



**REPUBLIC OF MOZAMBIQUE
MINISTRY FOR COORDINATION
OF ENVIRONMENTAL AFFAIRS**

**NATIONAL DIRECTORATE OF
TERRITORIAL PLANNING**

**MOZAMBIQUE
REPORT**

CITIES WITHOUT SLUMS

**Part I
Analysis of the Situation
Chapters 01 to 05**

&

**Part II
Proposal of Intervention Strategies
Chapter 06**



Technical record:

Title

Mozambique, Cities Without Slums, Analysis of the Situation & Proposal of Intervention Strategies.

Promoter

National directorate of Planning and Territorial Development (DINAPOT)
Ministry for the Coordination of the Environmental Action (MICOA)
Av. Acordos de Lusaka nrº 2115.
Telephone: (258) 1 469210 Fax: (258) 1 465477
Maputo

Funding

United Nations Human Settlements Program (UN-HABITAT)
Land Tenure Section - Shelter Branch
" Cities Without Informal settlements " Program

Author

Center for Habitat Studies and Development (CEDH)
Eduardo Mondlane University (UEM)
Av. Mártires da Machava nº 181
Telephone: (258) 1 490111 Fax: (258) 1 490111/492191
Maputo



Technical team

Architect. José Forjaz - team leader
Arch. Júlio Carrilho
Arch. Luís Laje
Arch. Albino Mazembe
Arch. Erasmo Nhachungue
Arch. Liana Battino
Arch. Marcelo Costa
Arch. Anselmo Cani
Arch. Carlos Trindade



General coordination and compilation

Arch. Carlos Trindade
Arch. Anselmo Cani

Production of Maps

Arch. Carlos Trindade (Maputo e Manica)
Arch. Marcelo Costa (Nacala)

Maputo, 2006

Mozambique

Cities Without Slums

Part I

Analysis of the Situation

Chapters 01 to 05

&

Part II

Proposal of Intervention Strategies

Chapter 06

Table of Contents

1. Introduction to the initiative “Cities Without Slums”	6
1.1. Analysis of the Situation and Proposal of Intervention Strategies	6
1.2. Work methodology and performance phases	6
2. Urban growth in Mozambique	8
2.1. Nationalization and the occupation of the urban system	8
2.1.1. Migratory flows	8
2.1.2. Characteristics of the peri-urban settlements	9
2.1.3. The 3 rd Congress of FRELIMO and the 1 st National Meeting on Cities and Communal Neighbourhoods	10
2.1.4. The National Urban and Housing Development Program (PNDUH)	12
2.1.5. Basic Sanitation	13
2.2. Decentralization period and the Government intervention in the sector	14
2.2.1. Restructuring the economy	14
2.2.2. The autarkic (<i>autarquias</i>) process and restructuring local authorities	14
2.2.3. The relationship between the centralized and decentralized administration system	14
2.2.4. The government as regulator and as facilitator of the development process.....	15
3. MAPUTO: the slum problem in the country’s capital	15
3.1. The expansion of Lourenço Marques: from the colonial period to the independence.....	15
3.1.1. Activities to improve the neighbourhoods in the former lagoas area “ <i>zona das lagoas</i> ”	17
3.2. The urbanization post-independence.....	18
3.3. MAXAQUENE: post-independence upgrading interventions	19
3.3.1. Extension of the experience to other neighbourhoods of Maputo.....	21
3.4. Annexes (Maputo/Maxaquene Neighbourhood) – cartography	21
4. MANICA: Integration of the former rural peripheral settlements into the urban context	22
4.1. The town and its regional context	22
4.2. Main historical marks: the former village of Macequece.....	22
4.3. Access to basic sanitation services.....	23
4.4. The environment and its main problems	23
4.5. Urban management and access to land.....	24
4.6. Local institutions: the role of the Municipality in the urban management policies.....	24
4.7. JOSINA MACHEL: Actions for slum upgrading	24
4.7.1. Objectives of the initiative: main actors and target groups	24
4.7.2. The importance of community participation in the urban spatial reorganization.....	25
4.7.3. Brief note on technical approach: essential materials for activities in the field	25
4.7.4. Rights to land: issuing titles after the improvement activities	26
4.8. Annexes (Manica/Josina Machel Neighbourhood) – cartography	27
5. NACALA: high risk informal settlements: resettlement and/or physical upgrading	28
5.1. Nacala and its main characteristics	28
5.2. Historical evolution of the settlements	28
5.2.1. Urbanization plans and lands occupation up to the independence	28
5.2.2. Urban expansion post-independence.....	29
5.2.3. The Land use policy under the Town Master Plan.....	29
5.3. Economic situation.....	30
5.4. Characteristics of urban land in Nacala.....	30
5.4.1. Types of land occupation and use	30
5.4.2. Origins and dynamics of growth in the different settlements.....	31
5.4.3. Demographic growth by areas	31

5.4.4	Housing	32
5.4.5	Basic services and infrastructures	33
5.4.6	The environmental problem in the urban area	33
5.5	The legal framework for urban land	34
5.5.1	The formal land management system in Nacala	34
5.5.2	Access to land in urbanized and semi-urbanized areas	34
5.5.3	Access to land in non-urbanized areas	34
5.5.4	Traditional ownership	34
5.6	Institutional analysis	34
5.6.1	The role of the municipality and government bodies	34
5.6.2	The basic structures	35
5.7	MOCONE: Interpreting slums located in the city center	35
5.7.1	Geographical characteristics	35
5.7.2	History of occupation	35
5.7.3	Relief, hydrograph and vegetation	35
5.7.4	Occupation of the land and urbanization	35
5.7.5	Basic infrastructure	36
5.7.6	Housing characteristics	37
5.7.7	Social equipment and other services	37
5.7.8	Access to land in the neighbourhood	38
5.7.9	Socio-economic aspects	38
5.8	<i>MOCONE "COMMANDO AREA": the municipality's priority for a pilot intervention</i>	39
5.8.1	Characteristics of the study area	39
5.8.2	Possible areas of intervention	40
5.9	Lessons from the Nacala experience – inputs for a local and national strategy	41
5.10	Annexes Nacala/ Mocone neighbourhood, "Comando Area" – cartography	42
6	Strategies for slum upgrading in Mozambique	43
6.1	Slum upgrading is a challenging issue	43
6.1.1	Definition of a slum	43
6.1.2	Some indicators of the size of the problem	43
6.1.3	Some qualitative indicators of the problem	43
6.1.4	Some ways of addressing the problem	44
6.2	Conditions and principles to be born in mind in upgrading activities	45
6.3	Main components of the intervention strategy	48
6.3.2	The crucial importance of building the capacity of the Municipal structure	49
6.3.3	Participatory planning – the main actors	49
6.3.4	Making good use of the national technical capacities	52
6.3.5	Creating a support mechanism	52
6.4	What to do?	53
6.5	Conclusion	54
6.6	Annexes –Recommendations arising from the meetings with the Municipalities	55
6.6.1	Cadastre – Land Registry	55
6.6.2	Criteria for the division and administrative organization of the Municipalities	55
6.6.3	Urbanization	56
6.6.4	Informal settlements	56
7	Bibliographical references	57

1. Introduction to the initiative “Cities Without Slums”

The initiative “Cities Without Slums in Eastern and Southern Africa¹”, promoted by the United Nations Human Settlements Program (UN-HABITAT), seeks to contribute to the accomplishment of the Target 11 of the Objectives of the Millennium Declaration: “ to improve the life conditions of at least 100 million slum dwellers by 2020”; by working with the member states, with the objective of improving the lives and conditions of people living or working in informal settlements, in the selected cities of the sub-area. Ethiopia, Mozambique, Zambia, South Africa, Kenya, Uganda, Tanzania, Malawi, and Lesotho are the first nine chosen countries for the pilot initiative.

Mozambique has about 19,91 million inhabitants (2006 Projection- II General Population and Housing Census 1997). According to the same source, the average annual exponential growth rate between 1980 to 1997 was of 1.7% (0.5% for the rural population and 6.2% for the urban population), and the natural growth rate was 2.3% (2.2% for the rural and 2.7% for the urban). According to the UN-HABITAT figures (www.unhabitat.org), it is estimated that in 2001 the urbanization level was of approximately 33% of the population of which 94% were slums. According to the same source, about 86% of the urban population had access to drinking water and only 14% had access to adequate sanitation.

Many residential areas in the urban centers of Mozambique have typical slum characteristics: low-incomes, no basic urbanization, ambiguous or insecure land tenure rights, high population density, poor environmental conditions, poor or very poor building quality, absence of an urban culture, high levels of criminality and delinquency, among others.

1.1. Analysis of the Situation and Proposal of Intervention Strategies

In a first phase, the objective of the initiative was to produce an Analysis of the Current Situation of the slums in the cities. For this, neighbourhoods in three cities of Mozambique were selected: Maputo, Manica and Nacala. This analysis aimed at producing a realistic approach of the political, social, physical, economic, cultural, and institutional factors with impact in the informal settlements. One of the objectives of this initiative was to address the critical aspects related to previous actions undertaken, with the aim of improving the living conditions in these slums.

The resulting document (Part I – *Analysis of the Situation*) provided the basis for the discussions leading to the elaboration of a proposal on Strategies for Slum Upgrading (Part II - *Proposal of Intervention Strategies*) defined and agreed at the national level in collaboration with the relevant government institutions, and in a subsequent phase outlined more specifically at regional and provincial level.

1.2. Work methodology and performance phases

The work methodology applied with the available opportunities, and the known constraints, addressed the research and was not limited to a mere translation of terms of reference; instead, it sought to establish a continuous and systematic process comprising the observation of the slums in order to identify: local actors, applied research and strategic plans of improving the living conditions in these settlements, therefore, the participation of all actors is fundamental.

¹ The United Nations System entrusted the United Nations Human Settlements Program (UN-HABITAT), with the responsibility to help member states in the gradual implementation of one of the main objectives of the Millennium Declaration “Millennium Declaration”, the “Cities Without Slums”, also known as Objective 11 “Target 11”. This is one of the three goals of the Objective 7 “Target 7” – “*Ensure Environmental Sustainability*” and it foresees that by 2020, to achieve the significant improvement in the lives of at least 100 millions of people in informal settlements: “*By 2020, to achieve the significant improvement in the lives of at least 100 millions slum dwellers*” {UN-HABITAT, *Urban Indicators Guidelines – Monitoring the Habitat Calendar and the Millennium Development Goals*, Nairobi, August 2004

The local Municipalities were involved in order to ensure the sustainability of the program. Several subjects linked to the growth processes of the slums in Mozambique were discussed: the probable causes of its existence; the inhabitants' main sources of income; the phenomenon trends in the country and the national vision of the "Cities Without Slums" initiative.

Under the general supervision of the National Directorate of Planning and Spatial Development (DINAPOT) of the Ministry for the Coordination of the Environmental Action (MICOA), with technical support provided by the (UN-HABITAT), and conducted by the Centre for Development Studies of Habitat (CDHS) of Eduardo Mondlane University (UEM), the work was divided into five main phases:

Phase One – the choice of pilot cities

One of the main selection criteria was size:

- Maputo, as a large urban center (Maxaquene neighbourhood);
- Nacala, as a medium-sized urban center (Macone neighbourhood);
- Manica, as a small urban center (Josina Machel neighbourhood).

In addition, these cities represent the three regions of the country (South, North and Center respectively), and characterized by different socio-cultural and economic profiles. The municipalities were responsible for choosing the neighbourhoods to be studied in detail.

Phase Two - Analysis of the Situation of the Cities

The referred analysis, focused on the selected cities (Maputo, Nacala and Manica) and tried to identify and summarize the following aspects:

- Characteristics of the slums: (history, demography, physical aspects, basic services and land ownership);
- Institutional analysis: (government, community-based organizations, NGO's, religious organizations, professional organizations, the private sector, and multilateral and bilateral organizations);
- Policy analysis: (housing, infrastructure, land management; emphasizing the relationship between these policies and gender issue, HIV/AIDS and orphans;
- Interpretative analysis of the slums: (economic, political and socio-cultural);
- Improvement initiatives: (colonial, site and service, NGO's, churches and international interventions, etc.).

Phase Three – Proposal of a strategy and slum upgrading

In this phase, the priority was the elaboration of a first strategy proposal through regular consultations with key personalities in the relevant government institutions in order to achieve, among others, the following main results:

- Proposal of an operational structure and appropriate mechanisms for linkages between the central, regional, provincial and locals levels;
- Identification of the kind of actors and entities that will be involved;
- Definition of type of actions and implementation forms.

Phase Four – Discussion with the main stakeholders in a nation-wide debate

The draft proposal of improvement strategy was presented in a national seminar organized by DINAPOT/MICOA and enriched by contributions from the various participants: residents of these settlements, local organizations, NGO's, religious organizations, the private sector, professional associations, local and government officials as well as international cooperation staff.

Phase Five- Conclusion of the study

The comments and contributions of the national workshop were included in the document and the final results were submitted to the government (DINAPOT/MICOA) and UN-HABITAT.

2. Urban growth in Mozambique

2.1. Nationalization and the occupation of the urban system

Mozambique became independent in 1975, and it had an estimated 12 million inhabitants² and an urban population of approximately 1,000,000 to 1,400,000 inhabitants. In general, the area with the highest population density lay along the coast, in particular areas with a high incidence of economic activity, where monoculture farming (sugar, cotton, sunflower) was predominant, and in the south where the capital, Maputo is located. This was a privileged area for industrial development and the establishment of settler farming terrains (machambas) to supply produce to the colonial middle class, the bourgeoisie³.

One of the measures that complemented independence was the nationalization of rented housing and buildings. This put an end to speculative practices in housing and made it possible to structure the occupation of houses abandoned by the Portuguese. Many of the families that started to live in the peripheral neighbourhoods in urban areas had arrived from rural areas, attracted by the desire to get good jobs, and improve their living, health and cultural conditions

According to a study by MOPH/DNH and UNDP-HABITAT (Monograph of Maxaquene neighbourhood) it was during that period that the town councils started to establish services and social equipment. It also started to provide technical support for the construction of new houses, for the installation of commercial and artisan activities in peripheral urban areas through a guided participatory system. The town councils, the effective instruments for urban management, were transformed into Executive Councils with their respective City Assemblies, in order to fulfill their new role based on community management. At the community level the management of urban life was handed over to “Grupos Dinamizadores”⁴. The same study indicated that on average 50-60% of the urban population was living in informal settlements and marginal areas, in houses made of light, unstable materials.

2.1.1. Migratory flows

Based on the results of the First General Population Census, a study was carried out to analyze three main migration flows between 1975 to 1980:

- Migration between districts or cities of the same province;
- Migrants between two provinces of the country;
- People returning from overseas.



Figure 1. Mozambique. Main migratory flows (1975-1980). In: Census Coordination Council, *Population Migratory Flows*, volume 3, Analysis of the 1st General Census of the Population in 1980.

² In his book *Development in Mozambique* Eduardo Medeiros estimates that about 9% of the population was living in urban areas.

³ *The Evolution of the Mozambican Habitat; the question of physical planning*, Maputo, September 1980 – The Structure of Habitat at Independence.

⁴ The “*Grupos Dinamizadores*” are still grass roots organizations that manage various aspects of daily life, in particular social affairs and cultural, political, health and land issues.

The study concluded that at that time mobility in the country occurred in phases or intermediate stages:

- The first phase records a movement from the rural inland areas in a particular region, to the most important and closest regional urban center geographically closer;
- The second phase records movement of people from regional urban centers to the main cities

The phenomenon of the migratory flows occurred until the year of 1985, and it slowed down from 1983 onwards, following a movement to block the rural exodus to the cities⁵. The high mobility index within each province was driven first, by local urban centers⁶ and from there, to larger urban centers leading to the following main consequences:

- The increase of the food dependence, the cities became more dependent on the countryside for food;
- The social and economic, housing and employment policy implications of the fast growing population in the urban centers in the country, including demands on employment and the need to satisfy the basic needs of food, educational, health and sanitation.

The situation of the armed conflict that only ended in 1992 made it impossible to control the various levels of the migration phenomenon.

2.1.2. Characteristics of the peri-urban settlements

The unplanned growth of the precarious and peri-urban areas, aggravated by the absence of land use planning instruments and their execution and control. As result, most of the urban population was living in areas without adequate access to basic infrastructure and social amenities⁷ and was living in sub-standard housing, without secure land tenure rights. These areas represented 50% of the total urban area in 1980, and the population living there comprised 50% of the total urban population.

According to the 1980 census data, 24,4% of the urban population had piped water system within the house, 44,2% with piped water system outside the house (in the back yard), and 25,7% were supplied water from the wells. Those remaining used water from small lakes or rivers. The urban population that had access to electricity was of 23,2%.

In 1980, about 37,8% of the urban population lived in permanent houses and 62,2% lived in of non-permanent houses. However, when compared to data from the 1970 census the number of permanent houses had increased to 100%.

Building materials used in urban housing were as follows: 37,2% built of the houses were built cement or brick, 8% of wood and corrugated iron, 7,8% of the houses were constructed of mud bricks, 18,4% of woven cane structures (hurdles) and 25,42% of woven sticks with mud plaster (wattle and daub).

⁵ The Production Operation (*Operação produção*) had as objective to remove the people surplus from the cities and without occupation. The destiny of these people was the one of resettle and strengthening the growth of the rural areas.

⁶ About 20% of the total inward and outward urban migrations were carried out between the 12 main cities of the country. The inter-provincial migratory rates above 2.500 people were carried out in the tract of land between Chimoio - Dondo - Beira and in the Cities of Maputo, Beira and Nacala. The migration rates of less than 2.500 people were seen in the districts of Chibuto, Manjacaze, Mutarara, Mueda and in the Cities of Pemba, Tete, Quelimane, Inhambane and Xai-Xai.

⁷ According to the work compiled by the Inter-sector Working Group URBE about the *National Seminar of Strategies of Urban and Housing Development* occurred from 23 to 26 November, 1992, until 1980, only 27% of the urban population had access to the basic infrastructures and about 75% of the urban housing was informal.



Figure 3. Malhangalene. House with hurdle walls towed with cement and covering with zinc foils. In: the *Malhangalene Survey*, 1977, page 21.



Figure 2. Malhangalene. House of hurdle with covering in fibre-cement foils (Lusalite). In: the *Malhangalene Survey*, 1977, page. 14.

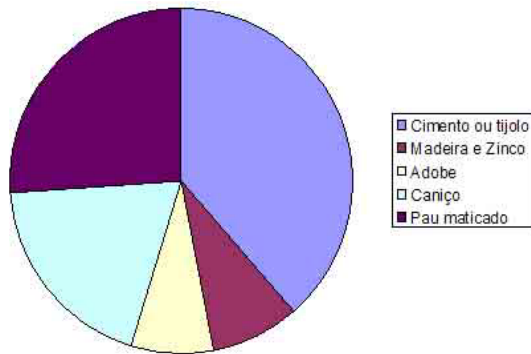


Figure 4. Mozambique. House distribution in the urban areas in 1980.

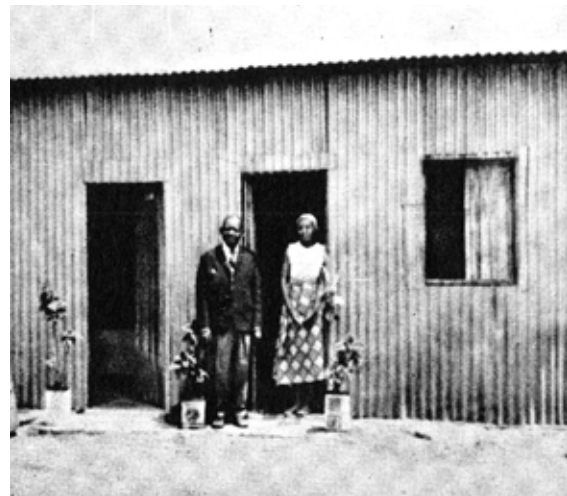


Figure 5. Malhangalene. House with walls and covering with corrugated iron foils. In: the *Malhangalene Survey*, 1977. p. 24.

2.1.3. The 3rd Congress of FRELIMO and the 1st National Meeting on Cities and Communal Neighbourhoods

The III Congress of FRELIMO⁸, the single party in power at that time, constituted an important mark for the changing of situation of the sector. Improving living conditions represented a major contribution to improving people's standard of living. The Economic and Social Guidelines of this Congress, identified the following as crucial aspects:

- Definition of strategic orientations for planning human settlements;
- Elaboration of Urbanization Plans and the identification of methods for controlling their implementation and execution;
- To elaborate projects and to support the populations in the execution of infrastructure and social equipment building works, with priority for water supply and sanitation;
- To organize and give technical support for people integrated in self-construction and housing cooperative programs;

⁸ The III Congress of FRELIMO took place in 1977.

