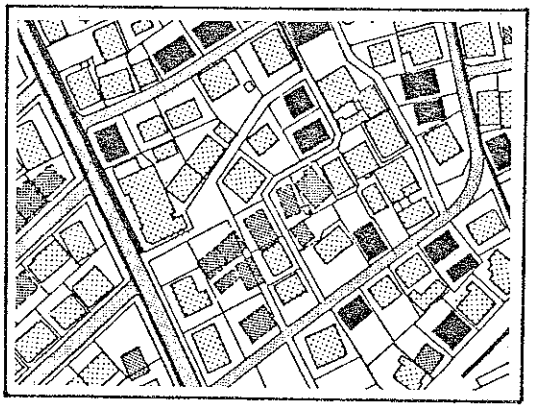

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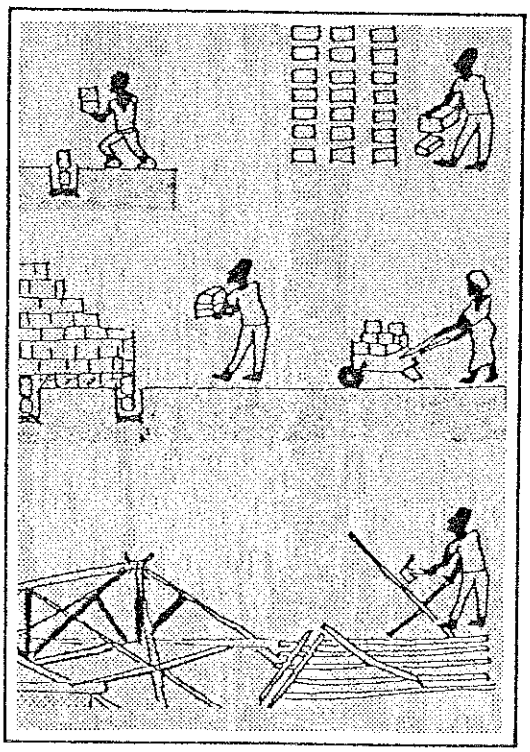
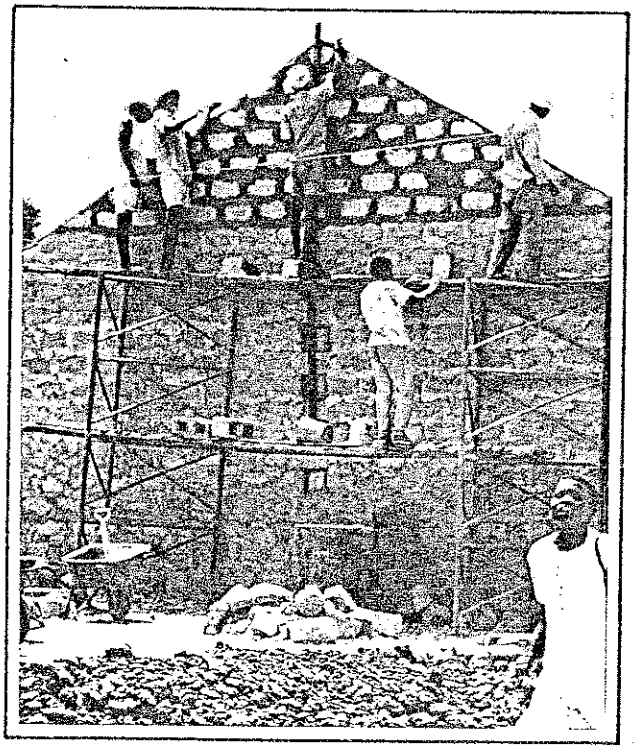
an approach to neighbourhood upgrading in a Sub-Saharan African city





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An approach to neighbourhood upgrading in a Sub-Saharan African city

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Publikatieburo / Faculteit Bouwkunde / Technische Universiteit Delft / 1992

TABLE OF CONTENTS

PART IV - THE MICRO SCALE: THE TARGET NEIGHBOURHOODS

PART V - THE HOUSING AND PLANNING COMPONENTS

PART VI - CONCLUSIONS

LIST OF FIGURES

1

INTRODUCTION

Urbanization is an irreversible phenomenon of Developing countries. The rapid growth of the cities brings wealth, development, poverty and a long list of problems presenting the greatest challenge to city planners and policy makers of today. The latest prognosis of the United Nations says that half of the population of the Developing world will be living in urban areas in the year 2015, and eight out of the ten largest cities in the world will be in the developing countries in the year 2000 (UNDP, 1990:86).
Between 1950 and 1980, the population growth was already outstanding in many Sub-Saharan African cities. Lagos, Kinshasa, Lusaka, Dar es Salaam have increased more than sevenfold in this period but this phenomenon will hit the African continent particularly during this next decade when an increase of 108 % in the urban population is expected (ibid).
Orthodox planning has proved to be inefficient to cope with the nature of this process and uncapable to provide the local authorities essential policy and management instruments to intervene positively and to guarantee the provision of a minimum standard of housing, urban services and public facilities.
All regulatory measures could not stop the growth of informal settlements created through a complex network of housing production, income generation and diverse survival strategies undertaken by the urban poor.
The World Bank, the United Nations, International Donor Organizations and development cooperation agencies started to formulate an agenda for the ninety's in order to create a suitable scenario that will make sustainable urban management feasible in the developing countries. Decentralization and financial autonomy of the local government and the increase of municipal revenues are their top priority. The formulation of policies and the development of strategies that can meet the real needs of the urban poor in terms of housing, infrastructure, employment, health and education is a must. And today more than ever before, a great attention should be given to the improvement of the urban environment.

That makes the theme of this study very actual and essential to understand the particularities of an African city like Bissau, the capital of Guinea-Bissau.
The study describes a series of experiences carried out within the scope of the neighbourhood upgrading project of Bissau, in the period January 1989 until January 1992. This project, financed by the Royal Dutch Government, involved three neighbourhoods of the city: Mindará, Belém and Cupilom de Cima, with a total target population of about 25,000 people.
Although it was financed by DGIS, the Directoraat Generaal Internationale Samenwerking, its implementation was under the responsability of the SNV, the Dutch

Development Organization. The project was first placed under the umbrella of the Ministry of Public Works (MOPCU) until 1988 when it was replaced to the Municipality of Bissau (CMB) who became the official tutor and counterpart organization.
The project was first characterized as an infrastructure improvement project. Along the years, after the initial "experimental" phase in Mindará (86-87), the project started to refine its approach by organizing an implementation scheme based on "working brigades" and developing a very efficient construction management.
After this stage, several attempts were made to involve the residents in the maintenance and management of the benefits provided in the neighbourhood of Belém (88-89), with emphasis on the public water standposts.
In the intervention in Cupilom de Cima (89-91), the project put forward, for the first time, an integrated approach that combined infrastructure, sanitation, housing and urban planning and community participation. In this phase, the project shifted its approach towards urbanization and physical planning which is the core subject of this study.

Case studies are essential to understand the process of urban development in specific contexts because they provide real evidences about the potentials of a certain policy approach and the nature of the problems that a specific project intends to solve. It is obvious that the experience of project implementation provides important feedback to urban planners, designers and policy makers and this case of Bissau, it provided me the opportunity to narrow the distance between planning and action, theory and practice.
I intend to demonstrate the feasibility and the bottlenecks of a certain upgrading approach that suits the particularities of Bissau, and to describe how it was formulated and what was the methodological and conceptual backbone of it.
The text differs from a typical theoretical and analytical study about urban development themes. It has a very practical orientation and tries to present the way the solutions were proposed and the way they were implemented. Naturally that it became necessary to situate the urban context in which the actions took place.

This has influenced significantly the structure of the study.
Part I describes the socio-economic and political scenario of the country and presents a compilation of facts and figures about Guinea-Bissau.
Part II emphasizes city level, the way it developed, its process of urbanization and its major problems. A special chapter describes the characteristic of the local government authority and its dilemmas to manage the growth of Bissau.
Part III presents a brief analysis of the Dutch policy of development cooperation for the project and its experience could only exist because of a political will of the Dutch government to support the development of Guinea-Bissau. The project and its objectives are described here as well and it is accompanied by an analysis of its evolution.
Part IV describes the characteristics of the target neighbourhoods of the project. It intends to present a typical profile of the inhabitants of the popular neighbourhoods as detailed as possible because I believe that the micro scale of a neighbourhood allows one to understand the invisible processes of urban life.
A summary conclusion with a description of the basic characteristics of the neighbourhoods is presented after that.
This chapter is concluded by an outline of project implemetation which presents the overall accomplished physical improvements and a preliminary assessment of the direct and indirect project impacts in each one of the three neighbourhoods.

Part V is indeed the core of the study. It describes at first a small scale pilot experience in which I had the opportunity to test several ideas about settlement planning and self-help housing. This part is concluded with a broad analysis of the experience of planning and implementing a neighbourhood upgrading approach and presents a preliminary appraisal of that experience.

Part VI is more conclusive and intends to present my personal insights about the future of the project and the potentials of neighbourhood upgrading as a feasible and suitable policy to achieve a sustainable form of urban development in Bissau.

This study advocates that neighbourhood upgrading is one of the forms to reduce urban poverty as it allows significant physical improvement in the living conditions of the inhabitants of deprived areas in the city.

The settlement planning approach and the assisted self-help housing strategy are considered as essential instruments to tackle the problems of the popular neighbourhoods in a specific African context. It is argued that it must form the core of a broad upgrading policy for Bissau.

PART I

THE MACRO CONTEXT: The Country

Fula woman in the region of Gabu, 1989.

2

GENERAL INTRODUCTION TO GUINEA-BISSAU

Guinea-Bissau is located in the Western coast of Africa and was discovered in 1446 by the Portuguese who kept it as a colony for 528 years. It is a flat and small country located in the estuary of a series of rivers and sea arms, and its population is composed of several ethnic groups, most of them are animists.

The population is growing close to one million inhabitants of which the majority is still living in the rural areas. Bissau, the capital, has approximately 180,000 inhabitants, about 18 % of the total population of the country.

In the North, Guinea-Bissau has borders with Senegal with whom it has a lot of tensions because of an unsolved border dispute in the offshore region. In the South is the border with Guinea-Conacry (see Figure no. 2.1), a country that strongly supported the PAIGC, "the African Party for the Independence of Guinea and Cape Verde", in its liberation war against the Portuguese colonialism from 1959 to 1974.

In this year, the PAIGC achieved the independence of the country defeating the Portuguese army and their long domination came to an end in Africa. Although it was an unequal war that lasted fourteen years, Guinea-Bissau was the first country to conquer independence among the other former Portuguese colonies in Africa such as Angola, Moçambique, Cape Verde and San Tomé and Principe.

1974 was also the year in which the world famous Guinean leader Amilcar Cabral, the mentor of the PAIGC, was murdered in Guinea-Conacry.

Cabral, who was an agronomist graduated in Portugal, knew a great deal of his country and its most crucial problems, the peasant way of living, its particularities, the habits of the people and its different ethnic traditions. He played a very important role in the organization of the PAIGC and encouraged popular participation in the organization of the new state and in the struggle against the Portuguese. He left a significant amount of writings about the possibilities of building up a new Guinean society, the approaches to solve the problems of underdevelopment as well as the military and political strategies to expell the Portuguese rulers out of the country. Unfortunately, Guinea-Bissau could not count on his charism as a stateman, his unquestionable capacity to lead and his political ideas. He died before the independence.

The Portuguese did not pay much attention to long term investments, especially concerning industry, technology development and social infrastructures. After their departure, most of the social and physical infrastructures were destroyed.

Certain sectors such as health and education, were so much neglected that after the independence war, the majority of the population was still illiterate despite the efforts of the PAIGC to decrease illiteracy during the period of war.

Today, although Portuguese is the official language, it is only spoken by 20-25 % of the population. The public health is still in a difficult situation and is top priority of the

policy of the government.
With a per capita income of US$ 170.00, a foreign debt estimated in US$ 400,000,000.00 and a GNP of about US$ 200,000,000.00, Guinea-Bissau is one of the poorest countries in the world. Its economy depends on foreing aid and on fishery, wood extraction and agriculture, mainly rice, peanuts and cashew.
During its 17 years of independence, the country went through several political and economic changes. During the first 10 years after independence, the country was ruled by a one party system and the economy was regulated by State intervention under a clear communist orientation which caused a significant centralization. Land was nationalized and put under State control. Free commerce was abolished and most economic activities were in the hands of the State.
Cuba, China, the USSR and some other Eastern European countries gave their good support during the first years of independence by sending sector specialists and financial resources. By 1978-79, multilateral agencies such as the UN, UNDP, EEC, and countries such as Sweden, Holland, Italy, Brazil among others, showed their solidarity by puting funds at the disposal of Guinea-Bissau. However, bad state management and unsuitable policies with an ambitious public investment program could not realize a sound economic development. Food shortage was reported; there was a very low agriculture output which was worsened by a period of drought; there were visible signs of corruption in the state controlled trade network (Armazéns do Povo), and there were many problems with the political unity agreement between Cape Verde and Guinea-Bissau; all that brought a lot of political disatisfaction which was responded by strict and autoritarian measures from the Government.
In 1980, army commander João Bernardo Vieira, known as Nino Vieira, organized a coup d'etat and overthrew the Goverment of Luís Cabral, Amilcar's brother, who had been in power since 1974. Nino, who was known as a very determined and heroic soldier during the independence war, abolished the Popular National Assembly and the Council of State, and established a new revolutionary council.
There were several shifts of leaderships and a special congress of the PAIGC was called one year later. It is said that one of the objectives of the coup was to bring the PAIGC back to its original track and review the accord with Cape Verde.
The first half of the 1980's was one of political turmoil, ministers were dismissed, there were some attempts of a coupe d'etat, several arrests, trials and executions.
In 1984, a new constitution was approved, a new Popular National Assembly was elected and Vieira reinforced his position as the head of State, chief of the Government, commander-in-chief of the FARP-Popular Revolutionary Armed Forces, and as general secretary of PAIGC.
Many well trained and young officials were appointed to important positions within the state organization and the emphasis of the new government was put on competence and economic stability.
In 1986, Guinea-Bissau embarked on a comprehensive medium term structural adjustment program (SAP) under the auspices of the IMF-International Monetary Fund and the World Bank.
A program of economic liberalization was set up and several fiscal and monetary policies were put forward in order to achieve a sound economic development, to stabilize the finance of the State and to decrease the rate of inflation . The government machinery had to shrink which involved strict control of salaries and dismissal of public employees. More emphasis was to be put on private initiatives, liberalization of commerce, the

abolition of import constraints and privatization and/or joint ventures of State owned enterprises.

The experience of other developing countries, especially in Latin American, who followed the prescriptions of the IMF are already known as well as its effects. The economicaly weaker groups of the society are to suffer from financial pressure and unemployment with the consequent compression of their power of payment. By knowing that, the SAP was accompanied by the set up of a Social Infrastructure Relief Program (PASI) which "primary objective is to effectively cushion some of the more adverse social effects of the SAP" (WB, 1989:04). The idea is the implementation of a broad program which will generate sufficient employment and provide more opportunities for those who were dismissed from office.

Despite all this efforts, the Guinean government has been uncapable of achieving a self sustained development program. It has depended on foreing funding and foreign technical assistance. According to the Ministry of International Cooperation, there were 516 expatriated assistants working in the country divided as follow: 166 in the health sector, 88 in rural development projects, 79 in the education sector and 69 in the sector of natural resources.

A National Development Fund was created in order to guarantee the financial resources which can assume the costs of the Guinean part, in local valuta, in the different projects. However, the fund cannot be sustained by the internal savings and once more it has relied on foreign aid. Moreover, bad management of the fund was the cause of many interruptions of several projects during 1990 and 1991.

The foreign debt is also increasing especially because of the export not being sufficient to cope with the import needs. The fiscal policies failed to accomplish its objectives which caused the retention of a credit disbursement expected from the World Bank. The public debt is growing to 300 % and the finance of the State is practicaly bankrupted. The country is fully depending on foreign aid and this dependency is increasing every day.

Politically speaking, 1991 was a year of important shifts. A special congress of the PAIGC promoted the uprise of a young generation in the party elite and the expel of many traditional leaders including some ministers of the Nino government. The PAIGC opened the gate for the formation of other political parties and the establishment of a multi party system, and started discussion on constitutional reforms and a new land act among other things.

But despite his unquestionable charism, the popularity of Nino's government is diminishing. There is a political ebullition and 121 well trained professionals made an official statement to call the attention of the government for the risks of the present situation. The opposition to the present government is organizing new political parties in order to take part in the promised democratic elections to be held in 1993.

President Vieira insists on national unity, using all his efforts in order to guarantee the "Guinean perestroika".

Generally speaking, Guinea-Bissau still remains as a peaceful country with a variety of traditions kept alive by its different ethnic groups. In July/August of 1991, there was a shortage of rice, main product of the basic meal, and its price went up in the sky, the housing rent has doubled in the last 6 months, the salaries remains very low and the population keeps optimist and cope with the difficulties with a good sense of humor. The question is for how long ?

2.1 BRIEF INFORMATION ABOUT GUINEA-BISSAU

AREA: 36,126 Km2 (13,948 sq miles).

POPULATION: 1917: 100,000 inhabitants (8 inhab/Km2).
1950: 500,000 inhabitants.
April/1979: 767,731 inhabitants.
Mid 1980: 810,000 inhabitants.
1986: 900,000 inhatitants.(26 inhab/Km2).
1991: 1,000,000 inhabitants (estimation).
An estimated population growth of 1.8 % per year. The population is very young, more than half is under 18 years old.
The majority of the population lives in the rural areas. About 20-25 % of the populatation lives in towns. The main cities are: Bissau, Bafatá, Gabú, Mansõa, Catió, Canchungo, Farim.

ETHNIC GROUPS: the most important ones are:
Balanta: 32.0 %
Fula: 32.0 % (muslim)
Manjaco: 14.5 %
Mandinga: 13.0 % (muslim)
Papel: 7.0 %
The groups which are known as excellent rice cultivators occupy the coast line: Balantas, Mancanhas, Manjacos, Papéis. The latter is known to their involvement with cashew plantations as well and are the dominant group in the region of Bissau; these groups have a hierarchical society, except the Balantas who are the major group in the South, around Catió, and in the central region (South of Mansoa). Their social organization is based on the independence of every clan (patriarcal family) and the land belongs to the whole community.
Towards Cacheu, the Manjacos are the major group. The Bijagós live and are the dominant group in the Bijagós islands and are known to have a very rich culture and an intensive fishing activity .
In the North, around the region of Farim, the Mandingas are the major group, and are known to have a long tradition with trading and agriculture. They have a hierarchical society divided in classes, and were organized in States in former days.
The Fulas occupy the East region, around Bafatá and Gabú, and were traditionally a nomad people, shepherd and involved with cattle raising.

RELIGION: Animist: 60.0 %
Muslim: 35.0 %
Christian: 5.0 %

LANGUAGE: Portuguese is the official language but is only spoken by a maximum of 20 % of the population. The Creolo is spoken by amost half of the population, it is a language used by the different ethnic groups to communicate among each other.
Other languages: Balanta, Manjaco, Papel, Mandinga, Fula.

GEOGRAPHY Mainly composed of lowlands. Meandering rivers and wide

estuaries along the coast, with many sea arms. A coast line of about 160 Km. Higher terrains close to Guiné-Conackry, up to 300 mts. The high plateaus of Gabu and Bafatá which is part of the massif of Futa-Djalon. The coastal areas consist of mangrove, swamps and rain forests while the savanas prevail in the inland. The main rivers are: Geba, Cacheu and Corubá.

CLIMATE: Tropical monsoons climate, hot and wet in two seasons. The wet season is from May/June to October while the dry season is from November to May. The heaviest rains fall during August and the driest month is April. The rain might reach more than 2,000 mm/year. The average is 2,000-3,000 mm per year in the coast and 1,800-2,000 mm in the interior. It can be divided in two zones: one subguinean, cooler and damper, and the other soudanese, hotter and drier. April and May are the hottest months (above 28°) and December and January, the coldest (20°). During the dry season there is a hot, dry wind blowing from the Sahara (harmattan).

EDUCATION: Illiteracy is said to reach 68.6 % in 1985. There were 807 primary and secondary schools, and 83,454 registered students in 1986 (Abril, 1990:456).

HEALTH: The birth rate is 45.4 per 1,000 inhabitants while the mortality rate is 24.0 per 1,000 inhabitants. Life expectancy is said to be 47 years, and the infant mortality is 141 per 1,000 inhabitants (Simon and Bruls, 1991:03). In 1983, there were 526 inhabitants per hospital bed (Abril, 1990:455). There is a national hospital, located in Bissau, and a regional hospital, located in Canchungo, which was recently renovated with the financial support from Taiwan. In total, there are 2 national hospitals, 4 regional hospitals, 14 sectoral hospitals, 1 psychiatric and 1 lepra hospitals (MOPCU, 1990a:72). There are 112 health centers. Total of 1,456 beds in 1991.

AGRICULTURE: It is the main economic activity. Main products are oil of palm, cashew, cashew nuts, cotton, mango, peanuts.
Corn, beans, manioc, sweet potatoes mostly planted for subsistence at village level, according to FAO, 40,000 tons was produced in 1984.
Livestock: cattle, pigs, sheep, goats.

MAIN CROP Rice (140,000 tons in 1987), and it is estimated that there is actually 265,000 ha planted. During the post independence period, the annual output of rice never attained the levels of the colonial times.

MINERALS: There are serious studies being undertaken to explore reserves of bauxite, phosphate and petroleum. The latter is said to exist mainly in the offshore zones.

TRANSPORT: The road network reaches 2,636 Km. Only 544 Km is paved. 288 Km has been paved with gravel and 1,804 Km are sand roads. Only 15 % of the network is in good conditions (PRI, 1990:03). There is a large port for big ships (Bissau) and 27 other smaller ports in the coast and rivers. There is 1 international airport and 17 other smaller domestic airports. In 1988, 345 fishing boats used the

port installations.

HOUSING: Based on the census of 1979, there were 168,520 houses, 123,936 households, an average of 5.1 persons per family and 4.5 persons per house. There was an average of 2.8 rooms per house, and an average of 1.63 persons per room. The rooms had an average area of 15.4 m2.

EMPLOYMENT: The primary sector employs most of the active population. 70 % is engaged to agriculture, 1.4 % to industry, 13 % to public services. The women represent 42 % of the working force (Abril, 1990:445). Agriculture, fisheries and forestry account for more than 90 % of employment (WB, 1989:08).

EXPORT: Peanuts, fish, wood. Fishing is the second most important export goods.

GNP: 200,000,000.00 US$. The GNP per head was estimated by the World Bank for 1981-83 as US$ 180.00 per head. Growth rate of the GNP: 0.8 % (1987).

FOREIGN DEBT: US$400 Million in 1991. The debt was estimated in US$424 Million in 1987 (BM, 1991:305).

PER CAPITA INCOME: 170.00 US$, among the poorest of the World.

INFLATION: In 1989, the inflation rate was estimated at 40 % per year (WB, 1989:07). It is possible that it reached higher cipher in the last two years despite all the efforts of the Goverment. According to the Ministry of Finance, the inflation for the years 1987, 88, 89 and 90 were 97.7 %, 60.3 %, 80.8 % and 32.6 % respectively. The World Bank estimated an annual inflation of 53.2 % between 1980 and 1989. According to PASI, the American Dollar was exchanged for PG 1,370 (Pesos Guineenses) in December 1988. In the parallel market, it was exchanged for PG 2,000 in December 1989, for PG 3,000 in December 1990 and for PG 5,000 in August 1991.

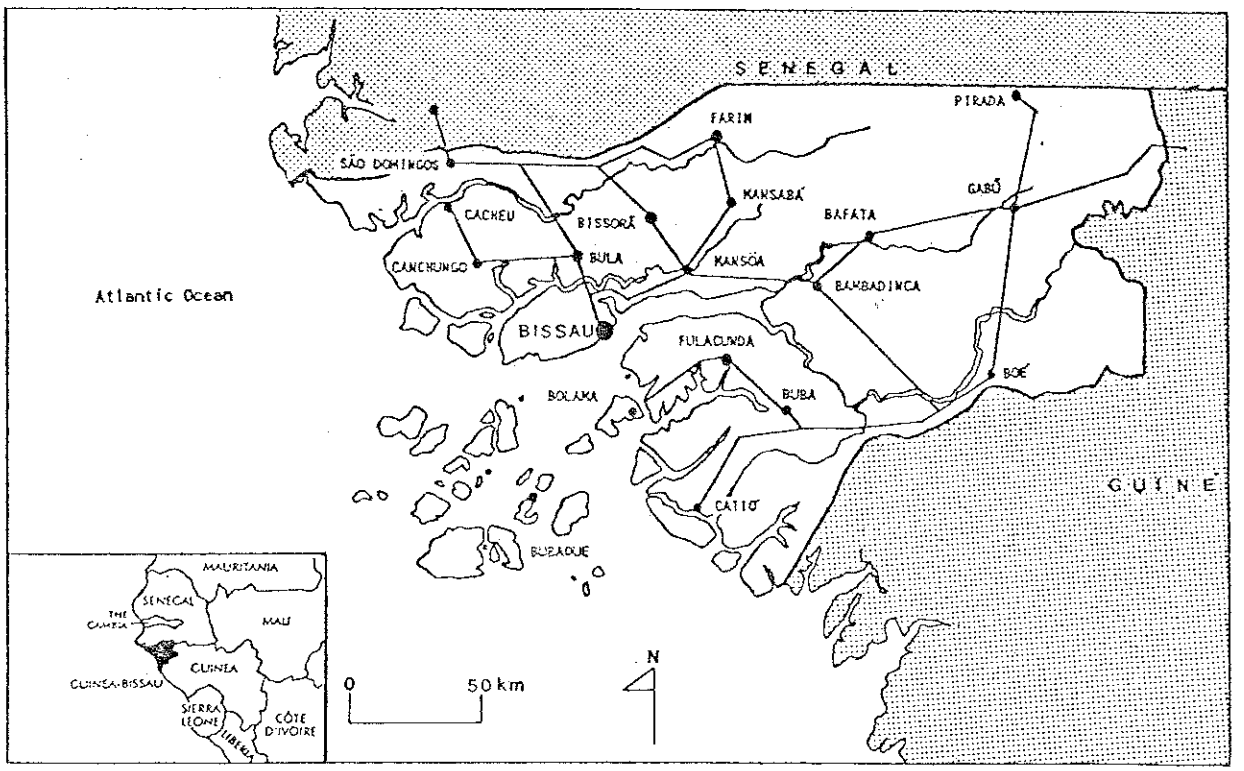
TYPE OF GOVERNMENT: Since the independence, the Republic of Guinea-Bissau is governed by an one party system ruled by the PAIGC-Partido Africano para Independência da Guiné e Cabo Verde. Land has been nationalized.

Until 1980, the country was ruled by a very orthodox communist oriented government. During the last decade, a lot of effort has been done in order to open the economy and diminish the participation of the State, and allow the foundation of other political parties.

INTERNATIONAL COOPERATION: URSS, China, Cuba, Korea, East Germany, Iugoslavia had intensive participation in the development of GB during the post independence period due to their historical and political linkage with the PAIGC, and have supported the development of the health and education sectors, sports, military equipment, state security and training. Countries such as Sweden, Holland, France, Italy, USA, Portugal, Switzerland, Brazil have made a great deal of donations or

loans to support the development of certain sectors, as well as the UNDP and other United Nations' organizations, the EEC, BAD and the World Bank. In 1990, Guinea-Bissau established diplomatic relations with Taiwan and received a very significant donation, mostly used in the health sector, housing and infrastructure. The diplomatic relations with China was cut immediately. "In 1985, Guinea-Bissau received US$ 84.65 per capita in foreign aid" (SNV, 1986:5). "In 1989, it received US$ 100,300,000.00 in foreign aid, which means US$ 106.00 of aid per capita, almost 60 % of the GNP per capita (US$ 178.00) (SNV, 1990a:23). In terms of bilateral cooperation, Sweeden (14.2 %), Portugal (6.5 %), France (6.3 %), Italy (4.7 %) and Holland (3.3 %) are the most significant inputs out of a total of US $ 32.4 Million (SNV, 1990a:23).
1989: there were 88 NGO's active in GB.

FIGURE 2.1:
Map of Guinea-Bissau with the most important Urban Centres in 1991.

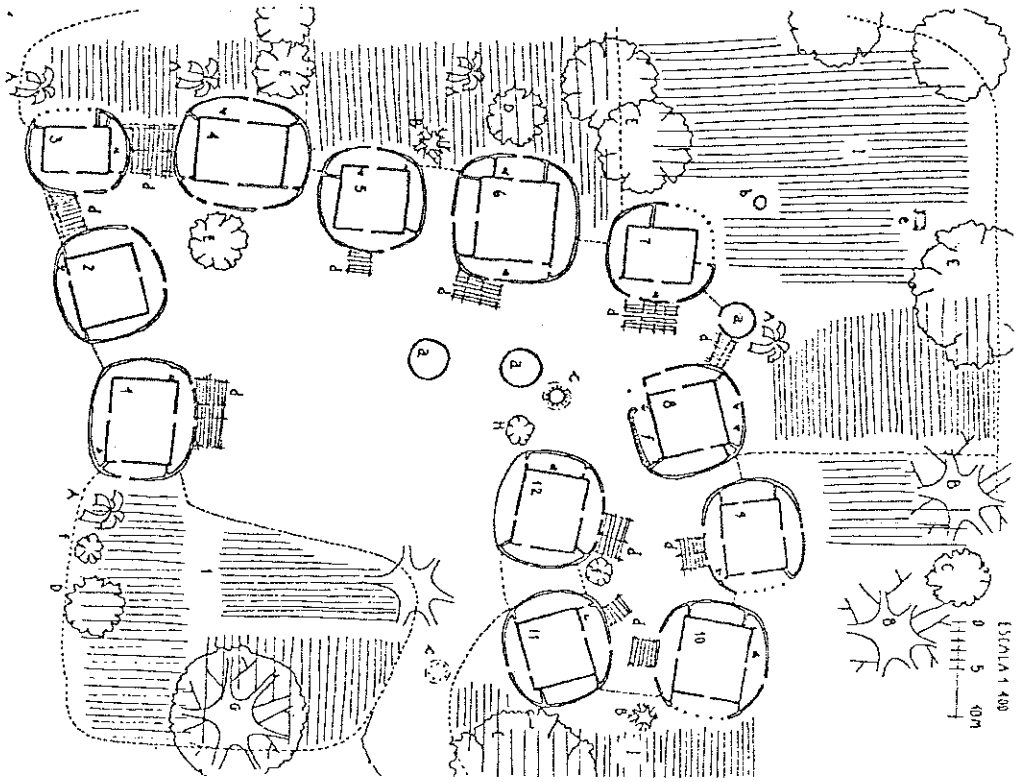


3

URBANIZATION: THE FIRST HUMAN SETTLEMENTS

When the Portuguese started to explore the country they were probably confronted with a very peculiar type of human settlements of the native population, a dispersed pattern formed by groups of clan compounds (morancas) separated by agricultural areas and communal, cerimonial and productive spaces, see Figure 3.1. This was the typical pattern of settlement though there were variations according to the ethnic group they belonged. A group of compounds could form the village settlement that was often subject to a hierarchical authority (Mandinkas) or stand completely independent and autonomous towards any kind of authority (Balantas).

FIGURE 3.1: Balanta Compound in the Region of Oio (North)



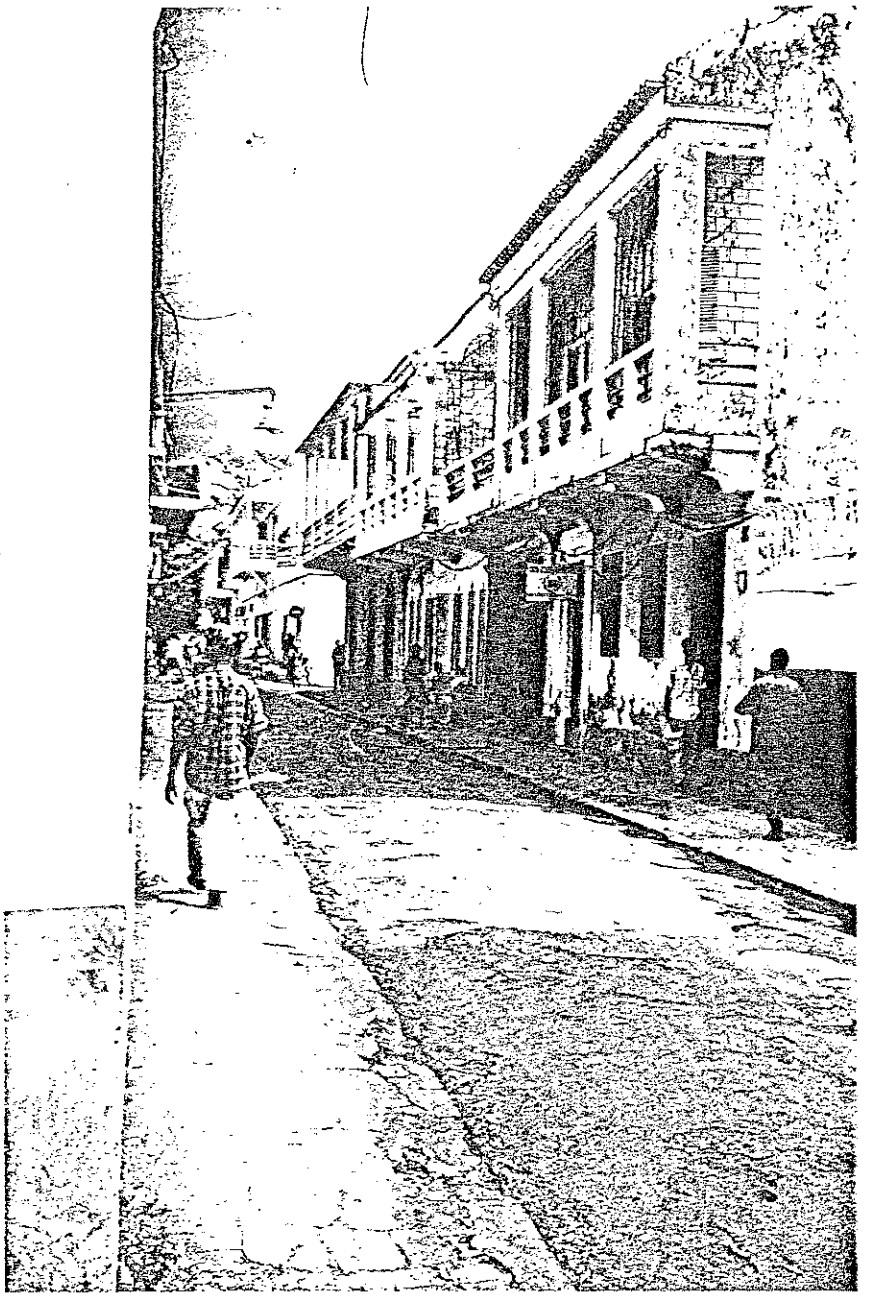
Source: Arquitectura Tradicional na Guiné-Bissau, ASDI.

The first village founded by the Portuguese occured around the year 1558, and the occupation of the territory was closely linked with the accessibility to the hinterland of

Guinea-Bissau through the rivers Farim and Geba. This accessibility to large boats created the possibilities of settlement.
Cacheu (1558) and Bissau (1687) are good examples of cities which were founded in the margins of these two important rivers, but instead of estimulating development at regional scale, they were rather ports for exchange and export of slaves, corn, rice, ivory, etc...
Portugal had a clear merchant approach in its colonization strategy and in fact, the establishment of human settlements followed the principle of maximum exploitation of the territory and its resources. The main goal was to maximize the export of goods and raw materials towards the mother country. There was never a sign of long term development and colonization. The villages and cities served as locations for military control, to guarantee the monopoly of commerce, religious indoctrination and for the collection of taxes. "Urban development was quite neglected, and attention was only given to the main square where the church and the city hall were built" (MOPCU, 1982).
The pace of occupation and the founding of new settlements was only increased when there was any threat from other colonial powers. "It is known that both France and England had tried to penetrate and consolidate a settlement post in Guinea-Bissau, in Bissau and Bolama respectively" (MOPCU, 1982).
In the second half of 1800, three hundred years later, the Portuguese had founded 14 important villages, all of them with direct connection to the sea: Cacheu, Farim, Bolama, Bissau, Buba, Bafatá, the most important ones. In this period the capital is transfered from Bissau to Bolama (1879), and this decision seems to be related to the increase of the peanuts production in the South and with the founding of several administration ports. "It is reported the existence of a telephone line in the region of Bolama in the very beginning of the 20th century". (MOPCU, 1982).
In 1940, the capital of the colony was transfered back to Bissau and this city became the most important link between the colony and the mother country. In the meantime, the South, the North and the East were already well connected to each other through a network of roads which linked other new settlements. There is evidence that the war between the fulas and beafadas, the decline of peanut production in the South and its replacement to the East caused the shift of occupation towards the East.
Twenty years later, in 1960, the first bylaw urban building regulation is approved by the Municipality of Bissau and later extended to all the other urban centers of Guiné-Bissau. One year later, a new limit for the city of Bissau and a new regulation for land occupation and conssession of plots is approved by the colonial government. This sudden interest in urban matters coincides with the start of guerrilla activities in the country side, and in the second half of the 1960 a new urban development program is announced: Guiné Melhor (Better Guinea).
The program intended to allocate land for new neighbourhoods, create possibilities of urban concentration and increase the investments in the urban centers in sectors of infrastructure, schools, hospitals, intercity highways, innercity roads, housing, etc...
This late initiative takes place during a crucial moment of the independence war and it is said that the program of the Portuguese government was intended to cool down the popular support that the liberation movement was gaining in the cities. Anyhow, the program just confirmed that the Portuguese had never payed serious attention to urban development on a long term approach, although a city as Bissau had gained investments with beautification projects and in infrastructure improvements such as roads, pavements, hospitals, schools, a new neighbourhood with houses, water, etc...

PART II

THE MACRO SCALE: The City



View of an inner city road in the colonial core of Bissau, in 1992.

4

THE CITY OF BISSAU

Bissau was founded in the second half of the 17th century. It is located in the estuary of the river Geba, a very important means of comunication between the coast and the hinterland of Guiné-Bissau. The city was the administrative center of the colony and always played an important role in terms of communication with other secondary urban centers of the country as well as with Portugal. Bissau always received a lot of attention and investments from the Portuguese. In 1879, when the capital was transfered to Bolama, Bissau faced a period of secondary importance and a decrease of its development. In 1940, the city gained again its status of Capital of the colony, and 10 years later it was a city of 20,000 inhabitants.
In 1944, a law established the limits of Bissau (Foral 1944), the city covered then an area of 1,094 ha. Other limits were officially defined in 1948 (with the formulation of a master plan for the city), 1955 and 1961.
In 1973, the Portuguese administration formulated another master plan indicating the present official limits of the city. In 1976, after the independence, another plan and limits were formulated but not officialized. In 1986, the MOPCU started with more profound studies to formulate a comprehensive plan for the city that resulted the present master plan, that was recently subject of public discussion in July/1991. According to this plan the city covers an area of 2,735 ha from which 73 % is used for housing and 5 % for industries and services. The plan proposes the extension of the urban area up to 4,898 ha.

4.1 THE URBAN AND POPULATION GROWTH

Between 1960 and 1975 the city experienced a spectacular population growth caused by the waves of refugees and migrants who were running away from areas of combats and crossfire during the independence war. The difficulties in the early years of independence did not stop the migration although it is reported that a reasonable amount of population returned to their home place.
In 1974, after the independence, commercial activities were centralized under the monopoly of the State, as new communist oriented reforms were put forward.
The secondary centers suffered the consequences of the total erradication of free commerce since they could not count on this possible source of income tax. This fact affected the process of development at regional scale as well.
At the same time, Bissau started to centralize the distribution of goods through the "Armazéns do Povo" (People's Storehouse).
What may explain urban growth is the fact that the city had (and still has) the largest port

in the country, was already the most important urban center, the seat of the National Government, and has the best health and educational infrastructure of the country. This may as well explain the role the city played in the process of centralization. It is not difficult to argue why Bissau has always atracted a lot of citizens who were searching for better opportunities.

Recently, the commerce was liberalized and the Government supported to the establishment of private initiatives and the tendency is that Bissau will gain more importance in terms of commerce, supply of goods, provision of health and educational infrastructure and will centralize the functions of the government.

And the latest tendency is that industrial development will take place at first in the city, and since there is no set up for a regional development program, Bissau will attract more and more newcomers, will rapidly urbanize itself and will replace its peripherical agricultural land by urban activities.

It is extremely difficult to find reliable demographic data about the city. There are several projections for 1990 made by several national and foreign organizations posted in Guinea-Bissau and they are mostly based on the results of the 1979 census.

In 1970, it was reported a population of 71,169 inhabitants (Pélissier, undated:521), including the Portuguese troops (estimated in 40,000). With the last official census, 1979, the population of the city, including its outskirts, was estimated to be 109,214 inhabitants, of which 102,566 inhabitants were living in the urban area.

For 1990, the population of Bissau is estimated in diverse numbers. The Bissau master plan team makes an estimation of 129,000 inhabitants (MOPCU, 1991:5) while Dunin already estimated 170,000 inhabitants for 1988 (Dunin, 1988:5).

