

KOROGOCHO STREETSCAPES:

documenting the role and potentials of streets in citywide slum upgrading

UN  **HABITAT**
FOR A BETTER URBAN FUTURE

KOROGOCHO STREETSCAPES: Documenting the role and potentials of streets in citywide slum upgrading

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EXECUTIVE SUMMARY

This report will explore the role and potentials of streets in slum upgrading, using the street upgrading project in the Korogocho slum in Nairobi, Kenya, as a case study. It focuses on the experiences and perceptions of the residents in Korogocho, and the changes ‘on the ground’.

The study argues that successful urban places are based predominately on streets and the connected street life. Streets serve as democratic, open public space and as platforms for economic and social development. Therefore, streets play a fundamental role for the public life in cities and particularly in slums, where open space is scarce.

The key findings of the study reveal that the streets have boosted microeconomic activity, which has increased the number of jobs as well as the available goods in the area. The connectivity to the larger urban fabric is improved,

which facilitates the flow within and to Korogocho. As part of the larger number of people dwelling in the street, the perception of safety has increased. The level of participation highly affects the resident’s attachment to the streets and communication is crucial to sensitize the community to the changes carried by the project. Overall, the project has brought positive aspects to the community and improved the life of the residents.

The publication ends by providing a description of key lessons, and a list of recommendations for planning, designing and maintaining streets in slum upgrading programmes and projects.

The publication forms part of an innovative shift promoted by UN-Habitat towards city-wide participatory slum upgrading where streets are used as the entry point.





FOREWORD

In Swahili, the name Korogocho means crowded, shoulder to shoulder. We all have seen images of a slum and the reduced public space citizens living there can share. Each new street means an increase of micro-economic activity, safety and security, and mobility. The new streets brought new and fresh connections with the surrounding urban fabric.

As a former mayor, I have already a strong conviction on the need to reassert urban design and planning as two key development drivers of contemporary city building. By laying streets and setting out public space in slums, you delineate public and private space and begin an urban transformation and regeneration that encourages prosperous cities.

When I speak of streets I do not mean simply roads for cars. I am talking about streets as multi-functional spaces which contribute to creating a safe, lively, and an economically productive public realm.

As the research carried in this publication shows, streets are an opportune entry point for successful slum upgrading for three reasons:

First, the planning of streets and public space (as components of overall settlement master planning) provides an accessible and positive forum for community participation. To improve the conditions of slums it is crucial to consult with community so that residents can participate in the planning, design, implementation, and maintenance of interventions.

This is fundamental for creating sustainable and responsive interventions.

Second, urban planning and the laying of streets can help generate wealth. Micro-enterprise activity springs up on street corners, new services and products reach slum households and new jobs are created.