- Support for the development of mechanisms for accessing credit;
- To create legislation on construction and procedures related to housing;
- To establish norms on housing construction elements, the conception of new housing types and materials accessible to the population;
- To define the role of the employers in relation to houses for their workers;
- To study traditional methods and techniques for building houses;
- To train technical staff to participate in urban development planning programs

Subsequently, and as an outcome of 3rd Congress directives, in 1979 the 1st National Meeting on Cities and Communal Neighbourhoods had the objective to analyze the political, economic, financial and social situation of the ten provincial capital cities plus Nacala and Chókwe⁹. It concluded that the solution of the problems identified required above all, organization by the State, the cities and the “Grupos Dinamizadores” of the Communal Neighbourhoods. It was evident that though spontaneous neighbourhoods would not disappear from the urban scene in the short term; given the financial and technical resources available, a long-term solution was more likely.

Nevertheless, as an answer to the need and the scope of the urban management problems faced particularly in the areas on the edges of urban centers, people started a process of self-construction building their own houses, and in some instances using their own resources and masonry material. This situation, lead to the rapid and spontaneous consolidation of these neighbourhoods. In the case of Maputo, this resulted in a parallel project to assist self-construction in Machava neighbourhood financed by the United Nations Development Program. At the end, after completion it was found to have been an extremely costly initiative.

Later, it gradually became clear that the results of the National Meeting of 1979 had produced a number of results, in particular:

- The Home Ownership Promotion Program (HOPP) – In 1987 the Council of Ministers approved general guidelines for the creation of Fund for Development of Home Ownership (FDHP) but due to financial constraints meant that it never functioned properly.
- United Nations Funding – also in 1987 a project financed by UNDP/PNUD and implemented by UNCHS (Habitat) started with the objective of helping the Government define its **National Housing Policy**, and it ended in June of 1991. The continuity of this initiative was established by the project MOZ/91/010, that supported the government in its formulation of a National Urban and Housing Development Program.
- The Urban Rehabilitation Project (PRU) financed by the World Bank – Again in 1987, studies began for the implementation of the PRU, in Maputo and Beira. To the housing component represented about 6% of the total cost of the project and it included a program of the Government in 1997, in coordination with PNUD, seeking to attribute housing based on demarcated plots and the provision of basic services. A total of 1000 plots were demarcated and 500 families were relocated following heavy flooding in the capital city, Maputo. In the sector of housing promotion several other activities were developed in the national scope, of which some highlights followed:
 - Construction of 370 evolving houses in the neighbourhoods of Polana Caniço and Ferroviário (Maputo) and Macurungo (Beira). Built in the neighbourhoods of the city’s periphery and conceived as temporary or permanent homes for people who had to leave the apartments that were being renovated in the city centre. None of the beneficiaries of the program returned to the

⁹ The 1st National Meeting on Cities and Communal Neighbourhoods took place from February 26th to March 3rd 1979 and it was, until then, one of the largest occasions for reflection on the urban problems. The objective was to analyse the political, economic, financial and social situation prevailing in the provincial capital cities, also including Nacala and Chókwe, in order to propose measures regarding the problems solution for the cities and their neighbourhoods.

previous residence or apartments. New rents were readjusted to about 50 times more than the rent charged prior to the rehabilitation of these buildings in the urbanized part of the town.

- Demarcation of about 2,000 residential plots in the neighbourhoods of Laulane and Mahotas (Maputo) and Inhamizua (Beira) for people with low-income.
- Restructuring of the Local Authority – The World Bank started supporting this process in 1991, financing the Local Authority Restructuring Program (PROL). Four pilot project cities were proposed for urban physical development and housing work namely Maputo, Beira, Nampula, Quelimane and Pemba. These projects were considered an essential component of the National Urban Development and Housing Program and included:
 - Planning of the urban structure and priority activities;
 - Urban mapping and land titles; and
 - Improvement in peri-urban areas.

Among other activities, structure plans were prepared for Maputo (the metropolitan area - that comprises the Cities of Maputo and Matola), Beira, Nampula, Quelimane and Pemba.

- National Social Housing Program (PNHS) – As follow-up to the National Housing Policy, the Ministry of Construction and Water formulated a National Social Housing Program (PNHS). Its main features were as follows:
 - To promote the production of building materials based on the resources existing possibilities in each area;
 - To encourage the use of local building materials and simple technologies;
 - To promote and encourage the creation of housing cooperatives or other forms of association;
 - To the extent possible, arrangements were made for the provision of areas destined for the housing construction, social amenities and a minimum basic infrastructure;
 - To participate in the training of monitors to help the population interpret and implement projects; and
 - To facilitate the acquisition of building materials not produced locally.

As the first step in the implementation of the project mentioned before, the Ministry of Building and Water implemented a pilot project in the provinces of Maputo and Gaza. In Maputo province it was implemented in Campoane village about 15km from Maputo where some 1,119 plots were demarcated covering an area of approximately 50ha for about 300 families. Four houses were built to demonstrate construction by phases and kiln for burning bricks was rehabilitated.

2.1.4. The National Urban and Housing Development Program (PNDUH)

The PNDUH that initiated in 1993 and ended in 1998 was financed by the Government and received technical support from the PNUD/HABITAT. The table below shows the five main developed projects.

Project	Sector	Sub-sector	Duration	Place	Executioner	Costs (USD)
Support to the coordination of the National Urban Development and Housing Program, its capacity building and training program	Human settlements	Housing, Construction and Physical planning (institutional reinforcement)	2 years	Center for Studies and Habitat Development of Eduardo Mondlane University (UEM)	INPF, Department of Housing of the MCA and APIE	1,600,000
Support for Urban and Housing Research	Human settlements	Housing, Construction and Physical planning (institutional reinforcement)	1 year	Center for Studies and Habitat Development of Eduardo Mondlane University (UEM)	Government of Mozambique	200,000

Project	Sector	Sub-sector	Duration	Place	Executioner	Costs (USD)
Support town council technical archives in the planning areas and administration of the urban land and building	Human settlements	Housing, Construction and Physical planning (institutional reinforcement)	1 year	Town Council of five cities: Beira, Quelimane, Nampula, Pemba and Matola	Relevant town councils	140,000 for city
Creation of a central database for the urban development and housing sector	Human settlements	Housing, Construction and Physical planning (institutional reinforcement)	6 months	Coordinating Unit for Urban Development and Housing and the INPF	Government of Mozambique	100,000
Support to the installation of a documentation center for urban development and housing sector	Human settlements	Housing, Construction and Physical planning (institutional reinforcement)	1 year	Coordinating Unit for Urban Development and Housing and the INPF	Government of Mozambique	100,000

Table 1. Mozambique. Projects under the National Urban and Housing Development Program

Source: National Urban Development and Housing Program: Institutional and Capacity Building Component: UNDP/UNCHS project MOZ/93/020, September of 1993.

2.1.5. Basic Sanitation

According to data from the 1970 census, 66.8% of families in the urban areas used common latrines frequently without minimum levels of sanitation. In 1980, this number reduced to 20% thanks to the government project launched in 1979 with external support¹⁰ that did research on an *improved latrine* that would be accessible to most suburban families and could be used throughout the country.



Figure 6. Concrete slabs constructions for latrines. In: *National Programs of Sanitation in Mozambique: Pioneer in the Suburban Sanitation*, 2002, p. 01. {www.wsp.org}.

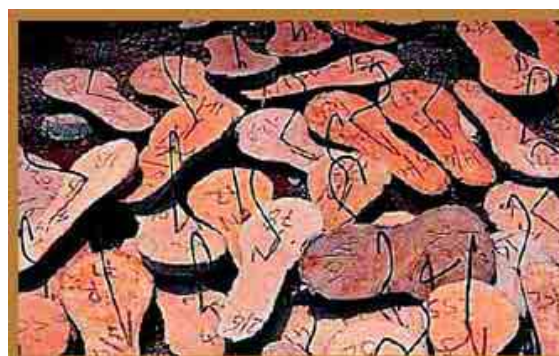


Figure 7. Holes covers of the slabs for latrines. In: *National Programs of Sanitation in Mozambique: Pioneer in the Suburban Sanitation*. 2002. p. 02. {www.wsp.org}.

The project, started in the suburbs of Maputo and resulted in a Sanitation Program in 1985 that was then transformed into a National Low cost Sanitation Program. By 1987, PNSBC had created 38 production units in all provincial capitals that were producing 25,000 slabs a year. The Program had a major impact between 1985 to the end of 1990, when the output began to fall. The autonomous nature of the program, the new supply-based approach and falling external financial support undermined the long-term sustainability of the program

¹⁰ Funds from three sources: external aid agencies (personnel, equipment, production costs and some running costs); households (purchase and transport of the slabs, construction) and the central government (partial subsidies for the slabs, personnel and other costs).

Extracts from a World Bank document (Water and Sanitation Program, 2002¹¹) that commented on the program are presented below:

.... *The decline was due to a number of factors: political and institutional changes - ..in the late 90s a new national policy on water and sanitation was produced. This policy put more emphasis on the sustainability of the institutional arrangements to reduce dependence on external aid agencies while making greater use of the private sector - Dependence on external subsidies and assistance - ...External aid funds fell sharply and had a major impact on the programs' activities throughout the country..... Operational problems - families who lived the furthest away faced major transport difficulties - ... many slabs were merely placed over the hole in swampy land that contaminated underground water or flooded the yards ...*

2.2. Decentralization period and the Government intervention in the sector

2.2.1. Restructuring the economy

The macro-economic restructuring program, adopted by the government, took place at the end of the eighties aimed at restructuring the policy and economic management due to the profound and widespread crisis in the country that was partly due to the destabilization as a result of the civil war in Mozambique at that time. In the urban planning field, this was reflected in the urban rehabilitation projects in Maputo and Beira (1988-1995).

The implementation of the 1992 Peace Agreement, and the subsequent first general elections held in 1994, was a landmark in the country's development process. However, the end of the war did not reduce the country's informal settlements. On the contrary, statistics show that many of them became more consolidated, giving way to informal settlements with more consolidated housing.

2.2.2. The autarkic (*autarquias*) process and restructuring local authorities

In 1994 the Law 3/94 that conceived a model of a decentralized government structure was introduced. This Law defined the creation of rural and rural municipal districts with relative autonomy and local representative bodies. Through the Law 9/96, an amendment to the constitution that provided the framework for the co-existence between central state bodies and directly elected local authorities.

In April 1998, the National Assembly approved the creation of 33 municipalities as part of the establishment of local authorities (*autarquias*) under the Law 2/97.

With the creation of "*autarquias*" and in order to guaranty the correct function of the 33 municipalities, the government created in August 1998, the Municipal Development Project (PDM) in order to: (i) create technical capacity; (ii) contribute to the full and effective operation of the *autarquias*; (iii) to respond to and guarantee their development.

The project had four components: 1) legal and institutional reforms; 2) Municipal qualification; 3) support for finance, urban management, cadastre and urban land; and 4) Municipal subsidy fund.

2.2.3. The relationship between the centralized and decentralized administration system

Mozambique has been engaged in local government reforms since the late nineties. It is possible to contrast the mechanisms of past administration, the centralized system (neighbourhood secretaries, heads of blocks and heads of 10 families/10 houses) and the current decentralized system (mayors and presidents of the Municipal assemblies). Although the grassroots community bodies inherited from the centralized system are not officially recognized they still exist in the cities, especially in the peripheral areas. The current system can be considered as *mixed* or *semi-decentralized* system.

¹¹ Water and Sanitation program – Africa Region (WSP-AF), *Programa Nacional de Saneamento em Moçambique: Pioneiro no Saneamento Suburbano*, The World Bank, Note 9, Nairobi - Kenya, Agosto 2002. {www.wsp.org}.

There are two local governance systems defined: one centralized system with Local State Bodies, comprising provincial governors, district administrators, heads of provinces, districts, administrative and locality posts, without any administrative or financial autonomy; and another decentralized system comprising “autarquias” where citizens participate, electing their deliberative and executive bodies¹².

2.2.4. The government as regulator and as facilitator of the development process

In the frame of the government’s housing program, the Housing Development Fund (FFH) was created through Decree 24/95 dated 6 June. The objectives of the FFH are: (a) to promote the construction for social housing; (b) to subsidize the interest rate on bank loans for housing; (c) to grant loans for the construction, repair and expansion of houses belonging to citizens whose income does not exceed a specified income; (d) to finance studies, the urbanization studies, operations and works considered necessary for promoting activities; (e) to finance the establishment of public bodies implementing state housing programs.

It is important to mention that the FFH gets its revenue from the following sources: Central government funds, 50% of income is from the sale of state property, 100% of the revenue comes from the sale of ruined or unfinished buildings, from the sale of property built by the HDF itself and repayments of the fund’s loans and the respective interest.

Since 1997 about 980 loans have been granted for the construction of “new houses”. Other important activities of the FFH are linked to the urbanization where allocation of about 7.000 demarcated plots with roads and water supply have been done throughout the country.

3. MAPUTO: the slum problem in the country’s capital

3.1. The expansion of Lourenço Marques: from the colonial period to the independence

The European presence in our country dates from the period following the first circumnavigation voyage accomplished by Portuguese sailors about 1498, attracted by the flourishing business of Indian spice trade. Until the end of the 18th century the Portuguese presence was limited to the coast, particularly the Mozambique Island, a town with important political and administrative functions arising from its status as the first capital of what was then the Portuguese Colony of Mozambique. Authors such as Mendes (1985), have described the military incursions and subsequent temporary occupation by adventurers such as the Dutch and even the French, in places like Mambone, Inhambane and De Lagoa Bay, now Maputo, but with little influence on the urban fabric.

In fact, the effective Portuguese occupation of Mozambique only occurred through the so-called pacification campaigns in the last decade of the 18th century. At the same time, the Portuguese authorities took the important political decision to transfer the colony’s capital from Mozambique Island to the still small and “unhealthy” Town of Lourenço Marques.

Therefore, under the pretext of the so-called pacification campaigns, the Portuguese military presence in the area intensified and there was heavy investment in the development of infrastructure.

Giving a shape to these initiatives, saw the preparation of an urbanization plan in 1887 that, when implemented, completely revolutionized what was then the inhospitable De Lagoa Bay or Town of Lourenço Marques.

From the early 20th century, the port activity in Lourenço Marques grew rapidly and it required labour. This acted as a magnet for local people coming from the interior and thus a catalyst for “slum” development or suburban neighbourhoods in Lourenço Marques.

The first neighbourhood, Xipamanine, appeared in 1919 and was followed by the Lagoas (now Maxaquene) neighbourhood around 1938.

¹² Center for Studies on Habitat Development/Eduardo Mondlane University. *Território e População – região de Chókwè*, Maputo 2001.

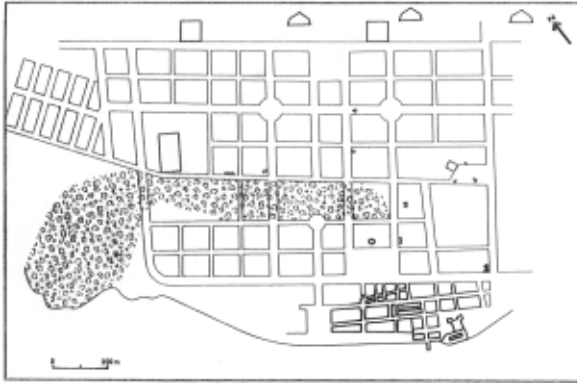


Figure 8. Maputo. The Urbanization Plan of *De Lagoa Bay* (Lourenço Marques) in 1887



Figure 9. Lourenço Marques. Harbor View. In: João dos Santos Rufino, *Photographic and Descriptive Albums of the Colony of Mozambique*, vol. I, Lourenço Marques, 1929.
<http://companhiademocambique.blogspot.com/>

The suburbs defined by concentric arch, on the far side of what is today Marien Ngoabi Avenue, being structured with roads linking the city to the region's main localities and were a magnet for the rural exodus. This migration was characterized by people of low social-economic status resulting in suburban development at the periphery of the organized city, and was only without planned infrastructures.

In the fifties and sixties, 11 individuals owned 71% of the land in suburban areas, the state/town council owned 13% and the remaining 26% distributed and shared by about 100 small owners, each possessed very small parcels of land (Jenkins, 1999). As we can see, any investment initiative in these areas meant negotiating land in a context of strong speculation.

For the authorities at that time, these suburban neighbourhoods were temporary, that constituted undisciplined extensions (and therefore, developed with poor or even the absence of urban planning) to the north and northeast of the town. The following quote from a Town Council document in the fifties illustrates the attitude at that time:

"The suburbs are neighbourhoods raised arbitrarily, without pre-conceived plan, condemned to one day being stuck by the city; its framing, future inclusion into a general urbanization plan will be a serious problem" (Mendes, 1985).

In the attempt to improve the housing conditions of the native in the suburbs, tested with some re-organization actions. The first evident examples of this policy are the central nucleus of the Neighbourhood of Xipamanine and the one of Munhuana.

As already mentioned, in the beginig the authorities of the time considered the suburbs to be temporary developments that would be corrected in due time.

According to Maria de Carvalho's paper on Xipamanine, published in the Municipal Bulletin number 12, of June 30, 1973:

"The Xipamanine neighbourhood was built in 1919 with the purpose of social and urbanized integration of the natives who came from the bush. Little documentation exists concerning the Neighbourhood and, consequently, it becomes difficult to know the norms that were followed by its occupation. Through informal contacts with town council employees indicate that at that time the natives did not want to live there but were forced to, otherwise they would lose their jobs. The former president of the Chamber, who was also the director of the Iron Roads (Railroad), distributed houses not just to council but also to the Iron Roads employees.."

It should be noted that at that time these neighbourhoods served as "dormitory" for low-cost labour needed to move the colonial economy.

The difficulties in eradicating the growing phenomenon of the suburbs in the colonial cities, meant that the authorities soon became aware that they were a challenge to the absorptive capacity and integration of these urban interface areas into Lourenço Marques. These rules focused mainly on the type of housing, which should be temporary so that when the long-awaited urbanization arrived they would be cheaper to demolish; Building with durable material in the suburban areas was not permitted, consequently this led to the proliferation of houses built with cane, or at best houses of wood and corrugated iron. This produced the most striking characteristic of the colonial city: an area called the cement city (*cidade de cimento*) and another suburban neighbourhood area called the cane city (*cidade de caniço*).



Figure 10. Maputo. The cement and hurdle cities. Dinageca, Ortophotoplan de 1973.

3.1.1. Activities to improve the neighbourhoods in the former lagoas area “zona das lagoas”

In the early seventies and during the peak of the anti-colonial war by FRELIMO, the suburban areas of Lourenço Marques housed 4/5^{ths} of the total population of the city, estimated at 600,000 inhabitants. The authorities saw them as nursery for revolutionary ideals and hatred of the regime. Consequently, and in order to win the inhabitants’ “minds and hearts” it became urgent to begin improvement actions of their life standards. One example of this situation is contained in the following quote from a document of that period¹³:

“The administration has given special attention to study how to solve the emerging problems of the undisciplined occupation of suburban areas due to constant influx of p rural people into the city, coming to deserve special attention from the part of the administration. Consequently, and as determined by His Excellency the Governor-General, in a meeting held on July 25, 1970, in GUHARLM attended by the Provincial Secretaries for Public Works, the mayor of Lourenço Marques Chamber and the Director of the Urbanization and Housing of the Lourenço Marques GUHARLM region, it was decided that there should be a study on re-shaping the cane areas, along the strip comprising the former Craveiro Lopes Avenue¹⁴, the Airport and the Cement City”.

The document also states that the study of the “cane area” had was aimed at reaching the following objectives:

- Construction of neighbourhoods perfectly integrated in Lourenço Marques City, by eliminating the cane houses;
- The re-accommodation of 50% of the current population;
- Transfer the remaining 50% to transition areas¹⁵ where they would receive assistance for their social improvement;
- Achieve a “balanced social granular structure.”

¹³ Documents of the *Correspondence* between GUHARLM and the Municipal Chamber of Lourenço Marques (1970/73), archived in the Center of Documentation and Information (CDI) from MICOA.

¹⁴ Today: Avenida Acordos de Lusaka (Avenue).

¹⁵ The transition areas defined as accommodation places of displaced native populations, still in assimilation process, just like the actual Neighbourhood of Infulene/T-3, transition area number 3.

The intentions of the plan for the *Lagoas Area*¹⁶, were very ambitious. It soon became evident that the challenge to eliminate the “cane area” constituted a sizeable challenge than the real capacities of the colonial authorities. Consequently, the plan was never implemented; all that was done was to open a number of access roads.

