1 Allocation of land with minimal infrastructure
2 Loans for buying building materials
3 Technical assistance
4 Review of laws and regulations.
Distinguishing features: Large-scale assisted self-help building. In addition to provision of water, sewage, compost, garbage handling, certain roads and some electrical installation, the project has had a social and economic impact. Training in different artisanal skills took place during the construction period and people learnt how to take loans and make repayments.
Responsible organization: The government of Papua New Guinea.
Source: Experiences with settlement improvement policies in Asia:
four case studies (ed. Paul Baross)

Sale Homoka and Alex Dira
BIE, Forum
Institute for Housing Studies
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BO Box 20718
3001 JA Rotterdam, Netherlands
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• Peru

Project title: El Augustino, zone II.
Area: Lima, urban settlement, spontaneous housing area.
Numbers affected: 1,000 families.
Time period: 1972–1985.
Type of intervention: Reconstructing of the settlement; new street network; installation of infrastructure.
Distinguishing features: To start with, the project was led, with no great success, by a government body. In 1979 the population organized itself and took over the project and also contracted a non-governmental organization for help. Certain improvements were then carried out.
Responsible organization: –
Source: Bertha I.B. Turner and John F.C. Turner
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East Sussex TN34 3LR, England
tel: (424) 715 796

• Philippines

Project title: Zonal Improvement Programme in the Philippines.
Area: Quezon City (1.4 million inhabitants), which, with three other cities, make up Metro Manila, the capital.
Numbers affected: 200 slum areas in Manila with about 1 million people.
Time period: 1977–.
Type of intervention: ZIP has three aims:
1 Arranging security of tenure of the land
2 Improving the poor environment and services
3 Arranging income-earning possibilities for the very poor.
Distinguishing features: The project was financed partly by a grant from the United Nations and a loan from the World Bank. Most dwellings were pulled down and those displaced received loans to build new ones. They were given tenure for 25 years. Infrastructure of high standard.
Responsible organization: Zonal Improvement Programme, National Housing Authority, Manila.
Source: Experiences with settlement improvement policies in Asia: four case studies (ed. Paul Baross)
Julie Viloria, Luis Cruz and Juliet Horfilla
BIE, Forum
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BO Box 20718
3001 JA Rotterdam
Netherlands
tel: (19) 430 95 40

• Philippines

Project title: Saarland Village I and II.
Area: Antipilo, urban settlement, spontaneous housing area.
Numbers affected: 300 families/1,500 persons.
Time period: 1983–1985.
Type of intervention: Construction of relatively high standard housing with water, sewage and electricity (not self-help building).
Distinguishing features: The project is a direct result of Sister Lydia Kalav's social work in the Manila area. She realized the need for better housing to achieve lasting improvement in the living standards of the poorest part of the population.
Responsible organization: The Domus Marian Foundation Inc.
Source: Sister Lydia Kalav
Marian Housing Foundation
Room 205, Marietta Apartment
1200 Jorje Bocobo Street
Emita, Manila
Philippines
tel: 521-03-81 ext. 14

• Tanzania

Project title: TARDEP, the Tarime Rural Development Project.
Area: Tarime District, rural area.
Numbers affected: 300 families in 10 villages.
Time period: 1979–.
Type of intervention: Training of craftsmen and group leaders for self-help building; provision of tools and a lorry; loans for housing improvements.

Distinguishing features: Cheap and lasting housing through self-help construction and improvement of local building techniques, combined with new materials. There was a resistance against local building materials and attempts were made to overcome it with information and new techniques.
Responsible organization: COOPBO (a Belgian NGO/Community Development Trust Fund.
Source: Bertha I.B. Turner and
John F.C. Turner
51 St. Mary's Terrace
Hastings
East Sussex TN34 3LR, England
tel: (424) 715 796