For 1988, PAV-Programa Alargado de Vacinação (Vacination Program sponsored by UNICEF) estimated a population of 131,568 inhabitants, a number very close to the estimation made by the Bissau Master plan team for 1990. In a recent edited report about the National Housing Policy, sponsored by the World Bank, the population of Bissau is estimated around 190,000 inhabitants, but it is very well possible that the population is placed under this figure.

Based on the BCG vacination program, on household interviews which covered a sample of 95 %, and based on the monthly notification per vacinated child, the PAV estimated that the city population reaches today an amount between 150,000 and 184,000 inhabitants.

This report assumes these last number as the most probable and reliable figure. That represents more than 15% of the total population of the country.

The fact is that the population of Bissau has been growing 5 to 6 % a year, and if this trend is maintained it is possible that the city will reach a population close to 300,000 inhabitants in the beginning of the year 2000. According to the World Bank, Guinea-Bissau experienced an urban population growth of 8.1 % per year between 1973 and 1980, and 4.4 between 1980 and 1987 (BM, 1991:330). This is a trend in Sub-Saharan Africa. The same study affirms that the region had an average annual urban population growth of 6.9 %. This is also verified in other countries of West Africa. According to data collected by the MOPCU in 1982, Ghana, Senegal and Nigeria experienced urban growth at rates above 5 % a year between 1970 and 1980 (MOPCU, 1982:37).

4.2 THE EVOLUTION OF THE URBAN STRUCTURE

Until 1914 the city was limited by the walls of the Sao Jose Fortress, renamed Amura after independence, and only then its urbanized area started to expand towards the surroundings, opening roads, building a church, a cemitery and creating spaces for human settlement. In 1945, the colonial government started to develop studies in order to expand the city once more and formulated a master plan which was not fully implemented but materialized the present colonial urban core of Bissau (see Figure no. 4.1).
In the end of the sixties the urban structure of the city started to suffer drastic changes. The first cause was the new portuguese urban policy which implied urban interventions and the building of new housing areas in the urban centers, especially after 1968. The second cause was the increase of the expontaneous occupation that was taking place in the outskirts of the city, giving origin to what is known today as the peripherical neighbourhoods (bairros periféricos), or the popular neighbourhoods. They are more than 20 neighbourhoods occupying more than 70 % of the city's urban area of today.
According to the airphoto of 1973, Bissau had already a peripherical ring formed by 13 neighbourhoods which were under the process of an expontaneous densification. Towards the West, Belém was the most peripherical neighbourhood and the Bairro Ajuda, created by the Guiné Melhor program, was in fact a recently occupied suburban area. By that time Antula, towards the North, was then a remote area.
During the last decade, the city expanded its urban area significantly (see Figure 4.2), creating a second ring of neighbourhoods, partly urbanized, but with a majority of illegal occupation.

At this moment, the process of occupation is taking place in two divergent directions: towards the North in the direction of Antula and towards the West, in the direction of Prabis and the Airport. This development has not been accompanied by the implementation of basic infrastructure such as roads, water and electricity, and a lot of illegal occupation has been reported.
Some land development schemes implemented by the Municipality generated the urban growth towards the West. In the direction of Antula, the process is more expontaneous although there are some land division schemes approved by the Municipality. The first sites & services project of the country, financed by the World Bank, is planned to be implemented soon there.
However, the old colonial city of Bissau, located next to the port, has maintained its shape and urban structure along the years. It has a grid structure, and small narrow roads in its heart, known as "Bissau Velha", with a profile of two store houses, built with bricks, rocks, and adobe, and tile roof overhangs protecting the balcony which resembles some spatial aspects and architecture styles found in the colonial cities of Brazil.
Two boulevards have their start next to Bissau Velha, close to the port. One, avenida Amilcar Cabral, leads to the present official Government Palace with a strong monumental character and the other one, avenida Pansau n'Isna, that leads towards the North (Antula) to the former Portuguese Military Headquarters, which is now the location of the Ministries of Industry and Natural Resources, and the State Secretary of Planning. They layed down the axis of development and land occupation which took place afterwards, following a regular pattern of clusters and low rise buildings, with low population density. (see Figure 4.3).

FIGURE 4.1: Master Plan of Bissau, 1948.

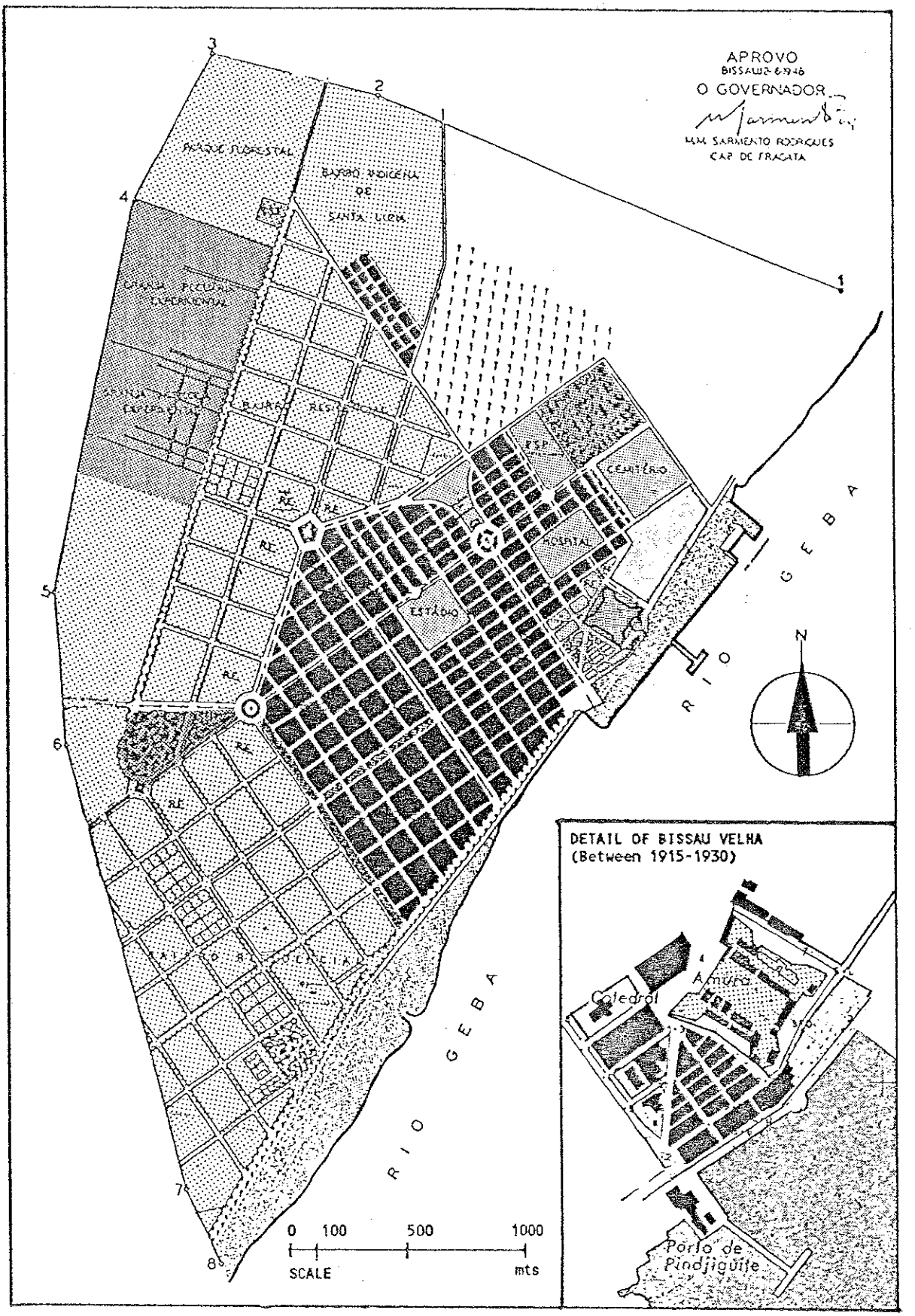
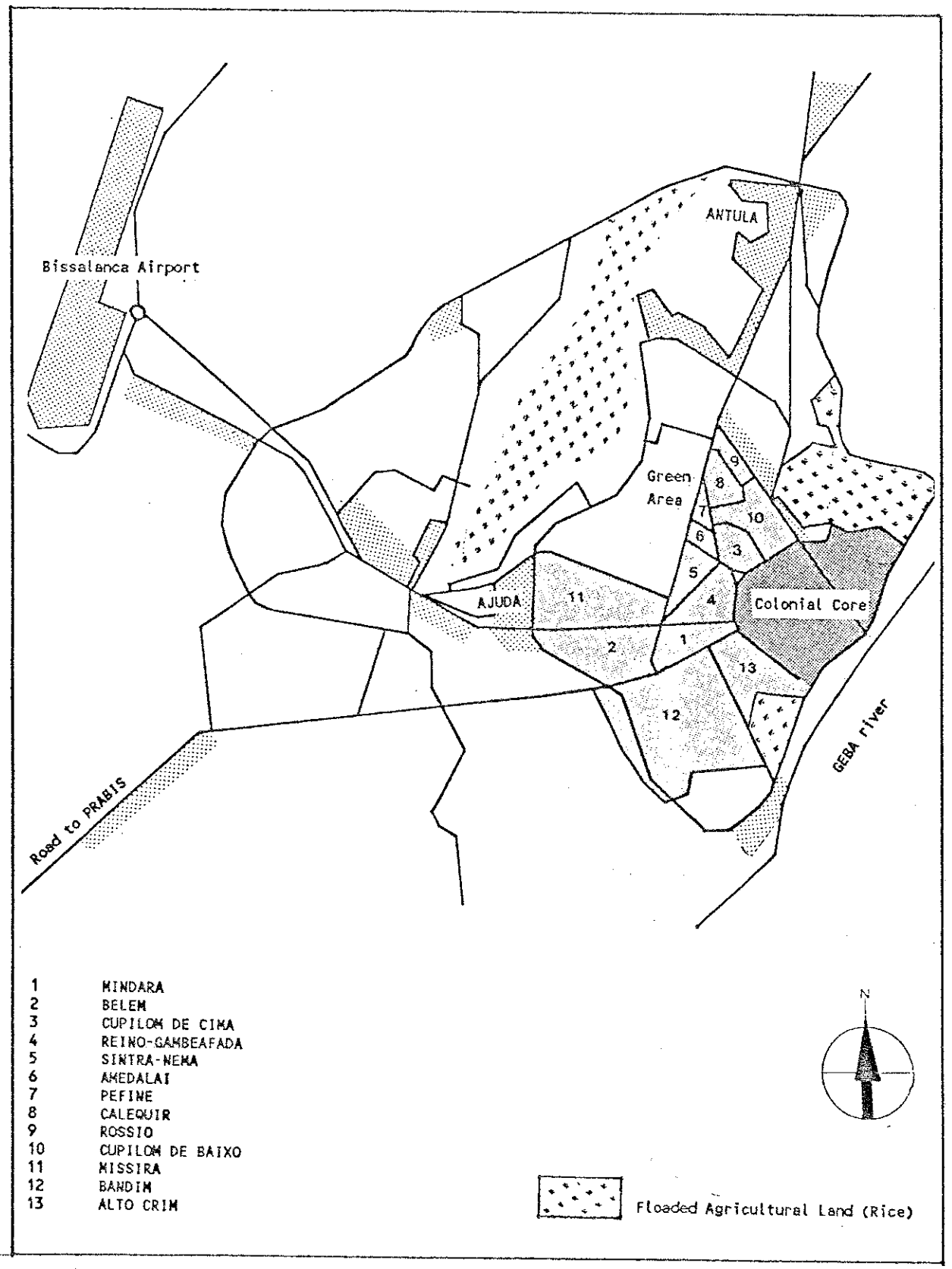


FIGURE 4.2: Bissau and the Peripherical Ring of Neighbourhoods (1973)



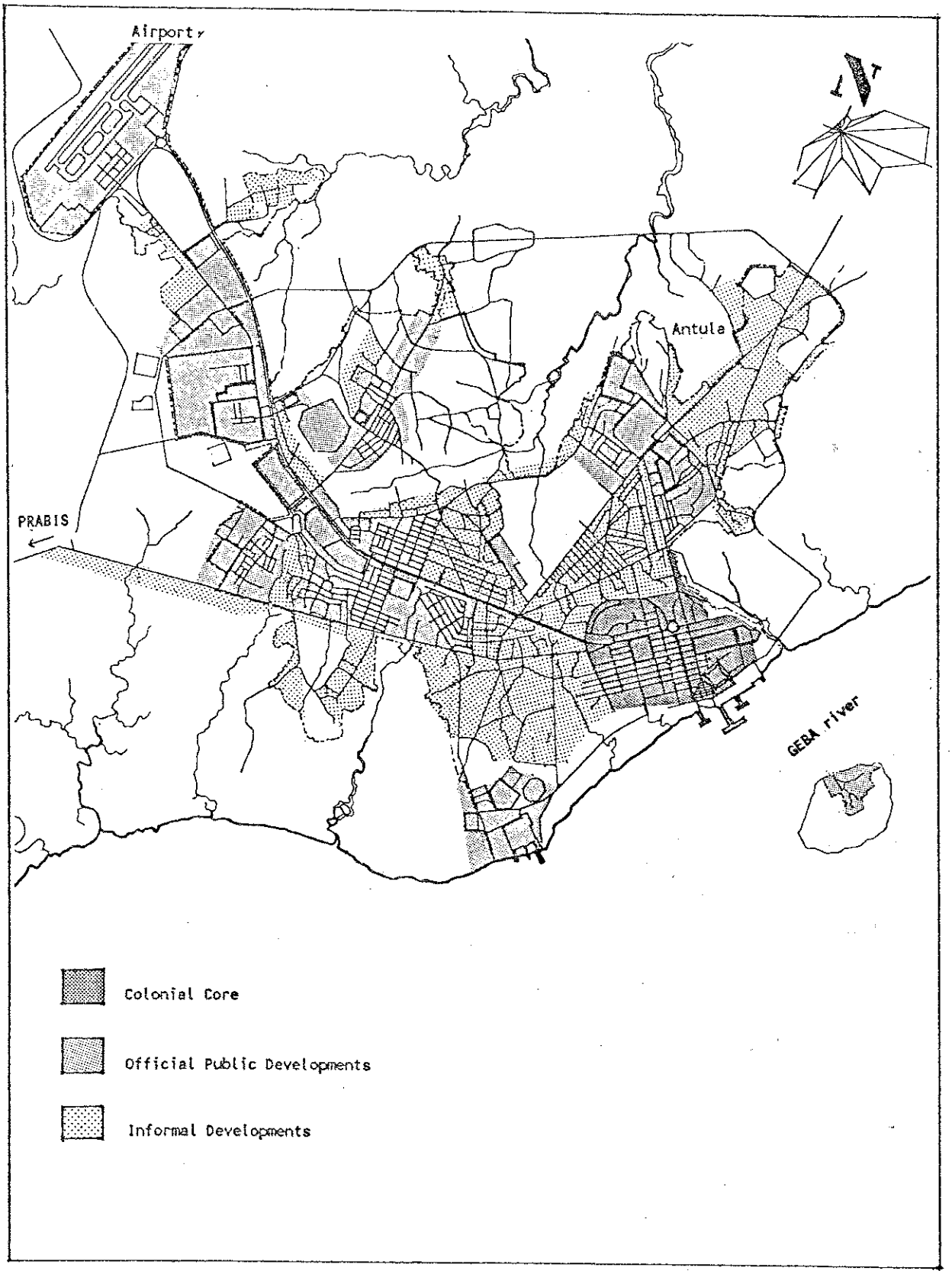
After the independence, due to a series of economic difficulties, the old city and its buildings started to deteriorate. The maintenance and repair of the buildings were neglected till very recently, and still some buildings are completely abandoned or partly deteriorated. The effects of the Economic Reajustment Program, more specificaly the liberalization of commerce, gave another impulse to the building sector that favoured the rehabilitation of buildings for commercial use and for rental purpose. In 1990, with the implementation of the PASI-Social and Infrastructure Relief project, financed by the World Bank, the pedestrian routes, the roads, the drainage system and several institutional buildings started to be renewed, and the city center gained a new profile.
However, in the outskirts of the old city, several african neighbourhoods were flourishing without any pre-planned schemes. The densification gained speed especially during the period when the battles of the independence war increased in the rural areas and other smaller centers, late sixties.
The study of the Ministry of Public Works, in 1981, already presented a list of characteristics that are partly useful to describe these areas today (MOPCU, 1981:1). There are several features which help the identification of these neighbourhoods, as follow:

1. There is a total lack of infrastructure. There is no sewage. A water supply system does not exist, or is partly implemented with a few public water standposts serving a large area than can cover more than one neighbourhood. In the case of Reino-Gambeafada, a centrally located neighbourhood with more than 7,000 inhabitants, there is only one public water tap. Water is commonly collected in traditional wells of 10-20 mts of depth and is not suitable for domestic use since most of them are polluted with feacal colliforms caused by the commom sanitation system utilized by the population. It is the common dry pit latrine used in many cases by the inhabitants of several houses. Few neighbourhoods have a health center, and community services are rarely provided. There is no system of public lighting, and domestic connection is exceptional. With the latest increase of the costs per kw, several houses are disconnected from the very fragile system.

2. Serious environmental problems are reported. There are a lot of dumping areas and the trash is rarely collected. There is always an open air sewage running out of saturated latrines. Access and roads are not paved and in many cases are obstructed by heavy erosions; the drainage system is not always present which gives a critical situation during the rain season and affects the houses as well.

3. Most of the houses are built with mud, adobe block or compacted mud walls, without foundations, without technical supervision, and are poorly maintained. They are mostly covered with metal corrugated sheets or with thatched roof. The houses follow traditional patterns, a rectangular form and covered with a four sided roof with long overhangs to protect the varandas and the mud walls, covering areas up to 180 m2. It is very rare to find a two store building. There are no cooking and sanitary facilities. Cooking is done in the varandas. The latrine is a traditional pit, surrounded by a structure made of bamboo frame, located at a certain distance of the house and in many cases shared by the inhabitants of several houses.

FIGURE 4.3: Urbanized Area of Bissau, 1990.



4. The majority of the houses have no legal status, and the plots are not legalized. That gives the neighbourhoods a character of clandestine occupations, although the traditional rights over land is accepted by the residents and in several cases by the Municipality. The residents only pay a yearly ground occupation fee (US$ 2.50) which only concerns the area that the house occupies.

5. The population density is high, mostly above 200 inhab/ha. The houses are overcrowded. Many households live in one or two rooms of 16 m2, and it is common to find more than one household per house. The average number of inhabitants per house in the neighbourhood of Reino-Gambeafada is 15.20 (Acioly, 1991b:09), with a population density of 269 inhab/ha and a housing density of 18.5 dwellings per hectare.

6. A high rate of room renters is reported, in some neighbourhoods it may reach more than 50 % of the houses. In Reino-Gambeafada, a recent study revealed that 69.33 of the housing stock is totally or partially occupied by tenants, from which 16.33 % are rented occupied (absent owners) (Acioly, 1991b:15).

7. The spatial structure have a character of "expontaneous" occupation, presenting several features that can be found in the traditional rural villages (tabanca). Narrow accesses, group of houses belonging to a clan compound, communal spaces.

8. There is no specialization in the use of space. Housing, commerce, production activities overlap each other as functions. The economy in these neighbourhoods has a strong subsistence character. Several informal productive and commercial activities for income generation are reported in these neighbourhoods. According to Delgado, the great majority of all 605 informal micro enterprises surveyed in the city were located in the ring of the popular neighbourhoods, and 70 % of the people employed by them were residents of this area (Delgado, 1990:09).

9. There is no homogeneity in terms of income, although the majority of the inhabitants belong to the lowest socio-economic stratum.

These neighbourhoods have been commonly neglected by all projects implemented in the city since the independence, their growth and the increase of the problems are taking place without the aknowledgement of the local authorities.
Several plans for these neighbourhoods were formulated by the Ministry of Public Works (MOPCU). Except for the first studies of Mindará and Cupilom de Cima, which were made by the german architects who were sponsored by the United Nations and posted at the MOPCU, most of the plans followed urban and architectural concepts which were not at all suitable for the context of Bissau.
The designs presented broad avenues with large roundabouts and a significant proportion of land allocated for public use, multi store residential buildings and very low densities.
Conceptualy speaking, the plans showed influences from the CIAM's basic principles of urban planning. Some of the most important professionals who were involved in these plans had studied in East European countries and therefore they presented many features of a certain planning and design model e.g. monumental avenues, high rise housing compounds, rigid State control of the use of land, radical changes in the urban structure.

They had a strategy of radical demolition that implied the replacement of most of the buildings, and consequently the eviction of the residents to other sites, without mentioning the source of the financial resources to fund their reconstruction. Most plans did not present any feasible economic basis for implementation and therefore they remained as intentions. They have not been realized so far.
Most of the interventions in the city have been depending on finance from donor institutions and foreign aid, e.g. the housing cooperative of the employees of the Ministry of Plan and the Neighbourhood Upgrading Project both financed by the Dutch government.
It was only with this project that the situation in the popular neighbourhoods started to change, although up to today only in three of them: Mindará, Belém and Cupilom de Cima.

4.3 BASIC INFRASTRUCTURE AND URBAN COMMODITIES

In Bissau basic infrastructure is poorly provided.
The water supply network is very old and shows many signs of deterioration e.g. constant leaks in the pipes. This brings a lot of risks of contamination because the water does not receive any treatment.
The system was planned to be renewed since 1982 when a water supply master plan was formulated. Three years later, another, cheaper, variant was proposed but until now it has not received the financing from the BAD-African Development Bank. In 1988, BAD approved another version of the plan at the cost of US$ 7.7 Million which is expected to be launched soon.
Most of the pipes are made of fiber cement with diameters varying between 60 and 200 mm. The water is pumped from 12 bore holes at depths varying from 100 mts to 285 mts. They are connected to 5 watertower reservoirs, built in different sites of the city, but they are not all connected with each other because it is not a grid network and has many interruptions. When one of the pumps in a borehole is out of order, one of the sections of the city is immediately cut off. When small adjustments are done by the Water and Electricity Company-EAGB in order to supply water to this affected section, a greater area of the city start suffering from water shortage.
Because of the interruptions in the pipe network, the pressure is low and the highest points of the city cannot be reached. Moreover, during the dry season when the underground water level is decreased, the pumps start to present several problems.
The total storage capacity of the towers is 1,030 m3 with an estimated pumping productivity of 42,000 m3 per day but high losses are reported.
Besides the 12 boreholes of the EAGB, there are other 5 holes which serve hotels, small industries, and some embassies.
Until September 1991, there were 63 public water standposts located at different points throughout the city (excluding the ones built by the PMBB in Cupilom de Cima), of which 12 had been closed down by the EAGB. Concerning the popular neighbourhoods, water is only partly served and the situation has only improved with the implementation of the public taps done by the neighbourhood upgrading project of Bissau.
Not much is known about the water supply system because its operation takes place under critical conditions within the EAGB. There is a lack of basic tools and storage of

spare parts, no equipments are available and the manpower capacity is not according to the needs. Houses do not have water meters and the water consumption fee is fixed at US$ 1.00 to US$ 3.00 per month, a value which cannot repay the costs of operation of the system. The public water taps and the towers have no meters either, and thus it is not possible to estimate the consumption and the real production of the system.

Concerning sanitation, the city does not have a water borne sewage system. Septic tanks are generally built throughout the "official" city and there is only one vaccum truck at the Fire brigade that cleans up whenever the tanks are saturated.

This sanitation option seems to be suitable for the type of soil of Bissau because of its high capacity of infiltration. However, in the low flat lands (bolanhas), where the water level is high, this option is more problematic. In the popular neighbourhoods, as said before, the dry pit latrine is the common solution of the inhabitants.

There is a slight difference concerning electricity. There is a central production unit capable of having 10 groups of diesel generators, but actually it has only 4 groups (total of 9,015 kva) operating under normal conditions and with a production estimated in 2,596,758.60 Kwh (MOPCU, 1991:129).

Since 1989, as a part of the privatization program, a French group is responsible for the management of the company together with the Guinean counterparts and they have managed to stabilize the production and to diminish the cuts drastically. However, the losses of the system has not been corrected and the bookkeeping not updated, and so there is not much known about the real production and consumption either.

It is said that the EAGB has 15,000 registered clients in its files although the MOPCU stated that the system provides electricity for 8,962 consumers (MOPCU, 1991b:129) but it is also known that there are a great number of pirate connections.

The Guinean State is the biggest client, known as a bad payer. The Ministry headquarters, houses of the Ministers, State secretaries and top civil servants are considered as one client, all included in one bill per Ministry. The cost of electricity has doubled in the last year which brought the cost per Kw in Bissau as one of the most expensive in the world. This has caused a lot of voluntary disconnection in the popular neighbourhoods.

The Russians have built a second diesel unit with a capacity of 3-4 Mw, but it has not been in operation until now.

The electricity system is fully depending on the import of fuel and of spare parts. Whenever there is a scarcity of fuel, or whenever the machines need to be repaired, it is common to have sections of the city cut off for a week or so.

Solid waste is one of the crucial problems of Bissau. The Municipality is uncapable of collecting all the trash produced by the city and detains no means to proceed with a periodic service with the result that the trash is in the whole city.

Leite estimates that the city produces 50-70 tons per day, about 240 m3/day according to the weight and the type of solid waste produced in Bissau (Leite, 1991:06).

However, the collection capacity is only 45 m3 and is implemented through 2 trucks and 5 agriculture tractors connected with a rear carrier. Since only two trips per day are done, at least 100 m3 is not collected per day. At the end of one month, there is at least 3,000 m3 of waste dumped on roads, sidewalks, drainage gutters and open plots (Leite, 1991:06).

In order to establish a solid waste collection program, the French cooperation donated to the Municipality 20 containers and one truck installed with a special lifter in 1990. The system was not at all appropriate to Bissau and after a few months, when the lifter of the

truck presented problems, all containers remained at its places being overflowded with waste and completely abandoned. With great effort and help from private enterprises, the Municipality was able to remove the containers and retire them temporarily. It is interesting to know that the hotels, the industries and the two hospitals have their solid waste collected separatedly from the system.

In 1991, the Municipality has tendered the solid waste collection to a private enterprise with the financial support from the World Bank's PASI project and the containers came into operation again.

However, the tractors installed with a rear carrier proved to be more adequate because it is more simple and less mechanized, it is not depending on engines and involves human labour, but it is still not sufficient to cover the needs. Besides, it is very hard to maintain the periodicity of the service when it depends on the personnel of the Municipality, knowing their low wages they become an easy target for bribery and deviation to special works out of the routes.

Concerning the facilities of **public health**, the city is very well equipped in comparison to the other urban centers of the country, although it is not sufficient to respond to the needs of the population. There are seven health centers, one child and motherhood care center, two well equipped hospitals and two specialized hospitals for lepra and mental problems. However, the mortality rate is still very high and the services are beyond the minimum standards despite the efforts made by the Ministry of Health.

In terms of **roads**, it is estimated that there are 50 km of asphalt roads of which 22 km are located within the limits of the old colonial city. The pavement of the roads becomes so bad during and after every rain season that the circulation of automobiles becomes almost impossible in certain points. Except for the main roads, most of the other secondary accesses are unpaved and in some parts the accessibility is cut during the rain season because of natural drainage gutters and erosion.

In the old city, there is always an underground **drainage** gutter along side the paved roads covering more than 20 km. In the rest of the city, except for the neighbourhoods where the PMBB and the PASI made an intervention, the drainage is done superficially or through natural gutters which causes erosions, creates obstacles and makes access for automobiles difficult.

Until recently, there was no urban **transportation** system. There were only private taxis which still operate on collective basis and fixed fares per passenger. The peculiar **"candonga"**, a type of collective transportation system implemented by private entrepeneurs, only serve interurban routes. It is very common to see a mob of pedestrians moving towards de center early in the morning and towards the outskirts through the main roads at sunset. According to MOPCU, most of the journeys up to 15 km are made by foot and consequently some companies register delays and even absence of work up to 45 % (MOPCU, 1990c:4).

In September/1991, a Portuguese group associated with the Guinean government established a public transport enterprise with 10 new busses serving different locations of the city.

Although the Guinean had no tradition in using public transport, most of the busses are full of passenger and this may cause a positive impact on the functionality of the city and on the productivity of the working force. This new scenario of transportation may also create more possibilities for housing since some locations will certainly become more attractive due to the new bus lines .

4.4 THE HOUSING SITUATION

In 1978, four years after the independence, the government started with a program to build about 400 houses, split in several projects with most of them located in Bissau and sponsored by the EEC, Germany, Holland, Sweden and Cuba. A small percentage was sponsored by the MOPCU with local funds. Ten years later, only 124 houses were completed (Dunin,1988). Some projects were abandoned half way; houses remained unfinished till today like the self-help and mutual aid housing program for the employees of the MOPCU; buildings are still uncompleted and abandoned, like the Sandino two store pre-fab apartment building complex sponsored by the Cuban government.
This gives the precise picture of the housing and urban scenario of Bissau. The government has been unable to carry out a comprehensive and continuous housing program which could provide alternatives for the different categories of residents and sectors of the population. It has been unable to provide apropriate solutions for the urban poor, especially for those in the popular neighbourhoods and those who live under the pressure of paying rent.
Many attempts failed, mainly because the solutions presented were unsuitable for the socio-economic and cultural context of Guiné-Bissau.
The "Guineenses" demand a lot of living space, and requests very large plots where a lot of activities take place. This traditional way of living and the multifamily apartment buildings implemented came into clash with each other. The subdivided spaces do not meet the requirements of the african family. I refer here to the concept of an african family which involves not only the nuclear houselhold but also the agregated members such as married sons and daughters, brothers, nephews, cousins, etc... and in many cases more than one wife. And as a cultural tradition which can still be seen in the popular neighbourhoods, residents still cook and wash in the corridors.
Some innovations in terms of technology, such as the Sandino concrete pre-fab panels system, imported from Cuba, was also introduced but its acceptance was very dubious. The temperature is extremely high both inside the houses as well as in the apartments and the spaces are beyond the expectations of the traditional family. Four of these blocks were finished and are used by the Cuban Cooperation and by the United Nations Volunteers Organization.
One of the bottlenecks of the housing problem is the traditional way of living.
In Bissau one can easily find features of the rural areas and habits which are not compatible with urban life. The spatial demands and the required standards make the solution for housing extremely expensive and it is unaffordable for the majority of the population. For example, the usual plot size used by the Municipality in its land allocation projects and in the legalization of plots throughout the city is 20.00 x 25.00 mts, and this demands so much land that there is a natural increase in the costs of infrastructure, roads, land taxation, etc... If the city continues to expand its urban area on such basis it will be impossible for the Guinean government to cope with the effects of this growth in terms of the supply of basic infrastructure and utility services.
Unfortunately, up to now there is no serious concern about this.
New design attempts such as core houses, smaller and narrower plots, row houses, are not understood and not acceptable by the common citizen and the professionals who are involved with urban projects are not yet very familiar with it.
It has to be said that the observed failures are as well a consequence of the lack of experience, of a certain degree of intellectual isolation of the local professionals and the

stagnation of the government machinery that is directly involved with this matter, mainly the MOPCU and CMB.
The situation becomes more critical because of the continuous process of decay and difficulties for renovation of the existing housing stock due to a lack of financial resources which cannot cover the high costs of the imported building materials.
Another constraint is the non existence of a housing finance institution. The national bank can only approve a housing loan for fully legalized plots if in case of a high standard construction with more sophisticated building materials used e.g. reinforced concrete, ceramic bricks, concrete blocks, etc..., and this exclude the majority of the residents of the popular neighbourhoods.
Thus a continuous process of provisional improvements of the housing stock with very little significant qualitative changes is seen in the neighbourhoods.
Since the housing production sponsored and/or with the participation of the State has been always very low, the so called existing "housing deficit" is continuously increasing. In 1982, the MOPCU estimated that there was a need of 1,202 housing units in Bissau (MOPCU, 1982:41). The same study estimated that there was a need for 872 new housing units based on a calculation which has as a reference the 109,214 inhabitants refered to Bissau by the census of 1979.
The United Nations defined a method to estimate the housing needs in Africa and recommended the production of 10-13 units per 1,000 inhabitants while the MOPCU comes to the conclusion that, for Guinea-Bissau, it would be realistic to have a production of 8 new housing units per year per every 1,000 inhabitants (MOPCU, 1982:42). These calculations consider that the existing housing stock needs to be renovated and that the life time of a house in Africa is predicted to be 27 years, and 22 years for the case of Guinea-Bissau. However, if the regional differences, the diversity of building technologies and climate conditions are not taken into account these figures cannot be sustained although it may be useful to estimate the actual "housing deficit" in Bissau.
The concept of housing deficit is not suitable to define the real housing needs because it implies a very rigid quantification based on demographic growth and population mobility. It does not allow a flexible approach which could reveal the different types of housing needs such as renovation, upgrading, reconstruction, land, etc. However it is always useful to estimate the housing shortage in order to create a basis for policy formulation and to compare it with the existing production capacity and potentials for different types of housing production.
Assuming that the present population of the city is 180,000 inhabitants, there is an increase of 71,000 people over the last 12 years. To provide accomodation for this population the housing production should have been 8,658 houses considering a number of 8.2 inhabitants per family (BKH, 1984), in other words 721 houses per year. Or at least 7,100 houses if one considers an average of 10 inhabitants per house, which implies an annual production of 591 houses.
It is a fact that the real housing production is far beyond these statistical estimations. It was indeed insignificant and the process of renovation of the existing housing stock was uncapable to create possibilities for housing .
Since the independence the increase of the housing stock was thanks to self-help housing, mostly illegal and taking place in the popular neighbourhoods.
The census of 1959 registered 8,744 buildings while in 1979, 22,606 buildings were registered from which 21,316 were houses. That means an increase of 38.67 % of the

built environment while the population grew 51.10 % during this period. The gap between the population growth and housing production has been accumulated along the years and according to the estimation made by Dunin, in 1988, there was already a housing shortage of about 11,000-12,000 units (Dunin, 1988:2). If this shortage is translated into a number of inhabitants, there are two possible outcomes: a population of 90,200-98,400 inhabitants if the rate of 8.2 inhabitants per family (BKH, 1984) is taken into account, or 56,100-61,200 inhabitants based on the rate of 5.1 inhabitants per house (census of 1979).
Although the African family is composed of several members, one has to bare in mind that the overcrowding and high rates per inhabitants per house that were verified by recent researches in different locations in the city is a transitory phenomenon. It is in fact one of the effects of a low housing production and the lack of an urban policy which could facilitate access to land and housing.
This study assumes that the housing need in Bissau may concern indeed one third of the population of the city and that in terms of housing, there is an estimated gap of 7,000-7,317 new housing units which should be recovered through many different policies and programmes of conventional housing, upgrading, land supply, building material credits, private developments, etc.
The result of this accumulated "housing shortage" has several consequences among other things: a progressive deterioration of the living conditions throughout the city, the increase of illegal constructions and a speculative rental market.
The inertia of the Goverment concerning the housing sector and the economic difficulties of the country caused a tremendous effect in the urban structure of the city, as it will be explained below.

a. Clandestine buildings in the periphery and in the neighbourhoods.

Illegal building is part of the urban development in Bissau. In the first place the control of building activities is very weak and in the second place there is no reinforcement mechanism to guarantee the application of the existing building regulations. Since there is no serious response from the Government towards the critical housing needs, and since there is no official land supply scheme concerned with housing through which the acquisition of a plot could become a quick procedure, the only possibility for housing is out of the official circuit.
In the center of the city, there is a process of subdividing residential plots and alternatives for housing are created through the construction of backyard house extensions, often with independent accesses.
In the periphery of Bissau however, houses are built without any pre-established urban plan or any criteria for land occupation. New plots are created as well through subdivisions of traditional land occupation and sold on informal basis without any knowledge of the Municipality.
There is a continuous process of urbanization going on at a significant speed, and consequently agricultural land is replaced by urban housing. This process becomes a very serious matter when one thinks about the economic basis for the future development of the city and the environmental impact of this growth, the threat on natural resources and the preservation of certain areas with future possibilities for food supply for Bissau.
In the popular neighbourhoods, illegal house extension is a common practice, and it occurs even at a higher speed than what is seen in the periphery. The open space is slowly disappearing and replaced by poorly constructed self-help housing extensions that

do not fulfill any requirements concerning minimum standards for size, ventilation, interior light, stability of walls, etc... The consequence of that is that the deterioration of the living space becomes more and more visible.

b. Overcrowding of houses

The lack of a housing policy does not only effect the quality of the living environment but as well the existing housing stock by the indirect stimulating to overcrowd the houses by the members of a family and newcomers.

The number of people living under one roof (house) increases and there are evidences that more and more households share one single room of a house. To give an example, in Mindará, I found two houses of 114 m2: one with 4 rooms and occupied by 3 families consisting of 25 persons, that is an average of 6 persons per room. The other house had 7 rooms occupied by 5 families consisting 20 persons (Acioly, 1989b:1). In Cupilom de Cima, a research detected houses with 20, 30, 40, 41 and even 49 inhabitants all belonging to one single family, with an average of 22 inhabitants per house (Acioly, 1991:19).

This gives a picture of what one can come across in the city, especially in the popular neighbourhoods.

The consequence is that a large number of people have to share sanitation facilities, cooking spaces (varandas) and even beds. During the night the houses are often shared with the animals, which makes it very clear that the living and health conditions do not meet the requirements of the minimum human standards.

c. The increase of renting practices and speculation with renting.

One of the first effects of the public inertia in the housing sector is the development of the rental market. The supply of housing is so low that there is a natural pressure on the existing housing stock which encourages speculation mechanisms.

In the "official city" of Bissau, the old colonial city, there are some astonishing figures of this speculation: houses of reasonable quality, with 3 bedrooms, kitchen, living and dining room, 1 wc and varandas are rented for US$ 600.00 to US$ 1,200.00 per month. According to the study of CESO, the rent of a house may fluctuate from PG 30,000.00 (US$ 15.00) to US$ 1,500.00, and for the city of Bissau it may reach more than US$ 900.00 (CESO, 1990:annex). These houses are usually rented by foreign organizations and in some cases by bilateral projects and governmental institutions. With the economic liberalization, this market attracted a lot of investments in building, repair, renewal and reconstruction of houses for renting purpose.

In the popular neighbourhoods the informal rental market developed rapidly and gave an immediate response to the housing needs of the lowest income groups of the population. The overcrowding of houses, explained above, was accompanied by the increase of practices of subletting rooms and housing extensions. A room of 4.00 x 4.00 mts may be rented in January/1991 for PG 25,000 or PG 30,000 (US$ 10.00), or US$ 5.00 in case of a room of a thatched roof house. In some neighbourhoods more than 50 % of the houses have in one or more rooms renters living, like in Mindará. More detailed information over this phenomenon will be given elsewhere in this report.

Low income renters who occupy rooms and internal subdivision of houses, are obliged to live under very difficult conditions and have to share sanitation facilities with other occupants of the house. The suppressed supply makes them easy victims to all kinds of rent demands made by house owners since there are no renting regulations which could

assure them certain rights. The majority of the people have no written contract and their salaries are extremely low in order to cope with such demands. Thus several evictions are reported.

e. Weak institutional structures and outdated regulations.

The housing sector has not received the attention it deserves from the government and therefore it is not a well organized sector which makes it subject to improvisation and political patronage.

The building regulations and the urbanistic norms which were formulated during colonial times are outdated and do not reflect the actual situation of Bissau, its needs and the socio-economic context of the majority of the population.

The strict application of these norms by the Municipality is strongly felt by the economic weaker groups as a real constraint to improve their housing conditions and therefore they become an indirect stimulus to go outlaw. Many residents prefer to do the entire process marginal to the existing institutional structures because to build a house and to legalize the tenure of the plot implies that the traditional building technology and popular standards cannot be used.

Besides that, the internal bureaucracy of the Municipality desmotivates the residents because it is so slow that a simple request to build an annex may take more than a year until a response is given. This is an open gate for corruptive tricks.

To buy a plot or to legalize an existing traditional occupation and receive a building permit from the Municipality may imply the disbursement of some "extra" capital.

The topographers and draftsmen of this institution, who have acted as intermediaries between the residents and the CMB, have profited a lot from this chaotic situation and have assumed the role of the architect, urban planner and engineer in the process of planning, designing, locating and constructing a building. This resulted in an architecture and urban environment of extremely poor quality, improvised and not at all concerned with elementary norms for ventilation and lighting, optimization of space, building materials, building costs, etc...

However, there are residents who are able to make their access through the bureaucratic procedures very rapidly due to special relationships within the CMB which demonstrates the existence of political patronage and favouring for aquiring a plot, a building permit, official demarcation, legalization. More details about this will be presented further on when the functioning of the Municipality is analysed.

Another aspect is the market of building materials which are mostly imported and sold in the local market at very high prices. In 1991, a sac of cement was sold in Bissau for US$ 9.00 while in Senegal for US$6.00, in the Gambia for US$5.50 an in Portugal for US$2.50.

There are no regulation and no incentives from the Government in order to stabilize the market supply and the fluctuation of prices. There are many signs of monopoly, specially concerning the supply of bricks, wood and cement. Besides that nothing is invested to improve and develop the traditional building technologies and that helps to keep and even increase the dependency on imported technologies.