3.2. The urbanization post-independence

This process did not entail major changes to the space of the colonial city or public infrastructures in general. The part considered the “cement city” remained. The peripheral suburban neighbourhoods, where the majority of the population lived, were the only areas that expanded and with the same precarious level of services.

Of an estimated 600,000 inhabitants of the Maputo City in 1977, about 73% to 75% lived in the so called peripheral or suburban areas. This term did not refer just to the constructions characteristics (wood and galvanized iron sheeting or cane¹⁷), but also to its marginal features, precariousness and the fact that they were not covered by the colonial Urban Master Plan established by the colonial government and that envisaged its progressive destruction and substitution through consolidated housing.

Years	“Cement city” (%)	Suburbs and Periphery (%)
1970	26.8	73.2
1980	24.3	75.7
1991	18.1	81.9

Table 2. Maputo. Population growth by the residential area, Maputo City (1970-1991).

Source: Elaborated chart based on the 1970 and 1980 population census and evaluation of the population by DNE.

In the post-independence period, the urbanization of Maputo City went through three main stages¹⁸:

- 1975-1977, occupation of the city – This stage begins with the Independence when the city virtually abandoned by its population of Portuguese origin, most of whom returned to their country of origin or emigrated to South Africa. The houses they left behind were nationalized and administered by the Real Estate Property Administration (APIE)¹⁹ that rented them directly to Mozambicans or to the public, state and private companies to sublet to their employees through allocation contracts²⁰. Consequently, and especially in the “Cement city”, a new population moved in, most of whom came from the peri-urban areas or were migrants from other cities²¹.
- 1977-1987, beginning of the urban and environmental deterioration of the City – In this stage, organization of the population for the upkeep of the city and education about urban life began to

¹⁶ Today: Maxaquene Neighbourhood.

¹⁷ According to Diego Robles Rivas in the book, *Barrio Maxaquene - Monograph*, about 80% of the total housings was of wood and zinc or of hurdle.

¹⁸ IBRAIMO Maimuna A., *Growth of the Urban Population and Urbanization Problems of the Maputo City*, Series Population and Development, Document nr. 11, Unit of the Population, National Direction of Statistics, Maputo, November 1994.

¹⁹ In Mozambique the nationalization of the earnings buildings, and of the ground, became conditions excellent or else only for the development of up-date actions of the habitat in the peri-urban areas, according to Ingemar Saevfrs, in the book “*Maxaquene – the comprehensive account of the first urban upgrading experience in the new Mozambique*”, 1986.

²⁰ According to the study “*Investigation Program and demonstration of biological systems of sanitation for the not planned urban areas in Mozambique*”, the movement of occupation of the Cement city still left about 60 to 70% of the population of Maputo (approximately 500.000 inhabitants) living in the hurdle areas.

²¹ In agreement with data of the “*Growth of the urban population and urbanization problems of the City of Maputo*”, of 1994, up to 1991 about 42% of the population settled down in the City of Maputo along a period of about 15 years soon after the Independence.

weaken. Little by little, especially in the “Cement city”, the rented buildings and houses, avenues, streets, parks and urban services deteriorated. The delivery and quality of urban services also deteriorated due to several related factors, such as:

- Difficulties to consolidate the new economic and social policy of the socialist ideology;
- The war that led to financial and economical crisis;
- Low wages that did not allow fiscal contribution for the maintenance of the buildings and service;
- The fact that most people had very weak urban tradition

One of the signs of deterioration of the urban environment was the reduced supply and quality of services, mainly of the water supply, garbage collection, and later on, difficulties of transport among others.

- 1987 up to date- deterioration stage and the start of recovery – the country’s economic and social crisis was reflected in its urban environmental areas. The central government began a radical change formalized in 1987, by introducing Economic Rehabilitation Program (PRE). In cities, and especially in Maputo, economic and social processes initially resulted in even greater deterioration of the town, later followed by a slow recovery. The rise in urban population²² as a result of the war led to the creation of new settlement areas, most of which were located in marshy or swampy areas, slopes, arid, and other degraded areas.

3.3. MAXAQUENE: post-independence upgrading interventions

By the end of 1976, work started on projects to endow the habitat of the urban periphery with infrastructures and services (transports, primary urbanization, social and sanitary services) to be followed by the preparation of a plan to regulate coherent development.

The project for Maxaquene neighbourhood was part of “assistance to peri-urban areas” project financed by PNUD and monitored by the United Nations Center for Housing and Planning, in New York.

The first step was to produce an urban scheme that identified the availability areas destined for services and road systems. The next step was the establishment of a technical structure to provide assistance for the most basic problems. The third was once the first service structures were established to connect them all together and the establish interconnections (latrines, open spaces for the family use, etc).

The first intervention area was Malhangalene neighbourhood with about 10,000 inhabitants divided into 4 cells in a 60 hectares area.

Its name was changed to Maxaquene neighbourhood. The transfer of families, opening up pathways and regularizing residential areas took place in stages as follows:

- From June 1977 to February 1978 – 10,000 inhabitants' inclusion in 60 hectares corresponding to the initial area of Maxaquene;
- From January 1978 to December 1978 – expansion to a new area of 60 hectares with a population of 8,000 inhabitants, in North Maxaquene area;

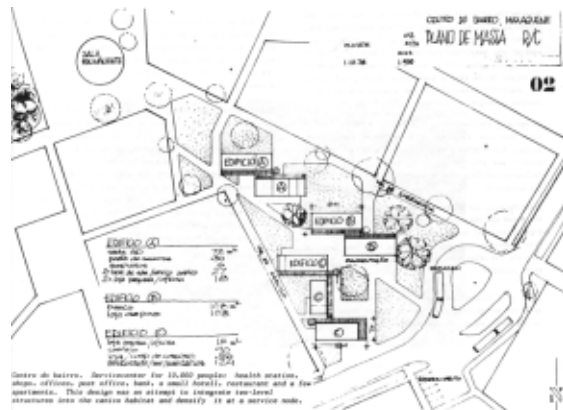


Figure 11. Maxaquene. Plan for the Neighbourhood Center. In: *Maxaquene, first urban upgrading*, page 51.

²² According to the data of the “*Growth of the urban population and urbanization problems of the City of Maputo*”, 1994, the City growth was concentrated in the population of the peripheral districts. The Urban Districts number 4 and 5 growth with rates of 7,0% and 6,5%, respectively.

- From February 1978 to May 1979 – a further 150 hectares with 18,000 inhabitants in Polana-Caniço neighbourhood

The big satisfaction of the residents was to hear that the intervention would not result in removing them to another location but would rather “transform the cane area into a city” with road access roads for public transport and other vehicles. Initially, there was no way to avoid causing some unavoidable sacrifices on the part of the inhabitants: displacement or demolition of some houses, walls reconstruction, reduction of the family space, etc. The inhabitants always used their experience in colonial times as a reference as the southern area of the neighbourhood had been urbanized some years earlier.

The program did not foresee the housing construction destined for the people with low incomes, only improvements to existing ones that would raise their standard of living. The analysis of the situation in the cane city, accompanied by discussions on the availability of funds, led to the following conclusions:

- An urban plan or just the simple definition of land use should be quickly elaborated to respond to demands for self-construction to improve existing houses;
- Some public services were of vital importance for improving the living conditions of a large number of inhabitants: water distribution, drainage, sewers, access roads, public transport services, garbage collection, and electricity.

The first objective was to provide access for public transport along the winding footpaths in the neighbourhood. It was decided to open a road 18 meters wide and to study a new road network. This was the only road not affected by the presence of buildings requiring renovation. Plots were organized in blocks of 300 inhabitants each (70 to 80 families) over an area of 1 to 1,3hectares.

Each block had a road 6 meters wide that ended in an open area of 400 to 500m², where stand pipes, public lavatories/toilets, telephone booths, a small day care or a small recreation area and an electricity connection point provided.

There was widespread public participation in the organization of the blocks, the public and the open areas. Roads 6 meters wide and 60 to 80 meters long were built, leading to a main roads or open areas.

The neighbourhood was provided with a network of footpaths 3 meters wide that were connected to each other and to the open areas. In some exceptional cases, a few 3 meter pathways allowed for the passage of emergency vehicles such as ambulances or other motor vehicles to intervene should the need arise.



Figure 12. Maxaquene. The scheme of division into lots of the Plan In: *Maxaquene, first urban upgrading*,



Figure 13. Maxaquene. Residents making the garbage collection. In: *Maxaquene, first urban upgrading*, page. 47.

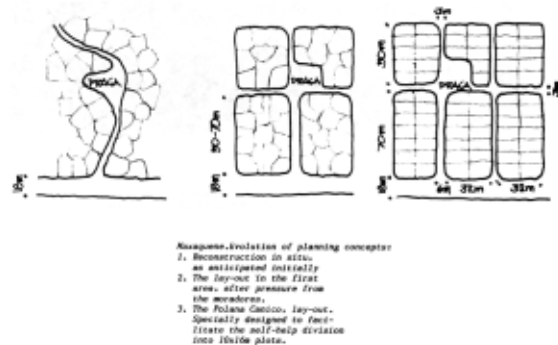


Figure 14. Maxaquene. The concept evolution of division into lots. In: *Maxaquene, first urban upgrading*, page. 40.

The development of 6 or 3 meter roads and the open areas took into account existing houses, fences and trees in order to avoid useless destruction, whenever possible. This type of intervention required work on site, as it was not possible to foresee details in projects of this kind, not even through the detailed examination of aerial photographs.

The main unknown factor was the ability to increase population density to absorb the families that were transferred to make way for roads and services. All depended on mobilization and socio-political awareness raising by the *Grupo Dinamizador*. Housing density had to rise from 225 to 300 inhabitants/ha. The neighbourhood Assembly gave its surprising, favorable agreement even in cases where some houses or walls had to be demolished. This meant that project implementation was much easier than anticipated. The project implementation became, in this way, easier than anticipated.

In the center of Maxaquene neighbourhood there was an area containing various services, including a school, a civic center, a park and a light industry area..

3.3.1. Extension of the experience to other neighbourhoods of Maputo

After the Maxaquene plan had been implemented, the experiment was expanded to the neighbourhoods of *Polana Caniço*, *Inhagóia* e *Chamanculo*.. In December 1977, they began the works of the *Polana Caniço* Neighbourhood that, at that time, had 36,000 inhabitants. At that time, there was extensive international debate about degraded habitat and slums focusing on “provisional urbanization” and “poor architecture.” Other experiments in peripheral areas and informal settlements relevant to those described above were widespread in the seventies and early eighties.



Figure 15. Maxaquene. Opening of access. In: *maxaquene, first urban upgrading*, page 65.

Unfortunately, in the 70s, the instability conditions in Mozambique turned difficult to access this different innovative form of urbanization. The City of Maputo was the only project involving formal and agreed collaboration between a United Nations agency and a government, with the active involvement of the population²³.

3.4. Annexes (Maputo/Maxaquene Neighbourhood) – cartography

- ✓ Framework of the study area, various scales
- ✓ Borders of the study area, 1/12.500
- ✓ Accessibility, 1/12.500
- ✓ Topography, 1/12.500
- ✓ Basic services and other infrastructure, 1/12.500
- ✓ Informal growth (*ortofotoplano* 1973 and aerial photography 1982/91/96), 1/25.000
- ✓ Informal growth (*ortofotoplano* 1973, aerial photography 1966/82/91/96 satellite 2003), 1/7.500
- ✓ The state of the settlements (1996/98 (buildings), 1/12.500

²³ According to the article “*Mozambico - Il progetto Maxaquene: Una periferia urbana risanata in autoconstruzione*, in: “*Tamburi dell’Africa Australe*”. (*Mozambique - The Maxaquene project: An urban periphery recovered in self-construction*, “*Drums of the Southern Africa*”)

4. MANICA: Integration of the former rural peripheral settlements into the urban context

4.1. The town and its regional context

The town of Manica lies to the West of Manica province, between the border with Zimbabwe and the capital of Manica province, Chimoio. The area under the influence of Manica municipality is of economic importance due to its mineral potential (mainly gold that in the past brought together prospectors with a variety of origins), agricultural resources and the Chicamba dam.

Given their regional, national and local economic potential the road and rail corridors are also important factors. Manica town lies along a rail and road transport corridor (national highways 6 in an east-west direction and 102 in a north-south direction) to Zimbabwe and the surrounding districts, including the town of Chimoio.

Like other Mozambican towns, Manica grew rapidly in a context of economic crisis which led to a widespread shortage of resources for urban management.

The 16-year armed conflict accentuated the crisis and resulted in dramatic demographic pressure on the town. According to the 1997 census Manica town had 28,568 inhabitants distributed among 10 neighbourhoods: 7 de Abril (5.192 inhabitants), Manhati (1.605 inhabitants), 4º Congresso (3.335 inhabitants), Vumba (5,726 inhabitants), 25 de Setembro (2,380 inhabitants), Josina Machel (4,445 inhabitants), Macoreia (1.183 inhabitants), Forte Macequece (1,477 inhabitants), Vista Alegre (849 inhabitants) e Nhaconza (2,376 inhabitants).



Figure 16. Manica. View of the hill *Penha Longa* (in background, 3rd plan).



Figure 17. Manica. Mina *Manarch* in the hill *Penhalonga*, one of the mining exploitations in the Old Village of Macequece. In: Pires de Carvalho, *The Old Macequece* 1946

4.2. Main historical marks: the former village of Macequece

In 1891 the region, that formed part of the *Muenemutapa* kingdom, was the source of disputes between the English and Portuguese, then the Portuguese built the Macequece fort with the objective to defend the ownership of the territory. The two parties later reached an agreement whereby the Portuguese provided transit facilities for access to the sea and the respective frontiers were demarcated.

The past of Macequece is closely linked to the Manica gold mines that played an important role in the attracting adventurers in the XVI century and subsequently in the creation of the OFIR company and finally the “*Companhia de Moçambique*”.

In 1892 the Directorate of Mines²⁴ was established in Macequece and in 1901 mining regulations were introduced that remained in force until independence, with the objective to regulate the mining exploitation. “*Companhia de Moçambique*” a colonial organization, undertook mining, agriculture and livestock activities in the area for 60 years²⁵.

²⁴ Pires de Carvalho, *A Velha Macequece* in Government Press Mozambique, *Mocambique Documentario Trimestral*, 46 April/May/June 1946

²⁵ UN HABITAT, *Study of Regional Profile of the Urban Sector of Mozambique (RUSPS)*, February 2005.

The village of Macequece (actual City of Manica), was founded in March 10, 1894, due to its importance for iron and gold trade routes. Its charter (Foral) as town was approved on August 4, 1956 through the Act (*portaria*) n° 11583, and it was raised to the category of city on December 5th, 1972 by the Act (*portaria*) n° 1043/72. In April 22, 1978, Law 7/78 transformed the former Town Council into Executive Council. In June 1986 Resolution 8/86 changed its status to a Level D city (Resolution 7/87). In 1997, the category of Municipal District created under Law 394 was abolished and the Municipal Council was created (Law 10/97)²⁶.

4.3. Access to basic sanitation services

The main priority in this field is the supply of basic services. For example, as there are few resources, the sanitation improvements being installation of septic tanks for urban areas and improved latrines in informal areas.

In peripheral urban areas water is supplied through public standpipes. Unlike the many slum areas elsewhere in the country, in Manica water is not the main problem. It is the source of *Vumba* mineral water, which is well known throughout Mozambique. Some of the neighbourhood standpipes are managed by the community - for example, a women's association.



Figure 18. Manica. Josina Machel Neighbourhood. Public spring feeding by a manual pump.

In addition, some companies have established partnerships with the municipality to provide a number of basic services. For example, the factory that bottles the mineral water has supplied the population with drinking water.

4.4. The environment and its main problems

The main problems related with the environment, in Manica, and that affects directly the population, are:

- Pollution of the Revue River in the tract of land between the gold mine area and the lagoon, in a partition of approximately 50Km;
- Removal of soil to make bricks cause craters and increases soil erosion;
- Cutting down trees on mountain slopes. The trees are mostly used as wood for fuel to make bricks and bread.

It is likely that transport difficulties aggravate environmental problems. People prefer to obtain soil and cut down trees closer to home as they have no vehicles to bring raw materials to where they are needed. And even if the fabrication site were to be located closer to source of raw materials it would be difficult to transport the finished product, due to the absence of vehicles and roads.

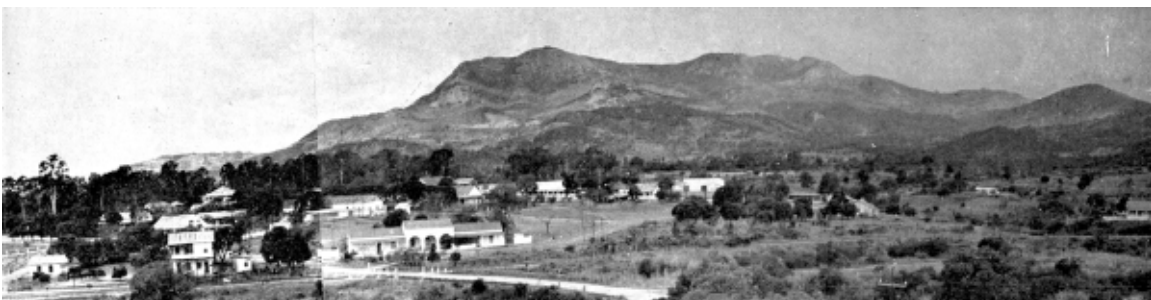


Figure 19. Manica. Partial view of Macequece and the hill of Vumba. In: Pires de Carvalho, *The Old Macequece*, 1946.

²⁶ MAE, National Direction of Autarkic Development, *Informative Bulletin of the Municipal District*, Maputo, June 2002.

4.5. Urban management and access to land

Population groups that possess few economic resources have the tendency to occupy the informal areas, therefore the procedures in the place are more informal, simplified and, in most of the cases, does not involve money or written documents. Technicians working in the municipality's urbanization sector say that some people avoid the formal process because they have to pay fees, sign documents and in some cases hire specialists involved in a concession and registration of land.

In cases where a person has to formalize his occupation, the process usually starts with a verbal approach to the neighbourhood secretary who prepares a document declaring that the person lives in the area, for how long and whether or not he objects to the occupation being registered. The applicant then sends this documentation to the Municipal Council, Urbanization Sector, to be processed. A file is opened containing this information and the opinion of the technicians involved. The necessary fees are calculated, a team goes to the location to issue a site plan and then the file is submitted for consideration by a Technical Council, that issues the final opinion: whether registration or concession is approved or not. The applicant is then informed of the decision.

Most conflicts over land are due to unclear plot boundaries. During visits to Manica it was found that people living in informal settlements do not bother to demarcate their plots. This inhibits the management of urban land as it hampers the formal registration of plots. Another, no less serious problem is the fact that boundaries in the urban area are also unclear.

As regards security of tenure, there have only been a few cases where the Municipal Council has expropriated land. When this does happen, due to the need to establish public infrastructure, there is always advance warning of the eviction and alternative land is provided. The municipal authorities guarantee protection for residents in cases of land conflicts or expropriation by private entities etc. The municipal council has a committee for this purpose, comprising three members of the Municipal Assembly; it studies cases of this kind and presents them to the municipality to be resolved.

4.6. Local institutions: the role of the Municipality in the urban management policies

Manica municipality, one of 33 *autarquias* (local authorities) created by Law 3/94, has limited urban planning instruments for the urbanized part of the city. Basically, all that has been done is to make small plans of plots to ensure a certain urban grid that will guarantee the installation of basic services at some future date. However, a structure plan for the town was prepared in 1999.

Today, it can be affirmed that planning work is limited to specific programs focusing on issues of primary concern: preventing erosion, providing drinking water, opening roads/footpaths and environmental sanitation. There is a conscious effort to improve living conditions in slum areas through a number of projects such as a first aid post in *Cacargué* and schools.

4.7. JOSINA MACHEL: Actions for slum upgrading

4.7.1. Objectives of the initiative: main actors and target groups

One of the main objectives of the spatial reorganization experiment that has been running in Josina Machel neighbourhood since 2002 was to confirm the residents' land ownership rights, regulate land use and provide basic infrastructure. For example, to ensure minimal accessibility by building footpaths or gravel roads

The work involved residents and technicians supported by GTZ, the Faculty of Architecture and Physical Planning of Eduardo Mondlane University (FAPF/UEM) and the Municipality of Rome (*Comune di Roma*), Italy.



Figure 20. Manica. Neighbourhood Josina Machel. Characteristics of housing constructions.