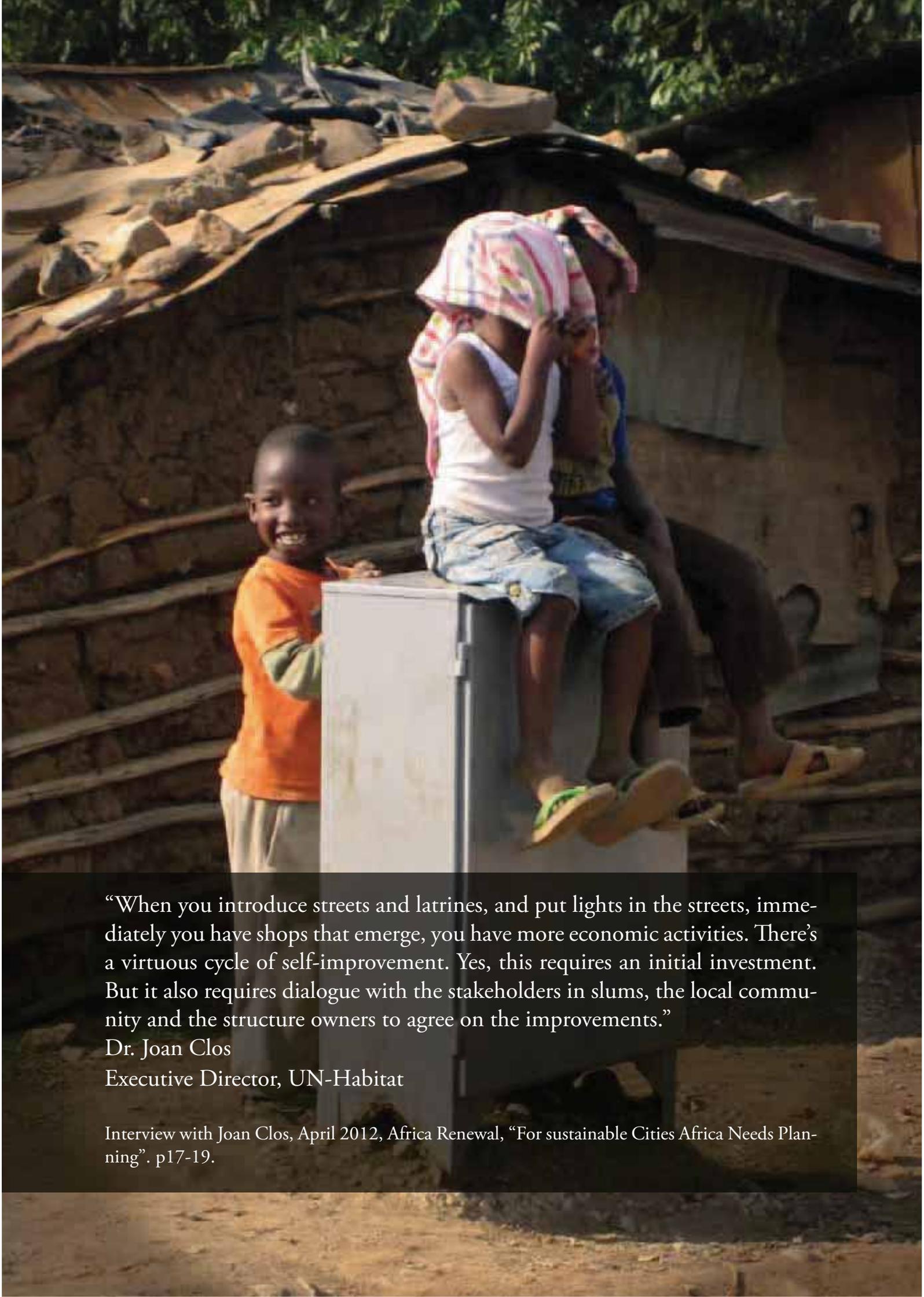
Third, planning street upgrades or creating new streets in all slums in a city helps us 'go to scale' and connect the slums with the wider urban fabric of the city.

What is needed – and what UN-Habitat is advocating for – is a pro-active approach to creating lively and economically productive public spaces and streets in slums. This publication showcases our emerging principles regarding the importance of streets and community participation in slum upgrading. I sincerely thank all those who worked on this for their efforts, critical insight and working with me on a new approach to improving the living conditions of all urban residents and addressing the challenge of slums.

A handwritten signature in black ink, appearing to read 'Joan Clos', written over a horizontal line.

Dr. Joan Clos
Under-Secretary-General of the United Nations
Executive Director, UN-Habitat





“When you introduce streets and latrines, and put lights in the streets, immediately you have shops that emerge, you have more economic activities. There’s a virtuous cycle of self-improvement. Yes, this requires an initial investment. But it also requires dialogue with the stakeholders in slums, the local community and the structure owners to agree on the improvements.”

Dr. Joan Clos

Executive Director, UN-Habitat

Interview with Joan Clos, April 2012, Africa Renewal, “For sustainable Cities Africa Needs Planning”. p17-19.

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ACRONYMS

CBO	Community Based Organization
CCN	City Council of Nairobi
GSGN	Good School Good Neighbourhood
KENSUP	Kenya Slum Upgrading Programme
KIDDP	Kenya Italy Debt for Development Programme
KOWA	Korogocho Owners Welfare Association
KSUP	Korogocho Slum Upgrading Programme
MOLG	Ministry of Local Government
NGO	Non-governmental Organization
PMU	Programme Management Unit
RC	Residents Committee - a group of 48 members elected to represent all villages in Korogocho plus the chief and the area councillor.
UN-Habitat	United Nations Human Settlements Programme

KEY CONCEPTS

Appropriation	To take possession of space by being or dwelling in it.
Community	A group of people containing a various number of different stake holders, living in the same locality and sharing the same leadership under the influence of a complex web of power dynamics.
Connectivity	A street's capability of being connected to other streets.
Edge zone	The area at the edge of the road reserve.
Flow	Continuity of movements and transactions.
Informality	Not being in accord with prescribed regulations or forms; unofficial: not of a formal or official nature.