The combination of several features make indeed the urban and housing scenario of Bissau very critical, such as:

lack of a housing policy and its diverse programs, lack of certain rules and regulations concerning the building material market and the definition of roles of the private sector, the lack of financial schemes to stimulate housing production, lack of incentives to the

private sector and stimulus to develop the construction industry, lack of appropriate building and urbanistic regulations, the lack of an urban land regulation and a land supply policy, the stagnated structure of the Municipality of Bissau and the lack of a definition of the tasks and responsabilities of the Ministry of Public Works towards the city.

4.5 LATEST INITIATIVES IN THE URBAN SECTOR

The latest actions that caused positive developments in the urban scenario of Bissau has the label of the World Bank. Without its financial support none of this could have happened.

In 1990, a Portuguese consultant delivered to the Guinean government one of the studies sponsored by the Bank for the formulation of the national housing policy (CESO, 1990). In three thick volumes, it compiles a series of existing information and presents perhaps the most comprehensive diagnosis about the housing sector known in the country. It stresses the problems derived from the process of economic stagnation and the negative effects of the SAP in the urban and housing sector. The study confirms the low levels of investments in the building sector and emphasizes what was generally known as the existing gap between the real social and economic dynamics of the Guinean society and the existing outdated and unappropriate instruments for urban & housing planning, management and implementation. That includes the chronic defficiencies of the local human and financial capacities as well. The study gives a good cronological view of the process of institutionalization of urban planning when it presents a compilation of all decreets related to this theme issued by both the colonial and guinean government. Nevertheless the study fails to accomplish the necessary short term actions. The recommendations were kept very broad and did not allow the Guinean authorities to make use of it effectively to create the urgent instruments to materialize the policy.

Concerning the city and its urgent problems, the study calls for a total revision of the institutional and legal framework related to housing, building and urban planning and proposes among other things the definition of competences between the Muncipality and the Ministry of Public Works. It suggests the increase of revenues collected by the city and the duplication of projects similar to the Dutch funded neighbourhood upgrading project. The establishment of credit mechanisms is seen as a prerequisite to increase the production of the building sector and a stimulus to housing renewal. According to the study, a great attention should be given to the upgrading and renovation of the physical infrastructure in order to increase urban productivity.

In 1989, the Infrastructure Relief Program-PASI was officially launched. The program has a budget of 17 Millions US$ from which 1/3 is directly financed by the World Bank. 56 % Of the works are done in Bissau (MOPCU, 1990c:15) and the rest is spread among the other urban centers.

PASI intended to reduce the effects of the economic changes carried out by the Guinean government, known as "Structural Adjustment Program-SAP" implemented under the supervision of both the World Bank and the International Monetary Fund-IMF.

The SAP has caused a positive impact on the growth of the GNP, the export and of private consumption, and has decreased the public deficit, but it also contributed to worsen the economic problems of the economically weaker groups, particularly the urban families and the underemployed and unemployed workers. The impact of SAP was immediately seen as the informal sector developed extremely fast in a short period of time and became the natural valve of scape for a great part of the population.

Therefore the main objective of PASI is to generate employment and to create possibilities for the application of labour intensive techniques in the reabilitation of public buildings and infrastrucuture networks e.g. schools, hospitals, markets, drainage, sanitation, water, roads.
PASI intended to tender all the works to legal building contractors. It carried out a survey to identify the profile of the building contractors operating in the country in order to judge their capacity for the implementation of the works. The small contractors could only participate in tendering the works if they would be able to fulfill certain requirements such as updated bookkeeping, manpower capacity, accumulated experiences, availability of basic equipments and machines. These requirements turned out to be a hard demand because the local small contractors had been operating in a very disorganized and amateuristic building sector.
Therefore I argue that the PASI has indirectly stimulated the professionalization of these enterprises and has directly supported their consolidation because it provided an advanced payment in hard currency in order to cover the costs of the acquisition of the imported building materials and equipments.
In Bissau, most of PASI's works were addressed to the "formal" city in the reabilitation of several markets and schools, hospitals, and in repairing sidewalks and drainage gutters in the city center. It paid little attention to the needs of the "informal" city, in fact very little was done within the popular neighbourhoods. Only 430,000.00 US$ (2.5 %) was invested in drainage gutters and road improvement in the neighbourhoods of Reino-Gambeafada (2 drainage gutters and a road), Nema (one road) and Cupilom de Baixo (one drainage gutter). The contractor oriented approach did not allow any involvement of the population directly affected by these interventions.
Perhaps the PASI intended to respond to this problem with the provision of 700 plots through its urban housing component: the country's first sites & services project (685,000.00 US$), called Antula.
The project has received the support of the UNDP-United Nations Development Program and the UNEF-United Nations Equipment Fund which raised its budget to US$ 5 Million.

On short term basis, the project pretends to offer urbanized plots in a well served area (infrastructure and equipments), in order to reduce the critical sanitation problems of the popular neighbourhoods, to supply housing alternatives, to develop the construction sector as a potential job creation instrument and to diminish the risks of social instability (PNUD, 1991:27).
However there are some peculiarities involving the program that are worth to mention here.
There are many institutional constraints and conflicts related to the tasks and responsabilities of the governmental institutions which are directly involved with its implementation e.g. the Municipality of Bissau and the Ministry of Public Works, which already caused a delay in its schedule.
Some other delays are to be foreseen because one of the basic requirements for implementation is the establishment of a Habitat Fund and a financial instrument to provide credit and finance for building materials. This implies a lot of preparations, the training and formation of human resources since Guinea-Bissau has no tradition and no experience for this kind of procedures.
Another constraint is related to the target population.
The project intends to meet the housing needs of the families earning between PG

200,000 and PG 470.,000 (US$ 67.00 - US$ 167.00). This means a contradiction to the project's primary objective and it is to be expected that the families will face difficulties to meet that requirement knowing the average income within the popular neighbourhoods. However, the project brings along a number of positive innovations. Institutionaly speaking, it tries to reinforce an intersectoral approach within the housing sector and to gather different governmental institutions with defined areas of competence. Technically speaking, the project's urban layout presents different plot sizes (150, 250, 300 and > 300 m2) and relates them with different cost recovery schemes up to a maximum of 10 years for the smaller ones, and that gives a chance for the application of cross subsidy mechanisms.
The different plot sizes may offer the possibilities to test creative housing solutions and rational land occupation which is rarely found in Bissau, and this is undoubtely the key practical and conceptual challenge of the project.

Not only PASI has selected Bissau as one of its priorities. The PRI, Infrastructure Reabilitation Project, officially launched in 1990, will invest in Bissau part of its total budget of 43.4 Million US$, from which 50 % is directly financed by the World Bank (MOPCU, 1990c:26).
The PRI focusses on the transport sector (ports, highways, urban roads, river crosspoints) but pays attention as well to institutional support and the development of human resources.
Both Ministries of Transport and Public Works are identified as target institutions and will receive support to build up their planning and management capacities.
The Municipality of Bissau was selected to receive technical assistance for the development of a sustainable solid waste collection system and to update its book keeping and managerial capacities.
Like the PASI, the PRI has an urban housing component which will provide 470 plots for Bissau and 250 in other urban centers. The PRI will stimulate experimental projects and will finance the construction of some housing prototypes.
It is yet early to evaluate the impact of the PRI, but seems to have quite some similarities with the PASI. It also focuses on labour intensive techniques and job creation and has a contractor oriented approach, it intends to support privatization of the transport sector and to stimulate the formation of enterprises. The PRI pretends to increase export capabilities through the upgrading of the most important ports in the country.
However, I consider it as extremely important that the PRI has provided financial support to allow foreign technical assistance during the process of the formulation of the master plan of Bissau.
Until 1991, the city had no legal framework that could provide the basic guidelines for urban development. It is considered as top priority by the Ministry of Public Works but the preliminary proposals which were submitted to public discussions received a lot of criticism and suggestions.
The starting points of the plan are weak. The field survey was fallible and the data collected in the neighbourhoods presented many contradictions with information that was collected by the Muncipality of Bissau and the Neighbourhood Upgrading Project during the same period. Therefore the estimations of the number of inhabitants and the prospects for population growth were inadequate.
The designs were made over an outdated map of the city based on the aerial photography of 1979 and there are no signs that the proposal took into account the aerial

photographies of 1989.
Conceptually speaking, the plan was more preoccupied with zoning and urbanistic regulations rather than presenting a global strategy which would promote and guide long term urban development. The plan has no economic basis and provides no guidelines to create that. There is no articulation with the emerging private sector nor with other relevant social and development programmes which has already the support of foreing aid. The plan lacks short term programmes that are extremely necessary to overcome the existing inertia and the lack of financial resources in the urban and housing sector such as supply of land to private developments and to industrial complexes, deregulation of the existing legal framework of the building sector, generation of revenues, institutional support and articulation with the Municipality, etc.
Unfortunately the plan has a very static approach which is typical of the analytical planning procedures. In general, a master plan should present its different components and subprograms, with clear strategies, which will become instruments to materialize the plan's main objectives, but this detail has been forgotten in the case of Bissau. It disregard a common decision of the Municipality and the Ministry of Public Works to broad neighbourhood upgrading to other nine neighbourhoods and makes no effort to articulate the existing Dutch funded neighbourhood upgrading project with the Antula sites & services project. The plan does not realize that these projects can form the core of the future urban development strategy of Bissau. Their success is a pre-condition to duplication and institutionalization and therefore they become a key element for the future of the city.

4.6 THE MUNICIPALITY OF BISSAU-CMB

Until this point I have described the city of Bissau and identified its major problems but an analysis of the governmental institution that is responsible for its management is certainly missing. The complexity of the Municipality deserves a serious analysis that could eventually help the formulation of guidelines that can be used to increase its capacity of planning, implementation, management and collection of taxes and tariffs. This would certainly deviate me from the aim of this study. I only intend to present evidences that the aprehension about the turnkey problems of Bissau is closely linked with the understanding of the operation of the Municipality.
Until the independence, the structure of the CMB was divided in four different departments: Administration & Plots, The Central Electricity Supply, Urbanism & Water & Sewage, Markets & Slaughterhouse. It has always kept a relative autonomy in relation to the local colonial government but in 1976 it suffered its most serious set back as a local authority resulting from the centralization process undertaken by the newly created Guinean government. The CMB was renamed as State Commissionery of the City of Bissau-CECB and a new structure with two directorates was formalized without the water and electricity components. The result was that the CECB lost completely the financial autonomy that the CMB had until then. All revenues started to be collected by the Ministry of Finance and later allocated to the CECB. The formulation of plans and the whole cadaster of the city was shifted to the Ministry of Public Works. The latter became the central government institution responsible for urban and building affairs of the whole country, including Bissau. The water and electricity company-CEABIS was created and those services were taken out of the CMB without any kind of compensation. The following years were earmarked by a complete undefinable institutional framework,

who does what and when in the city, and a complete deterioration of the municipal services started to occur. A lot of duplication of functions and competences with central government ministeries was also reported.
In 1988, the Guinean government abolished the CECB and reorganized the Municipality with another institutional structure divided in three different directorates such as Finance & Administration, Environmental Quality & Transport, Planning & Urban Management. But in practice this structure has never come into operation due to a lack of trained personnel, equipments and physical space, financial resources, and the insufficient generation of revenues due to weak collection of fees, taxes and tariffs among others. What characterizes the performance of the CMB today is the maintenance of the most important instruments of the colonial administration mainly the building codes and urban regulations and the public management system.
The CMB is a very complex entity nevertheless for the purpose of this study I will center the analysis on the Planning and Urban Management Directorate because it illustrates how urban planning is thought and implemented.
The CMB has actually 470 employees from whom 60 are allocated in this directorate. There are 8 technicians from which 5 are university graduated, 4 architects and 1 civil engineer. Four topographers and 7 draftsmen plus administrative and assistant personnel completes the staff.
The first absurd situation is referred to the salaries of its personnel. An architect is earning about US$26.00 per month, almost 1/7 of the GNP per capita.
If one considers that a simple housing unit of 2 rooms supplied with water and electricity and eventually served with toilet and kitchen is rented by US$25-30 per month it is not difficult to predict that this person is forced to develop a survival strategy that consequently divert him from his duties as a civil servant. His private initiatives become priority to provide him a second source of income. This disparity provides the most suitable ground for the establishment of corruptive behaviour and patronage.
If one looks at a particular internal procedure of the CMB, very astonishing facts are revealed: a single request for a plot has to go through an administrative channel of 14 sections until it can be replied. When an illegal building is detected by an inspector of the CMB, his information has to go through 10 sections until the fine is payed by the builder and two more in case the building is to be demolished.
This long, slow and annoying process is not at all appreciated by the population and leads to a wide range of outcomes. Nor the civil servant nor the citizen is sufficiently motivated to fulfill his duties and obligations. The indifference of the staff of the CMB induces the citizen to proceed through other quickest and most efficient channels, often placed in the border line that separates the actual law and regulations from briberies and corruption.
The amount of documents circulating and the piles of paper accumulated on shelves and tables provides a chaotic image. According to CESO, in the end of September 1991, 1,700 documents and 4,700 requests entered the CMB but only 800 came out with a reply, and only 900 warnings were issued by the Municipality (CESO, 1991:24).
The next table confirms that the stagnation of the CMB has a negative impact on the urban development of Bissau and helps to understand the process of illegal land occupation.
The number of building permits decreases every year, see **Talbe 4.1**, while the evidences show that the housing stock increases at a frightening speed without any participation of the CMB. Based on an annual population growth of 5 %, it is possible to estimate that

Bissau is gaining 9,000 new inhabitants per year or 27,000 inhabitants in three years who presumably demand 3,292 new houses, considering an average of 8.2 persons per family (BKH, 1984).

Table 4.1 : Building Permits issued by the Municipality of Bissau

Type of Building Permit	1988	1989	1990
Definitive Status	099	097	064
Provisory Status	131	123	103
TOTAL	230	200	167

Source: "Assessoria Tecnica a DGHU/CMB, Programa de Acao Municipal, PRI/MOPCU, mimeo, 1991.

This is a presumption to show the gap between the number of houses officially built and those built informally. The table 4.1 shows that in this period (88-90) only 597 building permits were issued by the CMB, that represents only 18.1 % of the presumed number of new houses. This is the ultimate evidence that more than 80 % of the housing stock of Bissau is produced outside the legal urban framework. This is not a new phenomenon in the African context which is demonstrated by the expample of other cities such as Dar es Salaam where 75 % of its urban population and and 59 % of Ouagadougou live in informal settlements (UNDP, 1990:88).

For Bissau it is just another evidence of the incapacity of the local government structures and the unsuitability of the planning instruments mostly inherited from the colonial periods. The existing directorate of planning and urban management is totally stagnated and is unable to accompany the development of the city and to cope with the demands and the needs of the population.
To face this situation, one would expect the government to undertake serious action and formulate innovative policies that could overcome the inertia and be immediately translated into projects, land allocation, internal adjustments to improve public efficiency and increase the city's revenues.
The allocation of plots is practically insignificant compared to the amount of daily requests received by the CMB. According to Lopes, who is the officer in charge of the allocation of plots, 1,732 plots were conceded throughout the city between 1987 and 1989 (Lopes, 1989:03), see **Table 4.2.**
However, Lopes does not provide more details about the location of these plots, if they were vacant plots or if the allocation was just a formality to legalize existing occupations.

The land issue reveals a series of anomalies. There is no systematic storage of records to demonstrate the number and the nature of the requests for land nor a cadaster of the allocated plots. There is no criteria for approval and it is often an ad hoc decision without any logic or minimum planning reference. A resident may receive the authorization to build a house under provisory status in an existing vacant space in a neighbourhood in case he detains the traditional property of the area. If this house will create a future problem when an urban plan is formulated or infrastructure works needs to be implemented, that is of no concern. Knowing the limitations of the CMB many

residents uses this mechanism to produce housing schemes because in Bissau the so called provisory can become permanent and consolidated. The difference between provisory and definitive status of a building will be explained further on.

Table 4.2 : Allocation of Plots by the Municipality of Bissau

Type of Allocation	1987	1988	1989	Total
Provisory (precarious)	309	349	165	823
Definitive	256	327	326	909
TOTAL	565	676	491	1,732

Source: "Oferta de Lotes dos Terrenos em Bissau, M. Lopes. PNBB, mimeo, 1990.

The topography section has no cadaster control of the demarcations executed and nobody is able to promptly inform where and when land has been officially allocated and legalized. The lack of this most basic management procedure provides a suitable opportunity for illegal transactions involving land which in most of the cases are not detected. That was not the case of a topographer who was caught in 1991 when the house was already built and occupied. He carefully organized the request for a plot made by an inhabitant, he identified a vacant space in a neighbourhood, demarcated the plot and alligned the house and received a payment that was 6 times his salary.
The CMB does not take advantage from the fact of having the whole land stock of the city under its control. In principle it should be considered as a positive step to establish an efficient management of urban development because it allows the autonomy of the local government to guide city growth and diminishes the chances for eventual land speculations by private developers in locations of vital interest of the city. But if state property of land cannot be translated into policy instruments that favor urban equity and easier access to land by the poorest groups, then the effect is reversed.
Land could become a continuous source of income for the CMB in case a minimum of organization and the application of realistic lease and tax prices would exist. An analysis of the values charged by the CMB shows that not only the internal organization but also the tariffs related to land need to be completely restructured.
In 1990, the common plot of 500 m2 was allocated at a price of US$0.50 per m2 for provisory and US$2 per m2 for definitive allocation. So that a plot can be acquired by US$250 or US$1.000 depending on its status. A quick survey carrried out by the PASI one year before demonstrates that the calculation method used by the CMB is totally obsolete and does not accompany the natural increase of such essential commodity. According to that, a plot of 350-370 m2 could already be bought by US$290 and after improvements it could be sold by US$1,090 - 1,300 (PASI, 1989: annex13,05).

Another disparity is verified in the process of collection of revenues originated from land occupation. Most of the houses in unplanned areas (illegally built or authorized as provisory status) must pay directly to the CMB an annual land occupation tax of US$2.50. The amount is ridiculous and in practice most of the house owners do not pay it frequently and the CMB has no instrument to persuade them to pay their debts. Unless the inhabitant needs a certain declaration or document from the CMB.
The land and building taxation of the legal urban fabric is collected by the Ministry of

Finance and only afterwards a parcel of that is transfered to the CMB but according to CESO only a very small percentage is collected. Out of the total housing stock of the city, only 744 houses payed the tax (CESO, 1991:117). If one presumes that the legalized housing stock would reach a number close to 15,000 buildings then it becomes obvious the bankruptcy of the system and the state of penury of the CMB. What makes it worse is the fact that there is only one tribunal to judge fiscal matters.
Existing data shows that the collection of revenue is decreasing every year and the CMB is more and more dependent on the resources originated from a few specific items such as the markets and the slaughterhouse. They respond to 55.23 % of the total revenue collected in the first semester of 1991 (CESO, 1991: 66), the rest is spread among other items such as land occupation (5.25 %), building permits (4.91 %) and fines & penalties (1.39 %).
The CMB is greatly dependent on the subsidies and transfers made by the Central government and despite the low salaries the expenditure with personnel reaches 50 % of the total overhead costs. In reality only 23 % is available to make investments and maintenance of its equipments, urban services, that means a poor and insufficient amount of US$68,000 (CESO, 1991:74).

At last, the inherited building and urban regulation represent a major barrier to the urban poor in their struggle to build a house, it constrains housing production and the collection of revenues.
There are two basic concepts utilized when a plot is legalized or a building permit is issued by the CMB which defines the status of the property title and the type of taxes that must be applied. Definitive is related to a building made of "manufactured" materials such as brick and concrete blocks, it must have a high standard quality, toilet and kitchen, and a complete project design. The legalization of the plot is strictly linked with this type of construction and vice-versa.
Provisory (precarious) is applied to all buildings constructed with traditional local materials such as mud, adobe blocks, a low standard construction. A traditional occupation cannot be legalized in the form of perfect property title if such a construction exists but such a house may be authorized in legalized plots that are not served by basic infrastructure. In certain areas of the city the traditional technology is simply forbiden.
When a plot is allocated under a "precarious" status the CMB has the right to have it confiscated without financial compensation in case it needs the area for a specific project, road, infrastrucure, etc... and therefore the resident is very reluctant to make many investments. Nevertheless, the margin of tolerance of the CMB is so wide that many residents who have the means to construct a good quality house opt to do so because they bet on a long term "de facto" recognition of their plot.
That is the duality of criterias utilized by the CMB which shows a clear discrimination towards the traditional technology because it forbids the use of adobe or mud in buildings constructed in the plots served with all basic infrastructure. This attitude constrains the development and refinement of the local building materials which could certainly lower the costs of housing construction.
There are three conclusions. The required standard is extremely difficult to be reached by the majority of the population, the provisory character of building and the plot does not stimulate further investments by the user, and the CMB looses the opportunity to implement a policy of land allocation that would immediately increase the collection of revenues.

4.7 THE ASSIGNMENTS OF THE CMB

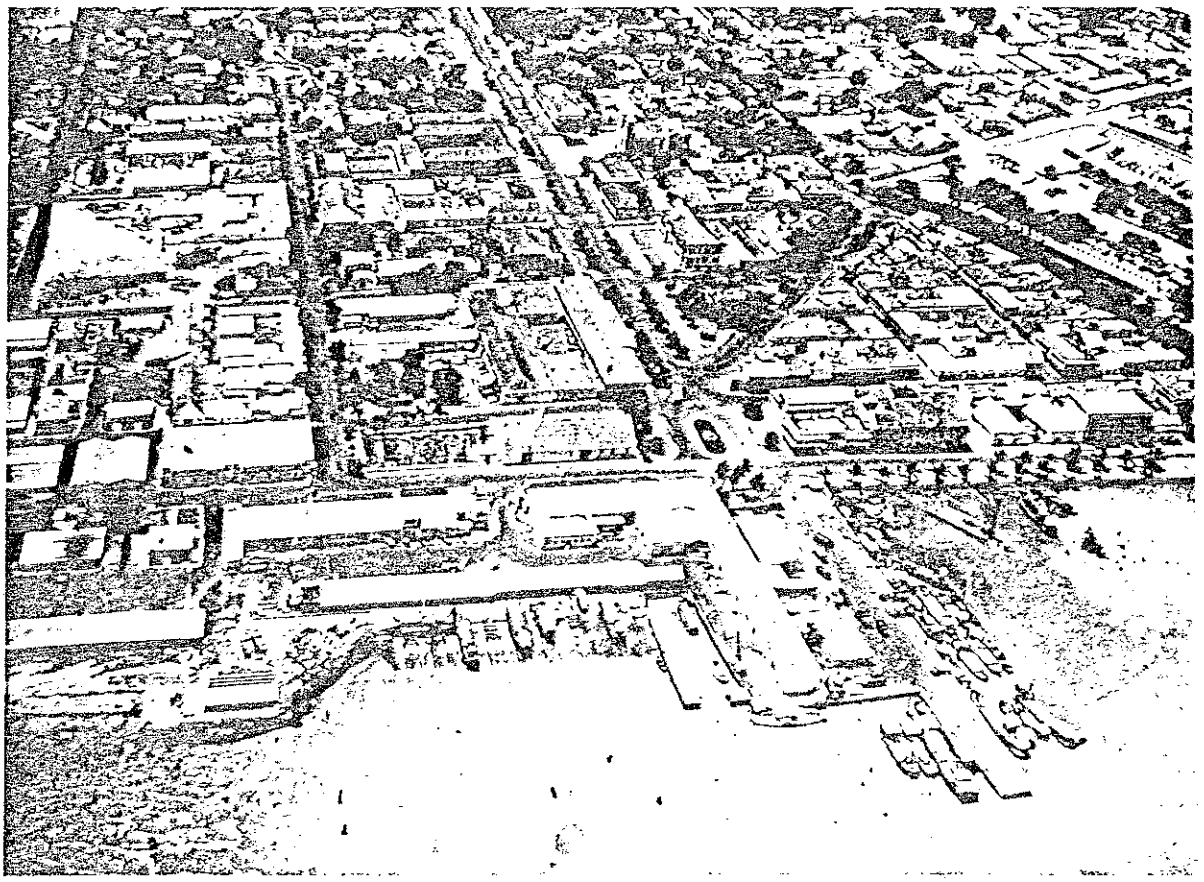
Besides the overall urban management tasks related to land allocation and legalization of plots, building permits, cadaster of the city, maintenance of the public spaces and drainage system, the CMB is supposed to authorize and inspect the works related to water and electricity networks which are responsabilities of the Water & Electricity company. The Municipality is responsible for maintenance of all roads of the city and this is done by requesting and paying for the services of the MOPCU, and should take care of the parking places and keep the maintenance of all traffic signs in the city; the maintenance and exploitation of all markets, the slaughterhouse, curral and cattle range and the collection of solid waste (of which they are the only one responsability of the CMB). The demolition of illegal buildings and the solution of occasional conflicts of property rights lays under the list of responsabilities of the CMB as well. The collection of taxes related to the "precarious" occupations in the city is done directly by the CMB. The Municipality has the autonomy to undertake actions related to urban planning, land subdivision and allocation of plots, taxations and tariffs, but it does not have the means (financial, material and human resources) to do so. The present list of tasks of the CMB is not compatible with its real capabilities to assume all the responsabilities derived from it and consequently some tasks are neglected and others are partly implemented.
Besides there are some conflicts of attribution that are not solved yet creating a lot of constraints for the CMB.
There are conflicts with the Ministry of Finance who centralizes the collection of land and building taxes; with the Ministry of Public Works who is responsible for the formulation of the master plan of the city and for the building and urban regulations; and with the Water & Electricity company who has never provided any financial compensation for taking over the exploitation of these two urban commodities.
The direct allocation of financial resources that are originated from land and building taxations and from water and electricity should allow the CMB to invest in certain priority areas of activity. However, it is not the guarantee to have a positive outcome in terms of its efficiency unless there is a total "enterprise" oriented administrative reform and a simplification of the internal functioning of the CMB.

With the MOPCU, the conflicts are more serious and involve a struggle for power between the two governmental institutions. The cadaster maps of the city are still kept by the MOPCU whilst the CMB is proceeding with a series of land subdivison schemes and allocation of plots that are not kept systematically in the cadaster, and which are often critized by the MOPCU. The CMB argues that it is the Municipality who is confronted with the daily needs of the city and is directly negotiating with residents and institutions whereas the MOPCU is more concerned with the macro policies, programmes and regulations, and has the ultimate responsability towards other urban centers of the country. Therefore the CMB wishes to have a more practical oriented plan for the city and evokes a series of divergences with the actual proposal of the master plan presented by the MOPCU. As a consequence the level of collaboration and articulation is very weak and makes the urban management of the city even worse.
For many years, the CMB assumed a subordinated role in relation to the MOPCU but from 1989 onwards, when it organized its technical planning staff, it started to claim for a more decisive role concerning the planning of the city.
It is indeed a question of decentralization of power towards the city and administrative

and financial autonomy of the local governmental authority. The CMB detains the control of the land stock of the city and wishes to assume the control of the planning process as well but falls short due to its weak structure, disorganized planning department and dismotivated technicians. The divergences between the CMB and the MOPCU has serious consequences for the city, while the MOPCU formulates a plan for a specific zone of the city, the CMB allocates plots and/or legalize existing occupations in the same area.

There are no positive prospects if there are no official definitions of tasks and attribution between the CMB and the other governmental institutions involved with the urban problems of the city, especially the MOPCU. There is an urgent need of optimizing cooperation linkages within the governmental structure. It is also necessary to accomplish a self-sufficiency of the current activities undertaken by the CMB referring to formulation of plans, execution of projects, taxation and collection of revenues, maintenance of equipments and exploitation of markets and vacant land.

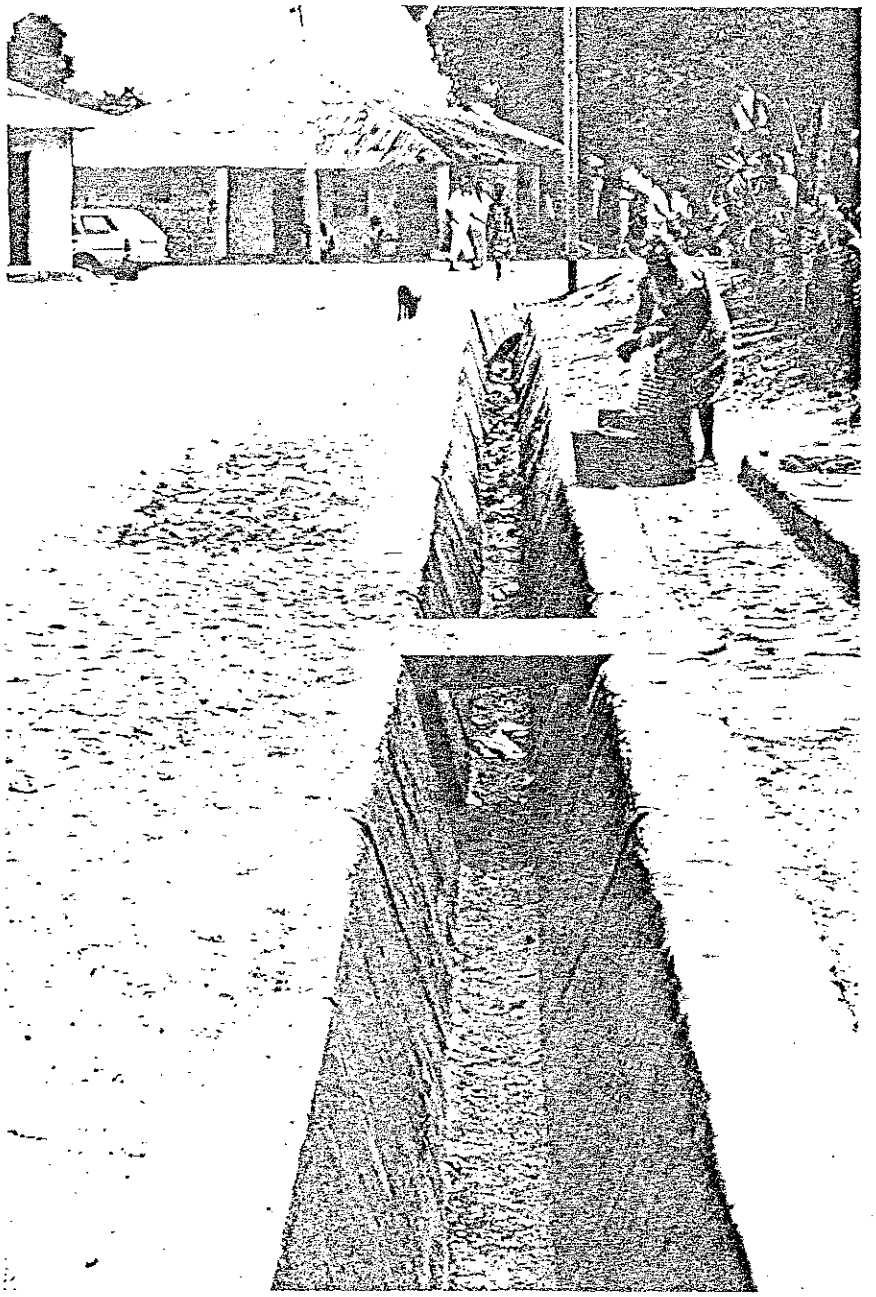
However, no concrete results can be expected unless it is accompanied by an efficient internal adjustment of the CMB and the creation of financial mechanisms that can capture the motivation, the self-esteem and the full engagement of its staff.



Detail of the colonial urban core of Bissau, photo taken before the independence of Guinea-Bissau.

PART III

THE FRAMEWORK OF DEVELOPMENT COOPERATION



View of an improved road with a drainage gutter implemented in Mindara by the Dutch funded project.

5

THE DUTCH DEVELOPMENT COOPERATION IN GUINEA-BISSAU

The involvement of the Netherlands in the development of Guinea-Bissau has just completed 13 years in 1991.
During this period there were many failures and successes of several projects. Many missions were necessary to solve eventual disagreements concerning the orientation, goals, targets and even policies of the different projects. Evaluation missions formulated reports and many guidelines have been suggested; how far these recommendations have been considered in the (re)design of projects is indeed a very interesting subject of study.
It is not my intention to analyse all projects but I rather concentrate on policy issues which may have played a role and perhaps influenced the decision to start an urban habitat project in Bissau. The Neighbourhood Upgrading Project of Bissau - PMBB is one of the many Dutch financed projects in Guinea-Bissau but it is the only urban project oriented to the habitat problems which are presently carried out by the SNV, the Dutch Development Organization.
The start of the Dutch involvement in the development of Guinea-Bissau is directly related to the economic and political situation in both countries.
While in the Netherlands the government was formed by a left oriented coalition, in Guinea-Bissau a new government had taken power in 1974 with clear left orientation and a strong will to establish a new socialist society.
By that time, there were sufficient governmental funds available to support the development of the less developed countries. It was not difficult for Guinea-Bissau to meet the selection requirements in order to be chosen as one of the target countries for Dutch aid. The country was one of the poorest in the world and was struggling to reconstruct its devastated infrastructure; it was a recently founded nation seeking its self-determination and struggling to achieve a sound process of development which could lead to the establishment of a socialist society.
The Netherlands seemed not to have a short or long term economic interest in the country because it had not much to offer in return. Instead, the political scenario seemed to have lead the Netherlands to start a comprehensive involvement in the development of Guinea-Bissau, and that seems to apply to many other European countries.
The year of 1978 was a turning point in terms of financial aid to Guinea-Bissau and by the end of the 1970's it experienced a remarkable flow of aid into the country from many different sources and donors. One can speak about great international political sympathy for Guinea-Bissau, comparable to Nicaragua during the following decade.
The year of 1974 was also a turning point in the evolution of the development co-coperation policy of the Netherlands. The independence of Guinea-Bissau coincides with a radical shift of the Dutch policy which has the stamp of the Minister of Development

Cooperation, Mr. Jan Pronk (Bilaterale Ontwikkelingssamenwerking-om kwaliteit van de Nederlandse hulp).
A comprehensive policy was formulated which reorientated the strategies of the Dutch cooperation, so that national economic development was thought to be achieved only if it could result in self-reliance of the target countries and of their most needed groups, that means a more equitable distribution of the benefits that are produced throughout the development process. Instead of proposing a localized intervention and provide instant project solutions for specific development problems, the new policy should search to promote self-sustaining and comprehensive development procedures. The "processual approach" becomes then the key element.

Until 1973, the policy focussed on promoting national economic growth and it was thought that the Dutch private and business sector could play a more relevant role in the economic development of the developing countries. However, the poorest groups of society never did profit from the modernization, industrialization and the consequent growth of the GNP, which was experienced by several countries. The wealth that was eventually produced was accumulated by a small elite of society, consolidating an uneven distribution of income. Simply because there is no automatic link between economic development and social progress.

What seems to characterize the Dutch development co-operation policy is the emphasis on the agriculture sector and rural development, and in lesser extent on education and development planning sectors (IHS, 1983:40). And this is quite visible when one looks at the target sectors of the funds.
It is interesting to notice that despite the astonishing and irreversible process of urbanization which has been experienced by the great majority of the developing countries throughout the last two decades, the urban sector and specially the habitat problem has been neglected by both the official government development cooperation policy and by the SNV.
In 1978, there were 17 habitat projects funded by the Dutch aid and that represented 6.3 % of the total aid of that year while in 1981 the number of projects is raised to 110, from which 45 were related to the provision of water supply system but it only represented 6.0 % of the total aid (IHS, 1983:43).
This discrepancy between urban and rural Dutch funded projects with a clear preference leaning towards the latter, has characterized the orientation of the SNV as a development organization as well. In such a way that in 1990, the organization was involved in 420 different activities, from which 61 % was related to rural development and only 8 % in women and urban affairs (SNV, 1990b:43).
In the case of the SNV, the nature of its involvement in the urban sector reveals the following figure, see **Table 5.1.**
According to this table, there are 44 different urban activities carried out by the SNV, which means a small increase from 8.0 % to 10.47 % of all the activities carried out by the organization in the urban sector. Despite this small increase of urban projects, Habitat comes still as second priority, and logically it could not have been different in Guinea Bissau.
In 1978 Guinea-Bissau was selected as a "concentration land" by the SNV and in this year its office was officially opened in Bissau.
One year later, in 1979, a reconstruction fund of Dfl. 13,500,000.00 was put at the

disposal of Guinea-Bissau but it was only in 1983 that an official decision was taken to start with the Neighbourhood Upgrading Project of Bissau.

Table 5.1: Urban Involvement of the SNV

Sectors of Involvement	Concluded	Going on	Planned
Habitat and Housing	04	10	02
Employment & Informal Sector	12	25	03
Community Development	02	04	03
Institution Building & Support	01	03	05
Combination of these components	--	02	04
TOTAL	19	44	16

Source: "Inzetten in Stedelijke Projekten", J. Hoogerbrugge, SNV, 1990.

The activities of the SNV in the country were related to the projects funded by the General Directorate for International Cooperation of the Ministry of Foreign Affairs-DGIS and it was only after 1981 that the SNV started to assume new projects funded by the organization itself and by other donors.
During the last ten years, it is estimated that the Netherlands has provided over Dfl 100 Million to the country, supporting its balance of payment, financing projects of rural development, roads, housing projects, educational building complex, an industrial plant, health centres, a small dam, educational programs, and obviously a neighbourhood upgrading project.
In 1990, the SNV was involved in 14 different projects in Guinea-Bissau as follow:

Rural Development	5
Education	3
Employment - income generation	2
Health Care	1
Urban Infrastructure	1
Institution building - rural	1
Industry - employment	1

This sector classification is not the same as the one applied by the SNV. For instance the COOPAC, a project supporting the cooperatives of the retired soldiers (ceramic, car repair workshop, cloth making) is classified by the SNV Bissau as an urban project while the annual report of the organization classifies this project as "forms of organization & cooperatives". I prefer to place it under the sector of employment and income generation because this is a better description of the nature of the works although organization and management represent a very relevant input of the SNV. But the fact remains that the priority is given to the rural sector.
Looking at the evolution of the Dutch development policy and particularly at the way the Netherlands started its involvement in Guinea-Bissau, it becomes evident that the decision to start the Neighbourhood Upgrading Project of Bissau is less determined by a policy orientation than by the demands and priorities put forward by the Guinean government.
Habitat has never been a priority of the Dutch development aid policy. Although the

Netherlands' participation in the United Nations Habitat Conference (Vancouver, 1976) called the attention for new approaches in the urban sector in order to diminish the problems of the urban poor (IHS, 1983:43), it did not cause any shift or any positive impact in terms of policy definition. It is only recently that the urban sector gained importance in the Dutch development aid policy.
Fighting against urban poverty becomes a key element at last in the policy and a clear strategy has been formulated in the policy paper presented by the actual Minister of Development Cooperation, once more Mr. Jan Pronk (Een Wereld van Verschil;nieuwe kaders voor ontwikkelingssamenwerking in de jaren negentig, 1991). Later on I will come back to the point of the effects of this new policy in the follow up phase of the Dutch funded Neighbourhood Upgrading project.
The focus on urban problems in this policy paper, and especially on habitat issues, should not be seen as the result of a sudden state of urban awareness of the Dutch government but the utmost step of a long process which started perhaps in 1984, when the Dutch Habitat Commission-NHC was found. Since then it has been carrying out several actions within the Netherlands in order to call the attention for the problems of the urban poor, especially during 1987, the United Nations International Year for the Homeless. It mobilized financial resources, identified projects and mobilized political suport for habitat issues. Several organizations joined the actions, working groups have been formed within the Universities, specialized courses were organized in different faculties, newsletters, and all that seems to have achieved a positive result.
In 1991 the Dutch government created an extra fund of Dfl. 10 Million to support projects that are aiming urban poverty reduction, this fund is expected to grow progressively to Dfl 30 Million in 1995.

5.1 THE NEIGHBOURHOOD UPGRADING PROJECT OF BISSAU-PMBB

In 1982, the General Directorate for International Cooperation-DGIS sponsored a mission to Guinea-Bissau in order to identify possible projects and to achieve an agreement about the use of some financial resources still available from the 1979 reconstruction fund.
The mission detected a critical housing problem in Bissau. There was a deteriorated housing stock with an average of 14 occupants per house (Posma, 1982:16) which demanded urgent renewal. It suggested to define an ammount of 700,000.00 Dfl to support the construction of 140 new houses under a voluntary assisted self-help basis utilizing local building materials and some imported components. According to the mission, the housing production should increase immediately in order to decrease the number of occupants per house verified in Belém and Mindará.
The mission recommended the start of a pilot project at the end of 1983 (Posma, 1982:19). In that year, after a series of discussions, the parties agreed to start a neighbourhood upgrading project in Mindará, Belém and in the city of Quinhamel, 35 km from Bissau, with a budget of 2,900,000.00 Dfl and a counterpart contribution of PG 11,000,000.00 per year.
One year later, DGIS tendered the formulation of the project to a private Dutch consultant and a complete report was formulated and presented to the Guinean authorities. The proposal emphasized technical matters related to the declivity of the drainage gutters in relation to the catchment areas, although it presented a summary result of a socio-economic survey. Nothing was reported about urban planning and many aspects related to implementation were not sufficiently defined, which received critics

from the Guinean authorities.
The Guinean wished to combine the execution of the project with a production plant of pre-fab concrete components imported from Cuba, called Sandino. The idea was to diversify the activities of the Sandino plant and make use of its components in the execution of the drainage gutters, and utilize its manpower experience in the brigades of the project.
This was never materialized because the Sandino experience revealed several failures and there were many doubts about its management, economic and productive efficiency which did not convince the DGIS.
In 1986, the DGIS finally decided to hand to SNV the responsability for project implementation and a contract was signed with the Ministry of Public Works.
Quinhamel was excluded as target city of the project and the preferences declined towards Belém, Mindará and Cupilom de Cima due to a series of studies already made in these neighbourhoods by a German cooperation, sponsored by the United Nations, in which the concepts of neighbourhood upgrading were clearly formulated, for location of the neighbourhoods see **Figure 4.2.**
"After the conclusion of the works in Mindará, the Project was transfered from the Ministry of Public Works (MOPCU) to the Municipality of Bissau (CMB). Several previous objectives were redefined. The goal is to improve the habitat and living conditions of the inhabitants of the popular neighbourhoods of Bissau and to establish a process of gradual improvements agreed by the community and by the local authorities.
The project is defined as a community project. It has an evolutionary character and should rely on the financial and material support from the Guinean government, the Municipality of Bissau and the SNV untill the moment a definitive and sustainable form of self-management can be realized" (Acioly and Gijselhart, 1991a:08).