About 16% of the municipality's population lives in this neighbourhood, in individual houses most of which have walls made of clay, burnt brick, or sand and cement blocks, and roofs of straw or corrugated iron sheeting. On the whole, although housing standards are not high they are acceptable: what was lacking was basic urbanization such as streets, drainage or piped water. The first phase of the intervention involved about 250 plots covering 32 ha. in part of the Josina Machel neighbourhood, supported by local technicians from MICOA (Ministry for the Coordination of Environmental Action) and the Municipal Council.

4.7.2. The importance of community participation in the urban spatial reorganization

Following a series of meetings with the residents and seminars to raise the awareness of local politicians and build the capacity of the technicians, the opening phase of new accesses and the improvement of the existent ways counted with the own residents' support, therefore minimizing the costs of an eventual task work.

The works were preceded by training by a FAPF/UEM team. The residents participated in the work in exchange for a small incentive and in the process they learned elementary building techniques so that the cost of future maintenance will be more accessible.

Where necessary, plot boundaries were adjusted so that public streets could be improved. There were also suggestions on the transfer of buildings in areas that should not to be built on, such as beneath an electricity power line and in areas with steep slopes.

The definitive decisions were taken on the site through discussions with residents.



Figure 21. Manica. Neighbourhood Josina Machel. Local communities discussions with participation of the Municipal district.

4.7.3. Brief note on technical approach: essential materials for activities in the field

A satellite image and the digital analysis of the data provided major improvements to the documentation available²⁷. Within a short time and at little cost it provided a credible cartographic basis for the simplified registration of informal occupation.

In the beginning, this image was analyzed to obtain an approximate lay-out that made it possible to compare and correct the rough maps based on aerial photography of the town in 1985. Maps for fieldwork were produced in more appropriate scales (e.g. 1:500) in order to be able to recognize buildings and obtain the reference points needed to mark out the plots correctly.

The fact that digital images could be printed in any scale proved to be a fundamental, fast and inexpensive aerial photography instrument for learning about land occupation in a town that has neither a land registry nor updated maps.

This led to the conclusion that, in fact, that in the case of urban planning of Josina Machel neighbourhood and probably in the case of most urban neighbourhoods in the country, sophisticated land ownership maps are not necessary.



Figure 22. Manica. Neighbourhood of Josina Machel. Access opening with the participation of the own inhabitants.

²⁷ The only cartography available was an aerial photograph of the town dated 1985.

4.7.4. Rights to land: issuing titles after the improvement activities

During the implementation phase in Josina Machel neighbourhood there were various discussions about the best way of guaranteeing the residents' land ownership.

Given the Municipality's doubts as to the use of and benefit from land in these settlements the UEM Faculty of Architecture and Physical Planning was asked to prepare a legal opinion on this issue. In the resulting document (November 2004) Arq. Jose Forjaz (Faculty Director and teacher) and Dr. Carlos Serra Junior (lawyer and teacher in the same faculty) suggested *proof of the right to use and benefit from land*", as required by the Land Law, emphasizing that Josina Machel residents have this right irrespective of the kind of state authorization or recognition

According to the Land Law (Law 19/97 of 01/10/97) the right to use and benefit from land is acquired in various ways:

- *Occupation* by individuals and local communities in accordance with *customary practices* (paragraph a, article 12);
- *Occupation* by Mozambicans who, *in good faith*, have been using the land for at least ten years (paragraph b, article 12);
- *Authorization of a request* submitted by individuals or collective persons (paragraph c, article 12).

The law foresees two different phases in the process for authorizing request to use and benefit from land:

- *A first phase comprises the presentation of the request to use and benefit from land, resulting in a provisional authorization for a maximum of five years for Mozambicans and of two years for foreign people (nº. 1 and 2, Art.25);*
- A second phase that comprises the definitive authorization and issue of a title as long as land use plan presented during the validity of the provisional authorization (Art. 26) has been fulfilled; the article 13 (line) states that this title is issued by the general or urban Public Land Registry Services, but it further states (line 2) that the absence of this title does not harm the use and utilization right of the land, acquired by occupation.

According to article 23 of the Land's Law, it is the responsibility of the Presidents of the Municipal Councils to authorize requests to use and benefit from land with urbanization plans²⁸ as long as they have public land registry services. However, even though article 2 of the Land Law's Regulations state that the regulations apply to areas not under the jurisdiction of Municipalities that have Municipal Land Registry Services, and given that the cadastral service of Manica Municipality is still being formed, the following dispositions of the regulations should be mentioned:

- Local communities occupying land in accordance with *customary practices* acquire to the right to use and benefit from land (nº. 1, art. 09);
- Mozambicans who, in good faith, have been using the land for *at least ten years*, acquire the right to use and benefit from land (nº 1, article 10);
- Whenever necessary or at the request of interested parties, areas covered by the right to use and benefit from land through occupation in good faith, can be *identified and recorded in the national land*



Figure 23. Manica. Neighbourhood Josina Machel. Satellite Image (March, 2003) Quick Bird Sub-meter (0.6m) PSM (true color) with aprox. Restitution and terrains lots delimitation (talhões).

²⁸ In Josina Machel neighbourhood the preparation/implementation of a neighbourhood reclassification plan was already underway (in an evolutionary manner, by stages), using a March 2003 aerial photograph of the municipality (Quickbird Submeter (0.6m) PSM (true color).

registration book (n° 3 article 10); this implies that it is done through the municipal land registry ;

- Documentation on the acquired right to use and benefit from land obtained through occupation in good faith includes, among other elements, *demarcation of the land*. After the provisional authorization has been issued²⁹ (it can be waived for this type of beneficiary) the Land Registry Services will inform the applicant about the need for demarcation (N° 1 and 2, Article 34, and also mentioned in Article 30).

As the inhabitants living in the informal settlements of Manica municipality qualify to the conditions in the previous numbers (*customary practices, occupation in good faith for more than ten years, temporary authorization without immediate need of demarcation*) all indicated that the minimum conditions were created for the issuance of the DUAT, that would take effect following the issuance of the *provisional or temporary authorization*, that in reality would be a way of proving *the of the use and benefit rights* in accordance to the article 15, and according to the same, this can be proven in various ways, including the *oral testimony* presented by the members of the local community, men and women, or by an *expertise opinion* done by qualified technicians and involved in the upgrading process.

During the mapping operations and implementation of the upgrading plan this *provisional authorization* was issued in the form of a record card on the land use and benefit right, containing all the relevant information: name of the title holder, location of the plot, comparison, usage form, number of relatives living together, household, description of buildings and housing conditions, topography outline, witnesses and the technician responsible for the registration. In an important ceremony held in November 2004, residents in Josina Machel neighbourhood were presented with their respective documents.

4.8. Annexes (Manica/Josina Machel Neighbourhood) – cartography

- ✓ Framing of the study area, several scales
- ✓ Administrative division of the city, 1/15.000
- ✓ The expansion of the settlements, several scales
- ✓ Accessibility, 1/15.000
- ✓ Basic services and other infrastructures, 1/15.000
- ✓ The informal growth (aerial figures 1956/85 and satellite 2003), several scales
- ✓ Topography and accessibility, 1/5.000
- ✓ The drainage problem of the rain waters, 1/5.000
- ✓ The implementation of the territorial reorganization plan, various scales

²⁹ As the municipal land registry *service in the Manica municipality is still being established*, it was decided to provide *provisional authorization as demarcation* is only requested at a later date, up to one year after the notification, depending on the deadline and the Municipality's capacity to undertake the demarcation in question.

5. NACALA: high risk informal settlements: resettlement and/or physical upgrading

5.1. Nacala and its main characteristics

The City of Nacala, is located in along the Indian Ocean, at Latitude 14° 39' 63" and Longitude 40° 43' 30", in the Northern Province of Nampula, about 620 km from the western border with Malawi. Its location on Mozambican Coast and in relation to Malawi, and the exceptional natural conditions of its deep water port were determining factors in the appearance, importance and functions of this urban center.

In 1997, Nacala had about 160,000 inhabitants, 65% of whom lived in the main urban agglomeration and the remaining in the rural areas, in scattered houses or in villages. Like other Mozambican Cities, its population grew rapidly in a context of economic crisis and a general shortage of resources for urban management. The 10 years armed conflict intensified the crisis and increased dramatically the drastic demographic pressure on the urban center.

The urban nucleus of Nacala is located on a slope that is highly vulnerable to erosion, and on many occasions the town has suffered from the combined effects of torrential rains, poor land management and lack of resources for urbanization. Despite a number of actions, the erosion problem still exists. It has had a major influence on the land use policy followed in Nacala since the eighties.

Most of the population obtains its living from primary activities (agriculture and fishing) in a fragile ecological context or in small, informal businesses. This precarious economic condition is reflected in housing and the difficulty in improving the basic living conditions of all families.

Nacala occupies a vast area (approximately 350 km²) where roughly 1/3 of the population are living in conditions that are more characteristic of rural than urban areas. They live in villages lying some kilometers from the urban center, without electricity or piped water and precarious road access.

In the urban center, however, deficiencies can be found in the life environment, flowed mainly from the existence of spontaneous settlements densely populated, with specific environmental problems: erosion, environmental sanitation, housing space, and internal accesses.



Figure 24. Nacala. Harbour view.

5.2 Historical evolution of the settlements

The 1962 Upper Nacala Urbanization Plan describes the history of the village of Nacala as follows: *“At the end of the 19th century the areas now known as Nacala was sparsely populated with just an insignificant number of families that had come from the areas of Nacala a Velha, Itoculo, Maravi and other parts of the hinterland normally called Machuane. When the heads of family reached this area they were received by a great, famous chief who had been living in the area for a long time. In other words this chief lived in the Matibane region. In 1914, following the shift from a monarchy to a republic, the number of Portuguese started to increase, thereby making it possible to create colonial structures”.*

Through the *legislative Diploma* 1260 of July 4, 1951, the Nacala Harbour was created, and then connected to the Niassa Railway in 1947, following the inauguration of the 74 km stretch linking it to Monapo.

In 1964, the *Conselho de Circunscrição* with its headquarters in *Nacala a Velha* was transferred to the Nacala Port and the Fernão Veloso Municipal Council was created.

5.2.1 Urbanization plans and lands occupation up to the independence

Four important stages mark the planning process and management in Nacala City:

- The Urbanization Plan for the upper town – approved and started in 1995 and taking into account the requirements of the rail-port sector, the plan envisaged the installation of 15,000 people in a first phase. The area chosen as the residential area for the settlers was on the plateau, about two kilometers from the port. Areas near to the port were identified for warehouses and services;
- The General Nacala Urbanization Plan – approved by Dispatch of June 2, 1965, by the *Provincial Secretary for Public Works and Communications*;
- The Partial Urbanization Plans for cells from 01 to 08 of the Nacala Plan – approved by the *Portaria* n°. 20116 of March 4, 1967. *Portaria* n° 20376 of June 3, 1967 set new boundaries for Nacala. The H2 area, located on the plateau, corresponds to the old urbanization plan;

The Land Registry Plan and Ownership Ground Liberation Charter (*Foral*) – were approved in October 2nd 1967.

During the 60s and early 70s the main occupation areas lay close to the port and cement factory and, to a lesser extent, the industrial area. The plan did not foresee accommodation workers and service employees in specific housing units. The only “natives” who were allowed access to the town were those who had paid employment. So people started to settle near the central areas that had no prior urbanization, mostly on slopes near the bay where building with permanent materials was forbidden.

In 1971 there were partial studies on the urbanization of an area to the south of Nacala destined for “economic neighbourhoods”. At the same time it was proposed that the area covered by the charter should be increased to achieve greater social and territorial integration and have a more comprehensive vision for the development of the town.

5.2.2 Urban expansion post-independence

Various initiatives mark the immediate post-independence urban context in Nacala:

- 1975–1981, the organization of communal neighbourhoods Large areas adjacent to urban centers and in the outlying areas (villages) were subdivided into plots and allocated. Although this was done with limited technical and financial resources, this intervention had a major impact on the physical structure of the town. Today these demarcated areas are being consolidated. It is estimated that between 5,000 and 7,000 plots were provided between 1975 and 1980, within and outside the urban nucleus..
- 1981–1985, the elaboration and approval of Town Master Plan – The plan provided guidelines on land use within the urban perimeter and was marked by a disaster in 1982 caused by erosion in the urban area.
- 1985–2004, implementation of the Town Master Plan– Structuring the local government and building its planning and land management capacity. Conclusion of urbanized areas; registration and consolidation of semi-urbanized areas. From 1991 onwards expansion areas were opened and families in critical areas were refocused. But these measures were insufficient to stem the growing population density in central areas, especially during the war when the influx of immigrants was the greatest, despite the availability of plots for a variety of reasons including acceptance of the proposed areas and weak inspection capacity and will.

5.2.3 The Land use policy under the Town Master Plan

The Master Plan, prepared by the National Institute for Physical Planning and approved by the Town Assembly in 1985, established a series of actions for the physical development of the town, identified vast expansion areas to be subdivided into plots and provided with infrastructure, settlements to be consolidated in semi-urbanized areas and large slum areas where occupation was to be discouraged. The families living there would be gradually transferred to new residential areas.

The lack of financial and material resources and the pressure created by the influx of people during the war meant that the program could not be implemented completely before the early 90s. In 1985 there were some activities that did not require investment, such as the creation of a system for regulating the occupation of semi-urbanized areas and the registration of occupancy in the largest slum area, the *Triangulo* neighbourhood, in order to control occupation. This work was supported by the National

Institute for Physical Planning that provided technical assistance and provided the basis for launching urban interventions in the nineties

From the nineties onwards and with external financial support (Finnish Cooperation) expansion areas with minimum housing conditions were opened and residents in some of the most critical areas, where erosion control measures were to be implemented, were resettled elsewhere. At the same time the program aimed at regulating the occupation of semi urbanized areas continued and work started on measures to contain erosion in the main hydrographical basins.

Except for the resettlement aspect, all these activities have continued up to today. The areas from which people were transferred and that were not re-occupied have become environmental protection areas that are inspected regularly.

5.3 Economic situation

Despite of the lack of formal job and the difficulty in finding income sources, Nacala continues to be an attraction pole of coming immigrants from the neighbouring districts (Memba, Nacala the Old, Mossuril, etc.).

The field situation, in districts with problems of alimentary safety and/or with deficiencies in the commercial net and a weak development of infrastructures and equipment, turns the most attractive city and cause the dislocation of young population to search of better opportunities.

5.4 Characteristics of urban land in Nacala

5.4.1 Types of land occupation and use

Nacala main urban centre covers an area of approximately 2,400 hectares and comprises housing, central urban functions and a strip of land containing the rail-port and industrial areas.

The urban nucleus contains three kinds of urbanization that reflect the characteristics of the occupation process, the standard of occupation, housing density and level and infrastructure:

- Urbanized areas. Upper town and lower town – 1,600 units, 161 ha. 10/12 hearths/ha;
- Semi-urbanized areas: Divided into plots in communal neighbourhoods and expansion areas – 11,000 plots, 880 ha., 10/12 hearths/ha.
- Areas not urbanized: informal settlements – 10,000 houses, 290 ha. 34-50 hearths/ha.

Classification	Areas	Access to land	Physical planning	Housing	Infrastructure
Urbanized areas	Upper city	Formal licensing and ownership title	Colonial urbanization plans	Permanent, buildings and dwellings	Water and electricity house connection
	Lower city	Formal licensing and ownership title	Colonial urbanization plans	Permanent, buildings and dwellings	House water connection, underground drainage, electricity and paved roads
Semi-urbanized areas	Mocone, Triângulo Ribaue	Origin: Communal Neighbourhoods. Title or provisional license on request or systematic registration	Division of land in communal neighbourhoods	Improved traditional and partially consolidated (along main axes)	
	Mathapue Nauaia Ontupaia – expansion areas	Provisional license – on request or systematic registration	Allotments. Partial Plans. Plots staked out. Partial plans of Executive Council/Municipal Council	Traditional not very consolidated	Standpipes, some house and yard water connections. Electricity and dirt roads.

Classification	Areas	Access to land	Physical planning	Housing	Infrastructure
Non-urbanized areas	Mocone, Ribaue, Triângulo and Tielela	Illegal occupation	Spontaneous occupation	Traditional not very consolidated	Standpipes, a few house and yard water connections. Electricity and dirt roads. Yard water connections, some standpipes and electricity. No internal access, only peripheral roads

Table 3. Nacala. Classification of areas by type of occupation and their characteristics

5.4.2 Origins and dynamics of growth in the different settlements

The various reasons for the creation and expansion of the different settlement areas in Nacala are as follows:

- Lower Town: colonial plan, construction in the 60s and 70s concluded from 1985 to date. All plots in the land register plan have been occupied.
- Upper Town: Colonial plan, construction in the 60s and 70s, concluded between 1985 and today. Practically all plots in the land register have been occupied.
- Semi-urbanized areas (Mocone, Triângulo and Ribaue): Main construction in the early 80s, consolidation from 1980 onwards. Pressure to build with permanent materials and legalization. Uncontrolled occupation of road and reserve areas.
- Semi-urbanized expansion areas: Occupied mainly since 1990 and up to today. In the completion phase. There are still some reserve plots. Occupation is recent and still not very consolidated. There is pressure to occupy streets and reserve areas. Main occupation pressure is in the southern area (Ontupaia). Less occupation pressure in the north (Nauaia).
- Non-urbanized areas occupied mainly in the 80s and 90s. Continuous densification in some more central areas.

5.4.3 Demographic growth by areas

In Nacala, a census took place of 75,038 people in 1980 and 158,000 in 1997. Between the two censuses, the population grew with a medium rhythm of 4% a year. The urban population grew more than the rural: 5% against 2.2%.

The occupations of the urban nucleus duplicated from 1980 to the present date, but not urbanized informal settlements grew more than the half-urbanized. The following chart shows an estimate rate of growth of the occupation by area.

Areas	Occupation in 1980 (nr. of houses)	Occupation in 2003 (nr. of houses)	Increase (nr. of houses)	Growth rate
Urbanized	1,229	1,693	464	38%
Half-urbanized	6,076	11,000	4,924	81%
Not urbanized	3,757	10,000	6,243	166 %
Total	11,062	21,442	10,380	94 %

Table 4. Nacala. Estimated occupation growth rate by area

The main reasons of growth of the not urbanized slums are:

- Insufficient lands provision in expansion areas to answer to the affluence to the City in the period after-independence and in the war time;
- Proximity of the harbour, grocery stores and other areas of economical activities;
- Proximity of the services;

- Supply existence of more abundant water, including treated water and alternative sources (excellent well with water in the whole year in the mid of Triângulo Neighbourhood);
- The immigrants' attraction was for the areas of larger density, where already live family and fellow citizens and where the access to the land can be facilitated (to be confirmed);
- Informal character, high density, and few accesses facilitate the illegal activities.

The main informal settlement not urbanized in Nacala, denominated Nicandavala (Part of Neighbourhood Triângulo), gathers all these conditions and housing about 6,000 houses. It grew at most, having duplicated the number of houses in 20 years. In the remaining slums were counted, in the year of 2003, about 2,000 houses (Mocone) and 1.360 houses (Ribaue), making a total of about 9,300 counted houses in informal settlements.

To mention a certain number of houses located in the half-urbanized areas in irregular situations, or as: supra cash houses in mono-family terrain lots (talhões), houses occupying reservation areas in an unorganized way with houses occupying tertiary streets (crossbars). It is estimated in hundreds of these kind of occupation and the reasons for the development of these non controlled occupations include:

- The progressive increase in the values of these half-urbanized areas;
- The increase of the infrastructures and services;
- The natural growth, with tendency to settle close to the relatives;
- The insufficient control and inspection on the side of Municipal Council;
- The insufficient resolution of conflicts with the traditional occupants of the expansion areas (“owners of the farming terrains (machambas)”);

5.4.4 Housing

According to the 1997 census Nacala had 4,309 houses that were built with solid materials and 32,335 houses built with traditional materials (12% and 88% respectively). Most of the conventional dwellings are concentrated in the main urban agglomeration.

The proportion of houses built with permanent materials has declined over the last twenty years (from 15% to 12% according to the 1980 and 1991 census data) because the number of traditional houses has grown more rapidly.

The greatest progressive consolidation can be seen in the oldest and more semi-urbanized settlements, especially along or close to the main roads.

The following chart shows the results of recent partial counting³⁰, regarding the construction types:

Areas	Masonry	Traditional with Zinc roof	Traditional with grass roof
Semi-urbanized (old)	45 %	42 %	13 %
Semi-urbanized (expansion)	7 %	14 %	78 %
Non urbanized	12 %	14 %	74 %

Table 5. Nacala. Type of construction in the different housing areas

³⁰ The counting in the old half-urbanized areas included about 25% of the existent occupations, 22% in recent half-urbanized and more than 80% in the not urbanized.