• Thailand

Project title: Slum Improvement in Thailand.
Area: Bangkok (4.7 million inhabitants), spontaneous housing area.
Numbers affected: 26,000 families.
Time period: 1979—1982.
Type of intervention: Installation of infrastructure; improvement of walking paths; drainage; water installation; some revision of borders.
Distinguishing features: Large programme with technical advice for self-help building. Each family was given the possibility of a 20-year plot lease. The National Housing Authority arranged this no matter who owned the land.
Responsible organization: National Housing Authority.
Source: Experiences with settlement improvement policies in Asia:
four case studies (ed. Paul Baross)
Surapol, Channoi, Chumpol Kao-Utai
BIE, Forum
Institute for Housing Studies
Weena 718
BO Box 20718
3001 JA Rotterdam
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tel: (10) 430 95 40

• Tunisia

Project title: Organized Self-Help Building in Rural Tunisia.
Area: Rohia, rural.
Numbers affected: 100 families/500 persons.
Time period: 1979—1984.
Type of intervention: Development of housing that is appropriate to local conditions and that takes into account climate, income, building materials, construction methods etc; organization of self-help building; advising; financing.
Distinguishing features: The project was carried out at the express wish of the local population but in conflict with the official housing policy, which did not give priority in 1979 to self-help building. After three years work, the project was accepted by the central authorities and given as an example of how to solve housing problems in rural areas. The housing project was preceded by an agricultural project that had improved incomes and which brought about increased demand for improved housing.
Responsible organization: ASDEAR (Association pour le Développment et l'Animation rurale/ SADEL (Swedish Association for Development of Low-Cost Housing).
Source: SADEL
Architecture I
Box 118
221 00 Lund
Sweden
tel: (046) 10 72 57

• Vietnam

Project title: Housing Area for Vinh Phu Paper Union Workers.
Area: Vinh Phu Province (Bai Bang).
Numbers affected: 800 families.
Time period: 1985—1988.
Type of intervention: New construction of 500 dwellings and renovation and improvement of 300 dwellings for employees at the Swedish-supported paper mill in Bai Bang; design advice; provision of material and equipment. Main emphasis on inirastrucure.
Distinguishing features: The focus of the project changed from housing construction to infrastructure and from entrepreneurial to self-help building. The project met with scepticism in the early stages but once the work began there was a large interest in it. Also, one result was that, by February 1987, 350 people in the area, without any support, had built their own homes.
Responsible organization:
Scanmanagement/Boliden WP Contech.

Source: Hans Rosenlund
Sweden Habitat AB
Vastergatan 12
222 29 Lund
Sweden
tel: (046) 11 97 02

• Zambia

Project title: Lusaka Squatter Upgrading Programme.
Area: Lusaka, urban settlement, spontaneous housing area.
Numbers affected: 33,500 families.
Time period: 1975—.
Type of intervention: New street network; installation of drinking water; sewage and street lighting; loans for housing improvements.
Distinguishing features: The population comes from many different tribes in Zambia. The American Friends Service Committee (AFSC) devoted a lot of time to discuss plans and improvements with each family, and this contract has been very fruitful. AFSC prepared for Zambian colleagues gradually to take over responsibility for the project. The takeover took place in 1983 when the organization Human Settlements of Zambia (HUZA) was created.
Responsible organization: American Friends Service Committee/Human Settlements of Zambia/Lusaka Urban District Council.
Source: Oxfam
274 Banbury Road
Oxford OX2 7DZ
England
tel: (0865) 567-77

• Zambia

Project title: Kalingalinga Integrated Upgrading Project.
Area: Kalingalinga, part of Lusaka.
Numbers affected: 500 families.
Time period: 1980—1986.
Type of intervention: Technical advice; financing of infrastructure; loans to self-help builders to carry out housing improvements.
Distinguishing features: Integrated development and upgrading project of housing area with spontaneous habitation. Development of cheap housing models. Self-help construction of dwellings, communal buildings and laying of water pipes.
Responsible organization: Lusaka Urban District Council.
Source: GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit)
Postfach 5180
6236 Eschborn 1
Federal Republic of Germany
tel: (06196) 79-0

Recommendations for Future Housing Projects

There is a distinct recurring pattern of how housing problems have been tackled. This pattern recurs from project to project despite total dissimilarities in size and purpose. A resumé of the pattern, which should be useful for future housing projects, follows:

- **make thorough feasibility studies**
- **find out what the inhabitants want**
- **give clear information**
- **optimize people's participation**
- **develop and disseminate knowledge**
- **guarantee security of tenure**
- **see that there is continuity**

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