5.2 OBJECTIVES OF THE PMBB

According to the contract (CMB, 1988:02), the objectives of the project were defined as follows:

Long Term Objectives.

a. The consolidation of the project within the institutional framework of the Municipality of Bissau.

b. The establishment of an economic basis for upgrading policies through the implementation of a tax system which must be suitable to the socio-economic conditions of the population and agreed by the parts involved.

c. To search the direct involvement of the population and the government agencies related to the project.

d. The establishment of neighbourhood improvement as a self sustained and continuous process without the dependence of foreign intervention.

Short Term Objectives

a. The implementation of infrastructure and public facilities in the neighbourhoods of Mindará, Belém and Cupilom de Cima, with a target population estimated around 20,000 inhabitants. The quantities and standards would be fully depended on the agreement with the target residents and the local authorities and be limited by the funds available for each neighbourhood.

b. The infrastructure components and public facilities were defined as follow:
   - potable water supply network
   - public water taps
   - drainage network
   - improvement of accesses and roads
   - trash collection system
   - access to building materials through credit systems
   - sanitation facilities (latrines)
   - improvement of houses

c. The implementation of participatory schemes and community involvement. The production of information booklets about neighbourhood upgrading, neighbourhood organization and maintenance activities, and its delivery to the residents of the neighbourhoods.

d. The transfering of knowledge and the training of the Guinean counterparts posted at the project in technical and management aspects, in order to form a group of local professionals which will guarantee the continuation and consolidation of the project under the tutorship of the Municipality.

e. To cooperate with the Guinean authorities in the formulation of a housing and urban policy based on the experiences and achievements of the project, with special attention to regulations and legislative matters.

f. To support and reinforce the role of the existing grassroot organizations in the neighbourhoods through seminars, meetings, and overall contacts, in cooperation with the Municipality and other public institutions.

5.3 THE EVOLUTION OF THE PROJECT APPROACH

The project was initialy defined as an infrastructure improvement project, providing basic infrastructure: water supply system and public water taps, drainage system, improvement of main access roads, trash collection system, and some public latrines.
In 1986, when the PMBB started the implementation in Mindará, the item housing improvement was crossed out of the contract signed between SNV and the MOPCU, so that the issues of housing and urban planning were out of the question. The lack of these two important components influenced the conceptual definition of the project and the way it was understood by both the MOPCU and the SNV.
At first, the problem was thought to be a conceptual divergence between the SNV and the MOPCU but in fact it generated a serious institutional conflict which caused a lot of delays and even the complete paralization of the activities of the project.
The lack of a settlement layout plan for the neighbourhood was justly emphasized in the criticism of the technicians of the MOPCU. However, they insisted on having a complete "ready to live" neighbourhood which had more to do with the principles of slum clearance policies and bulldozing actions rather than with the concepts of settlement upgrading. Their point of view was much influenced by the ideas brought from the architecture and engineering schools of Iugoslavia where most of the MOPCU team had studied and where most of its technical assistance had come from.
This type of approach implied a great change of the pre-existing urban structure of the neighbourhood which certainly would cause direct and indirect impacts in the residents' living conditions. It implied that many houses would have to be replaced from their original location and consequently a high disbursement of capital by the project in order to finance the demolition and reconstruction of the houses. This could only be feasible if a good articulation with the residents could be achieved.
Was the project well prepared for that ? Was the context of Guinea-Bissau sufficiently mature to go through that kind of experience ? Could the SNV take the risk and was it interested to go on with this alternative ?

The SNV preferred to start a pilot experience in Mindará because both the organization and Guinea-Bissau had no tradition and no former experience in such a project. The SNV was more in favour to implement a progressive development approach which implied a gradual process of improvement and substantial inputs in terms of the provision of basic infrastructure but no attention was given to the structural problem of the neighbourhood: its peculiar urban morphology. The struggle between the gradual development approach supported by the SNV versus the radical intervention guided by an urban plan for the whole neighbourhood, defended by the MOPCU, was time consuming and caused negative effects in the performance of the project. The discussions came down from conceptual grounds to more practical levels of implementation, in such a way that the construction works became extremely difficult. The Guinean counterparts and the expatriated team were discussing the validity of certain solutions right at the spot at the moment of execution.
Although the urban structure of Mindará was very problematic, the project opted to adapt the infrastructure networks to the pre-existing pattern situation, without demolishing houses that would consequently create space for a rational implementation of the infrastructure networks and roads.
The conflicts with the MOPCU increased. The approach put forward in Mindará did not

give a good impression. In the mean time, an evaluation mission took place and came to the conclusion that there was insufficient involvement of the residents and that not much was done in terms of maintenance and management of the benefits introduced in the neighbourhood. Although the works were considered of good quality, the intervention was not in accordance with the views of the MOPCU. The mission recommended the project to reorient itself and reformulate its objective according to a global view of the town planning of Bissau, as the MOPCU had insisted. According to the mission's report, too much time was spent on discussions concerning town planning, housing policies, etc, but it emphasized that there was an urgent need to define clear tasks and responsabilities of the MOPCU and the project in another agreement. The project team was not very content with the results of the evaluation mission and concerning the relation between the project and the MOPCU it was completely deteriorated, there were problems at all levels which the mission was not able to solve. The project slowed down and finally stopped.
In 1988, the project was shifted to the Municipality of Bissau and a new contract was signed between the SNV and the Municipality. A plan of operation was formulated and the implementation of the works started in Belém.
At this stage, the project gave much atenttion to implementation methods. Emphasis was put on the development of working brigades and the establishment of a productivity system in the implementation works where minimum performance rates were defined for every brigade according to its tasks within the implementation cycle.
It was also in Belém that the project did put forward its first campaign to raise the sensibility of the residents towards the improvement of their living space. The campaigns focused on water supply and trash collection and intended to bring about community awareness, neighbourhood organization and individual responsabilities concerning several aspects of neighbourhood upgrading.
For the solid waste problem the target groups were the schools of Belém and the women. For the water supply campaign the whole neighbourhood was the target.

In the beginning of 1989, the project recruited a new team. Until then, the project had been operating with 4 expatriated experts: an administrator, the project leader (an economist), a civil engineer and a construction manager (engineer), and according to the new contract with the Municipality of Bissau, the expatriated team is raised to 6.
From now on, the post of the architect will be occupied, and housing and urban planning will receive a great attention.
I was recruited to develop the plans of the neighbourhoods and to formulate a technical assistance program. I should also give form to the housing component of the project and formulate guidelines for community participation and neighbourhod upgrading policies, and carry out research activities. Right after my arrival, I could test certain ideas in a small scale pilot experience of rebuilding 6 houses, which were burned down in Mindará. And that could be useful before starting in Cupilom de Cima. A detailed analysis of this experience will be given in part V of this study.
The optimization of the adobe block as a building material, produced "in loco" by the residents, showed the potentials of a local building material. The building process revealed where and how the participation of the resident is necessary, and it showed how the production of a house can stimulate the resident's self-esteem and motivation. This experience demonstrated that housing was a relevant instrument to capture residents' mobilization but to build a house with the financial and technical assistance of the project would face some constraints, as it is explained in **Part V.**

By the end of 1989, the project started its activities in Cupilom de Cima and had the opportunity to formulate an integrated plan which combined provision of infrastructure, housing and urban planning, individual sanitation facilities and residents' participation. As a final objective, the project intended to demarcate and officialize all individual plots and create possibilities for a land taxation policy, to be implemented by the Municipality of Bissau.
With this approach the project gained a good reputation and improved its relation with governmental agencies, especially with the Ministry of Public Works, the Municipality of Bissau, and with the residents and local technicians.
This became clear when the Project organized a seminar, in October 1990, in order to discuss the problems of the popular neighbourhoods of Bissau. The project could present an overview of its achievement and the local technicians from both the MOPCU and the Municipality of Bissau were invited to present papers on defined themes. Case studies from Senegal, Cape Verde, Burkina Fasso and Brazil were presented by invited lecturers, and in total 16 papers were presented. The seminar became an excellent forum of discussion of the most urgent and essential urban problems of Bissau.
A better cooperation between the project, the MOPCU and the Municipality was one of the positive results of the seminar and the neighbourhood upgrading approach as a feasible strategy for the urban development of Bissau became a concensus.

This was reinforced by an evaluation mission that took place right after the conclusion of the seminar. The mission pointed out the importance of the project within the definition of the housing and urban policy of the Guinean government. Neighbourhood upgrading can become the core of this policy together with the World Bank's sites & services project. The settlement planning approach put forward in Cupilom was seen as a very positive start of the project towards town planning but the project should put a stronger accent on that issue and search for stronger linkages with the formulation of the master plan of Bissau (Nimpuno, 1990).
According to the mission's report, neighbourhood upgrading should be broaden towards the concept of settlement planning and community development.
The mission detected some weak aspects of the project as well, e.g. the institutional links of the project with the Municipality and the consequent lack of a good communication channel; the lack of coherence between the components of the project; the lack of a systematic research and impact evaluation. It suggested several shifts on building management, more refined housing designs, better participatory models and more emphasis on training and backstopping.
The discussion about the content of the mission's report with local technicians of the MOPCU showed once more that the present project approach, especially the succesfull intervention in Cupilom de Cima, is well appreciated.

As a follow up of the seminar and the evaluation mission, the project organized a series of meetings with the technical staff of both the Municipality and the Ministry of Public Works. The objective was to clarify the future interventions of the project according to the guidelines of the master plan of Bissau, to define strategies for neighbourhood upgrading and to select the target neighbourhoods.
As a result, nine neighbourhoods were selected for future upgrading and the project started to search for a position within a new institutional framework which could involve the government institutions directly related to the urban affairs, a council for

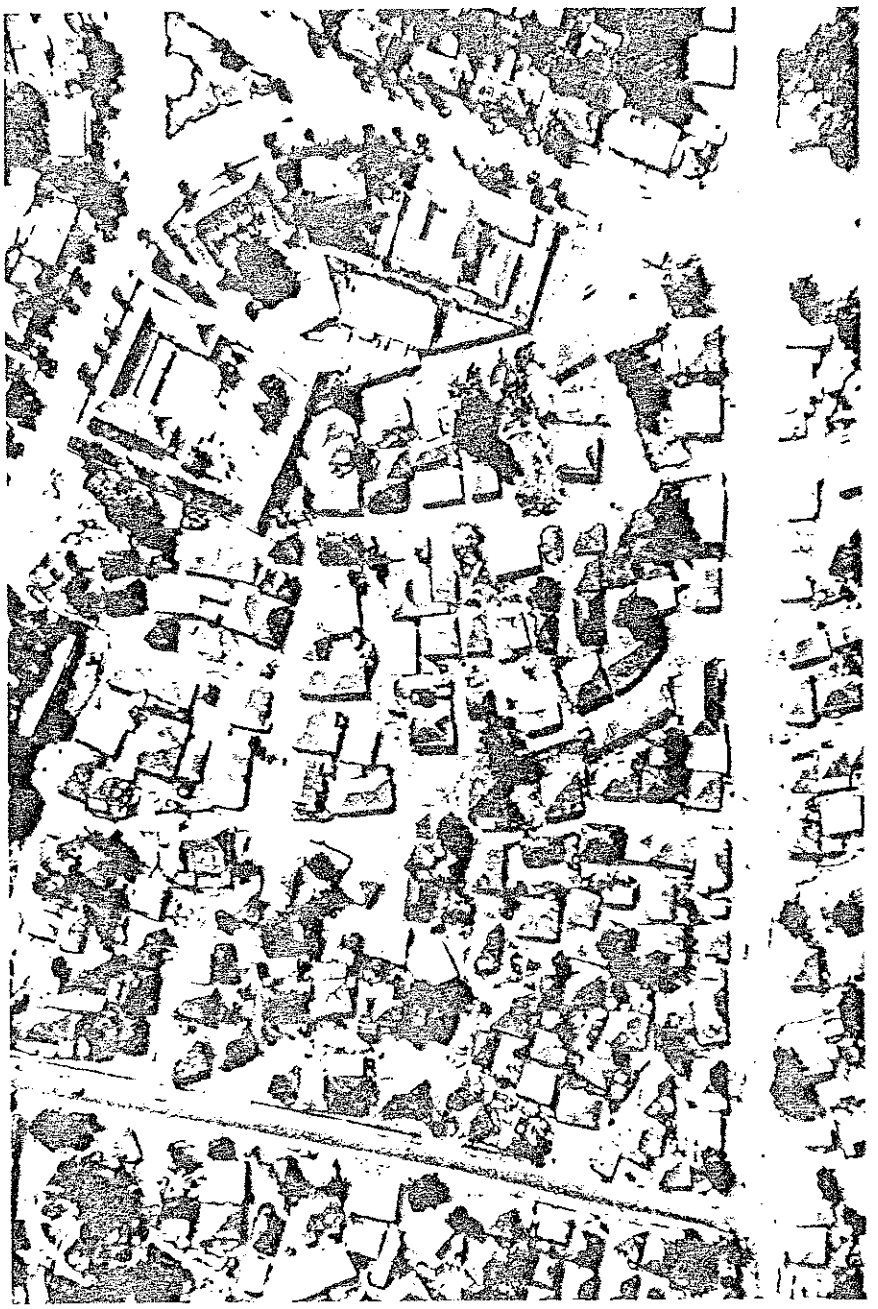
Neighbourhood Upgrading has been proposed by the project and accepted by both the MOPCU and the CMB.

The year 1991 is a turning point in the evolution of the project. The completion of the second phase of Cupilom de Cima coincides with the end of the financial resources provided by the first agreement between the Netherlands and Guinea-Bissau.
The first phase of the project cycle is succesfully completed while the MOPCU is fully engaged with the formulation of the master plan of Bissau and with the definition of the national housing policy.
It coincides as well with new trends and a new policy framework of the Dutch government.
A (re)formulation mission took place in order to define the future development of the project and its strategy for the period 1992-1996. The result of the mission as well as the future options of the project will be analyzed in part VI.

A resident producing the adobe blocks which will be used in the reconstruction of his house, 1990.

PART IV

THE MICRO SCALE: The Target Neighbourhoods



Detail of an aerial photo of the southern part of Cupilom de Cima in 1989, before project implementation

6

THE NEIGHBOURHOOD OF MINDARA

6.1 LOCATION

With an area of 31 ha, this neighbourhood is centrally located within the present urban structure of Bissau, right in the fringe of the old colonial city, limited in its Northern boundary by the city's main access avenue, **14 de Novembro**, and in the south by **estrada do Bór**, which is another important access route to the city coming from Prabis. The Bandim market is located in the eastern side of the neighbourhood , the largest and most popular commercial area of Guiné-Bissau, which probably attracts per day an amount of visitors close to one fourth of the city's total population. This population movement is recently reinforced with the innauguration (dec/90) of a big modern supermarket, located next to Bandim, placed precisely on the fringe of Mindará. This point of the city is in fact very critical because of the amount of people who come and go to Bandim. Most taxis and transportation means make a stop at that point on the 14 de Novembro avenue, causing traffic jams as well.
There was still two other attraction points for the population at the eastern fringe of the neighbourhood: one was the stop and departure point of the **candongas**, the peculiar intercity public transport system which was surrounded by a large informal market where bamboos were sold and as well **"crintim"**, a special tatched bamboo panels used in the construction of fences, barracs, ceilings, latrines, etc... All this was removed by the Municipality in July of 1991, during a cleaning and trash collection campaign. The other is a busy popular nightclub but has a temporary character as well.
The western boundary is defined by the **Caracol** road which separates Mindará from Belém. To enter the neighbourhood one can only use this road or the Estrada do Bór, see **Figure 6.2.**

6.2 POPULATION

Population and demographic data are always very difficult to find in Bissau and besides that its reliability can be questioned. Still it is possible to present some general information about the population of Mindará based on the comparison between several enquetes held along the years by the PMBB in this location.
Very little is known about the ethnic groups living in Mindará. Empirical evidences revealed that the Animists form the biggest group, with a large percentage of Papéis. The fact that the whole area was originally a village subdivided in several kingdoms of the Papéis may explain the predominance of the papéis in the neighbourhood.

The number of houses in the neighbourhood decreased in the last 10 years due to several

demolitions necessary for the construction of the main avenue 14 de Novembro. However, the population did increase, which reinforces the argument that the densification in Mindara is caused by illegal housing extensions and overcrowding of the existing houses.
There are many contradictory data collected over the years. In 1981, the MOPCU registered 488 houses (MOPCU, 1981:5) and in 1990 455 houses were registered by the CMB. It is possible to estimate the population growth based on different indexes: the census of 1979 revealed an average of 5.1 inhabitants per house in Bissau but another reserarch in the same year showed that there was an average of 3.06 families and 13.69 persons per house in Mindara (Kunzel and Wehenpohl, 1979:31); five years later a research carried out for the formulation of the upgrading plan of the neighbourhood demonstrated that the families were mostly composed of 8.2 persons (BKH, 1984:13).
In 1990, the PMBB carried out a survey covering 366 houses, which is a sample that represents 80 % of the existing housing stock. The survey intended to register the owner's name, caracteristics of the buildings and the number of occupants, but the sample excluded the area surrounding the Bandim Market. It revealed that 43.71 % of the houses were occupied by more than 10 and less than 16 persons, and 28.14 % by more than 5 and less than 10 occupants, meaning that more than half of the houses that were surveyed had 10 or more residents (see Table 6.1).

Table 6.1 : Number of Inhabitants per house in Mindara

Number of Persons per house	Frequency	%
Less than 05 persons	029	7.92
Between 05 and 09 persons	103	28.14
Between 10 and 15 persons	160	43.71
More than 16 persons	066	18.03
Missing Data	008	2.18
TOTAL	366	100.00

Source: Inquerito das casas em Mindara, PMBB, 1990.

After analyzing the existing data collected by the CMB, MOPCU and the PMBB, the estimation is that the population of Mindara grew from about 3,500 inhabitants in 1981 to about 8,600 inhabitants in 1990 providing an actual population density of 278 inhabitants/ha. It means that the annual population growth rate has been 7.8 %.
Although it might sound as an overestimation, Mindará attracted a lot of new residents because of its top location and commercial activities. The effects caused by the liberalization of commerce on the process of land occupation in this location is remarkable; open space is slowing disapearing thanks to the construction of clandestine new buildings and house extensions.
The densification increased very much in the last 3 years and the increase of renters living in subdivisions of existing houses is a clear evidence of this population growth.
There are strong evidences that the houses are overcrowded with large families occupying only one room.

The classification of the population according to family income becomes a difficult task. Data about income and salary seems to be a taboo. The residents are not very willing to speak about what they do for a living and their income.
In 1978, the research carried out by the MOPCU already showed that Mindará was the poorest out of the three neighbourhoods that were selected to be upgraded. In that year, the average family income was PG 2,820 (MOPCU, 1978:42) or Dfl 86.00 per month (rate of 1.00 Dfl= PG 33.00 used by BKH).
The results of the research of 1984 (BKH, 1984:14) showed that, "half of the population belonged to the poorest group: 45% of the families interviewed earned less than PG 8,000 or Dfl 240.00 (US$ 120) per month".

6.3 THE URBAN MORPHOLOGY AND THE USE OF SPACE

The neighbourhood is densed, the houses are built very close to each other. It has a peculiar tribal layout. It is very exceptional to find a house surrounded by a plot division wall or a fence, which would give a clear idea of what is private or public domain.
Although there is not a clear physical separation or demarcation of plots, an outsider can identify the spatial and social control that exists in this neighbourhood. The private domain is "symbolically" demarcated or identified through trees, local vegetation or cerimonial spots and seems to be accepted by the residents. However, a pedestrian can walk all directions without finding an obstacle which could force him to return his way. There is no cul de sac.
Certain facilities such as the place for the shower and the pit latrine are shared by occupants of several houses, especially when they belong to the same clan. And since these facilities are located at a certain distance of the houses, they are obliged to cover certain distances to make use of them.
When a certain house has a tap, you see other residents filling their buckets and taking them back and forth to their houses. After the construction of the public water taps, implemented by the PMBB in 1987, the traffic of women and kids increased very much and by choosing the shortest way they walk through the open spaces between the houses. Therefore one can immediately perceive the network of circulation paths (caminhos) which allow the pedestrian to go in all directions.
The houses are built more according to the spatial structure of the compound (morança) it belongs to rather than according to a certain allignment.
To some extent, the urban morphology and the type of land occupation recalls the traditional patterns found in the rural villages (tabancas). This is not only applicable for Mindará but for most of the popular neighbourhoods of Bissau.

There are three constraints which help to maintain this pattern:

1. there has been no serious effort from the Govenment to ellaborate and approve a law concerning land rights which can clarify the issue of traditional rights over urban land.

2. The neighbourhood never had an official urban plan that could define the land division scheme and specify the individual plots for future legalization. If so, there would probably be more obstacles to demarcate the private domains.

3. The third constraint is directly related to economic affordability and personal contacts. Only those who have the access to the Municipality's decision makers and have the financial means to pay for the legalization of their traditional occupation, will be capable to invest capital to improve their housing situation.

After the intervention of the PMBB, some access roads were defined and improved and has facilitated the circulation of cars inside the neighbourhood.
In terms of land use and functions, the only specialization of function is detected in the surroundings of the Bandim market where the majority of the buildings are used for commercial activities. Even the open public space is now occupied by street vendors. Towards the western boundary, the residential use becomes predominant although buildings for several purposes are found. Along the Estrada do Bór, there is a process going on in which the residential use is replaced by commercial use, and as a result this road will be very busy and very attractive for commercial activities.

5.4 THE HOUSING PATTERN

Most of the houses are built with mud, sundried adobe blocks or compacted walls (taipa), and are usually built without a concrete foundation, which effects the stability of the walls of the construction. In the research of 1981, it was reported that 22.7 % of the houses had to be demolished because there was no other possibility of improvement (MOPCU, 1981:5). The number of houses built with concrete blocks or ceramic brick is still small till today and this is mostly due to the high prices of the usually imported building materials. In 1981, these houses represented only 2.3 % of the housing stock of the neighbourhood (MOPCU, 1981:5).

Although in this neighbourhood the ethnic group of Papéis forms the bigger part of the inhabitants, the houses follow the traditional pattern found in the villages of the balantas, a rectangular shape divided in four or six equal parts (rooms), surrounded by a varanda which is protected by a long roof overhang. And this is probably influenced by the colonial style, assimilation of modern ways of construction, etc... According to the research of the PMBB, 51.36 % of the houses have six (6) rooms and 34.69 % four (4) rooms (PMBB, 1990a:1).
The size of the rooms may vary from 12.00 m2 to 16.00 m2 and the houses may have a covered area of 100 to 180 m2. According to Kunzel and Wehenpohl, the average size of the houses, in 1979, was 100.8 m2 without considering the varanda (Kunzel and Wehenpohl, 1979:17).
The material used in the roof structure is the popular "Sibe", 7 mts long timber extracted from a palm tree, the only wood which does not demand any treatment against termites. In 1979, 25 % of the houses were covered with thatched roof and 62 % by metal corrugated sheets (Kunzel and Wehenpohl, 1979:18). In 1990, the research of the PMBB revealed that 73.22 % are covered with metal corrugated sheets and only 16.39 % by thatched roof. The thatched roof has decreased due to the risks of fire, especially because the inhabitants still cook with wood fire on the varanda, "according to the tradition". It is interesting to see that ten years ago, only 28 % of the houses had a kitchen built (Kunzel and Wehenpohl, 1979:24). Unfortunately it is not possible to compare it to today's situation but there are evidences that there is no radical change on this matter.

The varanda is used for cooking but it is also a place to keep domestic animals such as pigs, chickens and ducks. It is common to find an extra room created on the varanda to keep these animals, and even rooms inside the houses. This practice creates several vectors of deseases but since these animals represent a source of income, the residents want to exclude any possibility for robbery.

As said before, the houses are usually overoccuppied, and today, more than 50 % of the houses visited by the PMBB have 10 or more persons living under the same roof. This finding is not a surprise considering the omission of the government in the housing sector which has stimulated the changes in the housing pattern in the popular neighbourhoods. Extra rooms are built in the varandas under the existing roof and very often it occurs as a roof extension as well. The objective is the creation of extra space for housing and solve the problems originated from the increase of family members. As a result, there is a gradual transformation of the house pattern through internal subdivisions and attatched house extensions which serve for the family and for renters.

In Mindará, renting is a phenomenon. In 1979, 70.5 % of the houses were rented occuppied (Kunzel and Wehenpohl, 1979:43). In 1981, another research gave evidences that there was a decrease in rented occuppied houses and an increase in the number of onwer occuppied houses (MOPCU, 1981:7). Almost ten years later, this tendency is confirmed. The research of the PMBB revealed that in 1990, 17.21 % of the houses were rented occuppied and 30.60 % were partly rented by the owner (see Table 6.2). That means almost 50 % of the houses occuppied by tenants and room renters.

Table 6.2 : Number of rooms rented in houses in Mindará

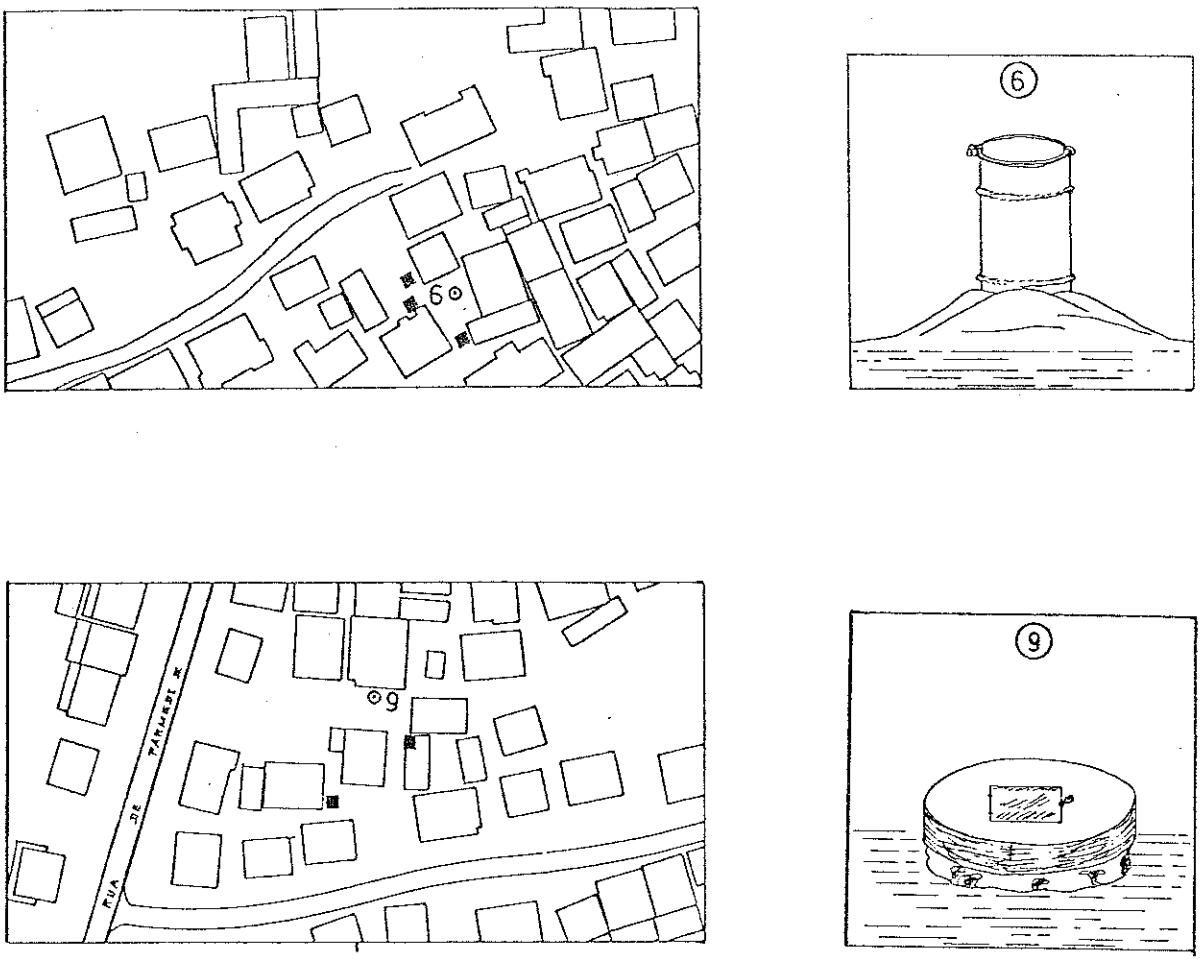
Number of rooms rented	Frequency of houses	%
01	010	08.92
02	028	25.00
03	030	26.78
04	031	27.67
05	005	04.46
06	003	02.67
Total	112	100

Source: "Resumo do Inquerito das Casas em Mindara", PMBB, 1990.

On one hand, there is an effect of this renting mechanism in the improvement of the physical aspect of the house: one may see houses partly improved with doors and windows of good quality, walls plastered and painted, and independent electricity connection thanks to the renter. It is a common practice that the renter or the tenant makes a series of improvement in the house which will allow him to live without having to pay the rent during a certain period because the costs will be considered as a partial payment of the rent.
On the other hand, the fragile infrastructure of the house suffers with the continous increase of users who must share the pit latrine and the shower place, the cooking space,etc... In Mindará, this is quite visible.

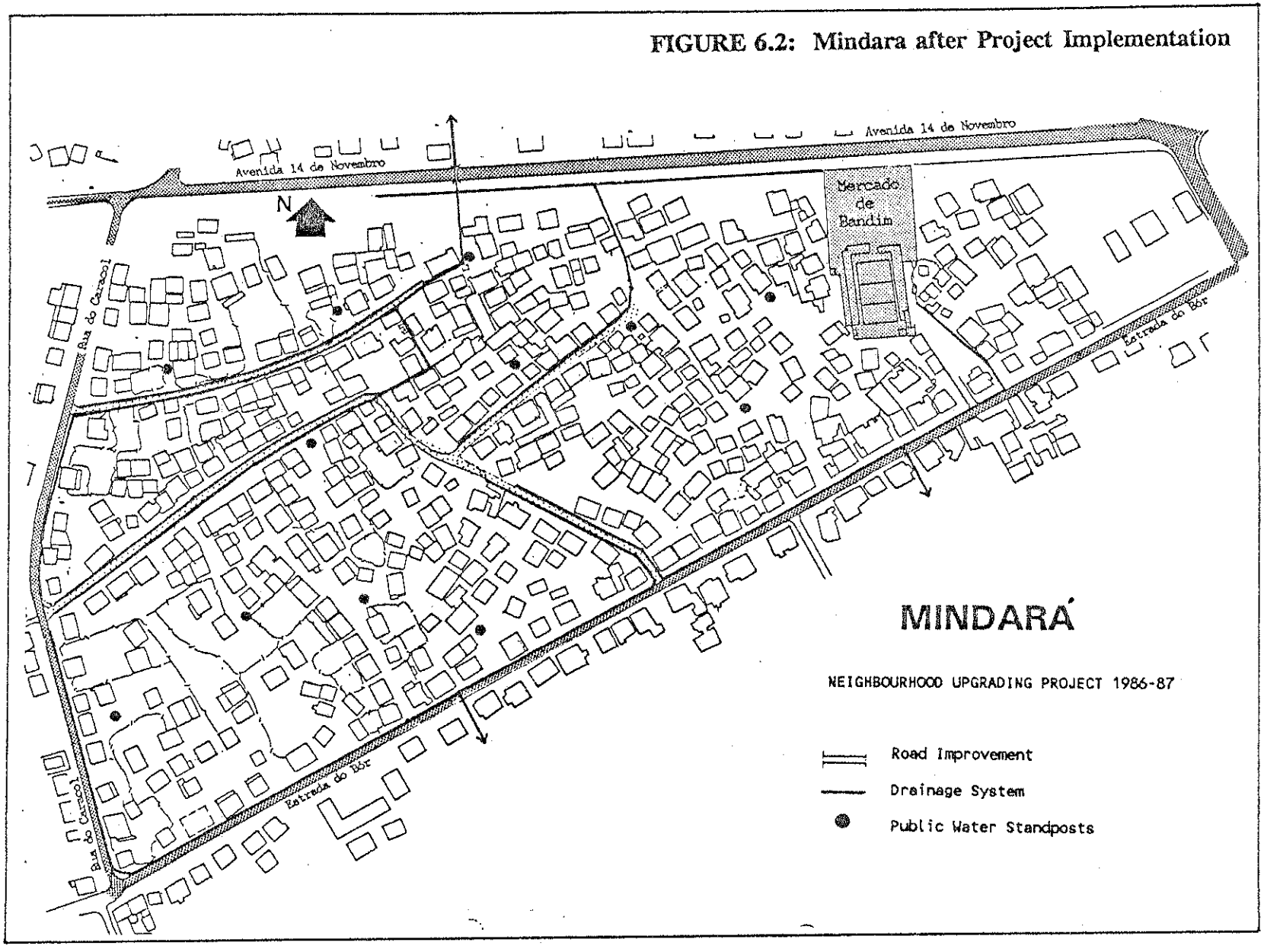
The houses have poor living conditions. In 1979, only 3.0 % of the houses had water connections (Kunzel and Wehenpohl, 1979:23). The majority made use of the water of the traditional wells, mostly poluted, (see Figure 6.1). The water supply was only improved in 1987 with the implementation of 14 public water taps by the PMBB. Although there is a substantial improvement, the implementation of the water network seems not to have encouraged individual connections as the recent research revealed: only 7.65 % (PMBB,1990:1). For electricity, there is a positive change. While in 1979 only 8.0 % had electricity connection, in 1990 this increased to 30.05 % (PMBB, 1990:1).

FIGURE 6.1: Traditional Wells in Mindara



Source: Kater, H. "Qualidade das Aguas nos Bairros de Kindara e Cupilom de Cima", PMBB, 1986.

FIGURE 6.2: Mindara after Project Implementation



6.5 OUTLINE OF PROJECT IMPLEMENTATION IN MINDARA

The project faced a very reluctant population and accomplished a very low level of participation.
Their previous experience with government intervention in the neighbourhood left a lot of "scars" and a very negative impact. Many residents whose houses were demolished because of the construction of the main avenue 14 de Novembro never received a correct financial compensation and some are still whithout a house today.

The communication with the residents was reported to be very weak and was not capable to involve them in the construction activities. Besides that, the fear to have their houses demolished contributed to keep them far from neighbourhood upgrading actions.
The project payed much attention to infrastructure works and disregard some other important aspects of the neighbourhood.
A preliminary evaluation of the present situation in Mindará reveals that, despite the substantial improvement in the supply of potable water and the better access roads to the inner spaces of the neighbourhood, and despite the solution of some critical drainage problems, the urban structure and the process of land occupation remained undefined.
Because the intervention was very localized and not combined with an overall settlement plan and because the project refused to tackle the housing problem, several other important aspects of Mindará remained unsolved. As a consequence, the housing stock is dillapidated and renovation takes place without any solution concerning land division and land tenure. There is now a lack of any kind of regulation in the use of the available space which affects negatively the living conditions of the inhabitants. The process of densification is ad hoc and takes place without any guidance. A certain degree of discipline could have been achieved if a settement plan would exist because it could at least define the individual plots and the limits between the private and public domains.
The situation is that critical that a reformulation of the first intervention in the area is necessary. A preliminary plan formulated in 1990 by my counterpart and me already implies the relocation of two public water standposts and the relocation of 35 houses.

7

THE NEIGHBOURHOOD OF BELEM

7.1 LOCATION

Belém is the largest of the three neighbourhoods that were selected for the first phase of the PMBB, occupying an area of 42.27 ha. It is farther from the center and it is separated from Mindará by the rua do Caracol in its eastern boundary.
Along its northern boundary the main access road to the city is situated, the Avenida 14 de novembro, just like Mindará but with the difference that in Belém there is an unpaved parallel road to this avenue which has , at its end, an access that connects Belém to the avenida 14 de Novembro.
In the South is the Estrada do Bór, as a continuation of Mindará, but here as an unpaved road. In its southwestern boundary, separating the neighbourhood from the estrada do Bór, there is a large green area used by local peasants for agricultural activities. Most of the water drained from Belém runs through this area in a natural open gutter because the terrein has a steep inclination towards the south.
The neighbourhood has a strong residential character although small shops, car repair workshops, tailors and restaurants can be found. These activities usually take place in the outside ring of the neighbourhood, more specifically the rua do Caracol and along the avenida 14 de Novembro, see Figure 7.1.

7.2 POPULATION

There are several evidences that the majority of the population belong to the animist groups. The mancanhas and papéis seem to be the major ethnic groups. That was the conclusion drawn from the campaign organized in 1989 by the PMBB in order to establish with a group of users of the public water taps a maintenance and functioning scheme of the taps that were implemented in the neighbourhood.
Most of the documents about Belém estimate the population at 8.000 inhabitants and since there is no data to contradict it, this number has always been assumed as a reliable reference.
In 1981, 606 houses were registered by a research carried out by the MOPCU. When the same rate is used to estimate the population as in the case of Mindará, 8.2 persons per family, it is possible to estimate a population of 4,969 inhabitants in Belém that year.
In 1990, the Bissau master plan team estimated a population of about 7,385 inhabitants of which 1,289 families living in 671 houses and 271 housing extensions (MOPCU, 1990a:1).
In the same year, the Municipality of Bissau together with the PMBB carried out a survey which revealed that there were 8,650 inhabitants living in 617 houses and 1,530 housing

units.
Considering the numbers of 1981 and the CMB's findings in 1990, the population increased with 57.4 % and there was an estimated growth of 6.3 % per year during a period of nine years.
However, if one considers the rate of 8.2 persons per family that was revealed by the BKH research (BKH, 1983:13), it is possible to estimate for 1990 a population of 10,569 inhabitants, based on the number of families surveyed by the MOPCU, and 12,546 inhabitants, based on the number of housing units registered by the CMB.
These numbers may be seen as an overestimation but there are evidences that the population of Belém may reach, at least, 10,000 inhabitants with an average of 14 persons per house, and a population growth of more than 6 % a year.
Indeed, a research revealed that, in 1979, there were already 14.46 persons and 3.07 families per house in this neighbourhood (Kunzel and Wehenpohl, 1979:31), thus reinforcing the credibility of the estimation made in this study.
It is likely that the population of Belém comes close to 10,000 inhabitants which gives the neighbourhood a population density between 200 inhabitants/ha and 250 inhabitants/ha.

7.3 THE URBAN STRUCTURE AND THE HOUSING PATTERN IN BELEM

Compared to Mindará, Belém has a much better defined urban structure. The roads and accesses create a series of clusters in some sectors of the neighbourhood which gives it a type of geometric urban morphology. The groups of houses are well alligned and that facilitates the circulation of cars and pedestrians. The intervention of the PMBB has made a significant step in this respect because it paid much attention to road improvement.
To certain extent, the same pattern of pathways for pedestrian circulation which was found in Mindará can also be found in Belém as well, but because there are many houses on legalized plots more walls and fences are built. These plots are ocasionally legalized by the CMB according to an urban plan developed in 1984/85 by the MOPCU. Although it has never been officially approved, the plan is the only reference used by the Topography and Urbanism Departments of the CMB with their demarcation work and legalization processes.
At this moment, along the avenida 14 de Novembro, there is a process of transformation taking place. Several modern two storey buildings are under construction and they form a facade of buildings of good quality (residence on the top floor and commerce on the ground floor) facing this avenue.
The neighbourhood can be divided in two different parts in terms of morphology. In the West side, the neighbourhood follows a pre-planned scheme of land occupation with well defined plots and clusters. In the East side, towards Mindará, the type of land occupation resembles the schemes described for Mindará: very densed occupation with houses built next to each other and no formal allignment in the process of land occupation.
Compared to Mindará, the outsider can easily orient himself when he is circulating through Belém because of the more regular and defined urban structure. In terms of environmental conditions, Belém gives a much better picture due to its many access roads, better housing stock and the improvements realized by the PMBB in its interventions of 88 and 89, especially the improvement of roads and drainage system.
About the quality of the houses, a research revealed that in 1981, 16.5 % of the existing

houses were excluded from any kind of improvement programs due to their state of deterioration (MOPCU, 1981:5), and 42.9 % needed not improvements at all. 14 % was made of adobe blocks and 18.5 % made of concrete blocks and mixed materials (Kunzel and Wehenpohl,1979: 18). These data show that, in 1981, the housing stock in Belém was of better quality and better maintained than in Mindará. However, today this cannot be confirmed. According to the latest survey carried out by the CMB in cooperation with the PMBB, the houses classified as "reasonable", "good" and "very good" respond to 74.87 % and 79.21 % of the houses respectively in Belém and Mindará. The number of houses in bad conditions is almost the same in both neighbourhoods but there are more "good" and "very good" houses in Belém than in Mindará (see Table 7.1), and that makes a difference when one look at the built environment.