The chart below shows the results of recent partial counting³¹, regarding the construction types:

Areas	Masonry	Traditional with Zinc roof	Traditional with grass roof
Semi-urbanized (old)	45 %	42 %	13 %
Semi-urbanized (expansion)	7 %	14 %	78 %
Non urbanized	12 %	14 %	74 %

Table 6. Nacala. Type of construction in the different housing areas

5.4.5 Basic services and infrastructures

Electricity

Electricity is provided by *Electricidade de Moçambique* (EDM). Until 1997 when Nacala started to receive electricity from Cahora Bassa, the electricity was produced by a local diesel generator, rehabilitated in 1982, that is currently seldomly used as an alternative source.

Water and Sanitation

Nacala gets its water from the reservoir of a dam located 30 km. from the town. Built in the seventies the system was planned to serve mainly the port, the lower part of the town and the surrounding areas. According to the water company some 2,200m³ of water are distributed daily, out of a total 4,500m³ of treated water. An estimated 120,000 people live in the system's area of influence. The system's capacity has remained unchanged since it was created. Since independence there have been investments to keep the system working (though with difficulties) and to extend the network to supply, inadequately, the expansion areas.

Nacala does not have a domestic sewer network. Urbanized areas have septic tanks and the remaining areas have traditional or improved latrines. Many people do not have any sanitation system; they defecate in the open air on waste ground, in erosion ditches (urban area) and in the bush (in rural areas). The problem is particularly acute in the non-urbanized informal settlements with high population density.

5.4.6 The environmental problem in the urban area

The soil erosion phenomenon

Much of Nacala is affected by severe erosion, particularly the non-urbanized informal settlements. The soil has little resistance and is eroded when unprotected on moderate (5%) slopes; the situation gets much worse in areas with slopes over 10%.

Although interventions to combat erosion – a combination of civil works, plants and small earth works – have helped stabilize the land the situation is still not completely under control. Protection areas have been established in unoccupied areas or where residents (about 600) have been transferred elsewhere.

Environmental hygiene

Poor water supplies and the insufficient use of sanitation systems result in a poor hygiene, especially in densely populated and non-urbanized settlements. Containing 26% of the population in the urban area the *Triangulo* neighbourhood had 57% of all cholera cases in 2001. This can be explained by its high population density coupled with the existence of surface and shallow underground water subject to fecal contamination.

³¹ The counting in the old half-urbanized areas included about 25% of the existent occupations, 22% in recent half-urbanized and more than 80% in the not urbanized.

5.5 The legal framework for urban land

5.5.1 The formal land management system in Nacala

The Nacala municipal council has a municipality cadastre service that issues land use and benefit licenses for all the areas that fall under its jurisdiction.

An analysis of the procedural process from 1992 (when the sector was reorganized and new procedural routines introduced) and 2002 shows that in most cases the complete, formal licensing and registration process was not followed. The difference between the (higher) occupation requests and the (lower) number of construction requests is explained in part by the fact that some requests are refused. However, another reason is that once their occupancy was authorized many applicants did not go back to the municipal council to continue the process; they built their houses without a construction license.

5.5.2 Access to land in urbanized and semi-urbanized areas

Occupancy and construction licenses are issued in urbanized and semi-urbanized areas with a cadastre. Land occupied in unregistered semi-urbanized areas without registered plots can also be legalized.

The construction of traditional houses in an expansion area does not require a formal application. The municipal council allocates plots directly, on site, and then registers the buildings after they have been built and are inhabited, as happens in the case of systematic registration in old semi-urbanized areas.

The land registration of semi-urbanized areas (about 5,500 to 6,000 plots) was done using the simple method of mapping aerial photographs and registering occupancy on forms that function as an authorization of occupancy. In the procedures for licensing construction work the systematic registration form has the same value as a provisional use and benefit approval.

5.5.3 Access to land in non-urbanized areas

In theory, as building is not allowed in these areas no license is issued by the municipal council. However, as control and inspection of occupation of new building is weak, it persists when land is granted/sold by local leaders (neighbourhood and block leaders) and traditional landowners.

5.5.4 Traditional ownership

In all peri-urban and rural areas traditional land ownership is indicated by cashew trees. The traditional owners still have considerable influence and intervene in negotiations over land in all these areas.

5.6 Institutional analysis

5.6.1 The role of the municipality and government bodies

Nacala became an administrative unit in the late seventies, one of 12 cities that comprised 10 provincial capitals plus Chókwè and Nacala and thus, as of the late 1980s it had a City Executive Council. With the introduction of local authorities/*autarquias* in 1998 this was replaced by an elected Municipal Council. In order to carry out its urban management tasks the Municipal Council has about 250 permanent employees and an annual budget of some 18 billion *meticais* (roughly 4 USD per capita/year) including its own revenue and state grants, excluding education and health.

5.6.2 The basic structures

Until the political system changed and a multi-party system was introduced, as in other cities in Mozambique the main community structure comprised the Neighbourhood Secretaries and Block Leaders. They played an active role – yet somewhat controversial one - in land management in suburban areas.

These structures were playing a role of social control, resolution of local conflicts, communicating the orientations from the local authority and at the same time they were both political and administrative structures. They played an important role in urban management, acting as a link with local residents and mobilizing them for various kinds of activities. In addition, in many instances they also had a detrimental role, providing (selling) land where occupation was forbidden, citing the strong pressure by the people especially during the war.

Nevertheless, although based on weakened traditional structures the authority of these local structures did not wipe out the influence of the traditional "landowners", with whom they continued to interact on access to land in a variety of complex ways. However, in the current multi-party situation the authority of these local structures has been eroded, as they are seen as a party structure rather than an administrative one.

5.7 MOCONE: Interpreting slums located in the city center

5.7.1 Geographical characteristics

With about 22,500 inhabitants in 1997, Mocone neighbourhood in the central part of the Nacala urban agglomeration is the second most populated neighbourhood in the town. It averages 1,800m wide running from East to West in a funnel shape, narrow in the western part (200m) and widening in the eastern part (1,800m). The entire neighbourhood is affected by erosion with serious consequences for the lower town and port area **downstream**. After some corrective and preventive action the situation has been partially stabilized but there is still the risk of erosion, especially when there are abnormal rains.

5.7.2 History of occupation

The neighbourhood is crossed West-East by one of the oldest *footpaths* in the town, which connects the urban center to the green areas. The settlements that lie along it were consolidated before and post-independence (communal neighbourhoods). Today the more recent spontaneous occupation on the East, South and especially the West of the neighbourhood, are densely populated and very precarious areas.

5.7.3 Relief, hydrograph and vegetation

Almost the entire area of Mocone neighbourhood comprises a hydrographical basin that flows into a single point upstream of the lower city and the port. One water line with two main branches is the main drainage route in the area. There are systems of highly developed secondary ravines everywhere. The most northerly part of Mocone belongs to the hydrographical basin adjacent to Ribaue neighbourhood and contributes to a system of ravines that flows into the main water line of the cement bridge. The maximum difference in level in the interior of the neighbourhood is 90m, located between the highest point (140m) to the East and the lowest to the West (50m). Much of the land has slopes of around 10%, ranging from 5% in the flatter areas to the steepest slopes with 20%.

The sandy soil, combined with slopes of over 5%, is easily eroded by the intense rain that falls between December and March. The situation has been aggravated by the destruction of the natural vegetation (cashew trees and grass) to build houses, to open fields of cassava and maize and to make footpaths that later become drainage ditches for rainwater.

5.7.4 Occupation of the land and urbanization

Mocone neighbourhood has three distinct types of occupation:

- Parceled areas, of traditional construction, ongoing consolidation most of which created at the time of the communal neighbourhoods. There are three main areas, one close to the secondary school with roughly 960 plots, one close to the TDM generator with roughly 300 plots and one along the beach road with about 530 plots. In these areas the land is divided in a regular pattern with paths giving access to almost all the plots. All these areas were covered by the program to regularize occupation.
- Areas of spontaneous occupation, with about 2,500 houses (2,000 counted in 2003) distributed across various areas with footpaths, only some of which are more than one meter wide. No road is accessible for vehicles. According to the master plan people should be removed from these plots and there should be anti-erosion work.
- Protection areas, located in the high intermediate areas of the basin, with virtually no buildings and that have mainly cashew trees and scattered fields. They are crossed by footpaths.

In short, the situation in Mocone neighbourhood is as follows: urbanized areas 0 ha; semi-urbanized areas 133 ha; non-urbanized areas 71 ha.; environmental protection areas: 62 ha.; areas with social equipment 4,5ha.

5.7.5 Basic infrastructure

Water supply

Mocone neighbourhood has piped water that comes from the town's central system; the lower part of the neighbourhood is supplied more regularly than the upper part. About 85% of the residents receive water from the grid (water supplied to all) but there are about 200 home connections and yard taps (data from 1997 census – Mocone). Most residents buy water from houses that have taps and cisterns for between 500 *meticaís* and 1,000 *meticaís* per 20 lt. can or 25.000 *meticaís* – 50.000 *meticaís* /m³.



Figure 25. Mocone. Water supply through faucet in the back yard.

Electricity

In general the electricity network covers the whole neighbourhood but only about 25% have house connections (1997 census).

Road network

The road network covers the periphery of the neighbourhood. The topography means that none of the roads within the neighbourhood are accessible to vehicles; there are only a few roadways in the semi-urbanized areas and they are in a very bad state due to erosion.

A busy footpath crosses Mocone neighbourhood and connects it to Ribaué neighbourhood and the hospital.

The network of footpaths providing access to houses comprises heavily eroded narrow tracks that are often blocked by yards.



Figure 26. Mocone. Example of a road inside the neighbourhood

Sanitation

There is no sewerage system. About 150 houses have latrines with or without water flush system. About 49% of the houses of the neighbourhood have traditional or improved latrines and 48% do not have any kind of sanitation facilities (Census 1997 – Mocone). Their residents defecate in ravines and forests or in open areas in the middle of the neighbourhood.

Drainage

There are no conventional drainages in the area. Some main ravines have been treated with 50 gabion units, providing a skeleton structure for drainage. They need periodic maintenance and are subject to vandalism and the theft of their protective wire netting.

5.7.6 Housing characteristics

Most of the houses in Mocone neighbourhood are of the traditional or improved traditional type. There are some brick houses, especially in the area close to the secondary school. Data from the 1997 census show that 17% of the houses had walls made of cement blocks or bricks, 60% had adobe bricks and 21% were of mud and wattle. In 2003 a count by the municipal council found that in spontaneous occupation areas: 10% of the houses were made of brick, 78% were built with traditional materials with a straw roof, and 12% were built with traditional materials with a corrugated metal roof. In 2004 a count by the municipal council, covering 61% of the dwellings in semi-urbanized areas, found that 41% were made of brick, 13% traditional materials with a corrugated metal roof and 47% traditional materials with a straw roof.

Initially the plots in semi-urbanized areas were of a standard of 18m x 30m (the size in communal neighbourhoods). In some areas there are smaller plots with consolidated occupation. In spontaneous occupation areas the land has an irregular shape. The plots are usually very small although some are larger and fenced. In general, if kitchens, bathrooms and latrines exist, they are built outside the main house.

5.7.7 Social equipment and other services

Education

The Nacala secondary school is located in Mocone (grades 8 to 12, with 2.500 pupils, and 16 classrooms). There is also a complete EP2 primary school (grades 1 to 7) with 5,560 pupils and an EP1 primary school in the upper part of the neighbourhood (about 560 pupils, and 5 classrooms). Children in the neighbourhood also have access to EP1 in Maiaia, upper town and Mathapue. The EP2 is located in the upper town that is also not far from Mocone neighbourhood.



Figure 27. Mocone. Problems of sanitation in the neighbourhood.



Figure 28. Mocone. Lagoon dam.



Figure 29. Mocone. Houses in masonry with zinc covering (to the left). Traditional houses with straw covering (to the bottom).

Health

The nearest health unit is the town's General Hospital; the nearest health center is in Mathapue neighbourhood in the upper part of town.

Trade

The lower and upper parts of the neighbourhood are close to their respective commercial areas in the lower and upper town. There is also a small neighbourhood market near the secondary school and some stalls.

5.7.8 Access to land in the neighbourhood

The access to the land of the neighbourhood of Mocone varies between different areas and historical periods. There are no specific studies and land access has evolved as follows:

- Occupations before Independence – the aerial photographs show houses in some areas, especially along a footpath adjacent to the secondary school. The Municipal Council did not allow any permanent construction outside the subdivided areas and there was effective inspection;
- The decade after the Independence – in the late seventies and early eighties, the Executive Council subdivided and demarcated various areas (the current semi-urbanized areas) that were immediately occupied and built on. The undivided areas remained relatively free of occupation until the mid eighties;
- The Nacala Master Plan- approved in 1985; much of the Mocone neighbourhood was considered a protection area (erosion) and the occupants should be removed. Despite this, from 1985 onwards there was a rapid increase in construction on the slopes in Mocone neighbourhood;
- From 1992 onwards an area was demarcated where about 160 families were removed in order to create a protection area and build drainage infrastructure. The building work was not concluded as some families remained on the land. Today there are 170 families remaining on the area that should not be occupied.

5.7.9 Socio-economic aspects

There are no significant commercial activities within the neighbourhood. There is an old cashew plantation in the protection area that is no longer very productive. Agriculture is discouraged because of the erosion; the soil is very fragile and not of farming quality.

The data on economic activities in the neighbourhood comes from the 1997 population census, disaggregated by neighbourhood. Of the roughly 12,300 people aged 15 and over that constitute the universe of economically active population in the neighbourhood 54% of the men and 20% of the women stated that they worked in the week prior to the census. Of the remainder, 20% were students (22% of women and 17% of men). In addition, 35% said they worked at home (11% of men and 62% of women). Of the roughly 5,000 people who said they had an economic activity during the period in question, roughly 3,900 were men and 1,200 were women.

The population's main activities were: trade and finance, agriculture and fishing accounting for 30% and 29% respectively, followed by industry and transport and communications with 12% each, services with 11% and construction with 4%.



Figure 30. Mocone. Private kiosks that characterize the commercial ambiance of the neighbourhood.

Self employment activities were spread among agriculture, commerce and manufacturing (artisans) and construction.

The private sector employs more people than the state sector. Overall, and based on census data, an estimated 2,000 people in the neighbourhood have wage employment, or 18% of the total employment activities estimated by the same source.

5.8 MOCONE "COMMANDO AREA": the municipality's priority for a pilot intervention

5.8.1 Characteristics of the study area

It is a spontaneous occupation area that was inhabited mainly during the war. With a central location close to the lower town and the secondary school, in 2003 it had about 950 houses (counted by the Municipal Council) on 38 hectares. Most of the area was always considered a forbidden area for construction, both in colonial times when permanent buildings were forbidden and also post-Independence after the town Master Plan was approved in 1985. Some plots were allocated under the communal neighbourhood program. The Executive Council and subsequently the Municipal Council, did not issue any construction permits for the area. Most of the houses were built on land allocated by block leaders, very probably together with traditional chiefs. A quick survey on the process for accessing land in the area showed that the residents believe their presence is pretty secure as there has been no direct pressure from the Municipal Council to remove them, unlike what happened in the upper part of the neighbourhood where there were resettlement programs.

Between the year 1982 and 1991, the settlement grew by 13% a year; and between 1991 and 2001 it grew by 2,2% (228, 780 and 954 houses respectively- Sources: maps and counting). This growth curve is similar to the one presented by the non-urbanized areas of the neighbourhood of *Triângulo*, the most populous of the City, with 13% between the year 1987 and 1991, and 2,2% between they year 1991 and 2003 (aerial photographs of 1991 and counting in 1987 and 2003).

The sharp inflection in the occupation curve was due to a number of factors, including the following:

- The start of an awareness raising campaign in the neighbourhoods;
- The availability of many demarcated plots with minimum access to services in the expansion areas;
- A probable decrease in the number of immigrants to the town following the peace agreement.
- There were however, factors that reduced the impact of these primary conditions: Reluctance to adopt administrative measures due to the growing complexity of the political situation;
- Ambiguity in the guidelines issued by the community structures – on the one hand to avoid confrontation with the people and on the other hand, not to loose the political and ultimately the financial benefits arising from the provision of land;
- The new demarcated areas were not very attractive, in particular for their initial inhabitants who considered that it meant “going to live in the bush”;
- Less realistic administration of the objective conditions for the land ownership in demarcated areas (and in the forbidden areas);
- In recent years, and due primarily to the political environment, the power of the community structures - the key to new occupancy - has declined. This deterioration is reflected in the duplication of authority (of the different parties), and hence uncontrolled occupation.

In administrative terms, the area comprises 8 blocks in Mocone neighbourhood: blocks 2 to 6, 32, 33 and 40.



Figure 31. Mocone “Comando Area”. Housing characteristics

In the Commando area 12% of the houses are made of brick, 71% are built with traditional materials with a straw roof (grass), and 16% are traditional houses with a corrugated metal roof. The average dwelling density is 25 houses/ha., rising to 45 houses/ha. in the most densely populated areas.

There is a Catholic Church, a mosque and two traditional cemeteries in the area.

There is no public standpipe, no access for vehicles except on the peripheral roads.

There are an unspecified number of house electricity connections.

The only road, that has a steep slope, has been damaged by erosion. Some residents blame the vehicles that that opened the path for rainwater and think that the absence of vehicles is a good thing.

The main problems in the area are:

- Erosion that affects houses and footpaths;
- No latrines or other sanitation facilities; people defecate in the open air in the eroded ditches;
- No internal access;

The expansion of the settlement, limited by physical constraints (erosion areas and the limited locally available land given the already high population density) is another problem. The new residents, whether children or immigrant relatives of older residents, cannot build in the same area without increasing the density and the precarious state of the existing slum.

The expansion areas with available plots are located in Mathapue and Nauaia neighbourhoods about 2,5-3 kilometers away. It is now a matter of checking to what extent these areas are considered an alternative by the Mocone residents and what impediments exist that limits its growth.

5.8.2 Possible areas of intervention

As it is now a forbidden area (1985 Master Plan and building/housing by-laws) any intervention must be designed with care, taking into account its impact in terms of land use policy and with the aim of improving, not weakening, the technical-legal requirements of territorial organization and environmental protection.

Following analysis and discussion the main steps will be the following:

- Framework of the intervention - Any intervention in the Mocone/Command Area means changing dispositions on land use in the approved Master Plan. For this reason it requires a pilot intervention that facilitates decisions about how to deal with the other sloping areas. The intervention in the command area will be one phase/stage in a broader improvement program in the neighbourhood;
- Consultation and collaboration mechanisms – The establishment of a consultation forum in the neighbourhood would be the first step in the establishment of consultation mechanisms: contacts using methods still need to be defined, conversations with individuals, meetings only of the forum or with residents etc.
- Lines of intervention – the main axes for intervention in the area would be:
 - Improvement of small local equipment (games field, market of the neighbourhood, etc.);
 - Limits confirmation of the environmental protection area. Protection tract for water lines;
 - Regularization of occupations, after the definition of the implementation modalities;
 - Complemented support actions such as: the places organization for expansion after agreement with the community, inspection, organization of the works maintenance, equipment and infrastructures basing in the community participation;
- Work methods -in a flexible way would be made the planning, seeking land solutions together with the residents; a special attention would be given to the subject of the drainage, in the sense of to reinforce and to optimize the existent infrastructures.

5.9 Lessons from the Nacala experience – inputs for a local and national strategy

The analysis of Mocone neighbourhood shows that it has been possible to control land use partially, by creating environmental protection areas, regularizing occupation in semi-urbanized areas and inspecting unoccupied areas in order to avoid new building and re-occupation. Nevertheless, population density in the neighbourhood's informal settlements has increased, and in the Commando area in particular, for the following reasons:

- Insufficient inspection of new construction and reconstructions in occupied areas;
- The local authorities have no real control over mechanisms for accessing land;
- No alternative occupation before the early nineties;
- It is a very attractive area, located close to centers with economic activity, equipment and services;
- No coordinated implementation by local authorities and utilities, resulting in water and electricity being supplied to unplanned occupation areas;
- The heavy influx of immigrants during the war made it even more difficult to take measures to control the situation.