Land tenure	Tenure is the relationship, whether legally or customarily defined, among people as individuals or groups, with respect to land and associated natural resources. Rules of tenure define how property rights in land are to be allocated within societies. Land tenure systems determine who can use what resources for how long, and under what conditions.
Microeconomics	Study of the economic behaviour of individual units of an economy (such as a person, household, firm, or industry) and not of the aggregate economy (which is the domain of macroeconomics). Microeconomics is primarily concerned with the factors that affect individual economic choices, the effect of changes in these factors on the individual decision makers, how their choices are coordinated by markets, and how prices and demand are determined in individual markets.
Participation	The involvement of people and organizations in making decisions and taking action. In this context participation has been interpreted in two broad ways. Firstly, as a means to improve development activities (instrumental participation, making the interventions more sustainable by involving the users or as an end in itself). Secondly, to ensure people's influencing of their own situation acts as empowerment (transformational participation).
Public realm	Public sphere or domain that incorporates all areas to which the public has open access; parks, streetscapes, coastal areas and public places.
Road reserve	The total open space that is reserved for the street; the road reserve includes the carriage ways, pavements and edge zones.
Safety	The perception of being safe, experiencing freedom of residing in an area without feeling vulnerable to harm.
Security	The quality or state of being secure as freedom from danger
Settlement	The physical environment and the gathering of dwellers within it
Slum	United Nations' operational definition of a slum combines the following five characteristics: <ul style="list-style-type: none"> • Inadequate access to safe water • Inadequate access to sanitation and infrastructure • Poor structural quality of housing • Overcrowding • Insecure residential status
Resilience	The ability to recover from or adjust easily to misfortune or change; robustness against shocks.