A house was considered "VERY GOOD" when the construction was in good conditions, and when the walls were built with bricks, concrete blocks and eventually adobe, plastered and painted; it had a concrete roof or covered with tile and eventually with corrugated sheets or fiber cement; the floors were paved with tiles, had a well built varanda and foundations.

A house was appointed as "GOOD" when its components were built as written above, except that the building deserved several small repairs in its components.

A house was considered "REASONABLE" when its components were constructed as mentioned above but presented cracks, deformation in the roof, and infiltrations but that could still be repaired.

A house which had a thatched roof, adobe walls or mixed with bricks/concrete blocks, had no paved floor and eventually had a varanda but without a well built foundation, could be appointed as "reasonable" if all components were well preserved or needed small repairs.

A house was appointed as "BAD" when all components were built as it is mentioned in the first classification but was demanding a total repair, or when it was built as the houses appointed as "reasonable" but needed a lot of repair works.

A house was considered "VERY BAD, when it was impossible to be occupied without a total renovation of the building (CMB, 1989).

In terms of the quality of the houses, one can see a gradual process of improvement in the last ten years in both neighbourhoods.

The fact that the houses in Belém are built more recently may explain the better quality of the houses. According to Kunzel and Wehenpohl, 53.9 % of the houses in Belém were built between 1970-1972 while in Mindará, 54.7 % were constructed before 1965 (Kunzel and Wehenpohl, 1979:26).

Table 7.1: Quality of the houses in Belém and Mindará.

	Very Good	Good	Reasonab.	Bad	Very Bad	Total
Mindara	05 1.1%	111 25%	235 53%	89 20%	03 0.67%	443
Belem	26 4.2%	203 33%	233 38%	150 24%	06 0.97%	617

Source: "Tabulaceo Vivendas em Mindara e Belem, CMB, 1990".

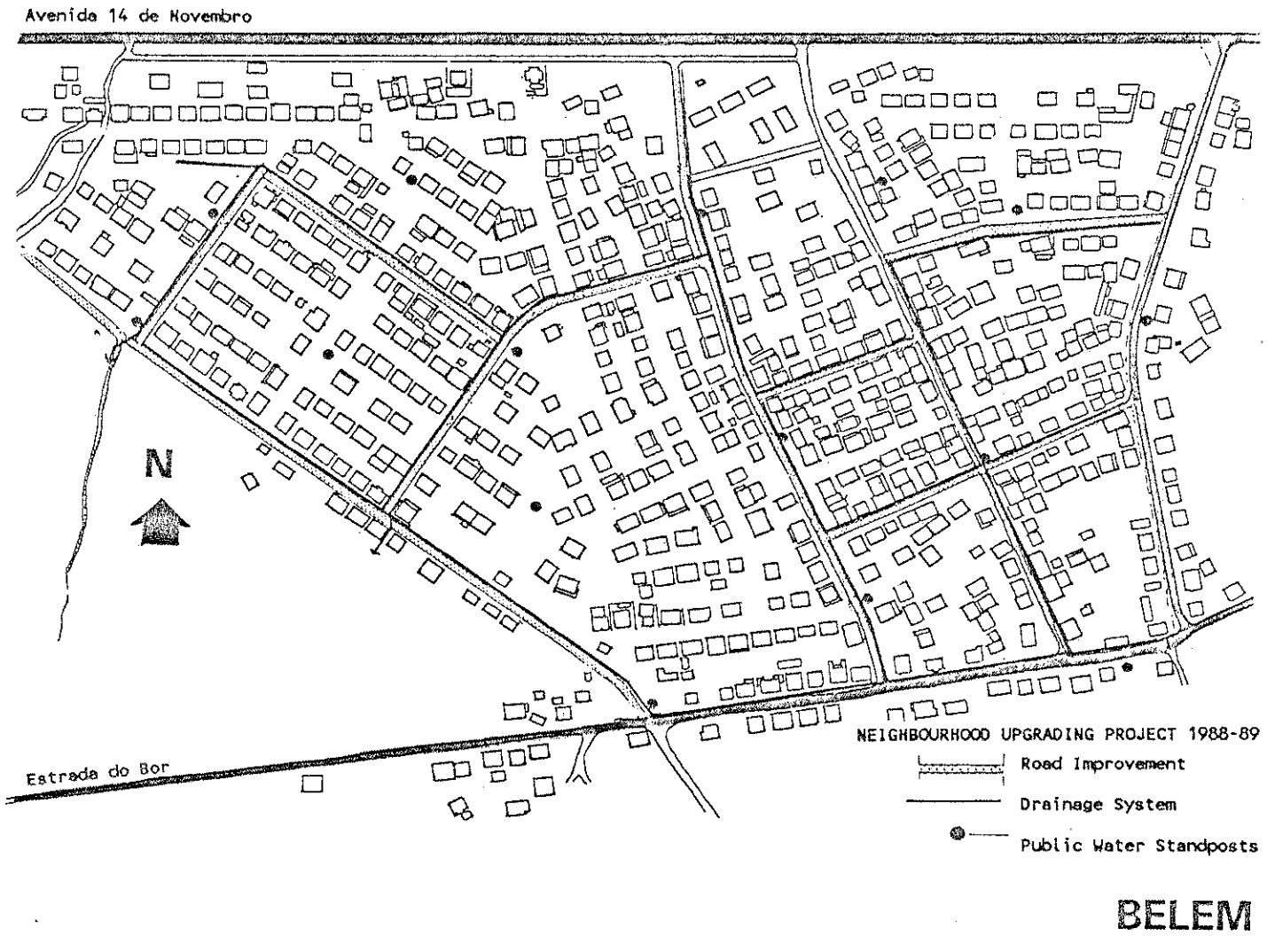
Like in Mindará the majority of the houses have 6 or 8 rooms, maintaining the traditional pattern and rectangular shape, with four sided roof covered by corrugated metal sheets. The living conditions, however, are better in Belém.
It seems that the water supply network with public taps implemented by the PMBB stimulated domestic connections. 19.12 % have individual connections, 40.52 % are supplied by the public taps and 41.98 still rely on the traditional wells (CMB, 1990b:1). There is a positive change compared with the situation in 1979, when only 6.0 % of the houses had individual connections (Kunzel and Wehenpohl, 1979:23).
In terms of sanitation facilities: 46.03 % of the houses have a toilet built under the roof, being a very significant figure. In 1979, 38 % had a kitchen built (Kunzel and Wehenpohl, 1979:24) but unfortunately it cannot be compared with recent data.
Electricity facilities: 55.43 % of the houses are connected to the system, which is a better situation than 9 years ago when only 14 % of the houses had an electricity connection (Kunzel and Wehenpohl, 1979:23).

7.4 OUTLINE OF PROJECT IMPLEMENTATION IN BELEM

In terms of drainage and water supply networks, the intervention in Belem was very significant. The urban structure of this neighbourhood was better organized thus very suitable for an infrastruture improvement project. Besides, there was already an urban plan formulated by the MOPCU approved and accepted by the Municipality of Bissau .
For the first time, the project could carry out a long campaign in order to mobilize and stimulate the organization of the residents around their public water standpost.
The neighbourhood was divided in sectors according to the location of the water standposts. About 40-50 houses located within the surrounding of each water standpost were grouped and their owners were requested to participate in a series of meetings organized by the project in collaboration with the party committee of the neighbourhood (Comitê de Bairro).
The goal was to stimulate the establishment of self-sustained maintenance scheme. The house owners were expected to elect a person who will be responsible for the management and operation of the public water standposts. They will take care of the cleaning of the soakway pits and for eventual repairs or replacement of the taps. They will be responsible for the collection of the maintenance fees as well, and will organize occasional cleaning campaigns of the drainage gutters within their sectors.
Although the project was able to engage the residents in this campaign, both the experiences in Mindará and Belém revealed the limitations of an infrastructure improvement project in terms of community involvement. It seems that the provision of collective infrastructure does not have a strong appeal to capture the participation of the lay resident and to motivate him to participate in the improvement of his living space. Besides this, the project had to face the weak mobilization capacity of the existing neighbourhood organization structures under the PAIGC control e.g. the neighbourhood party branch committee (comitê de bairro), the women organization (UDEMU) and the youth organization (JAAC).
The project could only operate through this filter and although these organizations had played a very relevant role during the liberation war, up til today they have not been able to (re)orient themselves, politically and socially speaking, according to the actual needs and demands of the residents. In fact, they have lost their grassroot links, they have become extremely bureaucratic and their leaders have lost the capacity to convince the

audience.
Most of the efforts of the project were directed to increase community awareness and individual responsability. Awareness about the linkages between: clean environment and good health conditions, solid waste collection and neighbourhood improvement, neighbourhood development and maintenance of the benefits introduced by the project, community development and the role of the resident and his organization. Both the trash collection programme and the programme to organize the users of the water taps were based on these principles. The residents were invited to participate in group discussions and small seminars organized by the project and the PAIGC neighbourhood branch where all these subjects were discussed.
The garbage collection implemented by the project received a prompt reaction from the inhabitants who carefully guarded their solid waste until the carrier of the project would make its weekly stop at the disposal points. But a weekly collection was not sufficient to evacuate all the garbage produced nor to keep a continuous reaction of the residents. After some time dumping places within the neighbourhoods were seen which were occasionally cleaned by a group of residents with the support of the project. Although this activity was undertaken only once a week in each neighbourhood it demanded a lot of management control from the side of the project because the tractor and the carriers were needed as well in the construction site. The project could not provide a frequent service which could justify the collection of garbage fees, this was seen as a pilot experience which could meet the contractual obligation and was not economically feasible.
The situation deteriorated when the project stopped this service and the Municipality was uncapable to continue. The minimum of what was achieved collapsed for good.

FIGURE 7.1 : Belem after Project Implementation



8

THE NEIGHBOURHOOD OF CUPILOM DE CIMA

8.1 LOCATION

Cupilom de Cima is one of the oldest traditional African neighbourhoods in Bissau. Mengers thought that the name Cupilom was originated from the word pilom, the name given by the mandinkas to a sacred and very tall tree called cupelao. But in fact it is originated from the word n'pilon, a denomination in the papel language for a local fruit called mandipere (by the Portuguese) that grew in that area where the settlement took place.
It covers an area of 14.5 ha, almost one third of Belém and half of Mindará. It was previously situated in the fringe of the colonial city of Bissau. Today it is a very central area of the town, surrounded by important institutional buildings such as the Ministry of Interior, the Fire Brigade, the Presidency of State, and by important paved avenues. The site covers one of the highest points in the city, between 15 and 30 mts above sea level. In the northwest boundary lays the avenida Corca Só and in the South the avenida da Unidade Africana. In the northeast, the avenida Oswaldo Vieira and its continuation in the northern boudary separates Cupilom de Cima from Cupilom de Baixo, see Figure 8.2. "It is said that this artificial administrative division has been done by the Portuguese in order to diminish the power and the influence of the Mandinkas, notably the major ethnic group there" (Mengers, 1986:13).

8.2 POPULATION

Cupilom has drawn the attention of researchers and therefore quite an amount of data about the neighbourhood can be found.
The PMBB sponsored a research that was carried out, in 1986, by H. Mengers, from the University of Nijmegen, which became a very useful reference and a good basis for comparison with recent findings.
When it is compared to other neighbourhoods, Cupilom has a homogeneous population. The Mandinkas form the major ethnic group, responding for almost half of the population, 47.2 %. The Mancanhas with 12.6 %, the Fulas with 8.3 % and Manjacos with 7.9 % form other secondary ethnic groups (Mengers, 1986:101).
Almost 60 % of the population belongs to the muslim groups and it is the reason of the peculiarities of Cupilom in terms of social organization and spatial control that can be detected in the neighbourhood, especially in the Southern part of the settlement. Cupilom is probably one of the very few places of Bissau where a high committee of "wisdom men" and traditional leaders exist, who safeguard the traditional laws and look after the changes in the development of the neighbourhood.

Because of the major presence of the Mandinkas in Cupilom, the residents' committee broke the PAIGC party monopoly without any conflict and could improve the neighbourhood along with all the political organizations, including the party branch. It was thanks to this organization that the PMBB could finally make an intervention in Cupilom after some early attempts of the Portuguese.
The majority (70 %) of the inhabitants have been living in the neighbourhood for more than 20 years which reinforces the community structure and the social linkage.
A survey made in the Southern sector of the neighbourhood, in 1979, showed that there were 287 families and 2,282 inhabitants, an average of 1.69 families and 13.42 persons per house. Compared to Belém and Mindará, there is a great similarity in terms of number of occupants per house but the number of families per house shows the peculiarity of Cupilom de Cima, and that is that most houses are occupied by only one family. The muslim families are large, composed of several members, there is more than one wife and there are many examples of clan compounds (see Figure 8.2).
Mengers reports, in 1986, a population of 2,600 inhabitants and an average of 17 persons per house in this sector of Cupilom (Mengers, 1986:99), and that means an increase of 12.23 % of the population in the period 79-86, with an estimated growth of 1.74 % a year.
For the whole settlement, Mengers reports an average of 16.5 persons per house, and a population of 4,510 inhabitants in 1986.
Three years later, another survey carried out by the PMBB, registered 264 houses and 211 house owners, and the population was estimated around 5,000 inhabitants which gives the neighbourhood a population density of 344 inhab/ha (PMBB, 1989:7).
In 1990, a sample research implemented before the second phase of the intervention of the PMBB in the neighbourhood, which covered 41 houses in the Southern part of Cupilom, revealed that 895 persons were living in 39 houses, an average of 22 persons per house, and in only 7 houses (17 %) lived more than one family (Acioly, 1990c:4).
Two houses were found of 160 m2, both with 6 rooms, 2 annexes (conco) built on the varanda plus an internal corridor, and both with 49 inhabitants who belonged to one family. That means an average of 6 persons per room if the annexes are considered.
Another two houses, one of 165 m2 and one of 180 m2, both with 6 rooms, had respectively 44 and 40 occupants, all belonging to one family per house.
These findings confirm the peculiarity of Cupilom in comparison with other neighbourhoods: large families living all under the same roof. If one considers these recent data, it is possible to estimate the population of Cupilom de Cima at 5,808 inhabitants and an annual growth of 5.5 %. That would bring the population density up to 400 inhab/ha.

It is interesting to notice that while the number of houses is decreasing, the number of inhabitants is increasing between 1979 and 1989, and that means an increase of the population density, although Mengers had affirmed in his study that there was a decrease in the number of inhabitants. But this cannot be confirmed.
Comparing the airphotos of the settlement taken in 1971 and 1989, and with the settlement map made in 1986, the decrease of the housing stock is visible and confirmed. In this period, many dilapidated mud houses that were covered with thatched roof collapsed due to lack of maintenance. In many cases, the house owner has no means to afford the replacement of the thatched roof which is supposed to happen every two years.

To classify the population on the basis of their socio-economic status is indeed a challenging task. The source of income varies very much. Many residents are public employees and very often they have a second source of income through the informal market, agricultural activities, etc... It is common to find residents who do have or share with someone else a piece of land (bolanha) where he and the family plants rice, peanuts, vegetables. This has no monetary value since it is more an activity of subsistence but sometimes in case there is a surplus, it is commercialized. Mengers detected that 10 % of the residents who were interviewed in 1986 declared their involvement with this agricultural activity (Mengers, 1986:32).
Some residents have a regular income and are employed in the private sector while others have an irregular income and are involved in carpenter works, cloth making, resale of fruits and several other activities. Many women are involved in activities for income generation and in many cases they are responsible for the second and maybe third source of income in the household.
But in terms of the socio-economic context of the residents, it is reported that in 1979, 48.7 % of the active population was unemployed, a figure that is a little less than Mindará and slightly more than Belém in that year (Kunzel and Wehenpohl, 1979:37). However, the income of the families as well as the income of the head of the families were higher in Cupilom de Cima than in Mindará and Belém in that year (Kunzel and Wehenpohl, 1979:42). The average family income was PG 5,814 and the average income of the head of the family was PG 3,064, respectively about US$88.00 and US$46.00 per month.
In 1986, Mengers reports that 1.81 persons per household are employed and that 5.46 persons depend on one salary (Mengers, 1986:31). The unemployment is reported by him as 41.5 % (Mengers, 1986:34), a little below of what was registered by Kunzel and Wehenpohl in 1979.
In 1986, the average income in the neighbourhood was said to be PG 13,700 (US$ 66.00) per month, or US$ 865.00 per year (Mengers,1986:32).
Considering the cost of living in Bissau, it is likely that a great percentage of this income is spent on food and housing since most of the residents prefer to use their feet as means of transportation.

8.3 THE URBAN STRUCTURE AND THE HOUSING PATTERN IN CUPILOM DE CIMA

The area was formerly an agricultural land explored by the ethnic group of the Papéis and with the migration of the Mandingas, the land started to be occupied by them. It is said that the land occupation started in the beginning of this century (Mengers, 1986:12). There was never any land title or official land allocation program and therefore, most of the ground is still traditionally occupied. The plots and houses which were legalized recently by the Municipality of Bissau are exceptions.
In terms of urban morphology, Cupilom de Cima is clearly divided into two different parts, separated by the avenida de Cintura (Nações Unidas).
Untill 1990, when the PMBB started to work in the area, the Southern part of the settlement had a very peculiar urban structure with houses built without any kind of regular pattern or road allignment, resembling very much the traditional villages of Guinea Bissau. 23 Clan compounds (moranças) were registered by the PMBB in 1989 (PMBB, 1989:7). The logic of land occupation and construction of houses were done

according to the permissions given by the heads of the families and house owners rather than any official regulation imposed by the Municipality.
Before the intervention of the PMBB (89-91), it was impossible to have a car access to the inner spaces of this sector in the settlement.
This unique urban morphology may have helped the militants of the PAIGC during the war period. According to the present leaders of the Residents' Committee, Cupilom was a free territory and a safe hiding place because there was an effective underground network of relationships and a social control which, in my opinion, was favoured by the urban structure of the settlement. It is reported that the Portuguese did not dare to enter the neighbourhood in order to search.
The Northern part is the contrary. All roads are parallel to each other and most of the houses respect the allignment given by these roads. The cause of this regular pattern is a great fire that took place in the thirties and burned down hundreds of houses. In those days, the Municipality allowed the house owners to rebuild them according to that given allignment. However, the problems of erosion continued to exist untill 1989.
It is said that the houses were first of a round shape, following the traditional pattern of the Mandinkas. Today most of the houses are just like in Mindará and Belém, a rectangular shape, with a varanda surrounding it and protected by a large roof overhang and mostly with 6 or 4 rooms.
In 1981, 62.8 % of the houses were covered with corrugated metal sheets while 22.4 % had thatched roof (Kunzel and Wehenpohl, 1981:18). Five years later, the houses covered with thatched roofs decreased to 16.6 % and the houses roofed with corrugated metal sheets increased to only 65.5 % (Mengers, 1986:107), this because of the increase of roofs made of tiles, fiber cement and flat gazoline barrels.
In September/1989, right before the start of the works of the PMBB, the number of houses covered with thatched roof is decreased to 13.6 % while the corrugated sheets is increased to 72.4 % (PMBB, 1989:8). An increase in the houses covered with tiles is also verified: 9.8 % .

After the intervention of the PMBB, the number of houses covered with corrugated metal sheets will increase with 16 houses more.
In 1979, 49 % of the houses were rented occupied (Kunzel and Wehenpohl, 1979:43). Seven years later, this number decreased to 22.7 % although 28.5 % of the houses are partly rented (Mengers, 1986: 113). When it is compared to Mindará, there is a similar situation in terms of the type of housing occupation: the presence of tenants.
The top location of Cupilom turns it attractive for rental housing and seems to stimulate the practice of subletting rooms since the demand is high and there is no public response to that. Although, the most recent research, which covered 28 % of the houses in the southern part, could only detect 5 cases (12.1 %) where renters were reported and only 1 case of absentee onwer (Acioly, 1990c:4).
The better located neighbourhoods such as Cupilom de Cima become a target for renting practices and this may result in future changes concerning housing ownership and housing occupations.
For space, many houses have a type of backyard and/or a plot demarcated by physical elements such as fences of old flat barrels, bamboo frames, trees, see **Figure 8.1.**
The existence of a backyard (quintal) is more visible in Cupilom than in Belem and Mindará. In many cases, a wall is built around it.
Several activities take place within this space such as washing clothes, bathing, personal

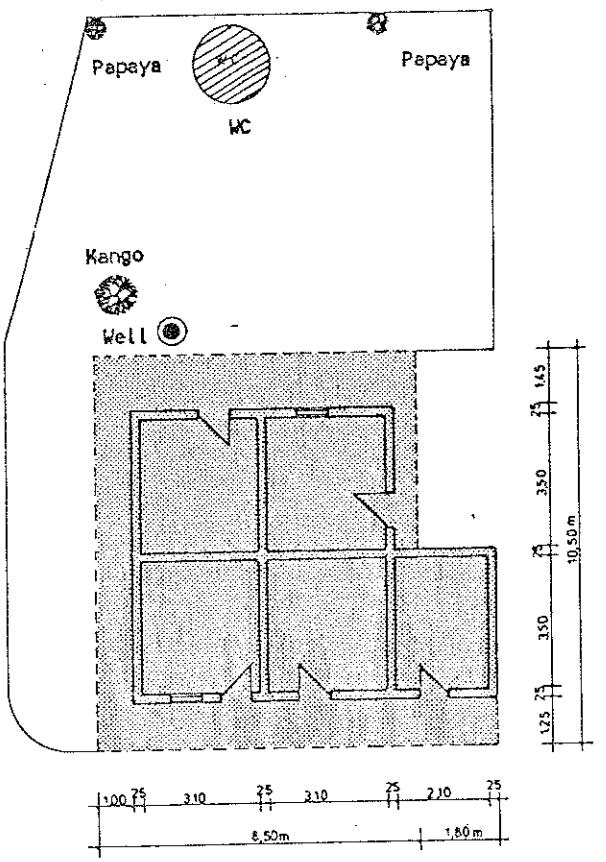
hygiene and cooking, although the latter is done very often on the varanda like in Mindará and Belém. For the kitchen inside the house, in 1979, Cupilom presented the lowest figure among the three neighbourhoods: 21 %.
Most of the bathing places and pit latrines are surrounded by round fences of bamboo frame (quirintim) or flat barrels with concrete floors made on top of a frame of cibes, the local wood used in the roof structure. They are usually located in the backyard of the houses and this is an important element because of the ceremonies which take place when there is a death in the house. The Mandinkas keep their dead in these places before the body is taken to be buried in the cemetery.
There is another feature concerning the public space which Cupilom differs from Belém and Mindará and which is closely linked with the ethnic background of the residents. It is common to find pigs walking freely around the houses in these two neighbourhoods while in Cupilom this is very rare.
For infrastructure, the situation in Cupilom de Cima has been always better than in Belém and Mindará, except for the drainage which did not exist in the three neighbourhoods untill the PMBB started its interventions. There is a gradual process of improvement in all infrastructure components during the last ten years.
In 1979, 17.1 % of the houses had a septic tank (Kunzel and Wehenpohl, 1979:21). In terms of water supply, 28 % of the houses were supplied with by piped water or public tap while for Mindará and Belém this component did not reach 7 %. The provision of electricity reached 28.6 % of the houses, more than Belém and Mindará together (Kunzel and Wehenpohl, 1979:22).
In 1986, Mengers found several improvements in relation to the situation of 7 years ago. 12.6 % of the houses had an individual connection to the public water supply system (Mengers, 1986:109) and 40.9 % of the cases were supplied with piped water or public tap (Mengers, 1986:119).
For electricity, there is also an increase: from 28.6 %, in 1979, to 49.5 % in 1986 (Mengers, 1986:110).
The residents demand several types of improvement in their living area. Less attention is given to infrastructure and more requests are made for improvement of the resident's individual housing situation. The first priority is the improvement of the houses: 51.9 %, followed by health center (25.3 %), public water standpost (12.2 %), pavement of roads (7,3 %) (Mengers, 1986:124).
This list of priorities is very significant because it shows the wishes of the residents and their awareness for what is to be improved in their neighbourhood. It provides elements that can greatly influence the formulation of any public intervention in this area.

8.4 AN OUTLINE OF PROJECT IMPLEMENTATION IN CUPILOM DE CIMA

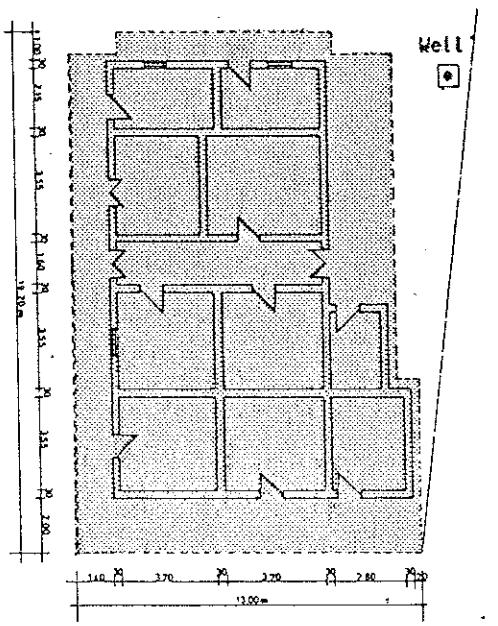
The strategy was to define immediately the circulation and road pattern. The roads became the pathways for the implementation of the drainage and water supply system. The settlement plan would be materialized in a second stage through the demolition and reconstruction of houses in bad conditions and/or located in contradiction with the urban layout of the neighbourhood.
The mobilization of the residents was quite satisfactory. The project could overcome the party structures and stimulated the formation of a broad Residents' Committee. There is no doubt that the ethnic unity of the neighbourhood favoured this outcome and the project could sign a contract with this committee defining roles and responsabilities. The

traditional leaders turned out to be indispensable participants.
In order to clarify its components and strategies of intervention, and to make proposals understood by the residents, the project had to refine its communication system towards the community.
The assisted self help process for housing reconstruction, proved to be a very effective mobilization instrument to involve the residents although it needs to be refined, roles and responsabilities to be reformulated and financial arrangements must be given greater attention in order to achieve a sustainable cost recovery. This will be dealt with in the part V of this study.
The experience in Cupilom de Cima showed that the traditional land occupation is the bottleneck for a land division strategy and for legalization of tenure of the whole settlement. Whenever new uses were defined for the open space available in the neighbourhood and individual plots had to be demarcated, the project had to go through long and tiring discussions. The residents had very little awareness of what urbanization means, the positive and negative effects of it and the need to officialize the land tenure of their settlement; they had no idea of the most elementary urban and building regulations and their civil obligations towards the Municipality.

FIGURE 8.1 : Surveyed Houses in Cupilom de Cima



House 147/1
Area = 96.4 m2



House 36
Area = 249.6 m2

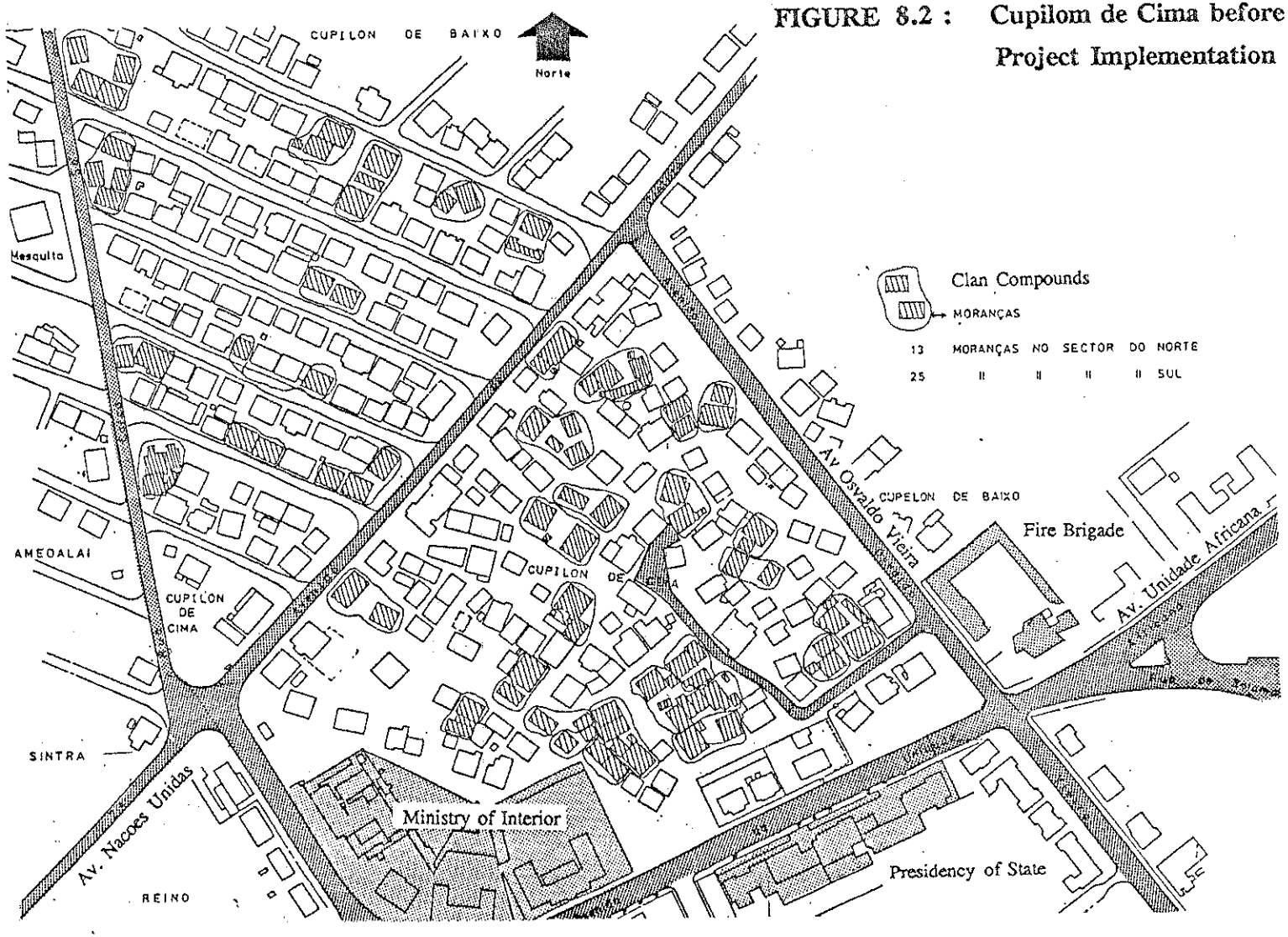


FIGURE 8.2 : Cupilom de Cima before Project Implementation

9

SUMMARY OF PART IV

9.1 GENERAL CHARACTERISTICS OF THE NEIGHBOURHOODS

The most important aspects of the three neighbourhoods which were discussed in the former chapters is summarized in **Table 9.1.**

The target population was initially estimated 20,000 inhabitants but today it represents a population of about 25,000 inhabitants, and that is equal to the estimated population of the second largest city of Guinea-Bissau.

The population of Bissau is growing at an annual rate between 3 and 5 %, while the population in these neighbourhoods is growing yearly more than 5 %. The densification is a particular phenomenon that affects the popular neighbourhoods and brings along overcrowding, illegal constructions, renting and subletting rooms and a flourishing informal sector.

Only in Cupilom de Cima there is reliable information about the employment situation but there are evidences that a significant number of the inhabitants of all three neighbourhoods are involved in activities of income generation out of the formal employment sector.

All empirical evidences demonstrate that the socio-economic status of the inhabitants make them eligible as a target group of the neighbourhood upgrading project. They do belong to the ecomically weaker groups of the population living in Bissau.

Physically speaking, the three neighbourhoods are very much alike starting from their problematic and densed urban structure, high population density and their critical provision of basic infrastructure like water supply, electricity, sanitation, roads and drainage.

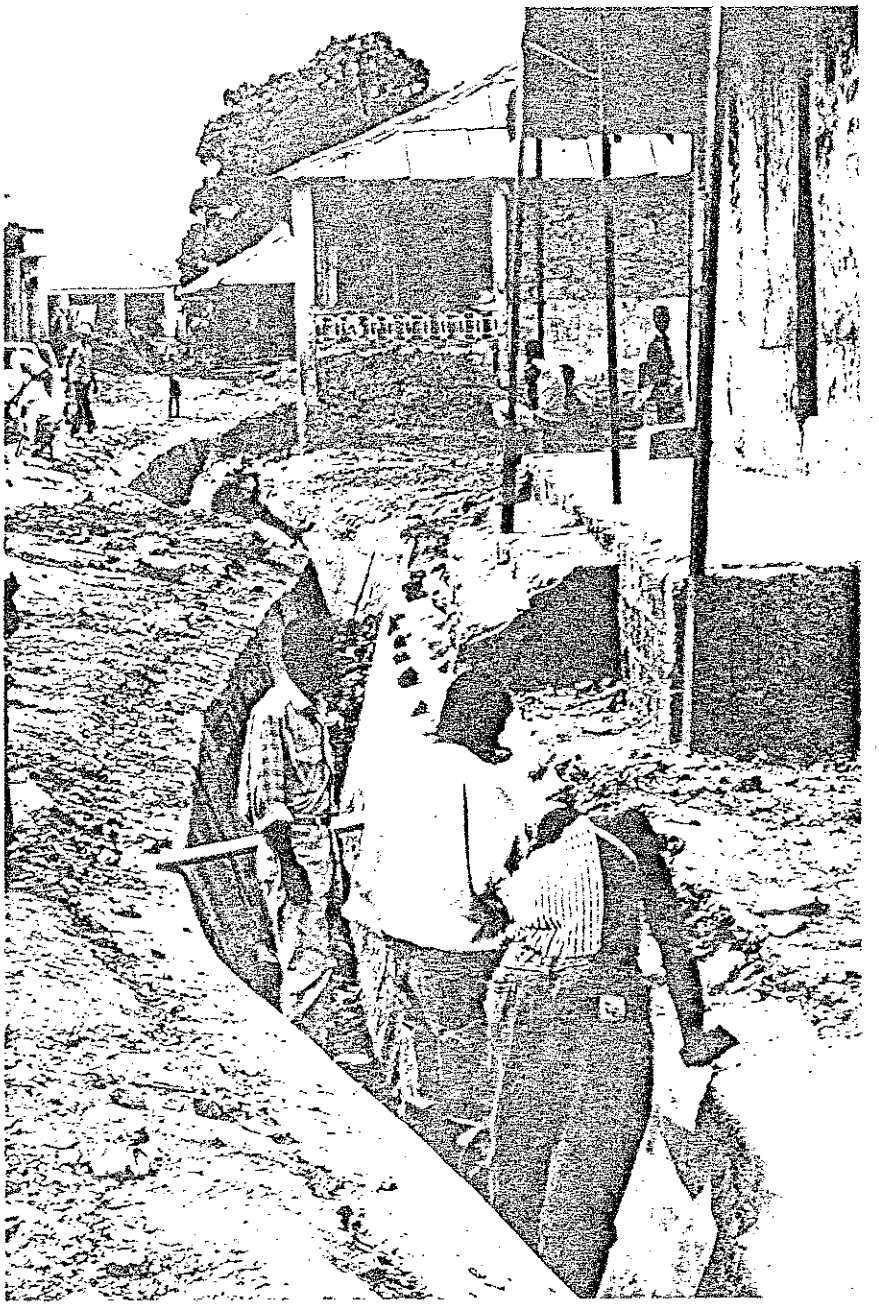
Despite the improvements accomplished by the PMBB in terms of water supply, the inhabitants still continue to collect water from traditional wells that are often polluted and therefore unsuitable for domestic use.

The traditional pit latrines are the most important pollution vector besides the open air waste water ditches and the dumping of solid waste.

The combination of a high population density, overcrowding, poor housing conditions and scarse infrastructure facilities creates a living environment that is extremely hostile for human development. Health problems occur and children are often affected by diarrhea, skin and infectious deseases, and occasionally by a measles epidemic.

Although there are missing data about Belém, the housing stock in the target neighbourhoods presents similar features: most houses are built with adobe blocks and have 6 or 4 rooms; there is a progressive decrease in the number of houses covered with thatched roof; there are many occupants per room; most houses are overcrowded and there is an intensive practice of renting and subletting rooms.

The average number of occupants per house is above 10, and in the southern part of Cupilom de Cima, it reaches 22 inhabitants per house.
Both Mindará and Cupilom de Cima have almost 50 % of their housing stock partly or totally rented. Assuming that the Government is unable to increase the housing production soon, the tendency is that this rate will increase the coming years considering their locational advantages and the significant improvements accomplished with the neighbourhood upgrading project.



A working brigade of the PMBB inspecting a drainage gutter implemented in Cupilom de Cima.

Table 9.1: Profile of the Target Neighbourhoods

	Mindara	Belem	Cupilom
Area (ha)	31.00	42.27	14.50
Population (inhab)	8,600	> 10,569	> 5,808
Annual Population Growth	7.8 %	> 6.0 %	5.5 %
Population Density	> 250 inhab/ha	> 204 inhab/ha	< 400 inhab/ha
Number of Houses	445	617	264
Housing Density	14 houses/ha	14 houses/ha	18 houses/ha
Occupants per House	10-15	14	16-22
Average Family Income (US$)	< US$ 120.00 (1984)	n. a.	US$ 88.00 (1986)
Unemployment Rate	n. a.	n. a.	49.6 %
Major Ethnic Groups	Papel, Mancanha (Animists)	Papel, Mancanha (Animists)	Mandinkas (47 %) (Muslims)
Houses Covered with Metal Corrugated Sheets	73.22 % (1990)	n. a	72.4 % (1989)
Houses Covered with Thatched Roof	16.39 % (1990)	n. a	13.6 % (1989)
Houses of Good Quality	26.19 % (1990)	37.11 % (1990)	n. a.
Houses Partly Rented	30.6 % (1990)	30-45 % (1981)	28.5 % (1986)
Houses Rented Occupied	17.21 % (1990)	30.00 % (1981)	22.7 % (1986)
Individual Water Connection	7.65 % (1990)	19.12 % (1990)	12.6 % (1986)
Electricity Connection	30.5 % (1990)	55.43 % (1990)	49.6 % (1986)

n.a. = non available.

9.2 PRELIMINARY APPRAISAL OF PROJECT IMPLEMENTATION

The first phase of the project was completed with the end of the construction activities in Cupilom de Cima, in the beginning of 1992, but there are still a lot of uncertainties concerning the future of these three neighbourhoods.
Perhaps only the process of consolidation will provide sufficient elements for a good appraisal of this phase.
It is a fact that evaluation is an important instrument to generate relevant information for the redesign of projects and policies but a comprehensive evaluation is out of the scope of this study. However there are a series of empirical evidences permiting a preliminary appraisal of the impact of the project and the validity of certain solutions. Five years of project implementation provide valuable case studies and if they are well analyzed, they can sustain the formulation of possible approaches and suitable strategies that may facilitate the life of the urban poor in Bissau. To a certain extent, a critical evaluation of this experience in Guinea-Bissau may be helpful to those who study similar contexts in the African continent.
There is no question about the impact of the intervention of the project in the three neighbourhoods especially if one looks at the achieved physical improvements as it is shown in the **Table 9.2.**

Table 9.2 : Physical Improvements of the PMBB (1986-1991)

Components	Mindara	Belem	Cupilom	Total
Roads (mts)	1,000	4,000	2,375	7,375
Water Supply (mts)	1,500	2,500	2,200	6,200
Public Water Taps	14	13	08	35
Drainage System (mts)	3,300	4,500	2,150	9,950
Houses *	12	03	35	50
Latrines **	14	26	41	81

* There are a number of building material loans and credit facilities related to housing improvement.
** There were 23 latrines built in other neighbourhoods, which makes a total of 104 latrines.

At an estimated cost of US$78 per inhabitant, excluding the costs of technical assistance provided by the SNV, it was possible to implement considerable improvements in three neighbourhoods. If one looks back on the situation before the implementation of the project, one has to agree about the benefits resulted from the improvement of basic infrastructure in the neighbourhoods. One of the most important questions is to know how these improvements were received and transformed by the target residents as essential items of their daily life and how this investments in infrastructure services will be recovered.
During my meetings with the residents and by careful observation of their behaviour in their daily life I could have a good insight on that matter.

In Mindara, the drainage gutters became temporary solid waste dumping places. Temporary because right before the rain season starts some residents take the initiative to clean the gutters that are located in front of their houses. I came across a resident who is in charge of the cleaning and maintenance of the public water supply standpost in his zone and who charges a fee not only to take care of the standpost but also to clean the drainage gutter. In some intervals of the system the situation is absolutely hopeless with gutters completely obstructed with garbage and mud. This occurs when there are no houses located in front of the gutter, or when in some cases the gutters pass in front of commercial buildings whose owners seem not to care for this particular improvement. In general there was a high degree of negligence from the part of the inhabitants concerning this benefit.