In this context, the analysis leads to some useful conclusions on a strategy to reduce slums in Nacala, and to some extent in other towns in the country:

- Actions with positive impact that should be maintained and strengthened:
 - Preparation of expansion areas that will always have plots available, with some basic infrastructure and equipment.
 - Legalization of occupation in demarcated areas in order to consolidate and improve areas with traditional housing and their evolution to higher standards;
 - Creation of environmental protection areas and rigid inspection, including resettlement interventions. Physical warning signs in protection areas;
 - Environmental rehabilitation to reduce the effects of erosion on built assets;
 - Dissemination of simple and cheap ways of fighting erosion to protect yards on slopes.
- Measures to promote legal expansion areas:
 - Improve attractiveness and create better conditions for those who take the first step;
 - Provide relative benefits (fiscal etc.) for activities in these areas (markets);
 - Ensure that plots of land are only allocated by the municipal council, in order to avoid speculation – local leaders will have a role in monitoring the allocation of land;
 - Prior negotiation with traditional landowners before the allocation of land.
- Measures to dissuade people from occupying forbidden areas:
 - More effective control over people who provide/sell land and more effective inspection;
 - Clarification by consensus of the administrative responsibilities at community level;
 - Application of fines that are at least equal to the fees paid in legal areas (for conventional houses built without a license in areas where this is forbidden).

In this scope, there can be defined the main action phases for the intervention in the slums at **local level**:

1. Preliminary classification of the slums;
2. Choice of pilot areas (Mocone/Commando and/or another)
3. Mechanisms for consultation and participation;
4. Rapid assessments and flexible plans;
5. Implementation of service upgrades and improvements;
6. Standardization of dwellings or housing units.

7. Follow-up activities;
8. Analysis, monitoring and evaluation;
9. Proposals on land use in the different areas;
10. Programming more interventions.

Due to the severity of the erosion on the Nacala slopes, with consequences for the city and the port-rail complex, the decision to alter regulations on land use must be taken after there are guarantees that inspection will really take place in the protection areas, and alternative land protection methods. Upgrading services without effective control of occupation could intensify population density in areas that are already occupied and in adjacent protection areas with effects that are the opposite of the intended ones. For this reason a service upgrade should only take place when effective conditions have been created to control occupation rates.

At **national level**, intervention in slums assumes that various medium term actions have been taken into consideration.

- A global vision of urban management is needed, not just one limited to urbanization (and, sometimes, semi-urbanized) areas as is the case in many cities in the country;
- Institutional capacity building for municipalities in land planning and management;
- Mechanisms for financing basic urbanization for the majority;
- Flexible and tailored ways of taking physical planning to the field, accepting minimum urbanization and land occupation standards, and to the extent possible respecting existing occupation;
- In addition to technical capacity, municipalities must develop the capacity to negotiate and integrate with the various social spheres;
- Handling traditional land ownership (acquisition of effective land ownership by municipalities for future expansion areas);
- Fighting the speculation that is rising fast, especially in big cities, on the new urbanization fronts;
- Credible inspection for effective land use control in accordance with approved plans and minimum land spatial organization principles;
- Urbanization, subdivision and allocation of land in incipient spontaneous occupation areas where population density is not yet too high, in order to ensure a minimum spatial organization.

5.10 Annexes Nacala/ Mocone neighbourhood, "Comando Area" – cartography

- ✓ Context of the study area, various scales
- ✓ Administrative division of the town, 1/100.000
- ✓ Accessibility and land use, 1/35.000
- ✓ Slum growth (aerial photography 1964 and restoring/updating aerial photography 1982)
1/6.500
- ✓ Slum growth (aerial photography 1992 and satellite image 2001),1/6.500
- ✓ Basic services and other infrastructure, 1/5.000
- ✓ Main problems, 1/5.00
- ✓ The rainwater drainage problem, 1/5.000

6 Strategies for slum upgrading in Mozambique

6.1 Slum upgrading is a challenging issue

6.1.1 Definition of a slum

In most cases, a slum is the result of a long, complex process whereby families and individuals adjust to adverse conditions where their interests (often contradictory), find ways of co-existing in a precarious equilibrium but are nevertheless recognized by everyone in the slum, even though this does not always entail official recognition by the authorities.

6.1.2 Some indicators of the size of the problem

- Over 60% of the urban population lives in slums;
- Only about 35,7% of the country's population has access to potable water (www.unicef.org/mozambique);
- Only about 45% of the population has access to improved sanitation (www.unicef.org/mozambique);
- It is estimated that in 2005 the urban population was about 6.1 million inhabitants (out of a total of 19.5 million) and that in 2010 the figure will be approximately 7.2 million (out of a total 22 million) accounting for some 33% of the total population³². This percentage could rise to 50%³³ by 2020 (out of a 28 million).

6.1.3. Some qualitative indicators of the problem

Informal settlements are urban areas that grows constantly, that do not offer to their residents the minimum acceptable life conditions (basic human needs), in spite of which there are attractive aspects which draw residents, above all in what concerns its favorable location in relation to the job and of services centers.

Conditions in slums involve a complex of different matters and should be studied and solved with a combination of different strategies.

The most obvious aspects requiring attention and corrective measures are:

- The occupation of inappropriate sites with the risk of flooding and mudslides;
- Weak integration into the city's urban structure, road system or the topography of the land;
- Lack of basic infrastructure (water, sanitation, electricity and public lighting, solid waste removal, communications, roads and an adequate road network, drainage);
- High population occupation density;
- Poor quality construction;
- Limited social integration that denies the residents their rights of citizenship;
- Absence of organized public spaces and insufficient social services: schools, medical services, markets, organized trade, public administration, police, leisure equipment, adequate and dignified religious buildings, no sporting and cultural equipment etc.
- No security with regard to occupation of the land;
- Lack of organized public spaces and insufficient social services: schools, medical services, markets,

³² Rounded projections based on the 1997 II Population Census

³³ Estimate based on growth rate

organized commerce, public administration, police, leisure infrastructure, adequate and dignified religious buildings, sport and cultural fields and centres, banks etc.

- Ignorance of the inhabitants of their legal rights and the mechanisms they can use to defend their rights;
- No access to credit;
- Distance (psychological and physical) from the municipal authorities;
- Lack of community spirit and motivation for community initiatives;
- No control over crime and illegal activities.

Although not all these conditions exist in all informal settlements and to the same extent or incidence, they are **problems that must be taken into account when conceiving an intervention strategy for slum upgrading.**

We can now consider the possibility of bilateral or multilateral cooperation agencies providing funds for decisive interventions to improve or upgrade informal settlements in Mozambique's cities.

Returning to the above-mentioned issue of **lack of access to credit** the issue of **using land as collateral for a loan** must be presented in more detail. There have been various debates on this issue, involving in particular planners and credit institutions. However, these discussions invariably lead to discussions about legislation on land (land tenure). In Mozambique, the land is State property and it cannot be sold or, in any way be alienated, mortgaged, or pledged confiscated (article 3, of the Law of Lands - Law 19/97 of 01/10/97). The holder of DUAT (right of land utilization) can grant the infrastructures, constructions and improvements, through public deed, preceded by the State authorization (n° 2, art.16) and in the case of urban buildings, when granting the property, the DUAT must also be granted (n°. 4, art.16). The policies of credit institutions include the provision of loans against guarantees that the loan will be repaid.

For this reason **in the “slum” environment it is difficult to use land as collateral for a loan** as the only possible guarantee is the buildings when accompanied by the necessary legal documents for a mortgage. However, in informal settlements these documents are heavily dependent on recognition of the building by the municipal authorities and also the recognized occupation of land accompanied by the title on the right to benefit from and use land issued by the responsible body. In turn, under article 23 of the Land Law the President of the Municipal Council, the mayor, is responsible for authorizing land use and benefit requests in areas covered by urbanization plans as long as they have **public registry services.**

6.1.4 Some ways of addressing the problem

- Doing nothing;
- Concealing the problem;
- Clearing the land and rezoning slum areas, with new buildings (people are transferred to other areas further away);
- Clearance and rehabilitation/reconstruction destined for residents and inhabitants;
- Creation of general infrastructure, preventive rezoning in expansion areas and the occasional surgical reorganization of some slum areas;
- Recognition that the problem exists; gradual integration/regularization through constant planning interventions; progressive and prospective re-zoning including expansion areas to resettle people (in extreme cases) and to improve living conditions in the areas themselves - **probably this is the most viable and developed solution.**

6.1.5 Factors that hamper the definition of a sustainable strategy

All of the 33 municipalities recently created in Mozambique have very limited administrative and technical capacity for interventions that improve living conditions in slums, most of which are located in peri-urban areas. For example:

- Lack of automatic extension of formal area management and planning processes to slum areas (strengthening the physical and psychological distance between the people in these areas and the authorities);
- The Land Law has no regulations covering urban areas;
- Superficial knowledge of the reality and perceptions that characterize slum areas;
- Technical and administrative limitations;
- Financial constraints;
- Inadequate territorial definition of city boundaries given their nature, socio-economic interests and the need for expansion;
- As regards to the administrative context in general there is usually a passive, highly bureaucratic, rigid attitude that is unable to create or accept new ideas and new ways of resolving problems;
- Most departments have no trained staff or acceptable working conditions and are poorly motivated;
- The way data and documentation are recorded and filed is manifestly inefficient and there is no transport capacity to detect and resolve problems *in loco*;
- Municipality workers are paid like civil servants and do not have any other facilities or prerogatives;
- The temptation to sell favours and priority access to decision-making mechanisms are common and very difficult to eradicate.

The decentralization of decision making and control of their application encounter the same problems and are an additional burden for municipal finances.

The situation is no better in the technical field. There is limited technical capacity, insufficient experience, and poor salaries yet a heavy work load. In most cases there is not even one graduate in engineering or urban planning in any of the urban services. Many municipalities have started to recruit middle level technicians in different specialist fields but they are still few. Where technical services do exist working conditions are usually inadequate and insufficient, starting with office conditions that are often too small and inadequate.

- The database materials, land registry, cartography, topographical survey, aerial photography and their updating, documentation on infrastructures and maps, etc., are often lacking, and when they exist they are of very poor quality.
- Demographic records and surveys are very general, and usually out of date, so they cannot provide a reliable basis, and there is no socio-economic data.

6.2. Conditions and principles to be born in mind in upgrading activities

6.2.1 Assumptions for an intervention strategy

Slum conditions are the result of global and national problems of the underdevelopment of certain parts of cities. Their origins lie in a complex set of social, economic, cultural and political causes and circumstances that cannot be understood or resolved without combining and integrating efforts on various fronts.

The essential scale of the slum problem must be identified and understood before defining and implementing strategies.

The following conditions and principles must guide the activities of any slum rehabilitation and upgrading program:

- A correct definition of the housing problem that is not limited to improving shelter conditions but is based on delivery of the services and infrastructure needed for a decent life;
- The creation of a strong will, capacity and motivation to improve the quality of life and housing in

informal settlements that can be easily mobilized based on a solid action program that the residents consider realistic and plausible and, in particular, their own;

- The order of priorities for any contribution or support for slum areas must always be identified together with residents in the area concerned and never *a priori*, even when some interventions seem more basic and necessary to planners. The process of involving residents in this definition is a strategic step that will make them feel that they are the owners of the process and the project;
- The development of a program and its sector projects must always consider residents as a labour reserve for its implementation; so that one of the main conditions for the success of any intervention is guaranteed: employment, albeit temporary;
- A clear definition of land use and occupation rights is an essential precondition for active and unconditional participation by residents in any slum rehabilitation - the use and occupancy rights of every family and resident must be established, recorded in a registry system. In the unavoidable case that some families have to be transferred elsewhere due to insoluble environmental problems or because it is legally a protected area, or for example in order to build an infrastructure of public benefit, the affected families must receive an alternative piece of legally registered land;
- At the end of the slum rehabilitation exercise no area or plot of land must remain without a status that clearly defines the conditions of its use and benefit;
- As in the case of the planned area of the city, no project must ignore the families and individuals living there and their spatial rights no matter how large and difficult the process. Experience has shown that when and where residents are involved in a rehabilitation process from the conception stage to the definition of priorities and implementation strategies, tasks that could seem impossible without their cooperation, they are not only possible but are easily carried out.

Conditions and principles statements of the statement, were established through a practice that considers that the beneficiaries of any rehabilitation action, have the main **responsibility for their own future and for the consequences of their own choices and behavior.**

6.2.2 Social values

Despite the apparent absence of institutional instruments of social control and information under the conditions described the sense of order and the passive co-existence of most citizens is admirable.

This can only be understood by taking into account the extremely strong traditional structures where family links and hierarchical relations retain their social relevance and the “informal” authority that these contain, is accepted as indispensable for the social integration of the family and the individual.

This authority is weaker in towns and is being replaced by other values. The political transition to a multi-party system is also changing the behavior of the politico-administrative structures created post-independence.

It is important to bear in mind this fundamental aspect when conceiving or designing any intervention that alters the physical shape of an urban settlement because social, economic, cultural etc. relations can be adversely affected even if it initially appears that these interventions can only bring advantages.

People subject to operations transferring them elsewhere are extremely sensitive to the possible consequences of any change in their lives and will resist the transfer unless they are positively convinced of the immediate and long-term benefits.

6.2.3 The planning environment

Planning positive changes in the living conditions of a human group, spontaneously organized in slums, cannot be an experimental exercise as a pilot project where residents become guinea pigs used to prove a theory or to achieve an objective designed by a more or less theoretical consultancy.

Slum rehabilitation or upgrading requires the permanent presence of a planning team and a relationship with the community that is built with care, provides the strongest foundations for mutual trust.

So the elimination of slums requires an operational structure that is able to acquire profound knowledge of the field conditions, not just the physical characteristics of the area but also its social composition, its internal group dynamics and the real local authority structure. Elements that disturb stability or might affect residents and the history of the urban form and value system with special relevance for the social group are other vital dimensions that must be studied and identified.

There must also be comprehension, as perfect as possible, of relations with other neighbourhoods and their correct integration into the network of urban infrastructure and their needs in terms of social services and equipment.

It will then be easy to recognize that slum upgrading cannot be reduced to a project exercise where various parameters are combined in an equation in a more or less rational manner, to be applied as a “solution” or remedy, as the sickly fabric of the city is made of people; it is not an organic, “curable” fabric.

There are no formulas for the eradication of the slums.

The key to success is **participation**, and participation is not obtained by interpreting and applying technical documents. It must be achieved and take shape in the field, with residents, through constant contact and relations.

Any attempt to reduce slum upgrading exercises to a series of programmable operations, quantifiable in terms of cost and time, is bound to fail, and could result in a form of violation of the rights and aspirations of the beneficiaries of these operations.

This assumes that the vision on slum upgrading should not contemplate the principle that improving and upgrading a slum necessarily implies removing most families from where they are living, which would be, at first, against the Mozambican law and against the political ideology of the government.

The basic premise is that residents, probably the vast majority, have acquired “occupation in good faith” rights to the plot of land on which they are living, if they have been there for more than ten years.

However, even if a family has been leaving on the plot for more than ten years, there will surely be no interest in making their life more difficult by forcing them to move in order to obtain an arbitrary geometric order and a disputable efficiency and justification.

In most instances of consolidated informal settlements, the alternative of imposing a system of straight, parallel streets with the land sub-divided into regular rectangular plots as the only solution to achieve a structured urban fabric is a violation that should not even be contemplated as it will result in enormous suffering, exorbitant costs and will alienate residents in terms of their peaceful relations with the authorities. Experience has shown that this kind of situation that means the elimination of all that a given spatial relationship signifies and its replacement by another, forced one is not viable. It does not take into account relationships and despises the essential design involving compromise, negotiation and giving way.

Given the shortage of resources to compensate families affected by resettlement programs, municipalities must be more receptive to a more flexible and open urban spatial organization, with concrete interventions on the ground that serve as an example and a source of learning about alternative methods to the above-mentioned spatial planning approaches.

On the whole, any action to upgrade and reduce slums will only be successful if urban residents have an open mind and comprehensive attitude on the management of the entire urban territory and if there is capacity to collaborate and negotiate with residents and their formal and informal representatives. This success will of course depend, above all else, on financial and institutional conditions that have not yet been created.

The planning environment proposed above must be a central theme for discussion in a forum dedicated to slum upgrading.

It is not possible to build an attitude and a national policy to achieve the objectives of the “cities without slums” initiative without defining a general position on this problem, accepted by everyone.

The implications of the kind of operations philosophy presented above are that the towns' residents must acquire technical capacity to organize and administer, and must be provided with the necessary means and resources to plan slum upgrading operations as these programs cannot be implemented using paper projects.

However, Mozambique is a country with a limited number of trained planners and most of them are concentrated in the capital, Maputo, and with more expectations than can be met by the salary of a municipal employee.

Yet there are sufficient young people who are willing and available, new graduates or people about to graduate who are ready to provide the necessary and sufficient capacity for all possible slum rehabilitation and upgrading programs in the country's towns if they are provided with minimally acceptable working conditions.

At much less cost than imported projects and specialists we can address internally the technical requirements that make it possible to mount a solid and consistent slum upgrading and rehabilitation program.

6.3. Main components of the intervention strategy

6.3.1 Preventive measures

For all the reasons given there is a vital need to pay greater attention to the slum problem. Although in Mozambique it has not yet reached the insoluble levels affecting other African countries, it must nevertheless be considered as one of the most serious problems in cities and other urban centers and even as one of the most serious problems in Mozambican society as a whole.

Mechanisms must be found that avoid the growth and further deterioration of informal settlements. These urban agglomerations are growing, in most cases within their borders and with a constantly rising density, due to the total absence of a policy and resources and resources to open and promote new urbanization fronts with a diversified supply of land that is accessible to the majority.

There is thus an urgent need to promote an active policy and find resources for opening new urbanized areas that are accessible to economic strata of the urban population, to absorb the population growth that is resulting in increased density in areas already occupied and atrocious housing conditions.

The densification scenario will prevail if there is no intervention to create viable occupation alternatives. In many cases upgrading interventions will attract more people, running the risk of massive densification after these interventions.

The reality today in Mozambique is that there are many slums where it is impossible to intervene without massive operations to transfer families.

In the short term, no intervention to improve the atrocious living conditions in these areas will inevitably result in greater densification and the deterioration of the already negative conditions.

There is thus an urgent need to combine interventions in the existing neighbourhoods with the following preventive actions:

- Create and maintain a supply of plots that are accessible to most people without resources, combining action by the State with action by municipalities and the traditional sector that controls land in peri-urban areas and also with the private sector and the residents. Experience has shown that the supply of plots is not viable if not combined with the potential and efforts of all these sectors
- Create and maintain an effective system for controlling and inspecting the use of the land, whenever possible involving the residents themselves, combined with educational, persuasive and repressive

measures when necessary, which is only possible when families are given alternative places where they can build

- Create and maintain a system for monitoring and persuading residents that excessive density must be avoided; start with clear subdivision of plots and their cadastral registration, defining conditions of use and division. However, these measures are useless if new, alternative expansion areas are not created
- Provide more structured forms of organization that provide employment and enable people to learn new skills, and endogenous capacity to develop economic initiatives.

6.3.2 The crucial importance of building the capacity of the Municipal structure

We must recognize that most of the time and in many cases, almost all the necessary information required either does not exist or it practically impossible to obtain from the technical means and logistic info available in the Municipalities.

Not only lack of information but the municipalities do not have the necessary capability to control the investigations, registration and creation of database for the archives, consultation, updating and for consulting data.

This is a serious situation and it happens at the national level including Maputo and the capitals of every province of the country.

This lack of information cannot necessarily be used as an excuse for not acting in the field, in fact it is through this performance that data can be collected as well as mechanisms for archive and use can be created.

Naturally, we cannot expect municipalities fully and perfectly operative, neither can we expect them to be well equipped or run smoothly the programs of slum upgrading, for the country's cities.

We should use the opportunity that opens up, by launching and develop a program of slum upgrading, in order to **build the capacity, acquire the necessary experience and create administrative Municipal structures as well as the necessary techniques** for the smooth running of our cities, avoiding the growth of the existent slums and the creation of new ones.

It means that, assuming that the resources for the program of "*cities without slums*" are materialized, the first step should be to **create mechanisms that make the Municipalities capable of identifying and quantifying the problem. They can then present them with cartographic means, and the indispensable technical data to any rehabilitation exercise or re-settlement, as well as with the necessary and sufficient means for the databases resources and consultation archive.**

The first and the most common obstacle to the project of a viable and realistic intervention, in any of our cities is, in fact, the lack of the most basic and essential information in usable form.

6.3.3 Participatory planning – the main actors

In many cases although a series of planning exercise were done previously from the "structure plans", the "municipal development plans" to the "partial plans or detailed plans", ordered and paid to the consultants from all over the world, either inside or outside the country and that take space in the shelves and drawers of the public administration offices, they are of no help because no preparation for its elaboration neither for its impossible implementation, no local capacity was produced or involved

The first and indispensable element in any planning strategy is – **participation.**

The participation is a form of indispensable work, not only in the search for solutions for the urban problems but also as an essential element to the formation and training of the operative municipality bodies (administrative and technicians).