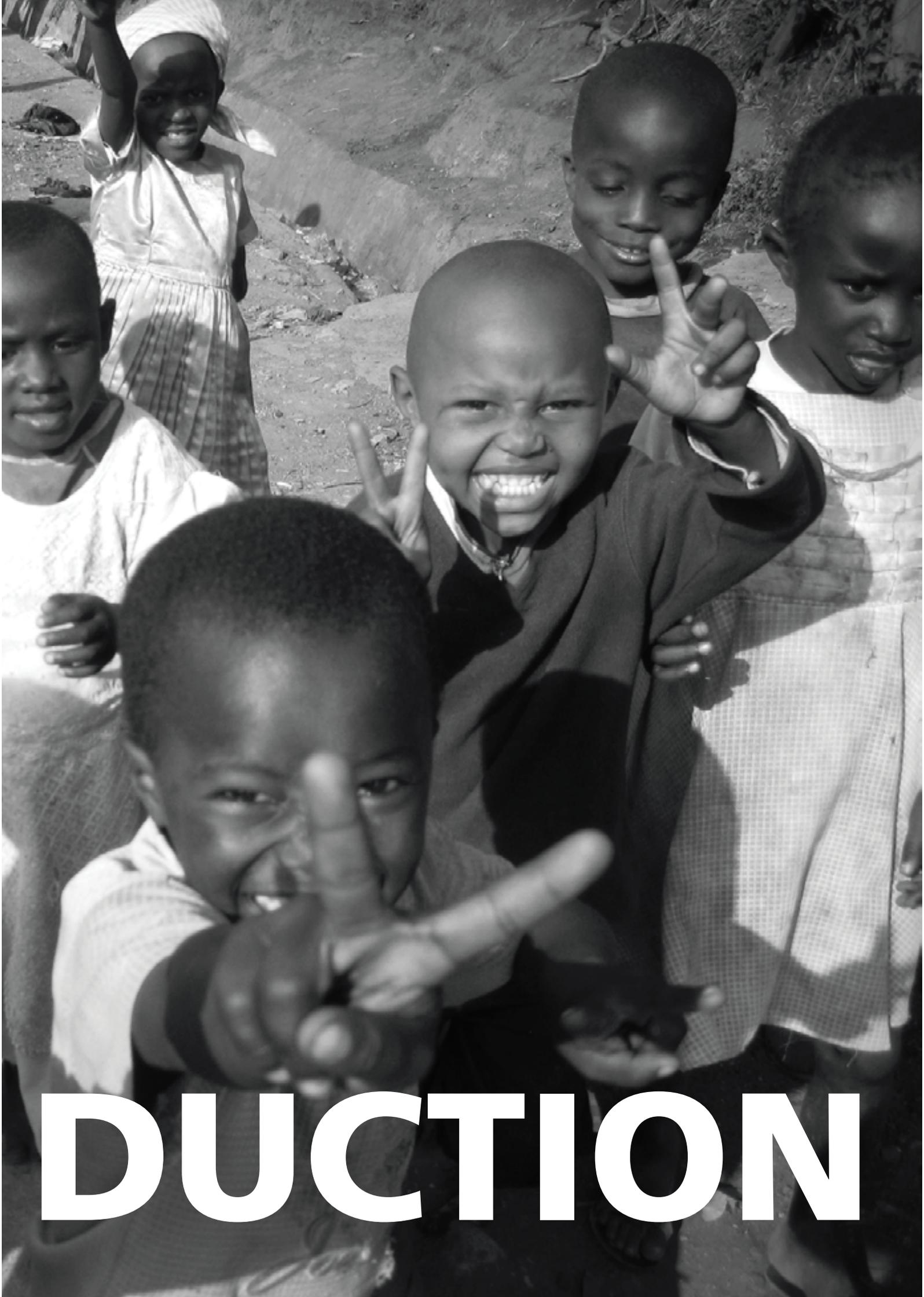


“Streets are undoubtedly the most important elements in a city’s public realm, the network of spaces and corners where the public are free to go, to meet and gather, and simply to watch one and other. In fact, the public realm in the city performs many functions, not only by providing meeting places but also in (...) representing meaning and identity.”

(Montgomery, J. (1998). Making a city: Urbanity, vitality and urban design. In: Journal of Urban Design, Vol. 3, No.1, 1998. p. 110)



01: INTRO



DUCTION

BACKGROUND

“Streets are undoubtedly the most important elements in a city’s public realm, the network of spaces and corners where the public are free to go, to meet and gather, and simply to watch one and other. In fact, the public realm in the city performs many functions, not only by providing meeting places but also in (...) representing meaning and identity.” (Montgomery, J. (1998). *Making a city: Urbanity, vitality and urban design*. In: *Journal of Urban Design*, Vol. 3, No.1, 1998. p. 110)

Streets have historically served as through passage and as an important public space. During the motor era roads built for the fast movement of traffic replaced dynamic streets. This vast road-driven transformation, however, has proven inadequate for creating new development that holds identity and vitality.¹

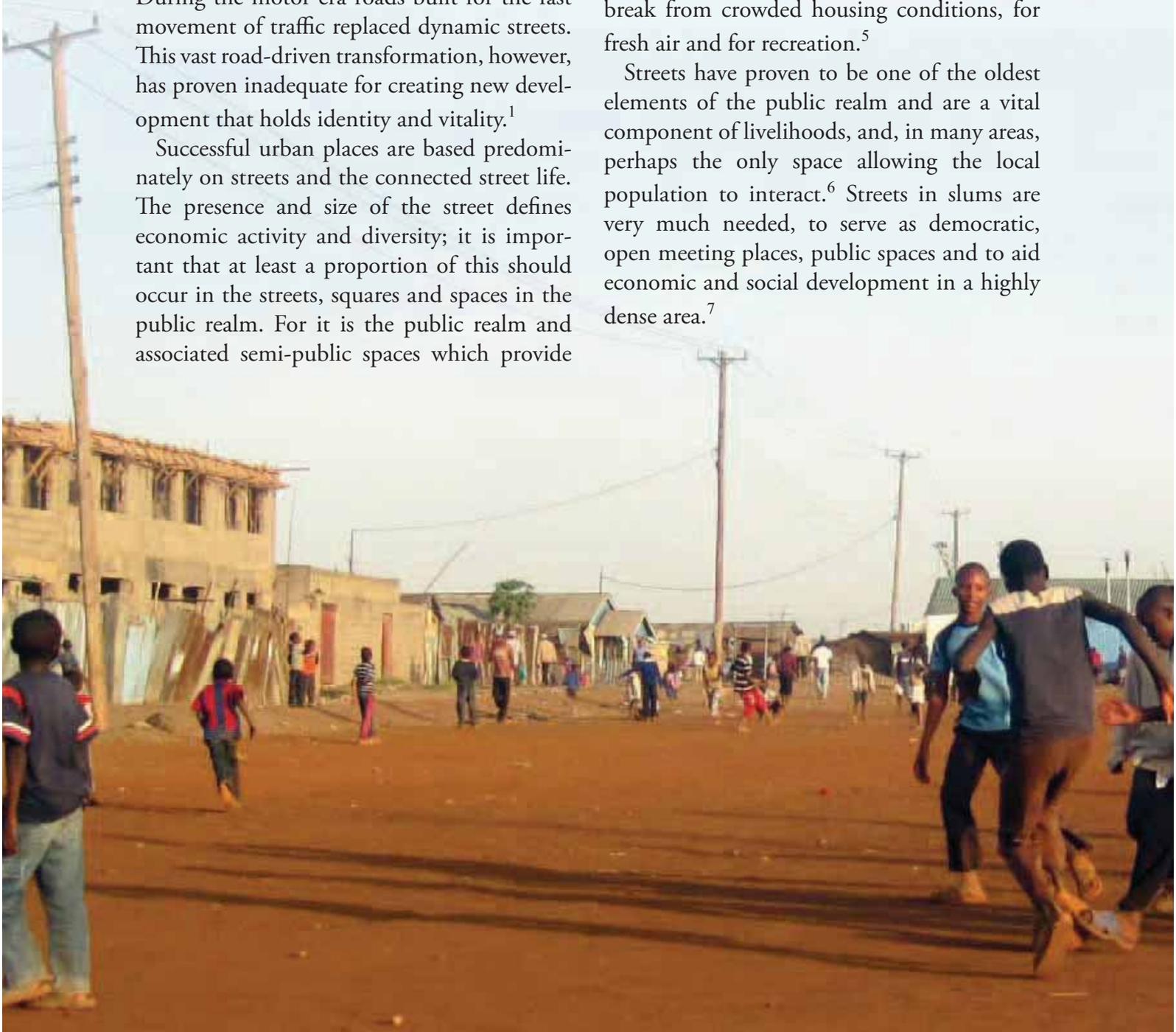
Successful urban places are based predominantly on streets and the connected street life. The presence and size of the street defines economic activity and diversity; it is important that at least a proportion of this should occur in the streets, squares and spaces in the public realm. For it is the public realm and associated semi-public spaces which provide