In Belem, during the first year after the works were completed, one could see that the campaigns and the efforts made to involve the lay resident in the maintenance of the benefits gave a positive result. However the situation deteriorated and the same kind of behaviour is now also visible in Belem.
The residents should not be blamed for that because former researches said that they were willing to pay for public services. Garbage collection is a structural problem of the city and should not be seen as a result of the lack of initiative and their unfamiliarity with environmental planning.
The efforts made to increase residents' participation proved that the local neighbourhood organizations, mainly the PAIGC committees and affiliated political branches are unsuitable counterparts for the PMBB to achieve forms of decentralized urban management. It seems that they joined the venture because they feared to be oveshadowed by the mobilization capacity of the project and consequently loose their control and already weak influence on the residents. But they alone cannot be blamed either for the failure of these attempts. The project was unable to keep the process of communication with the residents under constant revision and evaluation due to its limited manpower capacity. In fact, it was unable to implement a continuous participation policy in these two neighbourhoods. Community participation consumes time, it has a processual character and demands full engagement, and its impact can only become visible on the long run but until now the effects of the animation and participation programmes in Belem and Mindara still needs to be appraised. What are the positive and negative effects in terms of behaviour that can be detected among the inhabitants ? What motives do the inhabitants have for neglecting the maintenance of the infrastructure components delivered by the project ?
For example, only 8 out of 13 public water taps in Belem were functioning with a nominee resident in charge of its maintenance and had the collection of the monthly fees updated after six months of operation. The users of the remaining taps showed no interest to organize the water supply scheme in their zones, some never payed the fees and no attempts were made to replace a broken tap. The fact that the houses of a certain zone had individual connections may explain the lack of interest of the residents and the latest figures seem to indicate that many residents are connecting their houses to the water pipe network. That brings another problem. The common solution is the conventional tap standing in the backyard without any concern about the infiltration (soakway) pit. The increase of water consumption will certainly cause the overflow of existing pit latrines, the increase of open air sullage and environmental pollution.
Due to the fact that the intervention in these two neighbourhoods was restricted to the

delivery of physical infrastructure it is possible to assess the positive environmental impact of the drainage system but not the impacts in terms of income generation and eventual changes in land owership caused by neighbourhood upgrading. Empirical evidences show that the improved accessibility stimulated the appearance of some small shops and workshops in the houses located along these roads. Only a comprehensive evaluation will provide more accurate answers to those questions.

In Cupilom de Cima it is possible to appraise the outcome of the settlement plan approach and its impact on neighbourhood level. The change in the spatial structure was radical and gave a completely new outlook. This approach implies that housing becomes an instrument of urbanization that allows at the same time the direct participation of the inhabitant and the physical implementation of the settlement layout plan, as it will be explained in **Part V.**

It became a show case through which the project demonstrated not only the technical feasibility of a particular neighbourhood upgrading model but also the existence of a series of bottlenecks in terms of resident participation, building process and economic feasibility.

The changes in the environmental situation of the neighbourhood became obvious when the first heavy rains fell over Bissau and the drainage system worked perfectly to drain the water out of the settlement.

The outcome of the intervention in Cupilom de Cima marks the peak of the evolution of the project approach and characterizes the development of neighbourhood upgrading at policy level within the context of Bissau.

Besides the delivery of basic infrastructure, town planning became top priority of project intervention and this shift brought the project in confrontation with traditional land occupation, see **Parts V and VI.**

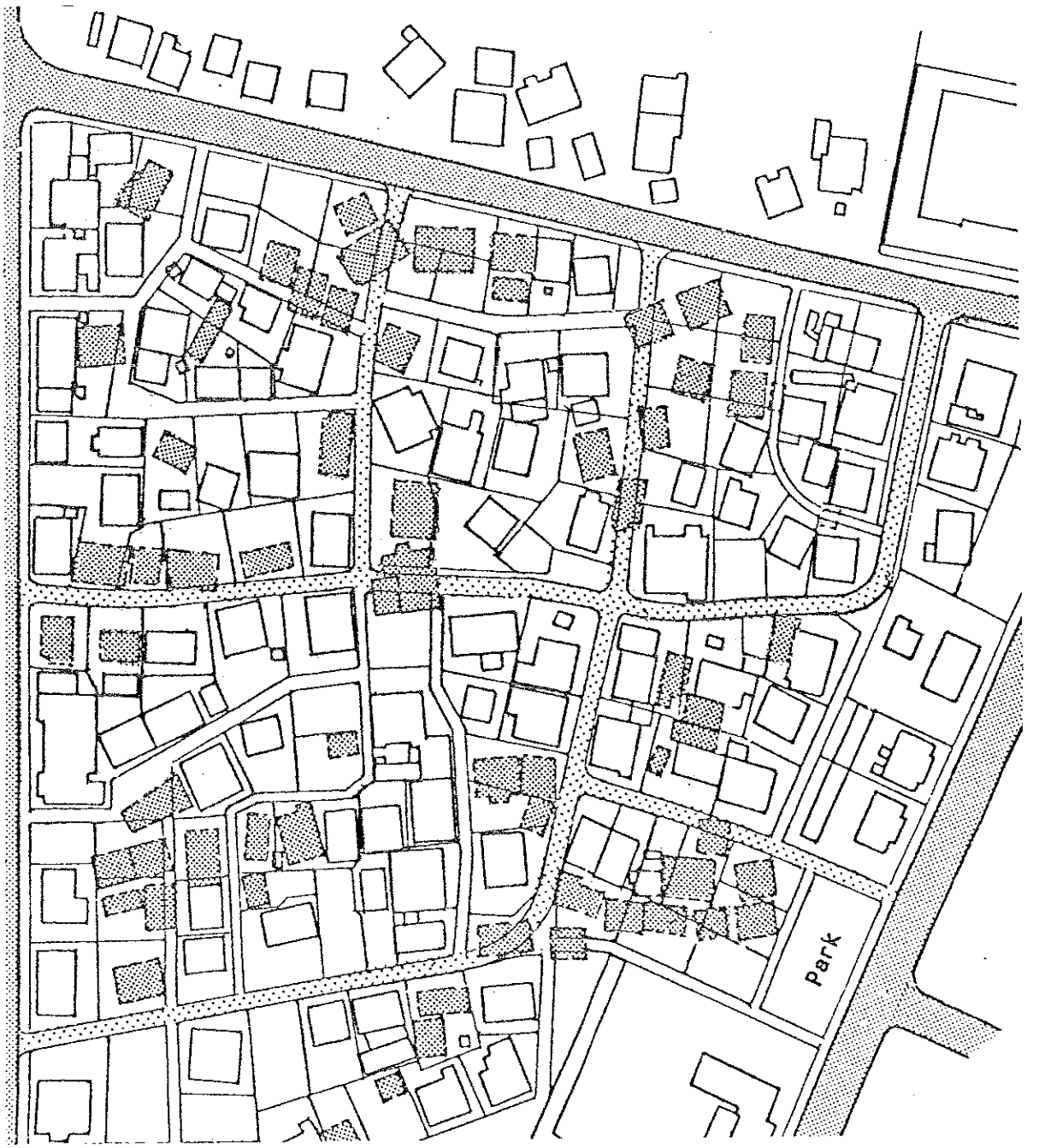
The participation model experimented in Cupilom showed a great potential to create neighbourhood based urban management schemes and confirmed that housing cannot be excluded from any intervention if one wishes to involve the layman in neighbourhood upgrading activities. In this respect, the experience of Cupilom de Cima could capture a level of resident involvement much higher than the former experiences of Mindara and Belem.

As said before, improvements which affects directly the individual resident like housing, seem to stimulate his participation rather than the collective improvements on neighbourhood level like infrastructure.

More conclusions about project implementation will be dealt with in **Parts V** and **VI.**

PART V

THE HOUSING AND PLANNING COMPONENTS



10

INTRODUCTION TO PART V

From Part I to Part IV this study was characterized as an analytical exercise.
The method utilized was in fact very simple: all possible data and information about the country, the city and the neighbourhoods were collected and analyzed in a systematic and critical way.
Sometimes information collected in different periods was compared, especially concerning the three target neighbourhoods.
My own experience as a citizen of Bissau and as a professional technician who was confronted with the different problems of the city should not be disregarded either.

The monitoring of the development of the project and its impact has two dimensions: as an outsider I tried to look back how and when the project started, its bottlenecks and its achievements. Afterwards I started to look at the present situation when I was a part of the whole process rather than an external evaluator.
However, I never intended to evaluate the project as a whole. Instead I had a particular interest to analyze the particular approach developed during the intervention in the last neighbourhood in which I had a decisive participation.

This is exactly the core of Part V, the settlement planning approach and the assisted self-help housing programme. The method that was used in this part of the study reflects the methodology of "action researches". I am not an external evaluator who is trying to appraise the direct and indirect impacts of the project but I intend to evaluate my own experience related to housing and planning during three years of project implementation. Due to my direct involvement, it is possible to provide many details and informations which are often skipped by evaluation studies.
I will try to describe and analyze the subjects and the specific difficulties I faced in Mindara and Cupilom de Cima in my field of activity. I intend to monitor the process in which I was directly involved with as objective as possible.
However, I believe thoroughly that the settlement planning approach and the assisted self-help strategy is suitable to tackle the problems of the popular neighbourhoods in Bissau although it still needs to be better structured and overcome its present limitations.

11

THE FIRST HOUSING AND URBAN INTERVENTION IN MINDARA

On the 19th of December 1988, eight houses burned down in Mindara of which some only the walls remained and others were completely destroyed. The residents contacted the Project to ask for help in reconstructing their houses.
This was the opportunity I needed to verify "in loco" the feasibility to implement new project components such as the physical planning of the neighbourhood, the technical assistance and the housing improvement programmes but before carrying out any action it was essential to define some concepts.
I defined the housing improvement programme as an activity that requires technical assistance provided by the professionals of the project during the building process, and financial support through the provision of building materials. It is a process of cooperation in which both the project and the house owner must have very explicit roles and responsabilities.
The active participation of the resident in the improvement of his house and his financial commitment to a cost recovery scheme should be seen as the pre-condition for financing housing improvement and for receiving technical assistance of the project. The technical assistance programme consists of a full technical support to the residents through project designs, construction guidance, on site supervision and orientation in the construction process, topographic plotation, assistance in the improvement of the sanitation system, supply of information, and legal support on land tenure issues.

Physical planning means in fact a physical intervention in the urban structure of the neighbourhood. By relocating houses and creating better accesses to the inner spaces of the neighbourhoods, it is possible to achieve more rational urban patterns and create conditions for land subdivision and its future legalization. This means the possibility to incorporate these neighbourhoods within the official urban fabric of Bissau and to accomplish an improved living environment at the same time. But it would be impossible to improve the living environment without relocating houses and the direct involvement of the resident. Thus the realization of the physical plan of a settlement will always imply demolition and reconstruction of houses, and its reconstruction can only take place with the intensive participation of the house owner.
These ideas formed the core of my conceptual paradigm. I am convinced that a neighbourhood upgrading project cannot succeed in Bissau or elsewhere if one does not consider the ultimate linkage between housing, urban planning and community participation.
Physical planning demands a good field survey about the environmental conditions of the neighbourhoods, the living and physical conditions of the houses, the social use of the

private and public spaces and a good overview on town planning of the Bissau, so that the socio-economic and cultural context and the built environment of the residents would be captured systematically before any planning and design activity would take place.
Each household was interviewed through a simple questionnaire which revealed the socio-economic status of the residents, see the summary on **Table 11.1**. In order to give some basis for the development of an appropriate design, each house was measured and analyzed in terms of spatial use and needs confirming some of the empirical evidences I collected in the neighbourhood. This was explained in **Part IV**.

Table 11.1: Data Summary of the Burned Houses in Mindara

House	Size/Rooms	Occupants	Families	Source of Income
Luiza	114 m2 / 4	25	03	1 bolanha, 1 cook, 2 renters, 1 servant, 1 public employee.
Jorge	114 m2 / 7	20	05	1 bolanha, 1 nightwatch, 3 drivers, 1 soldier
Avito	120 m2 / 6	07	01	1 bolanha, 1 driver, resale of fishes
Ines	115 m2 / 4	18	03	1 bolanha, 1 stevedore, 1 street vendor, 1 public employee, 2 renters
Justina	99 m2 / 4	13	01	1 sailor
Fafe	72 m2 / 4	10	01	1 bolanha, 1 artscraft salesman, 2 coal salers

Source: Acioly, C., "Reflexoes Acerca das Possibilidades e Limitacoes da Auto-construcao na Guine-Bissau com base nas experiencias do PMBB".
BOLANHA: a piece of land used for agricultural activities.

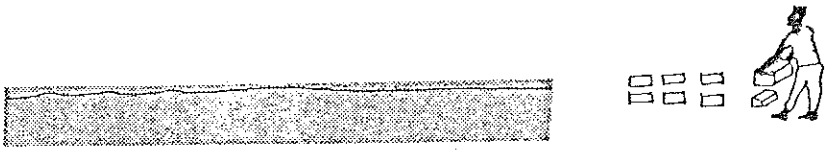
It was extremely important to explain all the details of the process because the residents were reluctant to take part in such a "risky" step to demolish their houses and to rebuilt them in another place, because there was no tradition and no accumulated experience with assisted self-help housing projects in Bissau and the residents were never exposed to such organized schemes. Besides that, the word "demolition" brought a lot of suspicion among the residents, especially in Mindara where a sinificant number of houses were demolished when the new avenue (14 de Novembro) was constructed and the owners never received the just compensation from the Government and some are without a house until today. The project had to try to reverse this suspitious behaviour.
They feared they would be uncapable to acomplish their tasks since part of the construction was completely in their hands and they lacked experience in the building sector.
They also feared that the time available to have the houses covered was not long enough,

3 months, taking into account that 15th of May is considered as the first day of the rain season.
After two meetings with the residents a plan was developed and presented in a third meeting. I prepared several posters and illustrations indicating how the activities were going to take place according to the timetable, the exact moment the houses needed to be covered and the location of the houses. For that purpose a maquete of the area turned out to be an efficient information tool. The visual tools received great attention because it was important to capture the confidence of the audience for the project. The whole process had to be very clearly understood in order to allow the residents to take a decision about their participation and acceptance of the conditions, their tasks and responsabilities, see **Figure 11.1.**

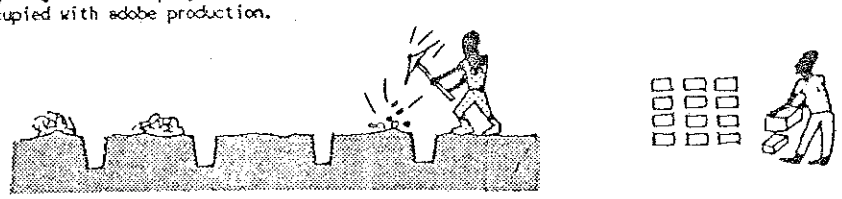
It was agreed that the project would be responsible for the demolition of the houses, the cleaning and preparation of the site, the management and the implementation of the foundation of the houses. The foundation was designed as a ciclopic concrete layer base of 5 cm plus two layers of concrete blocks of 20x20x40 cm accompanying the layout of the walls. The aquisition and provision of the corrugated metal sheets (ZINCO), the nails and rubber rings was a responsability of the project as well. The project would provide the straw panels and would help the residents to built the huts where they would temporarily live. The neighbours were asked to allow them to share their pit latrines until a final solution was found. The residents would be responsible for production of the adobe blocks, the construction of the walls, the acquisiton of the wood to built the structure of the roof (local wood from a palm tree called CIBE).
They would be allowed to work in the implementation of the foundation and the cost of their labour would be considered as a down payment in the cost recovery scheme. The project financed the building materials and the residents were allowed to pay their "loan" in cash, through labour in other activities of the Project or by letting two or more rooms of their houses to the project.
In summary, the project would take care of the building components that were imported such as cement, galvanized corrugated metal sheets and nails, while the residents would be responsible for the local building materials such as mud and sundried adobe blocks, palm tree wood (cibes).
In terms of the plan itself, a new access road of 5.00 m wide and 120 m long was introduced as a circulation axis that would allow a better location and the allignment of the reconstructed houses. It implied the relocation of all 8 houses plus two others that were appointed to be transfered to the site because they were blocking the drainage system in a nearby corner, see **Figure 11.2**
The concrete foundation was an inovative component introduced in the traditional construction. The foundation was thought to be a requisite to achieve a solid and balanced outcome of the adobe walls that could at the same time prolong its durability and avoid the common cracks when traditionally built. The foundation should be at least 10 cm above the ground in order to lift the adobe from the ground and protect the walls from humidity and termites, two serious enemies of the adobe walls. And whenever the floor of the varanda would be implemented the walls would still be above the ground. The foundations were designed as layers of concrete blocks because it was indeed the most apropriated technology in Bissau because local production would be possible and the brigades of the project gained quite some experience after having implemented the drainage gutters.

FIGURE 11.1 : Process of Cooperation between the Resident and the PMBB

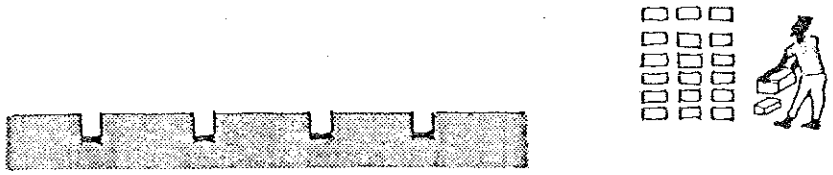
1. The project takes care of the demolition of the house, cleans the area and prepares the site for construction. The resident is already busy with the production of adobe blocks.



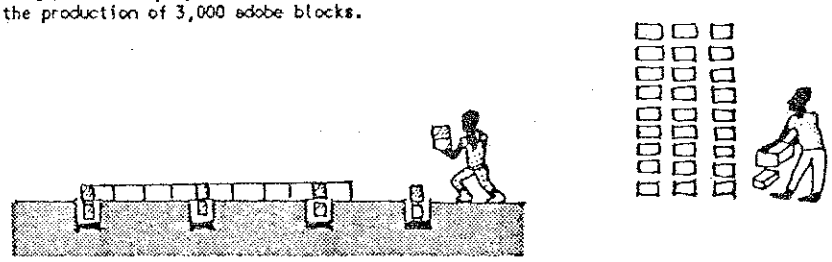
2. A working brigade of the project starts to dig the foundation of the house while the resident is still occupied with adobe production.



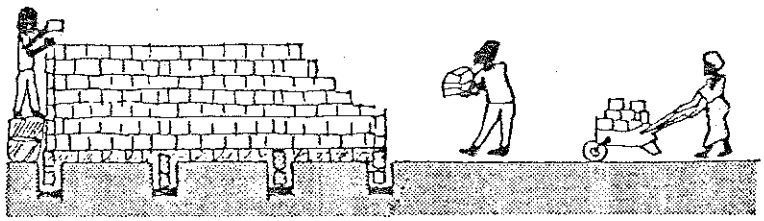
3. The ciclopic concrete layer is executed by the project. The resident is still producing adobe blocks to be used in his house.



4. A working brigade of the project executes the foundation of concrete blocks while the resident completes the production of 3,000 adobe blocks.



5. The resident builds the wall and is occasionally helped by his family.



6. The resident prepares the cibe wood and starts building the roof structure. When this part is completed, the project will place the corrugated metal sheets.

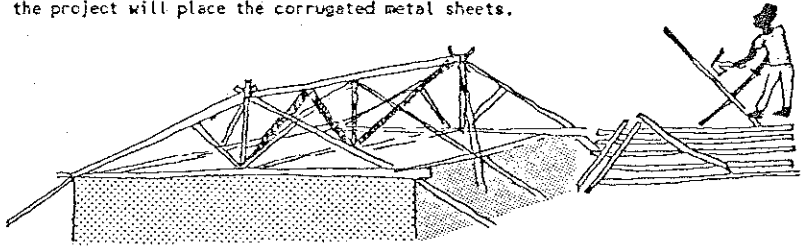
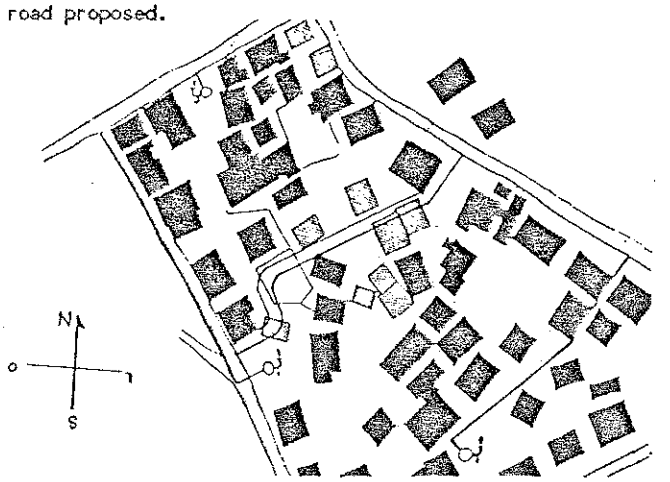
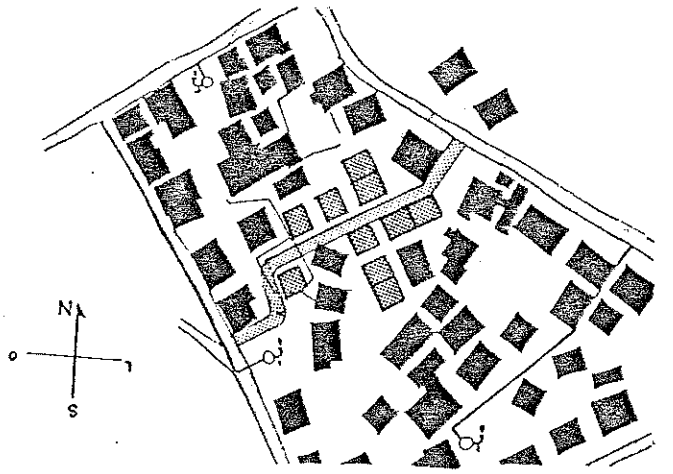


FIGURE 11.2 : Layout of the plan

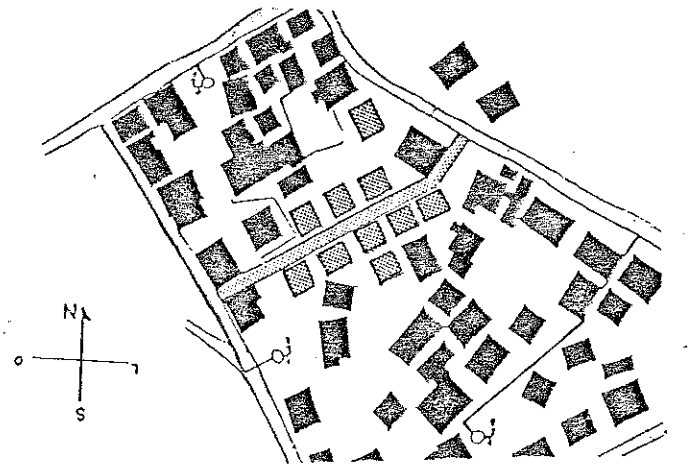
1. Existing situation and new access road proposed.



2. Relocation plan and new access road.



3. Situation after plan implementation.



(four houses were demolished and reconstructed in 1991).

The design of the house incorporated the elements of the traditional house. The four sided roof and the varanda surrounding a fixed plan of six rooms would protect the adobe walls from the rain.
The resident could define the location of windows and door and arrange the internal circulation system between the rooms according to his needs. The advantage of the traditional pattern is that it is quickly accepted, easy to build and allows the use of the traditional technology and favours the immediate identification of the house owner with his house.
The whole intervention was based on the concept of gradual housing improvement. Further steps of improvements such as windows, doors, floors, plastering, ceiling, varandas would depend completely on the resident and his capability to fulfil his needs along the time. But there was no question of evolutionary design.
The residents were not prepared to accept a core house approach and there were too many constraints to insist with the idea. There was not much time to discuss other alternatives, the families were composed of many members and could not be accomodated inside a minimum dwelling. The fact was that the size of the families was not compatible with the sizes of a core house.

This was a localized intervention with a strong experimental character and it was solely concerned with that specific section of the neighbourhood and its relationship to the nearby areas. Although an urban intervention should be developed according to a global framework, a settlement plan for the whole neighbourhood was at that moment out of the question due to lack of time.
Because of this, the high density and lack of space made me exclude the individual latrine solution and opt to a communal solution. The plots could not be defined either. I prefered to apply the concept of **projection** which means that only the area covered by the house would belong to the resident. The non occupied areas were considered as communal space and in a second phase, when an urban plan would be formulated only then the borderlines of the individual plots could be realized.

Time was indeed the key constraint. In fact, the adobe block can only be used during a very specific period of the year, the dry season that goes from november to may. Several other steps had to be disregarded as well e.g. the organization and preparation of the human resources within the group of residents, the assessment of their real possibilities and abilities to participate intensively in the whole process, the definition of criterias and the design of other alternatives for the improvement of the area, the assessment of the possibilities of a financial scheme organized through the official channels.
This is why only 6 houses out of the 10 target houses were involved in the process and it is the reason why the project assumed the whole financial management because it was not possible to set up before hand an agreement with a financial institution e.g. the National Bank.

11.1 IMPLEMENTATION

After the plan was approved, the foundation works started immediately. The ciclopic concrete layer of the foundation of 5 houses consumed 3 days and in 15 days the foundation works were completed in all the 6 houses. 260 concrete blocks were used in each foundation and they were all locally produced by a team of four youngsters at US$ 0.70 labour cost per block. In seven days work (8 hours/day) the group was able to produce 1,024 blocks, almost 150 blocks a day.
A resident who was helped by his wives and daughter was able to produce 3,000 adobe blocks in a period of 8 days and started to build his walls even before the foundation works of the other houses were concluded. This man had never had a previous experience with building activities.
In the production of the adobe blocks to build the walls, I came across some interesting procedures. All residents re-used the blocks which were carefully taken from the walls of the former house before demolition so as the mud originated from the demolition of the compacted mud walls (taipa).
Except for three residents who contracted a local team of workers to produce adobe blocks (20x20x40 cm), paying an amount of US$ 80.00 for 3,000 blocks, PG 50.00 per block, the other three produced the blocks helped by relatives and friends. On site tests showed that some of these blocks had a good resistance, especially when they dried in the shadow and were kept untouched during four days.

During the process of building the walls, three of the residents contracted a team of 4-5 workers for the amount of US$ 160.00 and the others were helped by relatives and friends except for one who was helped by his 2 wives and daughter.
In 29 days counting from the start of the foundation works, all buildings were ready to be covered. This became the most difficult part of the house and turned out to be the bottleneck of the whole process. The pilot housing improvement programme suffered its first set back because the residents were unable to fulfill their tasks. They had no means and no knowledge to implement such a specialized work and only afterwards I realized that even in the villages (tabancas) there is always one person in the community who is the expert concerning this part of the building.
After one week of waiting, a group of residents asked for financial support. They had found a group of carpenters who would do the job for US$ 500.00 per house, a cost which was unaffordable for the residents and unacceptable for the project.
The 3 carpenters of the project were brought into the area under the condition that every resident would enroll in the work at least one person of his family. They started on the 3rd of May and finished the wooden structure of five houses in 26 days working 10 hours per day. One resident had managed to build the roof structure of his house and only the corrugated sheets needed to be placed. Each house consumed 75 sheets of 3.66 x 0.82 m, imported from Holland at the price of Dfl 35.00 per unit (US$ 17.50).
In total the building of the roof of all the 6 houses took 34 days of intensive work. On the 7th of June all 6 houses were completely ready to face the rain season and in total the experience consumed 70 days, a record for Bissau.

Fortunately, the rain season started a little later than expected although the first drops fell exactly on the 15th of May, as expected, but it was not sufficient to harm the adobe walls. It was only on the 4th of June that a heavy rain fell over Bissau.

11.2 AN ANALYSIS OF THE PROJECT APPROACH IN MINDARA

The lack of a global settlement plan of the neighbourhood which could indicate open plots for relocating the houses and the confined character of this small scale pilot project limited very much the outcome of the intervention. Another constraint was imposed by the high housing density and the exiguity of the open space available in the site which did not allow more flexibility in the relocation strategy.
Being aware of the difficulties to fit houses in the open space created by the demolition of the old ones, I tried to introduce an attached house solution. Two house owners would share one wall and foundation and would live under the same roof. This would economize the space of two varandas and give a greater distance between the alligned houses alllowing better ventilation and natural lighting.
Although these owners had agreed with the solution during our meetings, when implementation started and the foundations were half way this new housing pattern was completely rejected and the whole plan had to be adjusted "in loco".
They argued that they wanted to have their own shelter under their own roof as it is common in Bissau but I could see that their ethnic difference was influencing their decision as well.
During the implementation of the project, it was observed that the residents were busy with their own houses and there were no solidarity and mutual aid actions in the building process. The assisted self-help housing process was totally based on the individual.
Despite the observations made above the residents' participation in the housing programme reached far better results than those achieved with past infrastructure improvement works of the project. In my opinion it is due to immediate identification of the resident with his shelter as his living space.
The maquete, the illustrations, the posters and the individual and group meetings showed that they are indispensible communication tools to approach the residents. The channel of communication was excellent and it became very clear what, how and when every actor of the building process should take action. The technical language of planners and designers used to explain their plans and projects had to be abolished and give space for simple but creative means to reach the layman which had to be considered when the plan of operation for Cupilom would be formulated.
The coordination and the assistance of the project were essential to guarantee the best result in the building process and it turned out to be an excellent support to the residents who never had a chance to participate in a construction activity.

The whole site was traditionally occupied and had no official status. I started to work with the principle established by the Municipality of Bissau and by the Land Act of the Government that establishes that all land belongs to the State and that the right of a house owner in an unplanned settlement does not go beyond the area that is occupied by his house. But in fact, this experience revealed that traditional land property is a serious barrier for allowing a relocation strategy and the re-use of the open space in the neighbourhoods.
But there is a duality concerning land. Although I was obliged to change the design of the road because of a house owner who did not accept to loose part of her plot, the "legalization" of land ownership was never put as priority of the residents because in fact they could continue living with the traditional rules and collective awareness about each other's land domain, even without physical and geographical demarcation. This issue

will receive great attention in the intervention in Cupilom de Cima, because it is impossible to implement a neighbourhood upgrading program without tackling the issue of land ownership and legalization of tenure.

When one looks at the outcome of the "gradual housing improvement" strategy, it is easy to realize that the residents are uncapable to acomplish other steps in a short period of time.
The problem of the roof showed the limitation of the residents and their difficulties to build the doors, windows and to implement the floors could only confirm the short term failure of the strategy. The project had to provide a small subsidy in order to allow the acomplishment of these components and only then they could start to improve their houses.
After two years, none of the houses have varandas except for one which is plastered, painted and has electricity and an individual latrine. All the houses have doors and windows and have the internal walls plastered except for one which has only the walls of four rooms plastered. Three houses have concrete floors, and two others have 4 and 5 rooms with concrete floors.
But considering the income situation of these families the outcome is not negative. The only fact is that the process of improvement is rather slow compared with the latin american experiences. Their level of income is very low and the opportunities to generate income are rare, and empirical evidences show that when financial resources are eventually mobilized it is spent on essential needs such as food.
The residents prefered the project to have included the doors, windows and floors in its list of responsabilities because that would allow them to occupy the house immediately without fearing for their belongings and it would permit the prompt start of the cost recovery process through renting out the rooms. The renters were not willing to pay the full price and were not very eager because the rooms demanded many improvements before being occupied. They also complained afterwards that the rooms of the houses were too small although the covered area of the house was bigger than their former houses. But indeed, once a double bed and a small wardrobe are in the room, there is not much space left, also considering that the rooms are used in different ways by the inhabitants.
All these observations in a pilot experience were seen as important feedback to start with the planning of the intervention in Cupilom de Cima.

12

THE SETTLEMENT PLANNING APPROACH IN CUPILOM DE CIMA

In this neighbourhood the project intented to reach a comprehensive result beyond the provision of basic infrastructure and the implementation of roads. Special emphasis would be given to settlement planning which would obviously result in a gradual relocation of houses. The project intended to consolidate a housing improvement programme sustained by a revolving fund originated from a cost recovery process. The programme would be implemented through the voluntary demolition and reconstrution of the houses which were in contradiction with the urban layout. This would be combined with a programme to improve individual sanitation conditions through the construction of individual double pit waterlocked latrines on large scale within the neighbourhood.
A special priority was given to community participation and the involvement of the lay resident in order to institutionalize a participatory model that could create conditions for a decentralized urban management within the neighbourhood.
The project intended as well to officialize a land subdivision plan and search for legalization of tenure in the name of the present occupants of that area together with the approval of the land use and building/urban regulation for the whole neighbourhood.
To achieve these objectives it was important to define the strategies and the conceptual framework that could guide the intervention in the neighbourhood.

12.1 CONCEPTS

At first it was more than essential to define some methods and the conceptual basis that would sustain the formulation of the plan as follows:

1. The upgrading of a pre-existing settlement should always take into account the spatial morphology and the socio-economic context of the inhabitants and provide opportunities for a gradual transformation of the built environment with the direct participation of the residents.
2. The settlement plan should consider the different patterns of land occupation and the peculiarities of the existing urban morphology as a cultural and urban heritage so that the existing clan compounds (moranca) could be considered in the whole process of planning and consolidation of the neighbourhood.
3. In the urban layout plan, the plot size and especially its width has a direct affect in the overall cost of infrastructure. Therefore it should be taken into account during the formulation of the urban design and in the definition of the land subdivision. The existing traditional occupation should not be disregarded either and this must be seen as a parameter.

4. The same principle would be valid when determining the width of roads and accesses. The design standard has to be according to the local situation and would have to achieve an economic solution, giving priority to privatization of the space rather than to opening wide and costly roads.
5. The definition of individual plots considers that land is a public property and the use of all spaces within the settlement is subject to changes within the scope of the plan, except for those plots already legalized.
   The privatization of the individual plots and its legalization will gradually take place and will always imply the demolition and reconstruction of houses to guarantee a minimum standard of urbanization. There will be cases in which the plan contradicts the existing traditional ocupation but the plan gives priority to collective rather than to individual interests.
6. The officialization of the plan is a "sine qua non" condition for legalization of tenure and the guarantee to establish reinforcement mechanims to consolidate the plan and to start the collection of land taxes by the Municipality.
7. Any intervention in a built environment must seek to incorporate the residents in the decision making process in order to guarantee the acceptance of the changes and the maintenance of the benefits introduced in their living space. The local neighbourhood organizations must play a role in the process of planning, implementation and maintenance. Neighbourhood upgrading activities should stimulate the consolidation of grassroot organizations and create conditions to decentralize certain urban management tasks of the Municipality.
8. The participation of the lay resident in the process of neighbourhood upgrading is a pre-condition to consolidate the changes introduced in the environment and the guarantee for the subsequent maintenance of the benefits achieved with the intervention. Every input will have a cost to be recovered and to be requested from the resident through different ways.
9. During the demolition of houses the decision about the place of resettlement of the families have to consider existing family ties as well as clan and neighbourhood linkages in order not to disrupt existing survival strategies and social networks. Thus relocation should always take place within the limits of the settlement if technically possible.

12.2 THE METHOD

After defining the conceptual principles listed above, it was a must to set up the working method. The amount of data already collected in 1986 allowed me to have a good overview of the settlement, its main problems and the peculiarities of its socio-economic and spatial structure explained in **Part IV**. It was a question of updating the information and realize a very simple cadaster of the houses and complement the existing data, names of the owners, specific economic informations and so forth.
Obviously, the nature of the problems in the Southern and Northern sector of the neighbourhood differed and therefore it demanded two different strategies.
The regular urban morphology of the Northern part demanded attention for the improvement of the existing roads and the implementation of the infrastructure network such as drainage and water supply, precise land subdivision that could establish individual properties and land use and urban regulations for new constructions.
The traditional and irregular morphology of the Southern sector demanded a more radical

intervention and therefore it would receive top priority. Any plan to be worked out in that sector would have to include demolition of houses and need therefore a working method. It became important to define criterias to characterize the houses in the settlement that were in poor conditions before starting any design exercise. The survey also included data about the occupants of these houses but my approach was to look at the physical conditions of the building.

The houses were identified in this category according to the following characteristics or the combination of them: thatched roof or other material in deteriorated conditions, mud walls in decay, varandas affected by erosion, lack of concrete floors, lack of foundation, low level of the ground floor of the house in relation to the road, low ceiling and low walls, deteriorated general physical conditions demanding total reconstruction.
After doing this, it was possible to sketch the most feasible and most economic circulation systems and land subdivision schemes. By knowing the location of the houses I had more possibilities to formulate the most appropriated urban layout design, see **Figure 12.1**, and to compare alternatives that would avoid as little demolition as possible or the demolition of the poorest ones. It was a matter of killing two birds with one stone: opening new roads thus creating the pathways for the infrastructure network and renovating the housing stock through relocation of the poor houses.
It had to be an intervention in the urban structure allowing simultaneously the implementation of the infrastructure network, the urban restructuration and the technical assistance programmes. Only then it would be possible to point out at other components. The settlement plan would become the reference point and the guide for future interventions.

Compared to the experience of Mindara, there are some innovations and new formulations for Cupilom de Cima.
The intervention is not as localized as Mindara and has a global view of the settlement and on its future development in the context of the city although the plan did not tackle the issues of community and economic development of the neighbourhood such as public services, income generation and employment opportunities.
All houses identified as poorly constructed and/or situated in contradiction with the urban layout would be demolished and reconstructed on a voluntary basis and the resident would be requested to committ himself to an assisted self-help housing programme, except for those located in the axis of the roads for whom special arrangements were made.
The plan would be implemented in phases. First the houses would be demolished and the roads would be open. Then the implementation of the infrastructure network could take place without any obstacles. During a second phase the housing improvement programme would be launched as an instrument to materialize the urban subdivision scheme of the plan.
And in a third phase attention would be given to institutional aspects such as legalization of tenure, land taxation, urban regulations and cost recovery.

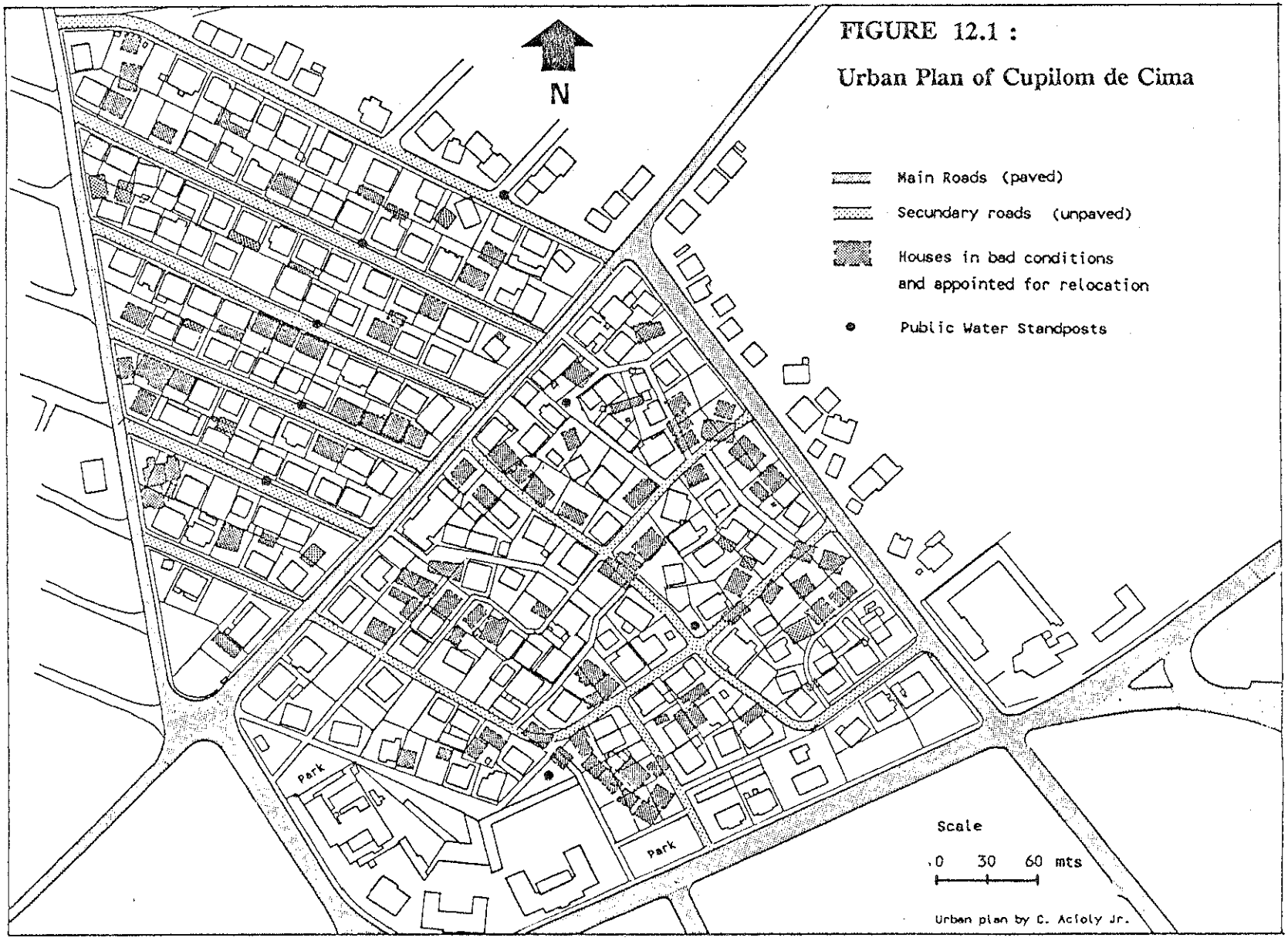


FIGURE 12.1 :

Urban Plan of Cupilom de Cima

A very important aspect of the case of Cupilom is related to community participation. The existence of traditional leaders provided the opportunity to test the feasibility of a broad community council which would involve not only the PAIGC party branch and its leaders but would also open opportunities for other residents. Therefore the project took the initiative to stimulate the organization of such a council and it became possible to reach an agreement with the residents' council. A contract with explicit roles and responsabilities was signed between the council and the project.
The information network towards the residents and the mobilization of the population would be entirely in the hands of the council who could also intervene whenever a conflict between the project and a resident occurs. The council acts as the filter of the decisions that were made and would discuss the whole plan in public meetings. Every action in the settlement has to be subject of previous discussions with the council. The location of the project's local office was to be arranged by the council and agreed by the Muncipality. The location of the public water taps and the trash collection points was also a task of the council but the final decision is always subject to a technical feasibility analysis.
The project would be responsible for all technical matters, for the coordination of all operations and for the provision of financial, technical and logistic support to the residents and for opportunities for housing and sanitation improvement. The legal and institutional aspects of the plan as well as the involvement of the Municipality would be tasks of the project.