Preparing a plan away from its human context and its administrative reality, or without the involvement of the local community and the municipal bodies, is to lose the best opportunity to **train people and to build the institution**.

We would risk now, the definition of **first priority** – the creation and institutionalization of the **internal competence** for the planning and to drive, supervise and accomplish the application of the planning instruments, in each Municipality.

To materialize this first step, three resources are needed:

- Technical and administrative capacity within the Municipality;
- Logistics and materials conditions for the technicians' work and for the services in charge of the planning;
- Technical and legal support;

It is this mechanism in the municipal administrations that makes it possible to organize the participation process.

In a **participation** process seeking a sustainable land administration accompanied by the supply of basic services in the slums, a variety of “stakeholders” must be involved – **the government, the local communities, the private sector and the civil society** – and all of them, together, can make decisions to satisfy the citizens' needs.

- **The Government/State** – is represented by the central/national bodies (ministries, national directorates) or by the local bodies (Provincial Government, District Administration) that also includes municipal authorities (Municipal Assembly, Municipal Council). The central/national bodies design the policies and draft laws related to land planning and land management. The local bodies handle the detailed planning and management of the land itself, both in detail. (UN-HABITAT, 2004).

The urban planning and the solution of the slum issue are problems of the field and are the responsibility of the Municipalities. The state, through their structures at several levels, certainly cannot ignore this problem and it should assume an important role in solving through definition policies that include the programs of improvement of the living conditions in the cities and, specifically in the slums, in the national programs of poverty reduction (PARPA), for example, through its administrative and legislative function. The problem of the informal areas must be considered institutionally and should be integrated in the Economic, Financial and Social Plans as well as in the Government's Five Year Program.

The approval of the policy and law on spatial planning, and publication of the Regulations on Urban Land will be extremely significant and important; they are vital instruments without which it will be extremely difficult to resolve the slum problem.

The state also has a fundamental role in the mediating between the local government and districts with regard to the expansion of urban territory. The provincial authority can and must intervene in order to protect the administrative, political and economic levels interests.

The Provincial authority must be present and assume a mediating position in the definition and expansion of municipal authorities, for example in relation to water source, electricity and firewood etc.

In the case of government companies that offer services, the government has the responsibility for defining special and specific conditions for delivering services this sector of the population.

Another government function is to finance the expenditures of the municipalities, through the general state budget. This budget (OGE) should include specific funds for tackling the informal settlement problems in order to support and create the necessary tools and mechanisms of intervention as stated before.

The state has also the capacity and responsibility to specifically negotiate international cooperation funds to tackle the slum problem and to grant it to the municipalities, controlling its efficiency and application.

Finally, we must refer to the role of the Municipalities which have to clearly establish the distinction between the city and the slums and operate a real approach to the population that lives in the informal settlements that must be considered as one of the structuring elements of the city, as a whole.

It is clear that there are no miracle solutions with guaranteed effects for the serious problem of the informal settlements in our cities but, it will however be impossible to solve them without the full participation of all government structures at all levels and without addressing the wide variety of problems ranging from economic to social, to administrative and legal problems

- **The civil society** – includes NGO's, (non government organizations) as well the CBO's (community-based organizations) and the various other entities dealing with the slum problem. The members of the civil society are an important connection link between the communities and the local authorities, facilitating the communication and interaction between both.
- **The local communities** – traditional authorities, representatives of the informal settlements and religious groups are key elements, especially with regard to the organization phases of the improvement activities of informal settlement through the participative process.
- **The local administrative authorities**– comprised of the Urban District Administrators and their equivalent, to the administrative level, and the neighbourhood Secretaries.
- **The final beneficiaries** – in a certain intervention of improvement of an informal settlement, they are key elements in the participation process, the own target population, that through the **community participation** must be encouraged to contribute in the three main phases of the process³⁴: (1st) identifying relevant local tools for land management, (2nd) establishing a relevant tenure framework for future development (3rd) implementation of the activities, integration of the informal settlement in the city and development of a system of urban management in the same informal settlement.

In the scope of a national strategy, and because there isn't an ideal income for the models of **community participation** to be applied in the whole country, it is important to bear in mind the several experiences in this scope accomplished in Mozambique and that will certainly be useful for new programs of slum upgrading³⁵.

- **The private sector** – the participation by this sector could be important in the three participatory phases beginning with the first that is the moment when eligible partners are invited to establish the stakeholder forum. (UN-HABITAT, 2004). Little by little the private sector acquire technical knowledge on subjects related with the land management³⁶ and can become an important key in the implementation processes once the priority actions have been defined and agreed.

³⁴ UN-HABITAT, *Pro Poor Land Management – Integrating slums into city planning approaches*, Nairobi, 2004. {In the document are considered as main phases of the participative process: Phase 1 – *Identifying relevant local tools for land management*, Phase 2 – *Establishing relevant tenure framework for future development*, and Phase 3 – *Integrating the poor into the city and developing a pro poor Land Management System*}.

³⁵ Some of these experiences are related in the Volume I – *Analysis of the Situation, Cities of Maputo, Manica and Nacala*, respectively in the chapters: *The nationalizations and the occupation of the urban system*; *Actions of responses to the increment of the population density*; *the importance of the community participation in the urban re-ordainment urban*; *Lessons of the experiences in Nacala seeking a local and national strategy*.

³⁶ In spite of the actions of urban expansion, and hardly ever in the improvement of informal settlements, just begin to be noticed in partnerships of the land administration between the Municipality districts and the private sector, as in the case of the Municipality district of Matola that very recently handle the urbanization of a new neighbourhood (Ntchumene Neighbourhood).

6.3.4 Making good use of the national technical capacities

The creation of technical and administrative capacity means that municipalities must be well structured, above all the medium and small, and equipped with the necessary specialists, with at least medium level of graduation (or superior), and that are part of the permanent experts personnel supported by the Municipalities budget.

It will not be possible to accomplish the essential tasks of planning and management of the urban land without these experts, with the minimum stability and continuity guarantee which are indispensable to avoid the creation of new slums. Some Municipalities have already proven that the economic efforts done for this integration in their teams have good returns for its smooth functioning

However, we know that many of the municipalities do not have sufficient funds to pay for graduates, nor even to create the housing and logistical conditions to attract them on permanent basis.

However the problems complexity of the urban planning and the improvement of the life conditions in the informal settlements need the technician's intervention with the highest level of qualification for the introduction of new planning systems and adaptation of the methods and techniques, already tested, for each case.

We already saw that we can find graduated professionals, in a sufficient number, in the country, that are capable and available to take the responsibilities in terms of reference, outlined here, for their work.

The examples already existent proved its capacity to be adapted in the very difficult work conditions producing relevant results with a minimum of technical support.

Where the largest difficulties show, and where the **external contributions** can make the difference, is the creation of the right work, logistical and financial conditions, with funds to pay the technicians and for acquiring equipment and to assure the work conditions for the planning exercise.

6.3.5 Creating a support mechanism

A crucial point that can affect the success of slum upgrading is the fact that it depends essentially on technicians with limited experience who also face big challenges.

Therefore, these technicians need **constant technical support** that gives them confidence and ensures permanent control, as in most cases they will be working under great pressure, isolated and with little or no technical information.

The exchange of experiences and the lessons learned with the success and failure from the others, calls for support unit that works as a concentration and dissemination center that builds a collective memory about the slum problem.

The creation of a support unit, composed by experienced and highly mobile technicians, with access to specialized technical expertise whenever necessary, is an indispensable complement to the distribution of the technical capacity for the Municipalities.

The presence of technicians mentioned in the management of the Municipality does not guarantee, the solution of the problems of planning, as they will face challenging situations that need hiring of specialist expertise so far a impossible to supply permanently to all municipal administrations.

This calls for the creation of helping mechanisms as first priority, to respond to the technical services of the different municipalities, solve specific technical cases and to work as an experience and information mechanism as well as to hire special expertise to solve new and unique problems.

It is not simple to define and quantify the nature of this mechanism and its introduction in the Municipality system.

However, it is clear that it has to be composed, and make an appeal to the country's expertise technicians to work as consultants in the definition of the programs, technical strategies and solutions for each problem that cannot be solved locally.

Ideally, this should be an independent body capable of building a philosophical base for the great planning orientation lines to proposed to all of the Municipalities in the country.

It should be, ideally to establish links with the “Association of Municipalities” which in turn could provide a deep vision, and extension of the difficulties of the urban planning in the country and a common platform of the discussion of policies elaborated as a result of the common experience, that this body would integrate, **considering the urban centers not yet covered by the autarkic process.**

Without this support mechanism of acquiring experience, the body cannot be sufficiently mature for the activity of urban planning and, especially, for slum upgrading programs, in the country.

The creation of a body requires sufficient resources for the establishment of the minimum working conditions and for its own management as well as permanent technical management staff

The logistics of this component within the global strategy, assume a special importance should foresee a significant requirements for transports and specialized consultancies.

This should include computer systems, sophisticated and efficient enough to ensure capacity for the establishment of archives and the distribution of information.

This body should also assume as a task, the preparation, publication, and dissemination of information, as a link between the Municipalities and similar international organizations.

Finally, it should take the responsibility for the organization of periodic technical meetings whereby the experiences and progress of the urban planning and the improvement of life conditions in the informal settlements can be discussed, analyzed and reflected.

The description of this support mechanism makes it clear that **it does not intend to duplicate any existing government structure or take charge of any of its functions.**

That description, intends to clarify the concept that should be an administrative “light” body which utility will depend exclusively on its efficiency and the capacity to respond.

6.4. What to do?

What is the order of priorities and the problems to be tackled first. Where to start? In which city? In which informal settlement?

It is very difficult to answer these questions; they require political decisions that are translated in guiding and normative documents.

Firstly, to inform the political bodies, required actions must be defined to determine the financial, technical, and logistical resources required.

What are the essential parameters for the implementation of this strategy?

On the basis of the indications provided by the situation presented above, the following aspects must be taken into account as a solid basis for the development of a strategy.

- Detailed knowledge of all the above-mentioned aspects of each slum area and any others that are specific to each case;
- The first requirement forming the basis of any intervention, is the need to consider the rights of all residents. This means that even when families must be transferred, each family has the right to a proportional compensation, including the right to compensation that matches the value of the existing occupation and situation;
- The need to know as much as possible about the residents’ perceptions of their urban integration;
- A data and record system for each case and each family’s occupation of land, duly recognized and witnessed by neighbors;

- The number of people, their demographic composition, professional qualifications, salaries or income sources etc;
- The informal settlement's integration into the urban structure and its connection to the road and infrastructure network, services etc;
- The topography, hydrology, ecology, micro-climate and all parameters and physical dimensions of the location;
- The municipality's potential in terms of providing the necessary data and information and assisting or conducting the intervention program;
- The possible alternatives locations for transferring all or some residents should this be necessary;
- The existence of community or social organizations that can be used in contacts with families;
- Interaction between the different levels of authority, namely, between the municipal authority and the traditional authority;
- Gradual adoption of appropriate and simultaneous processes to regularize and organize and mark out occupation of the land in informal areas and to plan new areas (for resettlement and expansion).

6.5. Conclusion

We have focused our comments and proposals on the **operational mechanisms** for planning a better urban environment in Mozambique.

After many years of planning activity and building of institutions, this is the factor that we consider decisive for the success in applying the resources, always insufficient, for the solution of the problem.

The problem of defining and quantifying a decisive contribution for slum upgrading in Mozambique, cannot be solved or be definitely established.

We are convinced that the proposed mechanisms of this definition and its quantification will be possible or valid as the application of resources without the capacity for its management can only bring losses and frustration and to lead to delay the structured solutions.

If **participation** is the key word for the success of slum upgrading, then **planning** is an indispensable condition for the correct use of the resources, then the **planning capacity** is the indispensable condition for the success of the **guided participation in order to use the available resources in the most effective way**.

Finally, we would like to isolate some special aspects of the impact of slum upgrading operations and that are of fundamental value for the **sustainability of** interventions:

- The application of funds and external resources can, and must, be an opportunity for providing residents with jobs, so they can learn new trades and skills and to develop economic initiatives, contributing to positive sense of change, without which the causes of deterioration will persist.
- The rehabilitation of an informal settlement should lead to **job** creation as the notion of common services and benefits is part of the **community values**, and these should be the one of the main consequences of any urban improvement intervention.
- Slum upgrading assumes the parallel implementation of:
 - Actions related to participatory organization of the management process;
 - Spatial planning activities that introduce improvements (access, water, sanitation, drainage etc.) and open up prospects of more detailed urban planning actions in the future.

6.6. Annexes –Recommendations arising from the meetings with the Municipalities

Two important meetings with the Municipal Councils of the country took place in Lichinga from 20 to 22 of July 2005 and in Manica from 25 to 27 July 2005: in Lichinga with the “provincial capital cities” and in Manica with “other cities and towns” The results of this document were presented to the two meetings under the topic “urbanization, registration and interventions in informal settlements”. The following tables summarize the main recommendations arising from the discussions.

6.6.1 Cadastre – Land Registry

Findings	Actions	Responsible in charge	Source resources	Time Frame
1. Weak institutional capacity	Recruitment	Municipality	Municipality	June 2006
	Training	DINAPOT/ DINAT	MAE	December 2006
1.1. Low professional and technical level	Training	DINAPOT/ DINAT	MAE	December 2006
1.2. Lack of equipment registration	Acquisition of new Equipment	Municipality	Municipality	December 2006 / permanent
	Loans	Other appropriate vocational Institutions		December 2006/ permanent
2. Weak procedures				
2.1. Lack of spatial plans	Preparation Plans where they do not exist	Municipality / DINAPOT	Municipality	December, 2006
2.2. Outdated territorial plans	Updating plans	Municipality/ DINAPOT	Municipality	December, 2006
2.3. Illegal and irregular concessions	Survey, analysis and Case by case treatment	Municipality/ DINAPOT	Municipality	June, 2006
2.4. Backlog of unanswered concession requests files	Analysis and answers case by case	Municipality	Municipality	June, 2006
	Simplification of Procedures	Municipality	Municipality	June 2006
	Installation and treatment (Excel, LAHS, e Land)	DINAT	Municipality/DINAT	December, 2005
2.5. Disorganized or inexistent Municipality structure	Creation and reorganization	Municipality/ DINAT	Municipality / DINAT	December, 2006

6.6.2 Criteria for the division and administrative organization of the Municipalities

Findings	Actions	Responsible	Source resources	Time Frame
1. Coincidence of the administrative division nomenclature and that of the municipalities and districts (duplication in the nomenclature)	Definition and/or updating the Municipality nomenclature criteria for the Administrative division	MAE	MAE	December, 2006

6.6.3 Urbanization

Findings	Actions	Responsible	Source resources	Time Frame
1. Deficient or weak institutional capacity	Recruiting	Municipality	Municipality	June, 2006
	Training	DINAPOT	MICOA/ MAE	December, 2006
1.1. Low professional technical level	Training	DINAPOT	MICOA/ MAE	December, 2006
1.2. Lack of equipment	Acquisition of new Equipment	Municipality	Municipality	December, 2006 / permanent
2. Legislation				
2.1. No regulation on urban land	Revision of the proposal	MOPH/ MICOA	MOPH	June, 2006
	Approval of Council of Ministers	MOPH	MOPH	June, 2006
2.2. No territorial planning policy	Elaboration and approval of the Law of territorial planning	MICOA	MICOA	December 2006
	Elaboration and approval of the respective regulation	MICOA	MICOA	December 2006

6.6.4 Informal settlements

Findings	Actions	Responsible	Source resources	Time Frame				
1. Inexistence of a general strategy on the improvement of the living conditions in the informal areas	Preparation and Elaboration of the strategy	MICOA	MICOA	December, 2005				
2. High population density	Definition of process and support mechanism and monitoring municipalities, at national or regional levels, aimed at regularizing the territorial organization of land occupation in the informal areas and search of technical resources	MICOA/ CMCM/MAE Forum for Local Government Development	CMCM	October, 2005				
3. Absence of mechanisms for the urban integration of the informal settlements					Preparation, release and monitoring of a pilot regularization operation in the City of Maputo, to adjust and implement the proposed process	MAE/MICOA/ CMCM	CMCM	December, 2006
					Stabilization of the proposed regularization process in Maputo and its extension to the other Municipalities	MICOA/MAE/ CMCM	MAE	December, 2007
4. Heavy pressure on urban land	Establishment of preventive planning measures of a minimum Standard	DINAPOT	DINAPOT	December, 2006				

7 Bibliographical references

7.1. Documentation on Maputo

AZEVEDO Mário, *O Plano de Urbanização de Lourenço Marques*, 1969.

BRANDBERG Bjorn, ZOUNKATA Tuina, TOLLIN Hans, *The Malhangalene Survey - a case study of an Unplanned Settlement in Maputo 1976*, part II: Constructions/Materiaux de Construction/Workshops and Crafts, Chalmers Tekniska Hogskola, Arkitektur, Goteborg, 1977. {Procede à análise da tipologia de construção, dos custos e da avaliação dos resultados da intervenção}.

Centro de Estudos Africanos/UEM & Ministério do Trabalho, *Relatório Provisório sobre o desemprego no Maputo*, Universidade Eduardo Mondlane, Maputo, 1979.

Conselho Municipal da Cidade de Maputo – Direcção de Construção e Urbanização, *Estudo Comparativo entre a informação documental e a situação no terreno, e suporte legal ao planeamento e gestão do solo urbano*, Primeiro Volume: Avaliação da situação existente, Relatório Final, Cadastre Pilot Project, Maputo, 1999.

Conselho Municipal da Cidade de Maputo, *Plano de actividades 2004*.

GITAP – Gabinete de Estudos e Projectos S.A., *Relatório Síntese do Plano de Estrutura da Área Metropolitana de Maputo*, Bases regulamentares da Cidade de Maputo, S.d.

IBRAIMO Maimuna A., *Crescimento da População Urbana e Problemas de Urbanização da Cidade de Maputo*, Documento 11 – Série População e Desenvolvimento, Unidade da População, Direcção Nacional de Estatística, Maputo, 1994. {O documento analisa as influências dos processos sócio-económicos e políticos específicos na mudança das características demográficas, no acesso ao emprego, nas receitas e na organização do espaço, de acordo com o nível de acesso às infra-estruturas urbanas}.

KOSSICK D., CINQUENTA A., HANSEN N. B., *Investimento no Desenvolvimento Cooperativo e Auto construção em Maputo 1982-1990*, Direcção de Construção e Urbanização, Maputo, 1992.

MENDES Maria Clara., *Maputo Antes da Independência - Geografia de uma Cidade Colonial*, Centro de Estudos Geográficos da Universidade de Lisboa, Lisboa, 1979.

Ministério da Administração Estatal - Direcção Nacional de Administração Local, *Plano de Estrutura da Área Metropolitana de Maputo*, PROL, Relatório Final (versão preliminar) - Volume II: Proposta para Plano de Estrutura, Maputo, 1999.

Ministério da Administração Estatal - Direcção Nacional de Administração Local, *Plano de Estrutura da Área Metropolitana de Maputo*, PROL, Relatório Final (versão preliminar) - Volume I: Análise da Situação Urbana e Opções de Desenvolvimento, Maputo, 1999.

Ministério da Administração Estatal - Direcção Nacional de Administração Local, *Plano de Estrutura da Área Metropolitana de Maputo*, PROL, Relatório Final (versão preliminar) - Volume III: Proposta de Normas de Desenvolvimento Urbano e Padrões de Urbanização, Maputo, 1999.

MITCHEL Hilary F., *Aspects of urbanization and age infrastructure in Lourenço Marques*, University of Zambia - Institute of African Studies, 1975.

NIMPUNO Krisno, SAEVFORS Ingemar, NASLUN Ruth Nordin, LAVEN Nea, *The Malhangalene Survey - a case study of an Unplanned Settlement in Maputo 1976*, part I, Chalmers Tekniska Hogskola, Arkitektur, Goteborg, 1977.

RIVAS Diogo Robles, *Barrio Maxaquene - Monografia*, MOPH/DNH & UNDP/Habitat, s.d. {Reconta o processo de reordenamento do Bairro Maxaquene, referindo-se aos programas de acção, às intervenções e às prioridades definidas, às normas específicas adoptadas e à expansão da iniciativa. Procede ao balanço da intervenção cinco anos depois}.

SAEVFORS Ingemar, *Maxaquene: a comprehensive account of the first urban upgrading experience in the new Mozambique*, Human settlements and socio-cultural environments, UNESCO, 1983. {Descreve o contexto e a história do caniço em Maputo, bem como os princípios de planificação vigentes, as estratégias

e as abordagens de reordenamento. Trata também da conceptualização para a realização do Projecto de Maxaquene}.

Sweco International and Consultec, *Scope Assessment and Preliminary Design study of Repair of Avenida Julius Nyerere, Maputo, Mozambique*, volume 2: Environmental Impact Assessment, Final Report, Maputo, 2000.

7.2. Maputo Cartography

DINAGECA, *Fotografias Aéreas da Cidade de Maputo*, escala 1/10.000~1/20.000, 1966/1982/1991/1996.

DINAGECA, Joint Venture Norway Mapping/Mozambique, *Cartografia da Cidade de Maputo*, escala 1/5.000 & 1/25.000, 1998.

DINAGECA, *Ortofotoplano da Região de Maputo*, escala 1/2.000, 1973.

INTEC Americas Corp., *Imagem de Satélite de Maputo - Ikonos (1.0m) PSM (true color)*, Dezembro 2003.

7.3. Manica Documentation

Comissão Provincial do Plano de Manica, Serviço Provincial de Planeamento Físico, *Plano de Ordenamento Territorial do Distrito de Manica*, Chimoio, Julho de 1994.

Conselho Municipal da Cidade de Manica/Serviço Provincial de Planeamento Físico, *Plano de Estrutura do Município*, Dezembro de 1999.

DE CARVALHO Pires, *A Velha Macequece*, in: Imprensa Nacional de Moçambique, *Moçambique – Documentário Trimestral*, nº 46, Abril/Maio/Junho de 1946.

TRINDADE Carlos T. G., DO VALLE Karyn B., BRUSCHI Sandro, *Informal Settlements Upgrading in Manica City*, Centro de Estudos de Desenvolvimento do Habitat, Faculdade de Arquitectura e Planeamento Físico, Universidade Eduardo Mondlane, Maputo, May 2003.

TRINDADE Carlos T. G., *Unconventional Development of a Cadastre – Systematic Surveying of Informal Settlements in Mozambique*, in: GIM International, Volume 19, Issue 2, GITC Publication, The Netherlands, February 2005.

TRINDADE Carlos T. G., *Upgrading and Land Titling in Informal Settlements – Manica City, The great importance of the PSM true color quickbird satellite image as a cartographic document*, Centro de Estudos de Desenvolvimento do Habitat, Faculdade de Arquitectura e Planeamento Físico, Universidade Eduardo Mondlane, Maputo, November 2004. Ver também: www.fig.net.

7.4. Manica Cartography

DINAGECA, *Fotografia Aérea da Cidade de Manica*, 1956/1985.

INTEC Americas Corp., *Imagem de Satélite de da Cidade de Manica QuickBird Sub-meter (0.6m) PSM (true color)*, Março 2003.

7.5. Nacala Documentation

BATTINO Liana, *Cadastro e Registo de Terras em Zonas Semi-Urbanizadas em Nacala*, Município de Nacala, Nacala, Fevereiro 2003.

BATTINO Liana, *Cidade de Nacala – Evolução e implementação do seu Plano Director*, INPF & UNDP, 1989. {Elementos de análise sobre o processo de preparação e implementação do Plano Director para o curso médio de planeamento físico}.

Boletins Municipais, 1968/1969/1971/1972/1973.

Conselho Municipal da Cidade de Nacala, *Estatuto Orgânico e Quadro de Pessoal*, 26 Maio 1999. {Documento preparado pelo Conselho Municipal e aprovado pela Assembleia Municipal, actualmente em

vigor. Descreve a organização interna do Conselho Municipal, as tarefas sectoriais, os postos de chefia e quadro de pessoal previsto}.

Conselho Municipal de Nacala – Núcleo para a revisão do Plano Director, *Resultados dos seminários de lançamento da Revisão do Plano Director*, 2000. {Análise de temas e prioridades para a revisão do plano director colhidos em seminários de consulta a entidades e personalidades de Nacala. Uma selecção de temas, com índice de prioridades e grelha de intervenientes por tema}.

Conselho Municipal de Nacala – Núcleo para a Revisão do Plano Director, *Fichas de Inquérito Urbano*, 2001/2002. {Fichas e listas de dados levantados para a actualização do Inquérito Urbano no âmbito da Revisão do plano director. Inclui sectores sociais e económicos}.

Conselho Municipal de Nacala – Núcleo para a Revisão do Plano Director, *Síntese das entrevistas a representantes da sociedade civil*, 2001. {Síntese das entrevistas individuais feitas à personalidades de Nacala, incluindo representantes de partidos políticos, agentes económicos do sector formal e informal, líderes religiosos, responsáveis de base (Bairro), directores de empresas e repartições públicas. Dá uma imagem dos problemas, prioridades e propostas apresentadas pelos entrevistados sobre o desenvolvimento da cidade}.

Conselho Municipal de Nacala – Núcleo para a Revisão do Plano Director, *Termos de Referência para a revisão do Plano Director de Nacala*, 2001. {Com base nas consultas realizadas, este documento foi preparado e adoptado pelo Conselho Municipal para servir de guião à revisão do Plano Director da Cidade}.

Conselho Municipal de Nacala & INPF, *Revisão do Plano Director*, Relatório do trabalho conjunto, 1995. {Minutas de encontros sobre a revisão do plano director, incluindo observações de campo e discussões de método e temas. Um trabalho conjunto Conselho Executivo/Instituto Nacional de Planeamento Físico}.

Conselho Municipal de Nacala & PDUIN, *Cadastro simplificado em Nacala*, 1993 (Comunicação ao seminário nacional sobre registo de terrenos promovido pela DINAGECA em 28/29/04).

Conselho Municipal de Nacala, *Código de Posturas Municipais da Cidade de Nacala*, Novembro 1998. {2º Código de Posturas da Cidade de Nacala, preparado pelo Conselho Municipal e aprovado pela Assembleia Municipal e actualmente em vigor, inclui posturas sobre higiene, limpeza, actividades funerárias, vias públicas e trânsito, actividades económicas, cultura e entretenimento, e urbanização}.

GERAP, TEC, VTT e outros, Vários estudos de combate a erosão das bacias de Mocone, Ribaue, Tielela, Triângulo, Nicandavala, s.d. {Estudos técnicos incluindo memórias descritivas e mapas para propor medidas de combate a erosão nas principais bacias hidrográficas da Cidade de Nacala (zona urbana). Guia a implementação de intervenções de combate a erosão desde meados dos anos 80. Incluem importantes indicações sobre política de uso da terra nas zonas sujeitas a erosão}.

INPF, *Resumo do Plano Director de Nacala*, 1985. {Resumo do Plano que foi lido na Assembleia para a sua aprovação. Resume as principais directrizes e dá elementos de faseamento das acções e intervenientes}.

INPF/GERAP, *Plano Director de Nacala*, 1985. {Plano Director preparado entre 1982 e 1984 por uma equipa de consultoria Portuguesa contratada pelo INPF. Contém recomendações sobre a região, directrizes sobre o território da Cidade e indicações detalhadas sobre o núcleo urbano principal e expansão. Aprovado pela Assembleia da Cidade em 1985, inclui uma extensa documentação com projectos de infra-estruturas e planos parciais de urbanização. Prevê a implementação de realojamento de populações fixadas em zonas sujeitas à erosão e a regularização de ocupações em zonas semi-urbanizadas, assim como a viabilização de zonas de expansão}.

INPF/GERAP, *Planos Parciais de Nacala*, s.d. {Plantas e memórias descritivas de zonas de expansão urbana. Fazem parte do conjunto do Plano Director}.

INPF/GERAP, Vários Projectos de infra-estruturas, 1985. {Plantas, cadernos de encargos e medições de projectos de estradas e abastecimento de água para várias áreas da Cidade}.

PDUIN/ Ojanperä, *When people have to move away*. {Relatório da assessora do Projecto, com descrição dos procedimentos, sucessos alcançados e sugestões, na primeira fase do programa de reassentamento}.

PDUIN/ BATTINO Liana, *Relatório sobre zonas de expansão em Nacala*, s.d. {Relatório sobre a situação de ocupação do solo nas zonas de expansão alguns anos após o início da adjudicação, com informação básica socio-económica dos agregados familiares, tipologia de construção e proveniência dos ocupantes}.

PDUIN/ Pangaya, *Relatório sobre o processo de realojamento*, 1992. {Relatório de consultor externo, de análise do processo de realojamento em curso no âmbito do Projecto Integrado de Nacala. Faz constatações, críticas e sugestões para a continuação do trabalho}.

PDUIN/CECN, *Rotina de concessão de terrenos e licenciamento das construções da Cidade de Nacala*, Capão 1992. {Rotina preparada e utilizada para orientar as actividades de licenciamento do uso da terra e das construções na Direcção de Construção e Urbanização, no âmbito de um programa de reorganização do sector de cadastro e licenciamento}.

PDUIN/CECN/ Hugues, *Plano Municipal de Nacala 1998-2003*, s.d. {2º Plano quinquenal de acção do Município de Nacala, com objectivos, actividades e orçamento estimado, organizado por sector de actividade do Conselho. Guia a preparação dos planos anuais de actividades}.

PDUIN/CECN/ Pedoni e Leite, *Nacala – Visão estratégica*, s.d. {Relatório do seminário sobre visão estratégica de desenvolvimento da Cidade, contém um sumário das contribuições dos participantes, organizado por temas}.

PDUIN/CECN/DNA, *Estudo das condições hidro-geológicas da península de Nacala*, 1992. {Um relatório sobre o potencial hídrico da zona de Nacala, destinado a identificar possíveis fontes alternativas de água para os assentamentos humanos na península. Identifica potencial muito moderado para pequenos sistemas locais}.

PDUIN/CMN/FEI, *Relatório Final do Projecto Integrado de Nacala*, 1998. {Resumo das acções empreendidas no âmbito do Projecto Integrado de Nacala de 1990 até 1998, com dados qualitativos e quantitativos sobre as principais frentes de intervenção}.

PDUIN/CMN/SPPF/ ARTUR D., *Relatório sobre Inquérito Urbano da Cidade de Nacala-Porto*, Nampula, 1999.

PDUIN/CMN/SPPF/ ARTUR D., *Relatório sobre Inquérito Urbano da Cidade de Nacala-Porto*, 1999. {Resumo dos dados sectoriais levantados na altura da actualização do inquérito urbano destinado à revisão do Plano Director. Abrange áreas económicas e sociais}.

PDUIN/IUCN, *Mozambique - Nacala Coastal Resource Management Project*, Project proposal, May 1992. {Um relatório e proposta de projecto para gestão das zonas costeiras incluídas no território de Nacala. Contém os primeiros dados de campo e observações qualitativas sobre o potencial das zonas costeiras de Nacala e sua gestão. O projecto não foi implementado}.

PDUIN/MICOA/ RUI M., *Recursos da Terra e Mar do Distrito de Nacala*, Outubro 1997. {Um relatório com recomendações para a gestão de recursos naturais na área de Nacala. Inclui zonas costeiras e rurais da península de Nacala}.

Plano de Urbanização de Nacala Alta, 1962. {O primeiro plano geral de urbanização de Nacala. Previa a urbanização do planalto para fins residenciais, deixando as zonas baixas para as actividades portuárias. Foi implementado como um plano parcial de urbanização na zona alta}.

Vários documentos de urbanização de Nacala dos anos 60 e 70. {Incluem partes do 2º plano geral de urbanização (1965) e planos parciais para células residenciais. Prevêem a urbanização das zonas baixas adjacentes ao Porto}.

7.6. Nacala Cartography

Cartografia diversa da zona urbana e suburbana, 1970 e 1980.

Conselho Municipal de Nacala, *Cartas topográficas da Península de Nacala (1995) na escala 1:50000 parcialmente actualizadas*, versão digitalizada completa (AUTOCAD).

DINAGECA, *Fotografias Aéreas da Cidade de Nacala*, Península de Nacala, Península de Mossuril e Ilha de Moçambique, escala 1/20000, 1992.

DINAGECA, *Fotografias Aéreas da Cidade de Nacala*, zonas urbana e suburbana, escala 1/10000 e ampliações 1/2500, 1982.

DINAGECA, *Fotografias Aéreas da Cidade de Nacala*, zonas urbana e suburbana, escala 1/5000 e ampliações 1/2000, 1991.

DINAGECA, *Levantamentos Aerofotogramétricos da Cidade de Nacala*, escala 1/2000 (zona urbana e suburbana), escala 1/5000 (Cimentos/Naherenque e Controlo/Muxilipo), 1/10000 (zona de Quissimajulo/Relanzapo), 1995.

7.7. Miscellaneous Bibliography

ANDERSON Paul S., *Mapping Land Rights in Mozambique*, in: Photogrammetric Engineering & Remote Sensing, Vol. 66, No. 6, June 2000, pp. 769-775.

Boletim da República – I Série n.º 40, *Lei n.º 19/97 de 1 de Outubro – Lei de Terras*, Imprensa Nacional de Moçambique, República de Moçambique, 1997.

Boletim da República – I Série n.º 48, *Decreto n.º 66/98 de 8 de Dezembro – Regulamento da Lei de Terras*, Imprensa Nacional de Moçambique, República de Moçambique, 1998.

BRUSCHI Sandro, *Planificar as Cidades: Por Que Razão e Para Quem?*, Faculdade de Arquitectura e Planeamento Físico, Universidade Eduardo Mondlane, Maputo, 1998.

COLIN Jeremy, *Water and Sanitation - Program Africa Region* (wsp AF), World Bank PS Press Services Pv Ltd, 2002. {Faz a resenha do Programa de Saneamento a baixo custo na perspectiva da parceria internacional que visa ajudar os pobres a terem acesso continuo a serviços melhorados de abastecimento de água e de saneamento básico}.

Direcção nacional de Estatística - Conselho Coordenador do Recenseamento, *Fluxos Migratórios da População*, Volume 3, Análise Nacional, 1º Recenseamento Geral da População de 1980. {Apresenta o panorama demográfico e os principais fluxos migratórios do país, quando comparados com a ocupação e força de trabalho, bem como em relação à habitação e condições de vida}.

Direcção Nacional de Estatística – Conselho Coordenador do Recenseamento, *Habitação e condições de vida da população*, Volume 6 TOMO 1, Análise Nacional, 1º Recenseamento Geral da População de 1980. {Apresenta as características gerais da Habitação passando pelos grupos sociais, número médio de pessoas e outras condições de vida segundo grupos sociais}.

Direcção Nacional de Habitação, *Projecto de Saneamento urbano*, 1978. {Um programa de Investigação e Demonstração de sistemas biológicos de saneamento para as áreas urbanas não planificadas de Moçambique}.

Faculdade de Arquitectura e Planeamento Físico, Universidade Eduardo Mondlane, Curso de Legislação e Gestão da Cidade e do Território, *Colectânea de Legislação*, Maputo, Setembro 2003.

FARIA F., CHICHAVA A., *Descentralização e cooperação descentralizada em Moçambique*, 1999. (Document de réflexion ECDPM 12). Maastricht: ECDPM. {O documento explora as respostas estratégicas que a cooperação União Europeia - Moçambique poderia dar aos desafios da descentralização e apresenta uma reflexão sobre os apoios à descentralização e a promoção de novas abordagens que permitam uma maior participação, envolvimento e capacitação de todos os actores responsáveis ou envolvidos no processo}.

Grupo de Trabalho Inter-sectorial URBE, *Seminário de Estratégias de Desenvolvimento Urbano e Habitacional 23 à 26 de Novembro de 1992*, Dossier Final, Maputo, Janeiro 1993. {Apresenta o diagnóstico, as políticas e as estratégias para o sector. Resume toda a temática do Seminário apresentando os aspectos institucionais, económicos, financeiros, bem como a síntese dos aspectos críticos e sugestões de estratégias de intervenção para o melhoramento e desenvolvimento urbano}.

<http://www.amigos-de-mocambique.org/sem/PALOP-Lucas.pdf>

<http://www.saplanners.org.za/SAPC/papers/Pitt-52.pdf>

http://www.sarpn.org.za/documents/d0000002/p18_p_parpa.pdf, [Set. 20-2004]

INPF, Cadernos para o uso dos terrenos urbanos.

INPF, Documentação da 1ª Reunião Nacional de Planeamento Urbano, 1982.

MAE – Direcção Nacional de Desenvolvimento Autárquico, *Folha Informativa dos Municípios*, Maputo, Junho de 2002.

MAE-DNAL/PROL, IBAM, *Planeamento e gestão urbana em Moçambique – Bases para a definição de procedimentos e regulamentos*.

MEDEIROS Eduardo, *O Desenvolvimento em Moçambique*, Departamento de Sociologia e Núcleo de Estudos sobre África do Centro Interdisciplinar de História, Cultura e Sociedades, Universidade de Évora, s.d. {Analisa a perspectiva de desenvolvimento dos centros urbanos perspectivando as áreas suburbanas}.

MICOA/DINAPOT, *Requalificação de Assentamentos Informais e Redução da Vulnerabilidade em Áreas Propensas à Cheias e/ou Inundações, ideias e sugestões para a implementação de um plano de uso da terra com componente ambiental e de planos de gestão de calamidades e de contingência, Malanga (Maputo), 3º Bairro (Chókwè), Manhaua (Quelimane) e Inhartanda (Tete)*, Programa Cities Alliance – UN-HABITAT, Maputo, Julho 2004.

Ministério das Obras Públicas e Habitação – Direcção Nacional de Águas, *Primeiro Programa Nacional de Desenvolvimento do Sector de Águas*, Consultoria para a Preparação dos planos estratégicos de saneamento para 7 municípios, Maputo, 2004.

NEGRÃO José, *Para que o PARPA resulte*, 2002.[em: www]

República de Moçambique, *Plano de Reconstrução Nacional 1994-96*. {Procede ao enquadramento macro-económico da reconstrução nacional; desenvolve um plano de reconstrução na perspectiva de recuperação e restauração da população, através de programas de reassentamento e reintegração, avaliando em simultâneo a infra-estruturação e a promoção das iniciativas locais para a geração de emprego, promoção de empresas, coordenação, implementação e acompanhamento do referido plano}.

The Evolution of The Mozambican Habitat: The question of the physical planning, Maputo, Setembro de 1980. {Caracteriza o Habitat rural e urbano no período da independência nacional; apresenta os principais problemas das cidades e faz uma perspectiva de intervenção no reordenamento do espaço urbano na óptica da planificação socialista}.

TRIBILLION J. F., *Villes africaines - Nouveau manuel d'aménagement foncier*, ADEF, Paris, 1993.

UNDP/UNCHS, *Programa Nacional de Desenvolvimento Urbano e Habitacional: Componente de Reforço Institucional e Capacitação*, Projecto MOZ/93/020, 1993. {O Programa descreve a necessidade de intervenção na área de capacitação institucional para os sectores de desenvolvimento urbano e habitação visando: treinar pessoal nas áreas técnicas de gestão e produção de informação actualizada e acessível para servir de base para a formulação de políticas e concepção de projectos; refere-se à fraqueza institucional como um dos entraves para a implementação de um Programa de Desenvolvimento Urbano e Habitacional; inventaria e caracteriza o Sector Público, o Sector Não Governamental e o Sector Comunitário; Levanta a questão da disponibilidade e da gestão da informação e de dados sobre as áreas urbanas e habitação; Propõe uma estratégia de reforço institucional e capacitação; Descreve o contexto de intervenção do Programa Nacional de Desenvolvimento Urbano e Habitacional elaborado pelo Governo de Moçambique com a assistência técnica do PNUD/HABITAT no ano de 1993}.

UN-HABITAT, *Estudo do Perfil Regional do Sector Urbano em Moçambique (RUSPS)*, Fevereiro 2005.

UN-HABITAT, *Pro Poor Land Management – Integrating informal settlements into city planning approaches*, Nairobi, 2004. {Escrito por Clarissa Augustinus, Ulrik Westman, Sylvie Lacroux and Absolute Proof., esta publicação foi concebida com o objectivo de ajudar todos os Stakeholders activamente envolvidos na Campaign for Secure Tenure lançada em 1999 pelas Nações Unidas, providenciando-lhes informações necessárias para a implementação de estratégias nacionais e para o desenho de planos de

acções específicas para diversas categorias. O livro foca diversos aspectos importantes no âmbito da gestão dos assentamentos informais, tais como o papel dos *stakeholders* em acções de *slum upgrading*, e ainda a identificação das principais acções que se deve tomar em conta seja num plano nacional de acções seja num plano local}.

UNIDO, *Papel dos municípios no desenvolvimento empresarial*, 2002. Ver também: http://www.unido.org/file-storage/download/?file_id=7672.pdf [Set. 20-2004].