The decision making process had to be transparent. The dialogue between the project and the residents had to be efficent and leave no gaps and umbiguity. The information tools had to be refined in order to pass the message and provide elements for a quick reaction and decision of the members of the council. A large wooden maquete of the southern sector of the settlement at a scale of 1:250 did not only help the planning process but allowed the perfect visualization of the area and the location of the houses by the council's members and by the lay resident. The visual materials collected during the experience in Mindara, the design of posters, illustrations and transparencies were used effectively and a video film about the project in the local language completed the information framework.
The residents of Mindara were invited to attend one of the meetings and give their own testimony of the meaning of urban restructuration and self-help housing construction assisted by the project. The project was playing an enabling role and the whole team simply became expectators of a discussion among the local population.
It was only after the plan was approved (October 1989) by the resident's council and by the house owners, whose houses had to be demolished in order to allow the implementation of the road system, that the plan was formally presented to the Municipality. There were no objections from their part but it was never officially approved until the end of the second phase, end of 1991.
The plan was never considered as a static object. I always considered it as the guiding element which had to be subject of constant evaluation. It had a dynamic character and therefore it was possible to improve its structure as the implementation would take place during two years.

12.3 THE PLAN

The first design implied the demolition of nine houses. Later on when the road system was changed two other houses were included in this group, see **Figure 12.1.**
The idea was that housing would become a tool for urban restructuration and an element to engage the residents in neighbourhood upgrading activities. The opening of roads would lay down the pathways for a rational implementation of the infrastructure network. At the long run the circulation system was thought to become the instrument to integrate the neighbourhood in the road network of the city and it would allow the accessibility to its most inner spaces. Every plot could be reached by the automobile through the local secondary accesses of 5.00 meters width or through the main access roads of 8.00 meters width. The latter would be preferred for heavy traffic while the former for pedestrians.
In a second phase the relocation of houses through an assisted self-help construction program would gradually materialize the urban layout and every house identified for demolition would be rebuilt in a nearby demarcated plot, see **Figure 12.2.**
The land use plan would take into account the trends of economic activities verified in the settlement. The main roads surrounding the settlement continuously attracted commercial activities which commonly overlapped housing functions. This should be reinforced by the plan in terms of use and in terms of norms for plot occupation.

The formulation of these norms was based on the principle that it could only be reinforced gradually when housing renewal and legalization of tenure would take place. In other words, the applicability of the building norms proposed by the plan could only happen whenever the house or building would be totally reconstructed in a new setup within the plot. Only the dynamics of the consolidation of the neighbourhood will dictate the pace of transformation and development. It is totally unfeasible to think that a house onwer will adjust the location of his existing house to a certain norm of occupation in a specific plot determined by the plan without its reconstruction. Only a new building could respect the indications of the new parameters. In this respect, the urban regulation for the occupation of the plots is based on a long term approach.
Why is the norm so important and whom does it serve ?
Since it has a regulatory character there is not doubt that the aplication of the norms will turn out to be a constraint for the residents. Ad hoc house extensions may be penalized. All new buildings (building extensions and reconstructions) will be limited by the demarcated lines of the plots and will have to respect the minimum distances from these limits as well as the percentage of land to be occupied.
That is indeed the first challenge of the plan: how far will these norms be respected and applicable ? Who is going to profit from this regulation ?
The officialization of the plan might stimulate social mobility. There will be residents who will not cope with the increase of land taxation derived from the legalization of tenure and who will be unable to meet the requirements of the plan e.g. gradual relocation according with the specifications of the norm. For those it is likely that this component of the plan will become a displacement instrutment.

For the Municipality, the whole setup of the plan will allow the organization of a cadaster of the neighbourhood. The norms and the cadaster will become a guide to manage the further development of the neighbourhood and will become an instrument to apply the

land taxation of specific plots and that is a possible way to generate financial resources to the empty safe deposit box of the Municipality. The improvements achieved with the project, the officialization of the plan and the legalization of land tenure in such a centralized location will turn the neighbourhood very attractive to the building sector and stronger economic groups. That might stimulate the gradual transformation of the housing stock. The existence of a norm and regulations will create a reference framework in the process of the consolidation of the neighbourhood but it will be no guarantee for the production of a healthier environment and a better spatial quality at plot level.
The norms and regulations have more advantage for the Municipality than for the residents, specially those whose income is situated at the bottom of the social piramid. I certainly cannot disregard that the market forces will create its own mechanisms in such an attractive location in the city within the present macro development of the country, so favourable for private and commercial initiatives. Thus the expell of the original residents will be a question of time if the development of the neighbourhood is not accompanied by an increase of their earnings.
This pinpoints a basic dilema faced by most neighbourhood upgrading projects: is the original target population profiting from the improvement of their living area or do they become the victims of land valuation and market mechanisms ?
Anyhow, the norm was thought to be as simple as possible. It would try to guarantee a minimum space necessary for internal household activities, ventilation, sunlight, accessibility for sullage collection and cleanning of pits. It specifies minimum distances towards the limits of the plot e.g. 1.50 mts from the front and side lines and 2.50 mts from the rear line, all counting from the eaves of the roof for all residential and mix use plots. There is also a possibility to build one of the side walls on the exact limit of the plot and leave a greater distance on the other side. In terms of land occupation there is a maximum limit of 65 % and 40 % of the total area of the plot for respectively the construction of one and two pavements. The plots for solely commercial and institutional use received specific parameters.
The implementation of these regulatory measures was thought to be a gradual process that would take place under the auspices of the Municipality with eventual support of the project during a third phase of the plan, after the relocation of the houses appointed for demolition. For that purpose, an assisted self-help housing programme was formulated.

12.4 ASSISTED SELF-HELP HOUSING

The experience of Mindara already confirmed the potentials of the traditional adobe technology and the efficiency of a building process technically and financially assisted by the project, and since the plan of Cupilom had been approved by the house owners as well as the residents' council, I did not expect any problem in this respect.
The first 9 houses were demolished and rebuilt without any problems except for one. There was a delay of one month in the reconstruction of this house because a resident did not accept to loose a part of his backyard and a whole process of negotiation took place. The plot layout had to be adjusted, the size of the new house had to be reduced and the project had to offer a new roof in exchange of using his land. I was confronted once more with the issue of land tenure and realized that nor the Municipality nor the Residents' council were able to reinforce the premisses of the plan. Further on I will come back to this issue.

The owners of the houses located in the axis of the planned roads would receive a compensation equal to the value of their houses. A survey would register all the components of the houses and rank them according to their physical conditions. Then the building would be valuated according to updated cost per adobe block, m2 of concrete, corrugated sheets per m2 and so forth. The total cost would be withdrawn from the total cost of the reconstructed house and the difference would become the final debt of the resident with the project.
For the second phase the allocation of land to rebuild the houses could not afford to have such delays because the plan was quite ambitious and involved the demolition and reconstruction of 43 houses in 5 months. The building process had to be continuous and smooth. This step accentuated the question of management capacity of the project and the need of a well organized process of cooperation between the project and all the house owners.

Compared to Mindara the houses became slightly bigger, 165 m2, with 6 rooms of 3.50 mts x 4.00 mts; the floors, doors, windows and an individual latrine were included in the package, see **Figure 12.3.** In order to overcome the difficulties of transport and bureaucratic constraints to acquire the cibe wood for the roof, the project would create a stock on the site and sell a maximum of 80 timbers per house, with a down payment. The house owner was asked to pay US$ 300.00: 1/3 when signing the contract and 2/3 before the roof was constructed. He had to agree with the new location, the plot size and its demarcation which had to take place in the presence of the president of the council and the president of the PAIGC branch. He would have to accept the division of responsabilities between him and the project as specified in the conctract signed before his house would be demolished. The resident would lease a minimum of 2 rooms to the project for a period of 5 years and that is the way the investment made in the building would be recovered. The project would rent them directly.

The residents were divided in groups of 5-7, according to the location of their house, and were called for a meeting where the whole process was explained. The geographical criteria intended to create possibilities of mutual help among residents who knew one another and had been living close to each other for a long time. The groups were intentionaly kept small in order to allow a very close and intensive contact between the project team and the house owner.
These meetings were carefully organized and the official animator of the project,a local staff member, was trained to present a series of transparencies and slides which easily explained the reason of the invitation and why their houses were selected to be relocated.
After these meetings the residents would have one month to decide to give him some time to mobilize the financial resources required before signing the contract.
The role of each resident and the responsabilities of the project were fully explained as summarized in **Table 12.1.**

Table 12.1: Definition of Tasks in the Assisted Self-Help Housing Programme.

ACTIVITIES	Resident	Project
Down payment of US$ 100.00	x	
Signature of the contract	x	x
Provision of straw panels for the hut		x
Construction of temporary hut	x	x
Demolition of the house		x
Cleaning/preparation of the site		x
Demarcation of the plot		x
Execution of the foundation		x
Provision of earth filling for the floors		x
Filling and Compactation of the floors	x	
Concrete of the floors		x
Production of adobe blocks	x	
Construction of the walls	x	
Down payment of US$ 300.00	x	
Provision of cibes/wood for the roof	x	
Provision of 80 timbers of cibes (wood)		x
Down payment of US$ 48.00 for cibe poles	x	
Preparation of the cibes	x	
Execution of the wooden structure of the roof	x	
Provision of the corrugated sheets		x
Placement of the corrugated sheets		x
Construction of 6 doors and 6 windows		x
Lockers in the doors of the leased rooms		x
Lockers in the windows of the leased rooms		x
Foundation and floors of the latrine		x
Pipes and sifon of the latrine		x
Two layers of blocks and covers of the pits		x
Excavation of two soakway pits	x	
Provision of building materials for the walls		x
Construction of the walls of the latrine	x	
Execution of the roof of the latrine		x

The construction of a latrine was a pre-condition of the programme. There was an urgent need to replace the traditional and often saturated pit latrines. The building process was quite similar to the housing programme that is to say that the resident must dig the pits and build the walls while the project constructs the basic infrastructure and places the roof. For details of the latrine, see **Figure 12.3.**

12.5 IMPLEMENTATION OF THE PROGRAMME

During a period of 5 months the southern part of the neighbourhood was transformed in a large construction site. Out of 43 houses 26 were demolished, which makes a total of 35 houses demolished and rebuilt in the neighbourhood during two dry seasons, see **Figure 12.2.** The inhabitants engaged themselves completely in the process and started to produce adobe blocks as soon as the raw material was provided or the houses were demolished.

Many other residents were willing to participate in the programme but they could not mobilize the financial resources in the required time or could not assume their tasks in the building process. Some residents tried to bargain with their tasks but the principle of the whole programme was strict and had to stick to its voluntary basis.

All residents but one produced their adobe blocks. Three residents mobilized US$ 1,000.00 and hired the project for the construction of the walls and roof while they would remain responsible for adobe production, delivery of wood and for compacting the floors before concrete pavement. Four other residents offered more rooms to the project in exchange of their duties so that the construction of the walls and the roof would fall under the responsability of the project.

In total, 19 houses were reconstructed according to the initial contract and 7 house owners passed their responsabilities concerning roof and walls to the project. There was one house that was totally reconstructed by its owner except for the foundation, concrete floors, windows and doors.

The process was not smooth despite all preparation and excellent communication channel between the project and the residents. During the building process the residents started to request a lot of changes in the initial setup. Some wanted to have more rooms and the majority kept on insisting to include the varandas in the package of responsabilities of the project.

It is worth to mention that the great majority of the residents participated actively in the building of the walls and only a few did it on their own. There was a preference to hire experienced bricklayers to do the job. In the construction of the roof the participation of the residents was very limited because of the specialization of the work, and only assisted the carpenter's work.

The experience of Cupilom confirmed that mutual aid procedures in self-help housing does not take place voluntarily. This became already clear in the reconstruction of 3 houses belonging to a clan compound in Belem. Although the residents had strong ethnic and family ties and belonged to the same clan, everyone was occupied with his own house and with the solution of his own problem, there was no cooperation.

12.6 LAND

The demarcation of the plots was very problematic because of unaccurated surveys and maps. The lack of a precise topographic cadaster caused delays in finalizing the plotation of the houses and plots within the existing situation.

The demarcation of the plots faced another structural problem. On one hand, many house owners did not agree with the limits specified by the plan but eventually it was possible to adjust the limits according to his demands. On the other hand , neighbours of these new houses contested the new limits introduced by the plan because it overruled their traditional land property.

The Resident's Council was not always able to solve the conflicts and therefore we had to appeal to the Municipality and have a topdown decision that could not be questioned by the inhabitants. But in both cases it became obvious that the premises of the plan could not be completely applicable. Both the council and the Municipality had very dubious attitudes. In one case the traditional occupation was a strong point of reference and in other cases it was barely considered or not at all. There was no reference and every ad hoc decision created dangerous precedents which could be used immediately by other residents in the neighbourhood. The waterfall effect had to be stopped otherwise it would become impossible to reconstruct houses in the open space of the settlement for every open space had a possible traditional owner ready to defend his rights. In this way the settlement layout plan would remain a piece of paper.
The conflict about land property reached its climax when one specific family did not accept the land subdivision specified by the plan. Three meetings could not persuade them to accept the plan, not even when a bigger house with 8 rooms was offered.
Together with the president of the council I designed three different alternatives which could suit their demands in terms of area and depth of the plot. But what was really under discussion was their right over the piece of land that covered two plots. The neighbourhood organizations did not agree with their demands but could do very little to persuade them or to reinforce the plan. The situation became critical and tensed with sharp discussions taking place in the field and with almost physical injuries. The mayor, who visited the site with me did not seem to be willing to take a firm decision that could harm his popularity. He had his own ambitions. He was once prime minister and now organizing his political (opposition) party expecting his election as president in the first election in 1992. Although they did not object against the land division proposal nor him nor the director of urbanism of the Municipality could take a decision and back up the project in this matter. The case was hopeless. The family simply impeded the demarcation of the plots and the reconstruction of another house in an attached plot. The rain season was just about to start and they were still living in a temporary hut in the middle of a road. So as the other family whose house had been demolished as well.
An agreement was only possible when the case was discussed in a meeting sponsored by the top officers of the Secretariat of the President of the country. This problem obliged another change in the urban layout but the decision remained ambiguous because they could continue to invoke their rights about the small plot located next to theirs. This "small" incident reveals the importance of land and the urgent need to define the rules concerning its use and commercialization.
It is a fact that the government is facing a serious dilemma concerning the land issue because there are alot of implications when the traditional rights are incorporated in the "modern" juridical framework e.g. tribe and communal property, clan property, individual property, state property. Until today there has been no clearness in this respect and land property is at this moment a very hot item on the agenda of the National Popular Assembly.

12.7 HOUSING TYPOLOGIES

Not only the urban layout was subject to changes but also the layout of the houses and some of its components. Due to specific requests and negotiations with 11 house owners, there were different types of houses constructed. Six houses were built with two sided roofs and gable-end (built with concrete blocks). This constructive solution gave more

flexibility in the plotation of those on narrow plots because it eliminates the side varandas and at the same time it allowed the number of rooms to be eventually increased from six to eight (without increasing the area of the roof) by decreasing the width of the rooms to 3.20 mts. Besides that it facilitates the construction of the roof and decreases the number of corrugated sheets. There is a financial argument behind the decision to introduce this model but this will be dealt with further on. Six houses were built this way from which two had 8 rooms.

In this type of house, the gable-end (that is to say the side walls) becomes the bottloneck and a constraint to experiment different housing typologies using the popular sundried adobe technology. The adobe block cannot be exposed to rain except when it is mixed with cement or even lime, or when it receives a very durable protection. A simple plaster is not sufficient on a long term basis because the adherence of the adobe is very low, the plaster gets loosen from the mud surface and starts to fall. This would mean a continuous process of repair and maintenance. This explains the pattern of large roof overhangs surrounding the outside walls which creates the varandas, a perfect protection but not always the most economic solution because of its four sided roof requiring more corrugated sheets and wood. This roof is often very high with the ridge usually placed at 2.35 mts to 2.50 mts above the top of the walls, depending on the width of the rooms. This is why the heat absorbed by the galvanized corrugated roof has a minimized effect. There is also a gapwindow between the walls and the roof that helps to expell the warm air.

This ventilation outlet is severely reduced in the two sided roof houses and therefore I started to look at the possibilities to improve the internal environmental conditions through cross ventilation. Some openings in the upper part of the gables improved the exit of the hot air but it was still not sufficient. In two of these houses I introduced in the walls of the facades, on top of every door, two small windows made of wood and nylon mosquito nets measuring 20x20x40 cm each to secure the cross ventilation even when a ceiling would be built. Small attempts to improve the climatic conditions inside the houses but there is still a lot to do in this field and look for other possibilities within the context of traditional technology. This applies for the side adobe walls as well.

In order to improve the performance of adobe side walls of the two sided roof houses, the center for intermediary technology, in England, has introduced a layer of carpenter's wooden glue mixed in water over these wall, with a positive result. This layer made the walls waterproof and sufficiently adherent to receive a plaster of cement and sand. This solution was approved because of its durability and simplicity. "The approach taken has been to use a common woodworkers' adhesive, diluted with water to penetrate and seal the outer surface of the mud brickwork and provide a suitable skin to which the cement can bond" (Parry, 1984:254); it does not demand special techniques.

However, the project team opted to experiment a solution that would be cheaper than the concrete blocks but very complicated when compared to the layer of glue. Two houses constructed only with adobe blocks received a galvanized wire net (chicken wire) mounted and stretched over the whole surface of the side walls, and on top of that the plaster was implemented. The idea was that even when the plaster would get loose from the adobe it would still continue to perform as an independent reinforced layer. The outcome was good but only a long term evaluation will judge if a correct decision was taken.

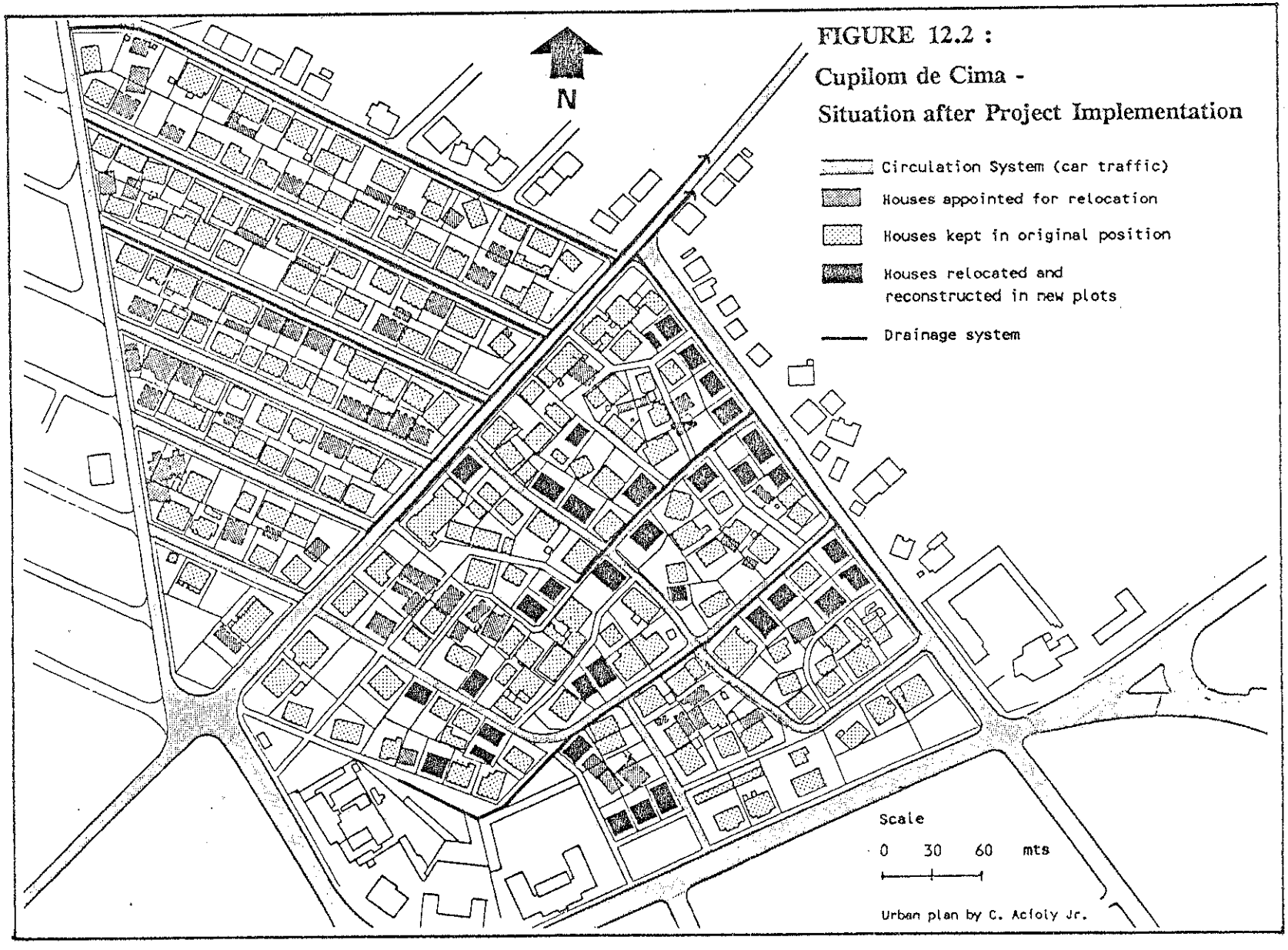


FIGURE 12.2 :
Cupilom de Cima -
Situation after Project Implementation

FIGURE 12.3 : Layout Plan of the Houses and Detail of the Double Pit Latrine

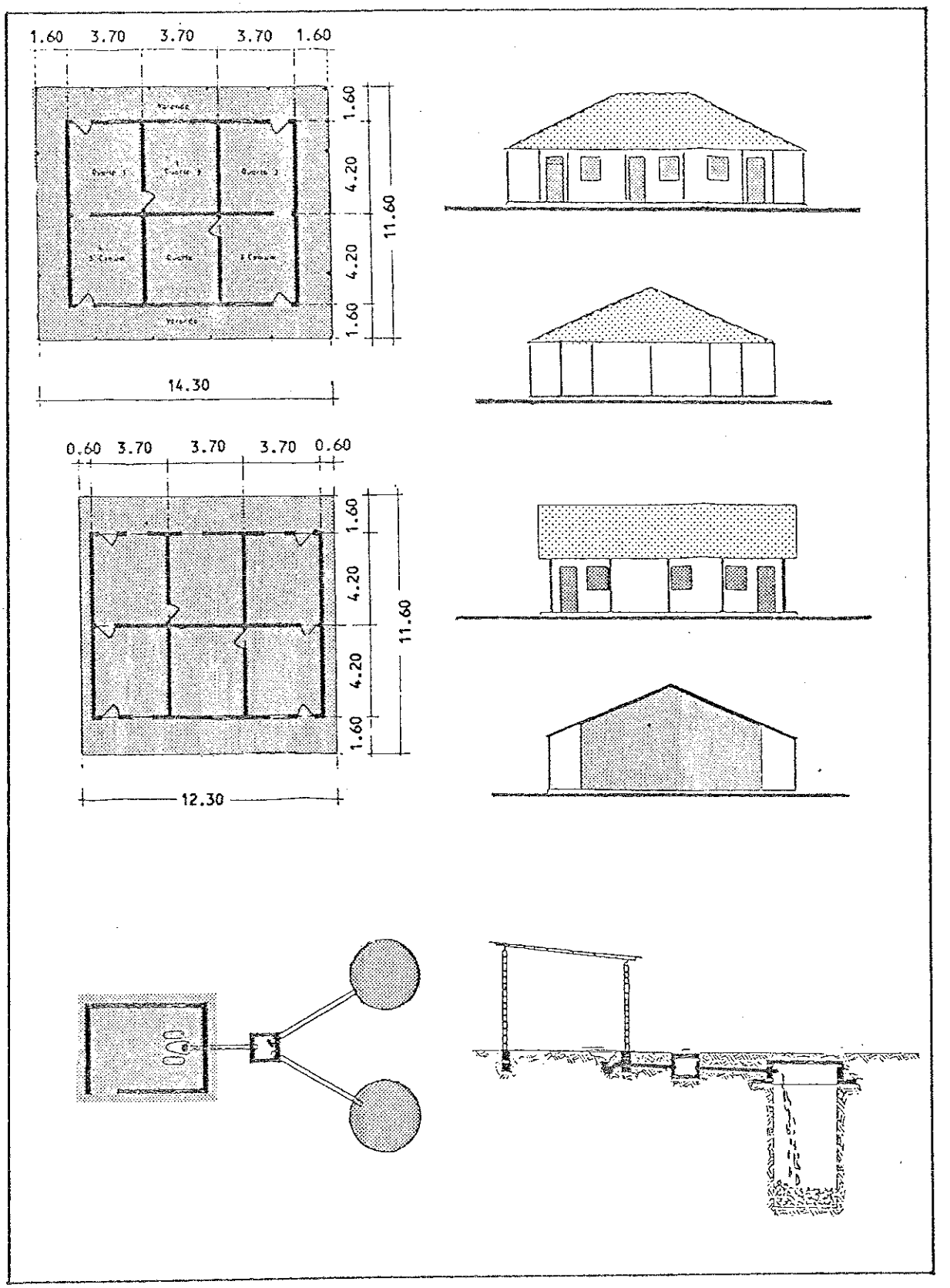


FIGURE 12.4 : Photo Documentation I

Photo 1: Situation before project implementation, during the rain season of 1989.

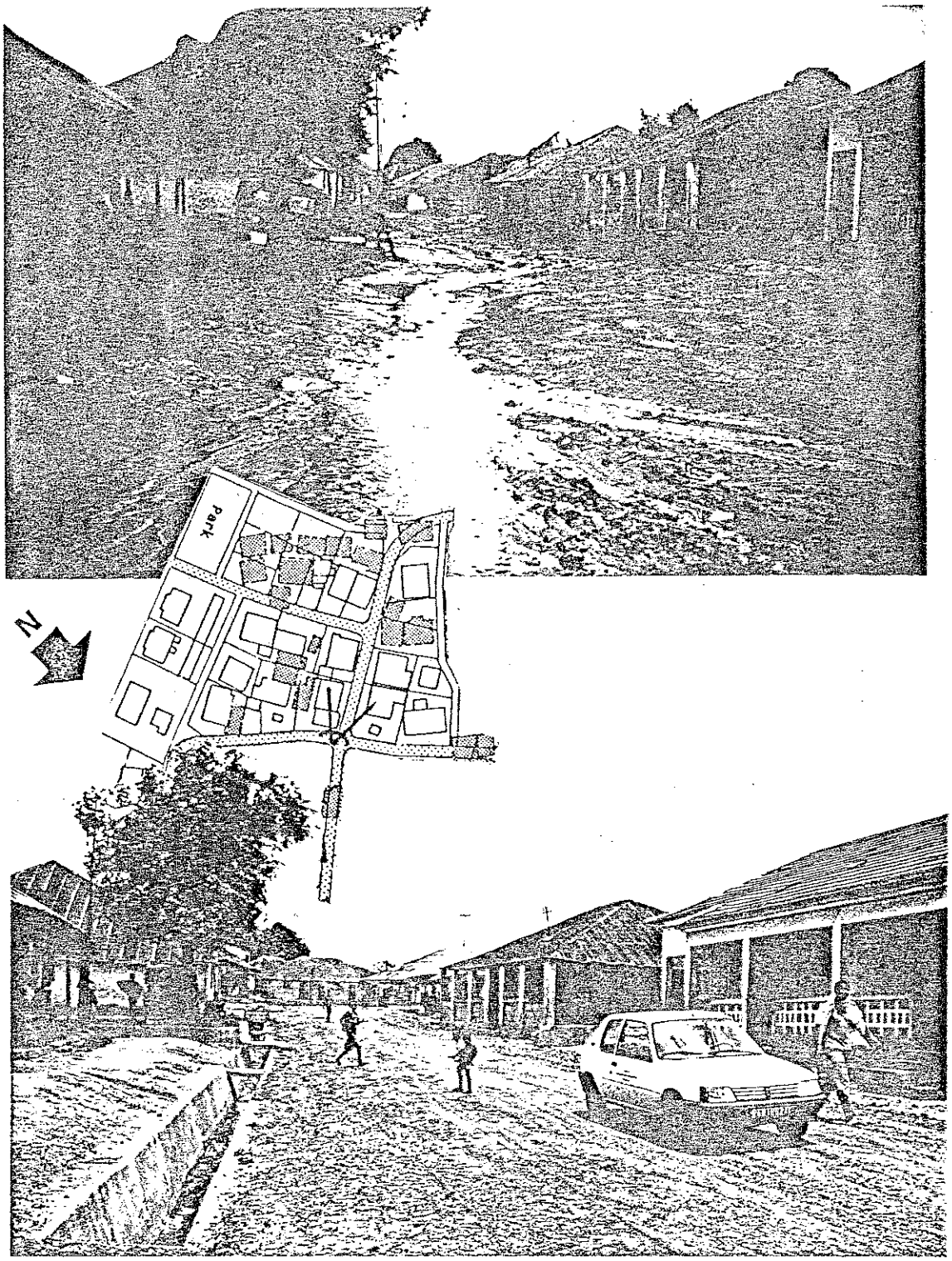


Photo 2. Situation after the demolition of 4 houses, the opening of the road and the implementation of a drainage gutter.

FIGURE 12.5 : Photo Documentation II

Photo 3: An improved house built totally with adobe bloks and a two sided roof. The improvement was undertaken by both the house owner and the renter.

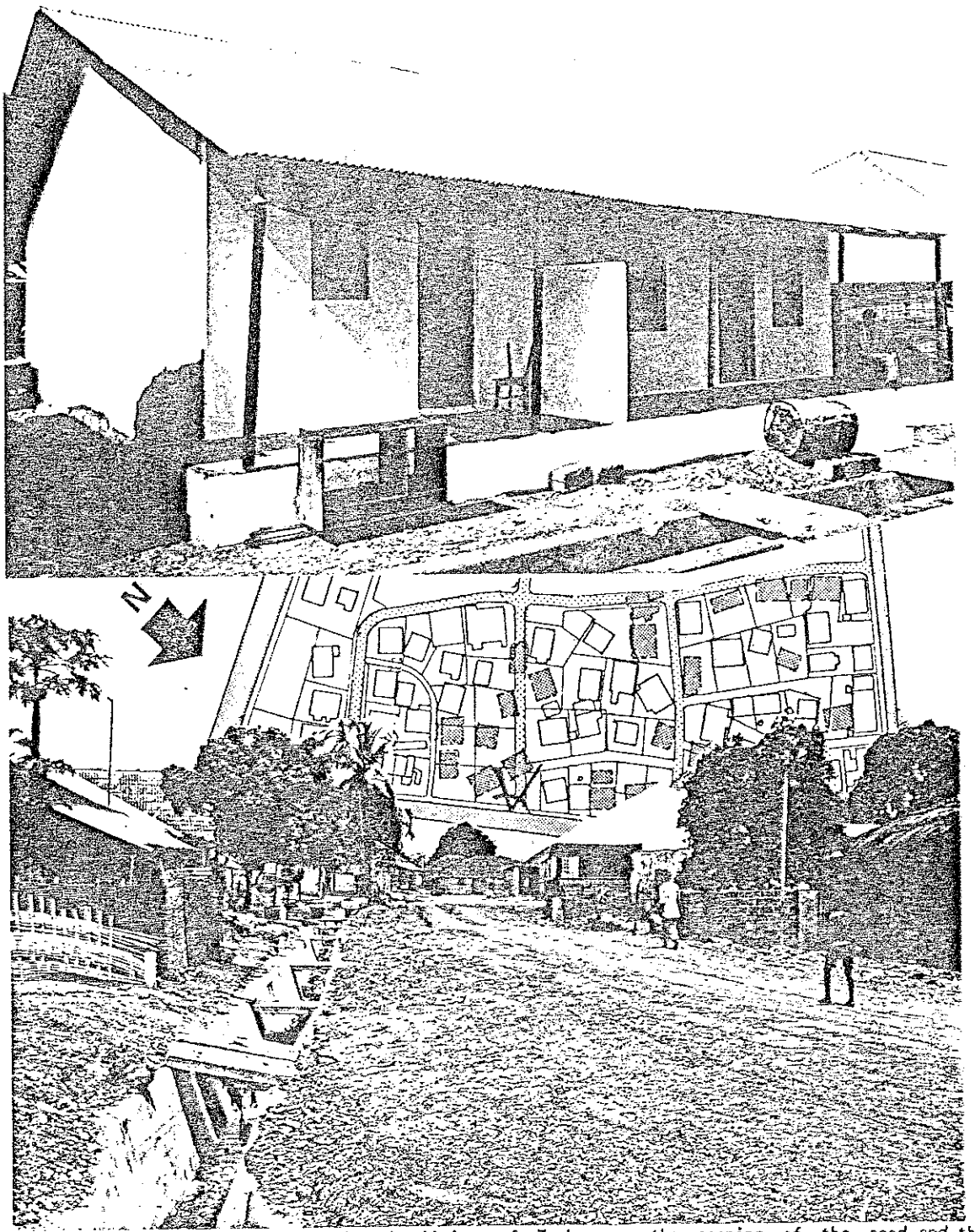


Photo 4: Situation after the demolition of 3 houses, the opening of the road and the implementation of the drainage gutter.

12.8 INVESTMENT PER HOUSE AND COST RECOVERY MECHANISMS

Mindara

The final cost of the 120 m2 house constructed in Mindara was US$ 1,900, that means a roughly US$ 16.00 per m2, only refering to the two components under the responsability of the project: the foundation and the galvanized corrugated metal sheets, including the labour costs. It does not include the incidental costs such as transportation for delivering cibes, the acquisition of nails and meals for the workers. Note that 78.32 % of the costs is consumed by the roof alone. Both the cement and galvanized sheets were imported taxfree from Holland by the project and even so the cost per unit was US$ 17.50 with every house utilizing 75 sheets.

The impact of these two components in the overall cost of this house confirmed that a low cost housing approach in Bissau is almost impossible with the existing difficulties to purchase imported building materials unless several changes come about such as indirect and direct subsidy inputs, low import tariffs, building material loan programmes, new housing types, local technologies and building materials.

In order to recover these costs, the project opted to fix a price per room of US$ 3.75 independently if it would be occupied by the owner or by a renter. In this way the money would come direct from the owner who would be entirely responsible for the repayment of the investments made in his house. Every house would return US$22.50 per month and that means US1,410 after a period of 5 years. In that way only 74.21 % of the total costs would be recovered but neither an inflation index nor the natural devaluation of the local currency were taken into account. The value of the rooms would be yearly raised according to the index utilized by the government when updating the salaries of the public employees.

During the first year, the residents payed their debts punctually but when the new prices were announced the problems started. We tried to explain a very simple method of updating prices by using the example of the price of a sac of rice and its variation along the years but all attempts failed to convince the residents. From that moment onwards the project assumed the responsabilities of the rooms and let them directly. All six owners leased 3 rooms to the project except one who provided 4, in total 14 renters and their families were living in 19 rooms.

Cupilom de Cima

Due to the changes in the size of the house and the increase of building components, it was already expected that the cost in Cupilom would be higher than the initial cost of Mindara. In fact it is almost double, US$ 3,500. If the downpayment made by the residents is widrawn from this total then its costs is decreased to US$ 3,200. The figures and costs considered by the project are very specific and do not reflect the prices commonly found in the building market of Bissau and therefore it is possible to affirm that the cost of a minimum standard house is out of reach by the majority of the population of the city.

In terms of components, the total cost is as follows:

FOUNDATION	10.42 %
FLOOR	8.43 %
WALLS	6.94 %
ROOF	55.56 %
DOORS AND WINDOWS	11.74 %

These figures exclude the costs of the latrine (US$ 300.00), the preparation of the site, renting machines, transport of sand and fillings to be used in the floor, labour to produce adobe blocks, cost of transportation of cibes, administration and technical assistance.
The cost of the house is raised to US$21.00 per m2 and the cost of the roof still represents more than half of the total cost of the house although a much cheaper and smaller galvanized corrugated sheet was utilized. The bigger house model of Cupilom utilized 160 sheets of 2.60 x .82 mts and 350 concrete blocks of 20x20x40 cm in the foundation.

Analysis of the cost recovery system

The residential rooms which were under the temporary possession of the project were rented for US$12.00 per room per month which allows a minimum recovery of US$24.00 per house/month. After a period of 5 years it would be possible to recover US$1,440 per house. In other words only 45 % of the investmenst can be recovered if one does not take into account the eventual currency devaluations and inflation. In case one considers a yearly inflation of 6 %, the real amount payed after 5 years is reduced to US$1,226.71, with a loss of US$213.29. The total recovery of the investments under a non inflationary context requires the increase of the amortization period up to 11.1 years or the increase of the monthly payment per house up to US$53.33 per month during a period of 5 years. The latter would have to imply the raise of the rent, which is impossible, and the only alternative is to call on the contribution of the house owner in the repayment process.
The whole idea behind the cost recovery process was to create a revolving fund which could refinance housing improvement in the neighbourhoods where the project intervenes. However, the programme fails by not considering the overhead costs and the rate of inflation in the calculation of the total debt and the required monthly payment.
In order to recover the costs within the present limitations it would have been logic to charge a higher monthly payment that would be equally shared by both the house owner and the renter that is to say US$48.00, US$24.00 per person. In that way it would be possible to recover US2,453.41 in a period of 5 years on the basis of an inflation of 6 % per year. But if one wishes to establish a margin of subsidy of 20 % of the total cost of the house, then the total debt would be decreased to US$2,560, an amount very close to the last figure.
So even if both the owner and the renter commit themselves in the repayment scheme there will be always a gap between the amount that was really recovered and the total invested in the house. This gap means housing subsidy. How big this gap might be is directly related to a technical and design option concerning the housing package but above all it is completely dependent on a policy and political decision.
In the commercial plots, the rooms were rated at US$33.30 which means that a house would provide a rent of US$66.60 per month. After 5 years a total of US$3,999 will be recovered and that is a total cost recovery.
Although the commercial plots allow the recovery of the investments made in the house, the rate of return is very low because there is indeed a great disparity between the resources invested and the amount which can really be recovered. The margin of subsidy is still too high to allow the set up of a self sustaining revolving fund to finance housing improvement in the neighbourhoods. This is the dilemma faced by the project and it is the key issue in the low income housing sector in Bissau.

To lower the cost of the house by taking off certain components of the package would bring us back to the situation of Mindara where the residents were practically unable to accomplish a minimum of improvement in their houses without the support of the project, especially concerning windows and doors. The roof remains the bottleneck. The only alternative is to lower the standard of the galvanized corrugated sheet because any other solution would require the use of wood of good quality. The tiles (pantile, roman) that can be found in the country or the fiber cement corrugated sheets (imported) demand a straight wooden framework that cannot be made with the local cibes. So, any eventual cost reduction achieved with another material rather than the galvanized sheets will be immediately lost in the acquisition of fabricated wood considering the cost of the wood in the local market. The thatched roof is out of the question. The galvanized sheet is not the most appropriate solution from the point of view of climate but its flexibility permits a roof made only by local cibes. Another advantage is that it does not demand constant maintenance and replacement and it is therefore used at a large scale in Bissau.

To lower the cost by diminishing the size and the standard of the house implies the implementation of different housing typologies as it is used in different low income projects throughout the developing world e.g. core houses, attached houses, evolutionary housing approaches, etc. This is certainly the right track to make a low income housing programme feasible in Bissau but it faces a big constraint: the size of the households and the general acceptance of the residents. The population living in the neighbourhoods of Bissau are not sufficiently exposed to an urban life style and lacks basic information about new forms of living derived from the diverse limitations of the city. Only a pilot sites & services project will prove the suitability of this approach and if the residents are able to assume the necessary improvements in the core house as a follow up.

Another possibility to lower the costs is to demand higher down payments from the resident plus his monthly financial commitment and conjugate that with an increase of his tasks in the building process. The experiences already demonstrated the inconvenience of this alternative. Although it is possible to charge an affordable monthly fee from the house owner, only a selective group of residents will be able to mobilize the financial resources to accomplish the down payments and not all will be able to assume more responsabilities in the construction of the house. That makes the impact of a low income housing programme very limited.

The last possibility to keep the programme within reach of the target population is to combine one or two of the alternatives listed above with an increase of the amortization period.

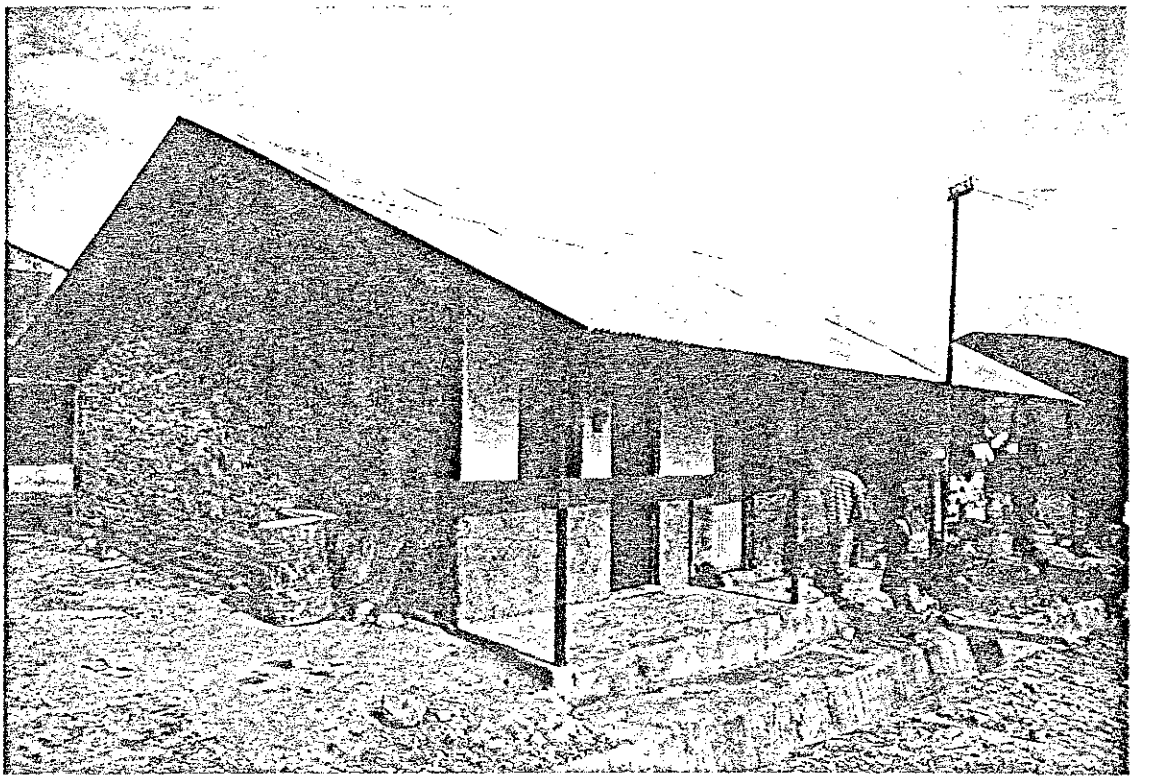
The period of 5 years was defined on the basis of the temporal existence of the project but in case a financial institution would be responsible for financing and collecting the payments then suitable conditions exist to set up a better cost recovery. It is likely that the power of purchase of the population will not increase thus not leaving much alternative for cost recovery mechanisms besides leasing and renting of rooms.

This peculiar form of cost recovery seems to be very appropriate for Bissau. Firstly because to let a room is a common practice in the neighbourhoods and secondly because there is a large population of room renters, mostly low income dwellers, who are searching a housing solution which is not sufficiently responded by the informal rental market. Thirdly it does not force the house owner to have a high commitment of his income in the payment of the debt.

It is interesting to see that through the housing improvement programme it was possible for the project to a certain extent alleviate the pressure for housing for a significant

number of people if one considers the scale of the intervention. A total of 115 rooms were offered to the rental market in the three neighbourhoods which means affordable housing accomodation for 57.6 households, considering the rate of 2 rooms per household. But the experience reveals that very frequently a household occupies only one room and sometimes the rooms are rented by the houseowner to accomodate members of his own family, like in 14 houses in Cupilom.

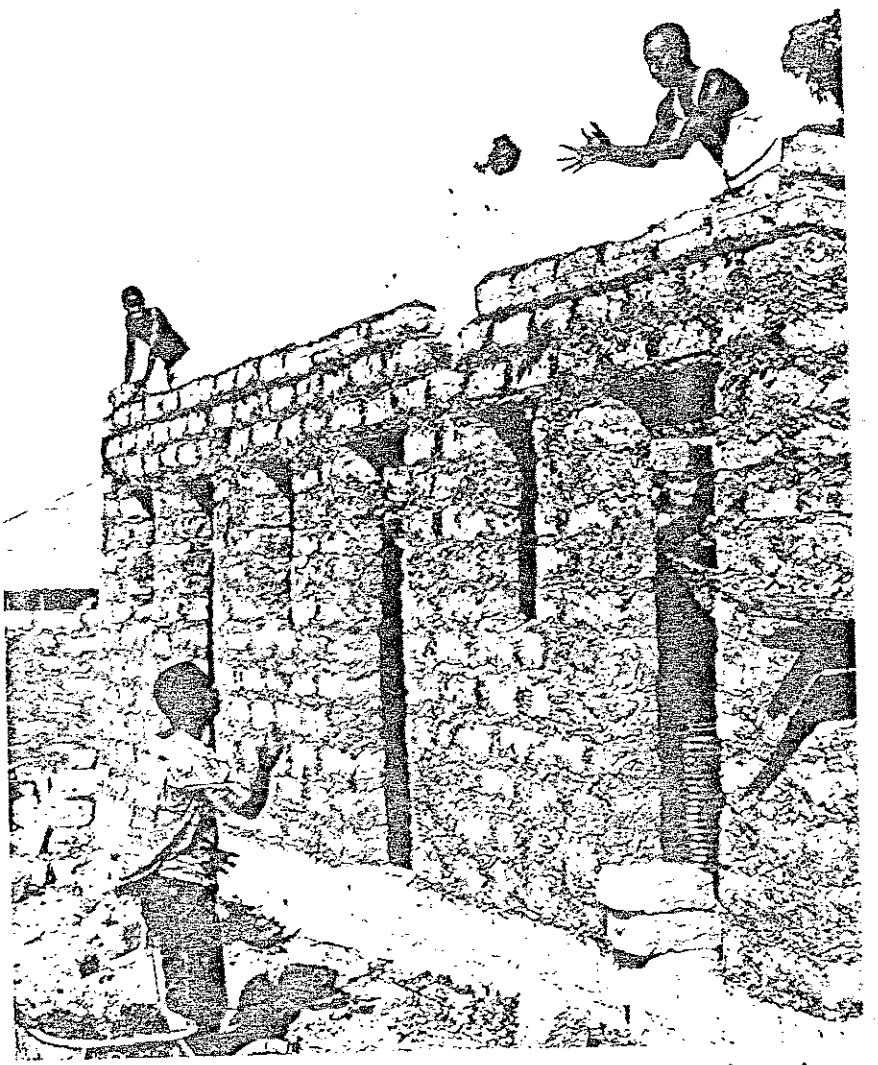
This small scale housing improvement programme provided housing for 50 house owners and their families plus accomodation for 86 tenants. Considering some renters single, others recently married without children, and taking into account the average of inhabitants per house in Cupilom, it is possible to estimate that more than 1,000 inhabitants received the direct and indirect benefits of the programme. At least, a shelter above the average quality found in the area and located in an improved neighbourhood provided with basic infrastructure.



View of a reconstructed house in Cupilom de Cima. It highlights the improvements made by the renter: varanda, plastering and painting and electricity connection.

PART VI

CONCLUSIONS



Residents in action during housing reconstruction in Mindara, 1989.

13

CONCLUSION REMARKS

From the case studies presented in the former chapters a series of conclusions can be drawn which will reflect both my analytical exercise over the specific subjects of this study and the global urban problem of Bissau.
Considering the physical, social and economic context of the popular neighbourhoods, this study advocates that the settlement planning and the assisted self-help housing strategies should form the core of a neighbourhood upgrading approach in Bissau. However, there are a series of prerequisites to be met before one can start thinking about the establishment of a continuous upgrading process and the consolidation of this strategy at governmental level.
It will only be institutionalized when there are important developments in other co-related areas of activities at macro level. The definition of the government's urban and housing policies, the improvement of the urban management of Bissau, the establishment of a financial structure to promote housing production and the availability of support from the international donor organizations are part of those developments.
There are still a number of inter-related barriers in the housing sector in Guinea-Bissau that restrains neighbourhood upgrading and low income housing processes.
The first one is the absence of an urban policy and an urban development plan for Bissau. Consequently there is no statutory framework with guidelines for the housing sector that could allow an immediate increase in housing production and the execution of very important programmmes among others building material loan and credit, self-help housing, land development, neighbourhood upgrading, housing finance and sites & services, incentives to the building industry sector, etc.
The second constraint is more conceptual but it influences the decisions on policy level. From the part of the government, there is no definition about what parameters should be used to identify social housing, low cost housing or low income housing. This lack of definition creates another difficulty because it provides no legal reference for the city and does not help to change the dubious and segregative attitude of the Municipality of Bissau concerning low standard constructions and the legalization of the plots where these constructions exist.
By not defining this concept the government is also unable to change the existing regulations for urban building and land occupation inherited from the colonial period and creates the third constraint.
The fourth constraint is the lack of a financial institution that could promote housing production and create credit mechanisms to backup all the different housing programmes. These are in fact pre-conditions to have neighbourhood upgrading consolidated on policy level. These requirements are not fulfilled yet and the neighbourhood upgrading project and the experience in Cupilom de Cima still remain in a very marginal position.

However, there many valuable lessons provided by the implementation of the project and particularly by the assisted self-help housing programme and the integrated approach put forward in Cupilom de Cima that can be useful for the Government of Guinea-Bissau.

13.1 SELF-HELP HOUSING

The experience of building 50 houses in three years through an assisted self-help housing programme may be seen equivocally as an insignificant achievement considering the existing housing shortage in Bissau. But if one takes into account that it represents 1/3 of the number of houses built through governmental channels during 16 years of independence, this figure gets another dimension. Especially considering that the construction of the houses can only take place during the dry season that lasts 6 months per year.

Self-help housing should be seen as one of the many alternatives available to increase the housing production in Bissau. It is far from being the "salvation army" of the problems of the housing sector but rather an instrument to facilitate the access to better housing conditions by the most weaker sectors of the population.

Although self-help housing implies more pressure on the already loaded working journey of the urban poor and it does not even provide an extra income, it becomes a suitable solution if one considers the socio-economic and technological stage of development of Guinea-Bissau.

Based on the experience described in this study, it becomes clear that this approach has good perspectives but if the costs of certain building components are not decreased for those who depend on imported materials, it becomes difficult to keep it accessible financially speaking for the lowest income groups.

In the neighbbourhoods where upgrading works are undertaken, the PMBB will be able to assist the process and to continue acting as an intermediary for supply of building materials. But on a large scale, it will be necessary to define rules and institution(s) that will be responsible for the supply of the imported building materials and the provision of the indispensible technical assistance to the residents. The government will also be requested to create incentives and lower import taxes in order to stimulate the housing sector.

A large scale self-help housing programme is totally dependent on the political will of the government, on the existence of fund and an efficient institutional framework.

13.2 LOCAL BUILDING TECHNOLOGY

The use of local building materials allowed a direct engagement of the inhabitants in the building process. This participation does not necessarily imply delays of the working schedule and if they are well informed and technically assisted, they are able to perform their tasks well.

Generally speaking, the basic knowledge of the adobe technology is a popular domain that is widespread all over the country. The soil is appropriate and the clay has a very high quality. Few tests in the field confirmed the high resistence of the sun-dried adobe block when the raw material was correctly mixed with water and dried in shadow places. The wall of the houses showed no cracks because the concrete foundation gave the necessary stability an adobe wall must have.

However, there is an urgent need to develop researches to increase its durability,

resistence and impermeability, especially when thinking of different housing typologies that imply the exposure of the adobe walls to humidity and heavy rains.
The Government should launch the idea of a Research Centre of Building Technology which would have as a primary task the development and improvement of the local building materials and technologies, and the dissemination of basic information among the population and local technicians.
International donor organizations and other similar centres in the developed and developing countries would certainly provide sufficient informations and perhaps the starting funds.
It would be interesting to promote short term actions such as the construction of a local oven to bake the blocks and increase its durability and impermeability; to build pilot houses and disseminate the information through all mass communication means to make it accessible to the population and after all it will help to improve the building quality of the houses.

13.3 THE SETTLEMENT PLANNING APPROACH

The implicit relocation of houses allowed both the physical execution of the urban layout plan and the rational implementation of the infrastructure network, creating at the same time better accessibility and a significant improvement of the environmental conditions in Cupilom de Cima.
In this neighbourhood it is possible to assess the feasibility of the settlement plan approach and its global impact. The change in the spatial structure was radical and gave a completely new outlook of the neighbourhood. It became a show case through which the PMBB demonstrates the feasibility of a particular neighbourhood upgrading model. The changes in the environmental situation of the neighbourhood became obvious when the heavy rains fell over Bissau and the drainage system worked perfectly to drain the water out of the settlement allowing the circulation of both cars and pedestrians.
The settlement plan provides the basic guidelines for legalization of tenure and the demarcation of individual plots (partly executed) and gives the possibility of the annexation of the neighbourhood with the legal urban fabric of the city.
The experience demonstrated the technical feasibility of the strategy put forward in Cupilom de Cima in several aspects such as the intensive participation of the residents in the building process, the efficiency of local building materials and the possibilities of innovation, the potentials of housing finance, the rational implementation of the infrastructure networks and the perspective of demarcation of plots and legalization of tenure. Nevertheless, it revealed a series of limitations as analyzed in Part V e.g. the costs of the houses and the cost recovery system, the undefined cost recovery of infrastructure improvement at neighbourhood level and its future management.

13.4 THE GRADUAL PROCESS OF HOUSING IMPROVEMENT

In terms of the built environment, a few weeks after the last house was finished many residents started to undertake a series of construction activities in their houses demonstrating a dynamic process of housing improvement. Several residents implemented the varandas on their own, planted trees in front of their houses, some plastered the walls and arranged the electricity connection.
But what became more evident was the input of the renter in the process of housing

improvement. In many cases, it was the renter who executed the mortar, the painting and installed electricity in his part of the house. That gave it a very interesting facade because his part was completely improved while the owner's part had the adobe block walls still without any improvement.
The houses located in mixed use plots received a significant improvement through its commercial part. One of the houses was totally plastered, painted and had four of its rooms completely changed, with ceiling, electricity and water connections. In this case, the house owner rented the two rooms of the project for himself and let the other four to a local businessman.
The new commercial enterprises that were established in the neighourhood after the intervention of the project give another perspective to the legal and physical consolidation of the neighbourhood.
Housing improvement is creating a very interesting and dynamic process of changes in the neighbourhood, offering new opportunities for housing as well as employment in the building sector because the finishing touch in the houses is usually undertaken by local contractors.
However, the housing component has a series of limitations and is not feasible economically speaking if one considers the cost per house and the high rates of subsidies, as explained in Part V.

13.5 COST RECOVERY, REVOLVING FUND AND NEW HOUSING STANDARDS

The revolving fund depends on the cost of the house, its standard and the capacity of the residents to pay back the investments made in their houses. All that is totally dependent on the different housing alternatives and the implementation of new housing typologies as well. But let me first look at the financial aspects of the housing component.
The project invested US$ 90,000 on housing and had recovered US$ 13,000 or 14.4 % until November 1991. The present recovery scheme with rates of subsidy reaching more than 50 % is obviously insufficient to establish a revolving fund, as explained in Part V. Although the standard of the house was kept as low as possible, and considering that the participation of the resident in the construction process already represented 27 % or almost 1/3 of the total cost of the house in Cupilom de Cima, it is still an unaffordable cost for the majority of the population of the city. The high cost of such a simple house is caused by the imported building materials used in certain components mainly in the foundation and the roof. Only the metal corrugated sheets consumes already 39.6 % of the overall cost.
On one hand, cost recovery through renting and letting rooms is very interesting, it is very creative because it provides opportunities for housing within the very demanding informal rental market and at the same time it shifts the payment commitments from the house owner to the renters. They will have the security of fair raises of rent established in official contracts during a period of five years.
But on the other hand, the renters, who are already in a more vulnerable and weaker housing situation than the house owners (although they are usually formally employed and have a steady income) are exactly the ones who will suffer unilaterally the effects of the cost recovery process.
Considering a real rate of return of 80 % in a period of 5 years, the monthly payment should have been US$ 48.00 equally divided between the house owner and the renter in

order to have an equal share of the impact of housing costs, as explained in Part V. In that way, the monthly payment of US$ 24.00 would represent 36.3 % of the average family income in Cupilom de Cima and that is still a very high percentage of income allocated to housing costs.

What are the alternatives for an affordable low income housing approach and how can a revolving fund for housing finance become a feasible idea ?

It is a combination of several actions. To lower the housing standards seems an obvious response but it collides directly against the size of the families, their housing traditions, the limitations of the adobe technology, the dependency of imported building materials, the existing land and urban regulations and the present urbanization parameters applied in the urban plans formulated by the Municipality of Bissau and the Ministry of Public Works.

A core house approach seems to present better prospects in terms of financial results but it implies several changes in the building process and in human behaviour aspects. The traditional life style found in the neighbourhoods is not compatible to new concepts of housing such as core house and evolutionary housing design. However, considering the positive experience of the neighbouring countries such as The Gambia and Senegal, it is a must that the government start using all means to persuade the population about the advantages of these options. Pilot projects and house models would help to spread other urban concepts of housing among the population.

The houses build with a two sided roof through the assisted self-help housing programme accomplished a successful result and received a lot of interest from the part of the residents, especially because of its "modern" appearance and it is a more simple and cheaper roof structure (it uses less corrugated sheets and does not demand cuts as the four sided roofs).

However, the side walls that are directly exposed to humidy and rain remain as a bottleneck and that shows exactly the limitation of the adobe in allowing different housing typology. The use of concrete blocks in these walls consumes the gains acquired with cheaper roof and the tests made with the galvanized iron net applied over the side adobe walls remains uncertain in terms of its long term efficacy. As said before in Part V, there are research centres that are occupied exactly with this issue.

Therefore it is necessary that the government starts moving to establish a Research Centre to look for alternatives in terms of building components and environmental conditions of the house. At the same time it should take measures in order to lower the costs of cement and the corrugated sheets. That can be accomplished through import incentives for the private sector and the financial support for developing the construction industry in the country so the building sector can be provided with cheaper and more standardized and manufactured building components. One should bear in mind that the development of the construction industry is a requisite to increase housing production, and both have a significant and positive impact in terms of job creation and in the growth of the GNP.

Lower housing standard means low cost urbanization parameters as well. The actual plot size of 20.0 x 25.0 mts utilized in most of the urban plans designed in Bissau creates living standards that are unfeasible economically speaking because of its implicit low density and high cost of infrastructure per housing unit.

The new parameters of plots with frontages of 13.0 and 15.0 mts, put forward in the sites & services Antula Bono project, should be considered as an important step that must be evaluated and duplicated in low cost housing projects throughout the city.

13.6 NEIGHBOURHOOD UPGRADING AND CAPACITY BUILDING

One of the goals of the SNV and the Dutch cooperation is that the PMBB will lead to the consolidation and institutionalization of a neighbourhood upgrading unit within the structure of the Municipality of Bissau financially independent from foreign funds.
Since 1989, the CMB has a group of professionals who are capable to assume the responsability of plan formulation if they receive a proper training and on-the-job assistance, and if a better institutional structure of the CMB is realized offering better employment conditions, as analyzed in Part II.
The involvement of counterparts of the CMB in the activities of the project has been very limited. Firstly because the PMBB has been operating very independently from the CMB structure, with little supervision and direct engagement of this institution and having only one counterpart architect from the CMB posted in the project.
Secondly, because this group of technicians are loaded with their daily and "dull" duties within the CMB with very little time left to perform their real professional tasks.
Thirdly because the PMBB does not offer any financial compensation. Despite their professional interests towards the project, their involvement in neighbourhood upgrading activities diminishes their mobility to take "extra" job opportunities and therefore the PMBB becomes unattractive to them.
The consolidation of a neighbourhood upgrading unit depends on the local capacity in terms of personnel and funds.
Funds that will be allocated to finance neighbourhood upgrading activities and to provide good employment conditions for university educated guinean personnel that in the future will be placed in the PMBB.
The direct involvement in neighbourhood upgrading provides an unique chance to have "on the job" training in several areas of activities such as planning and design, implementation, financial management and information processing, computer applications, surveys and field research, topography and cadaster, building management, etc. Therefore the SNV should start considering seriously this "training" subject if it wishes to have the continuation of the methological and conceptual framework developed during the last 5 years.
However, if there are no changes in terms of the institutional structure of the Municipality and an increase in the revenues and budget allocation, it is unlikely that an upgrading unit and a continuous neighbourhood upgrading policy will be consolidated within the CMB.
Funds, training, transfer of knowledge and public management should receive the priority of the Dutch cooperation and the SNV with the Municipality of Bissau.

13.7 COMMUNITY BASED URBAN MANAGEMENT

It is obvious that housing as an individual commodity is receiving many attention in the list of improvement priorities of the inhabitants.
But the future of the urban (collective) commodities remains uncertain. Will the neighbourhood council be sufficiently organized to guarantee the maintenance and the whole management of the improvements accomplished in Cupilom de Cima ?
The council wishes to take over certain tasks of the Municipality like the collection of improvement fees referred to water, drainage and garbage collection and they want to organize brigades to keep the neighbourhood clean and appoint certain residents as

inspectors of their zones. At this moment I cannot see the organization of an improvement fund under the control of the council because they lack basic knowledges of bookkeeping, management and organization. However, the presence of traditional leaders with a good reputation within the neighbourhood and the predominant ethnic unity offers an advantage scenario for a fruitful development in this direction. But this can only be achieved in case the community leaders receive the support of the project or the SNV through training and transfer of knowledge. It would be advisable to have neighbourhood upgrading activities simultaneous to activities of training and micro planning workshops on community level.
The other question is whether the local government is willing to renounce some of its tasks and to decentralize its urban management responsabilities towards neibhourhood based mechanisms.
Besides the elementary knowledge to take over urban management tasks at neighbourhood level, the council needs money but this is the main problem of the Municipality. It has a chronic incapacity to generate financial resources. The revenues of the city remains as the bottleneck and it is so low that it is far from allowing a financial self sufficiency of Bissau, as analyzed in Part II. It is likely that the CMB will not renounce in favor of the council concerning collection of taxes.
The present mayor is seriously concerned with both lack of cash of his institution and the maintenance of the improvements introduced by the project in the neighbourhoods. It is his priority to start changing the negligent behaviour of the inhabitants by charging improvement taxes. Since the plan of Cupilom offers the opportunity to charge a series of taxes related to land, infrastructure and legalization of tenure it is likely that the settlement will be the first popular neighbourhood to receive the impact of the new urban tariffs.
Are the gutters and water taps going to be well maintained when the residents committ themselves financially from the start of the activities as they did in the housing programme ? How far can a financial commitment persuade the inhabitants to have a more responsible attitude towards public benefits ?
It is hard to answer but the experience tells me that the inhabitants have difficulties to commit themselves to obligations which involve "collective" benefits. An eventual agreement about that would consume so much time that it would make the realization of the project impossible within the restricted timetable of operation. At macro level, the fiscal policy and collection of taxes revealed the biggest failure of the Government of Guinea-Bissau and caused the retention of one of the important disbursements of the SAP by the IMF; this is the key question in the country today.
But there is another question, how much of the family income of the residents can be allocated to pay improvement taxes ?

13.8 NEIGHBOURHOOD UPGRADING AND DISPLACEMENT PROCESS

Besides the locational advantages, the level of improvements accomplished by the neighbourhood and the existence of a legalized framework, the increase of expenditures derived from land and infrastructure taxation will probably create a pressure on the income of the families. Those residents who already committed part of their income to the cost recovery process for the improvement of their houses will be in a very difficult situation.
This scenario is propitious to the development of displacement processes, specially those

who belong to the economically weakest groups and who will not be able to cope with the increase of the costs to live in the area.
Market mechanisms will certainly start to operate in Cupilom after the intervention of the project and the combination of all these variables challenges the goals of the project concerning the target beneficiaries.
Will neighbourhood upgrading attend the interest of the poorest families under a developing capitalist system ?
The pace of the physical and economic development of Cupilom will certainly be fast in comparison with the other two neighbourhoods but not everyone of the present residents will profit from without positive changes in their income.

13.9 NEIGHBOURHOOD UPGRADING AND INCOME

Employment and income generation is closely linked with housing and settlement planning but it is not included in the range of components of the project.
It delivers a package of infrastructure components and try to stimulate the participation and the organization of the residents which is considered as the prerequisite for a follow up maintenance and management of the acomplished improvements. However the intervention in Cupilom reveals the development of a series of income generation activities. Just in the southern part 9 new home based commercial activities plus a number of hawkers were in operation only a few months after the end of the housing programme, and this process is closely related to the activities undertaken by the project in that area. Neighbourhood upgrading stimulated the apprearance of economic activities without having the issue of employment and income generation as project components.
In the implementation of the drainage and water supply networks a team of several working brigades with pre-established minimum efficiency rates formed the core of a labour intensive approach utilized by the PMBB. The inhabitants of the neighbourhoods were called to join the brigades and received priority in the recruiting process but the outcome was poor and it was for the PMBB impossible to involve the residents in the construction activities.
At this moment it is not feasible to bring employment and income generation programmes under the umbrella of the PMBB because it would imply the allocation of funds and human resources for which the PMBB is not prepared yet. It is also unknown if the SNV is willing to increase the costs of its technical assistance in order to satisfy this development.
This is indeed the dilemma faced by the project in the transition from the first to the second phase (1992-1996) due to the new guidelines introduced by the Dutch policy for development cooperation formulated by Minister J. Pronk.

13.10 THE DUTCH DEVELOPMENT COOPERATION POLICY AND NEIGHBOURHOOD UPGRADING

The policy aims to support "sustainable poverty reduction as well as development of, for and by people" (DVL/OS, 1991:13) and defines seven areas of intervention such as rural development, urban development, education, health, culture, women and the public and private sectors. Rural poverty continues to receive high priority however a serious attention is given to urban poverty and a core of four great areas of interests is identified: environment & development, urban poverty alleviation, research & technology and

women & development.
The way these areas of interest are translated into specific goals of a Dutch funded urban projects is indeed the challenge of policy makers. The participation of the residents and NGO based activities, access to land and urban commodities are seen as key issues but it is quite explicitly said that funds will be allocated to projects that provides opportunities for employment and income generation. Labour intensive techniques, small scale private enterprises and the informal sector will receive a great attention, not forgetting the autonomy of women as a special target.
In other words the project had to suffer quite a radical shift in its objectives, its structure and in the composition of the expatriated team in order to meet the requirements of the new policy framework. This was reflected in the results from a mission sent to Bissau by the Dutch government to formulate a new project proposal and to sign an agreement with Guinea-Bissau.

The present approach of the project received a great deal of criticism especially for its emphasis on the delivery of "heavy" infrastructure works and its failure to set up a cost recovery mechanism at neighbourhood level. According to the mission the components **women, employment generation, support to small scale private enterprises, research, association with local NGOs**, formulation of **physical plans** and **institution building** would form the core of the project for the next phase. But what the mission could not picture in its analysis is exactly the processual development of the project taking place under very specific circumstances and under the limitations imposed by the macro context of the country.
If one looks carefully at the evolution of the project it becomes visible that the accomplishment of an integrated neighbourhood approach which fulfilled the expectations of the Guinean government was only possible in Cupilom de Cima. It was a step per step process which faced several difficulties but slowly and with caution the PMBB started to search for a broader horizon beyond the simple delivery of basic infrastructure. And that is exactly the basic development approach of the SNV.
It was very important to demonstrate the feasibility of a neighbourhood upgrading approach by building up a local capacity of implementation. Something that is not very common in Guinea-Bissau. And therefore the PMBB built up a respectable reputation as an authentic "doer".

It is only after the implementation of the works in Cupilom de Cima that it became possible to include other points on the agenda of the project. The collection of revenues, urban taxation and local management, legalization of tenure and demarcation of plots are some of the long and short terms objectives of the PMBB in this neighbourhood. But there are a lot of uncertainties which one must pay attention very carefully before changing the course of development of neighbourhood upgrading in Bissau with the possibility that everything that has been accomplished so far, collapses.
The new agenda for the ninety's proposed by the "Nota Pronk" is an ideal strategy but not immediately and fully applicable to the context of Guinea-Bissau. It should become applicable gradually and taking into account the local conditions of development and the real capacities of the public and non governmental organizations of the country.

12.11 URBAN POVERTY ALLEVIATION AND NEIGHBOURHOOD UPGRADING

At first it becomes essential to define the word poverty. It is originated from the latin word "paupertas" translated as restricted means. Poverty is the condition of being without adequate food, money, etc. Misery, originated from the latin word "miseria" means intensive unhappiness, disconfort or suffering.

There are several forms in which poverty manisfests itself. It becomes apparent in the urban structure of the urban centres of the Developing countries. One notices that there are great sections of the urban fabric deprived from minimum living standards and basic commodities whose population have no access to the goods and benefits produced through urban development, living under segregative conditions, social, spatial, political and economically speaking. Whilst other sections of the city are privileged with top quality services and commodities revealing a sharp contrast of living standards.

The models of development assumed by most governments in the Developing World and its effects become visible in the cities. Only a certain parcel of the population has profited from development and economic growth, those who detained the production and capital means and had directly or indirectly participated in the decision making process. The political and planning decisions often disregarded the needs and the interests of the urban poor and gave the privilege to an elite and minority group.

Poverty has many dimensions. A physical dimension is referred to the limited access to basic urban commodities such as infrastructure, housing, household goods, etc.

An economic dimension concerns the unequal opportunities for employment and income generation and to compete in the formal employment market. It reveals situations of marginality, underemployment and scarcity of minimum financial resources and low power of purchase uncapable to keep a household running.

A social dimension reveals an unequal chance to accomplish social benefits, limited access to education, health and social services in general.

Poverty has also an international dimension. The increasing foreign debts of the Developing countries increased on one hand their economic and political dependency to the Developed World. On the other hand, the debts and high interest rates forced most governments to pursue capital oriented policies that can generate immediate financial resources to pay their commitments which consequently placed vital social sectors in a very secondary position.

Structural economic adjustment programmes prevails in relation to human development policies so that the developing countries can continue to pay their interests and guarantee the possibilities of new loans no matter what the effects these programmes have among the population.

The control over means of production and technology creates an international dependency circle which is expressed in new forms of cultural, technological and economic colonialism. That contributes to keep unchanged the different dimensions of poverty and to consolidate stratified societies in the Developing countries where the urban poor are the direct victims.

How can urban poverty be alleviated within this complex scenario where the different dimensions of poverty are identified ?

People do not go to health centres and do not look for a doctor because of its absence where they live or due to the financial implications. The children do not go to school

because there is simply no school in the neighbouring areas and/or because their parents have no means to afford the costs of fees, books, clothes and transportation. So, should employment conditions be firstly satisfied in order to guarantee a steady source of income or should one struggle to make governments assume their ultimate social responsabilities towards the weakest sectors of the population ?
Should one stimulate the inhabitants to organize themselves and through collective actions with a strong political component to accomplish a redistribution of income by shifting governmental decisions towards their most urgent needs ? If so, are the present governements prepared to accept the political and economic consequences of that fact ? Are the inhabitants sufficiently mature for this process of action and are the existing NGO's the proper channels to have grassroot based processes ?
Is employment more important than housing and infrastructure ? How can one guarantee an efficient productivity of the labour force if the inhabitants continue to live in precarious and unhuman situations, deprived from minimum living conditions ? One should bare in mind that the provision of basic housing and infrastructure commodities is a prerequisite to have the reproduction of the labour force in the cities and is a condition to have economic development and therefore an integrated approach that can meet these prerequisite is a must.
Health hazards and natural disasters have brought out the issue of environmental deformities and pollution which especially affected the urban poor settlements. Has environmental planning and pollution control the priority instead of basic health care programmes ?
What has the layman in the neighbourhoods defined as his top priority ? Education, employment, insfrastructure, health, housing ?

In Cupilom de Cima, the inhabitants defined six items which were considered as essential to improve their living conditions, in order of priority as follows: to build a house, employment, to improve the house, to extend the house, to study abroad, to by or repair a car. To improve their neighbourhood, they defined the following priorities in order of appearance: to improve the house, a health centre, public water taps, the pavement of roads, electricity and school (Menger, 1986).
More recently, in the neighbourhood of Reino-Gambeafada, the inhabitants defined a list of priorities, in order, as follows: water supply, housing, health centre, electricity, school, drainage and trash collection (Acioly, 1991b:21).
It is up to the policy maker and project designer to interpret these wishes and to transform them in project and policy actions. There are many variables playing important roles in the final decision. The existing physical conditions of the built environment and the settlement as a whole, the level of organization of the inhabitants, their will to cooperate and to participate in upgrading works, the cost benefit analysis of project options, the human and financial resources avaliable, accurate physical, social and economic data, etc.
This study does not argue that the new policy of development cooperation is wrong or bad and that the present approach of the PMBB is good and right. The translation of the policy's guidelines into project guidelines can not be blindly applied because there are too many facts to be seriously considered, especially the local peculiarities and the development process of a country such as Guinea-Bissau.
It is not a question of manicheism or any form of radical dualism but rather a question of pragmatism or a successful coherence with experience.

Indeed this study advocates that neighbourhood upgrading is one of the instruments to alleviate urban poverty because it enables significant improvement of the living conditions of the inhabitants of the popular neighbourhoods of Bissau although it remains as a palliative solution if there is no change in the international dimension of poverty.
In my opinion the course of actions undertaken in Cupilom de Cima is the most appropriate strategy to tackle the problems of the popular neibhourhoods in Bissau. It is a feasible strategy to set up sustainable grassrooted urban development and mangement. The provision of basic infrastructure, the settlement plan as an instrument of legalization of tenure and the provision of credit facilities to promote housing improvement should receive a great priority in the agenda of the project. That does not mean that the core of the Dutch development policy cooperation should be disregarded. On the contrary, it should be introduced on a decentralized basis but with a clear definition of the neighbourhood upgrading project and its goals and strategies.

13.12 THE CONCEPT OF THE NEIGHBOURHOOD UPGRADING PROJECT

In my opinion the top down proposed changes as a result of the new guidelines of the Dutch policy distorts the profile and the concept of the project as a neighbourhood upgrading project. It reveals a very caricatural situation when a donor country misuse its power and the control over the funds by defining what is good for a recipient country:
"a dressmaker designed and sewed a very nice suit which must fit into the client's anatomy even if the client is obliged to go through an incredible diet, even shrink if necessary, or do everything to gain weight and hight so that the suit will fit nicely" (Acioly, 1991c:29).
I would afirm that it represents a set back to all the efforts made to set up an organized and efficient method of plan formulation and implementation. This situation reveals that there is a gap between policy formulation and project implementation and misapprehension about the nature and the scope of this project.
What is exactly the profile of the project ? I see it as a habitat project stressing neighbourhood upgrading and community participation within the context of Bissau that is to say the delivery of essential urban commodities such as water supply, sanitation, drainage, accesses, housing and land. It must assume the concepts of slum and squatter upgrading sufficiently described in a variety of studies published at international level which means that a great attention must be given to security of tenure and land allocation, urban planning, cost recovery, neighbourhood management and residents' participation as well. The economically weaker groups are defined as the target beneficiaries of the project and their direct involvement in the whole project cycle should be looked at as a strategy to stimulate the formation of neighbourhood organizations and to generate opportunities for autonomous neighbourhood based urban management. Without this, without financial resources and the technical assistance of the project there is very little chance to materialize this objective.
It is a community based project and not a community development programme because of its budget and human resources limitations and therefore it does not give priority to the provision of community services such as health centers, schools, parks and public lighting. However, the project must seek for other means to provide these services at a decentralized basis, that means to search for contacts with different partners who will be in charge to fund and/or implement these components.
There are a number of evidences that urban planning, housing improvement, income

generation and community participation form the core of urban upgrading programmes and are closely linked with the future development of a specific neighbourhood. This is why it becomes necessary to assess the range of direct and indirect impacts of the intervention of the project in these aspects through systematic researches. In the case of Bissau the increase of opportunities to generate extra income were more the incidental consequences of the intervention rather than a part of the whole stragegy of the project. Neverthless I cannot argue in favor to include employment and income generation as part of the programme of the project unless there are human and financial resources allocated to support specific paralell programmes that will promote the physical, social and legal consolidation of the settlements.
In this respect, the planning process should be well articulated with the urban development and housing policies of the government because the project can become an effective policy and practical instrument in the development of Bissau. I am convinced that if the project and the sites & services Antula project are well articulated within the policy framework the urban poor will reasonably improve their housing conditions in Bissau. The duplication of such projects and the institutionalization of neighbourhood upgrading will create the pre-conditions for a feasible approach in Bissau.
This is fully dependent on the institutional framework of the official macro policy towards the city as well as on the institutional reform of the Muncipality and its relation with the project(s).

13.13 FUTURE PROSPECTS OF NEIGHBOURHOOD UPGRADING IN BISSAU

The transformation of the project into an autonomous Municipal Agency for Neighbourhood Upgrading and Urban Renewal (ANUR) should be seen as a positive outcome of the formulation mission of the Dutch government. ANUR will have a very specific area of competence and will not only depend on Dutch funds (3.85 Million Dutch Guilders) and the counterpart contribution of Guinea-Bissau but will search for means and mechanisms to generate revenues. This will form the basis of a neighbourhood upgrading revolving fund that will allow a long term self-sufficiency of ANUR.
The Agency will have a defined area of intervention, the 9 central neighbourhoods selected by the project, the CMB and the MOPCU as future neighbourhoods for upgrading. But both the ANUR and the CMB need to define their tasks and responsabilities.
Before coming into operation ANUR will have to be clearly defined, its nature, its objectives and its processual development which in my opinion should not differ very much from what I have described before.
The implementation of a cost recovery programme in the neighbourhoods already upgraded and the continuation of the planning and implementation process, the institutional, financial and physical consolidation of the agency will become the main challenges of the coming phase. However if there are no legal backup and reinforcement mechanisms to guarantee the application of norms defining the borders of the traditional land property, it is likely that ANUR will face difficulties to materialize its urban plans.

13.14 THE LAND ISSUE

The absence of laws and regulations which could define the criterias for legalization of traditional land occupations in the centrally located neighbourhoods is the first bottleneck of project implementation.
The tolerance of the CMB has no defined limits and allows "ad hoc" decisions which creates difficult precedents within the neighbourhoods. It is important that there is a statutory standard that clearly states the maximum of land that can be allocated to a single owner in these neighbourhoods. Then a settlement layout can be physically materialized without having to go through discussions and claims from different traditional owners.
A minimum quotient or a principle to split up existing occupations that will guarantee an urban plot for its owners and that respects at the same time the interests of the collectivity and the State.
That means that if a particular resident has the traditional land property that exceeds this quotient, he will have part or parts of his land confiscated by the CMB and re-allocated for the benefit of the community. To community services, roads, or to other residents whose houses had to be demolished within the scope of the upgrading plan. It may occur that he will have the right to receive two plots if his traditional occupation exceeds two quotients. Anyhow, it is a must to have a regulation and quick reinforcement mechanisms, otherwise the plans will never be physically executed.

At last, I am convinced that a multi disciplinary approach is the only way to achieve a feasible neighbourhood upgrading model in Bissau and this is closely linked with the professional background and the profile of the technicians directly involved in the projects as well. The methods and concepts that form the central theme of this study is the result of an experience of project formulation and implementation under the responsability of a professional architect who struggled to play an enabling role in his interaction with the local population.

15

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The former volumes of the serie "Integrale Stadsvernieuwing" presented the discussion and the analyses of different strategies of urban renewal that can lead to a broad understanding of the urban problem in European contexts. In this volume, the discussion is placed in the context of a particular Developing country. The typical process of urbanization of the Sub-Saharan African cities is demanding urgent, innovative and non orthodox planning and implementation measures from the local government authorities.

This study advocates that settlement planning and assisted self-help housing should form the core of a broad and integrated neighbourhood upgrading policy in the city of Bissau, Guinea-Bissau.

It argues that neighbourhood upgrading is one of the instruments to alleviate urban poverty and is a feasible strategy to set up sustainable grassrooted urban development and management processes.

The involvement of the Netherlands in the development of Guinea-Bissau provided the opportunity of cooperation between the Municipality of Bissau and the SNV-Organisatie van Ontwikkelingssamenwerking en Bewustwording who is responsible for the implementation of the Neighbourhood Upgrading Project of Bissau-PMBB.

The provision of basic infrastructure, resident's participation, labour intensive techniques in implementation works, the optimization of local building materials, neighbourhood based management, housing, sanitation and urban planning are some of the points of the agenda of the project.

This study presents an analysis of the development of the city with a particular emphasis on the development of the approach of the project and to the issues of housing and urban planning.

Architects, urban planners, researchers, policy makers and those who are directly or indirectly involved with urban problems of the developing countries will find this study very useful.

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