the terrain for social interaction and a significant part of a city’s transaction base.²

Streets serve both the mobility and the social functions of a city. Mobility ensures residents to travel, allows them to interact and perform business. Socially, streets make cities liveable; they foster social and economic growth.³

Today we are seeing a rapid and uncontrolled growth in urban slums that are increasingly putting pressure on land and public spaces, which are converted into private use.⁴ Often the need for public space in slums is not considered but it is particularly important for these settings. Open space is a much-needed break from crowded housing conditions, for fresh air and for recreation.⁵

Streets have proven to be one of the oldest elements of the public realm and are a vital component of livelihoods, and, in many areas, perhaps the only space allowing the local population to interact.⁶ Streets in slums are very much needed, to serve as democratic, open meeting places, public spaces and to aid economic and social development in a highly dense area.⁷



STREETSCAPES IN KOROGOCHO

This study explores the role of streets in slum upgrading. It focuses on the Korogocho slum in Nairobi, Kenya, which is used as a case study to document the outcomes of installing a network of streets. The study pays particular emphasis to documenting the effects of the streets ‘on the ground’, that is, for the residents and daily life of Korogocho slum.

It must be emphasized that this study is not an *evaluation* of the streets, which would require more sophisticated tools and more resources. Instead, this study is underpinned by a quest to understand the effects of the streets through documentation. It qualitatively explores the key opportunities, challenges and issues surrounding an approach to slum upgrading where the street (here, broadly considered synonymous with public space) is used as an entry point.

According to the 2009 census, the three locations that constitute Korogocho slum is home to some 42 000 people,⁸ including the village of Ngomongo, and is Nairobi’s fourth-largest slum. Like all slum settlements in Nairobi, it is home to a large poor population with no access to minimum services.⁹

Open spaces in Korogocho are very few, thus limiting recreation and forms of social and economic opportunities for the residents.¹⁰

Korogocho has, however, recently undergone major physical development. Three interventions have been implemented: a footbridge, a community office and a network of streets through the area. The planning process of the Korogocho Slum Upgrading Programme (KSUP) has examined the possibilities of using integrated participatory planning steps as a resilient slum upgrading method.¹¹

STUDY PURPOSE

The study will document the effects of KSUP’s street upgrading project in Korogocho to understand the potential of streets in a slum upgrading. Placed in relation to the spatial and physical dimensions of the street intervention, the study documents the impact of the streets in terms of both the process and outcomes. Based on the results, the study aims to draw key lessons and formulate recommendations that can be utilized in other slum upgrading projects and programmes.



THE STUDY AIMED TO:

- Understand the activities, uses, actions, functions, actors and perceptions that are associated with streets in slums in general and Korogocho in particular
- Understand how the dynamics of the streetscape have changed through the Korogocho street upgrading project, and how this has affected the livelihood of the residents
- Identify key issues and indicators associated with the street upgrading that can generate recommendations to guide the design and implementation of future street upgrading projects

STUDY APPROACH

In the documentation, the upgraded streets have been examined in terms of place, with the belief that streets hold important value to the community as places. The starting point of the study has been the community's experienced change implied by the streets. In this case the 'community' consists of the residents that dwell in the public space, *the street*, hence giving it meaning and attributes of place. Therefore, theory of place, and consequently the residents' perceptions, will set the frames for the study and are outlined below.

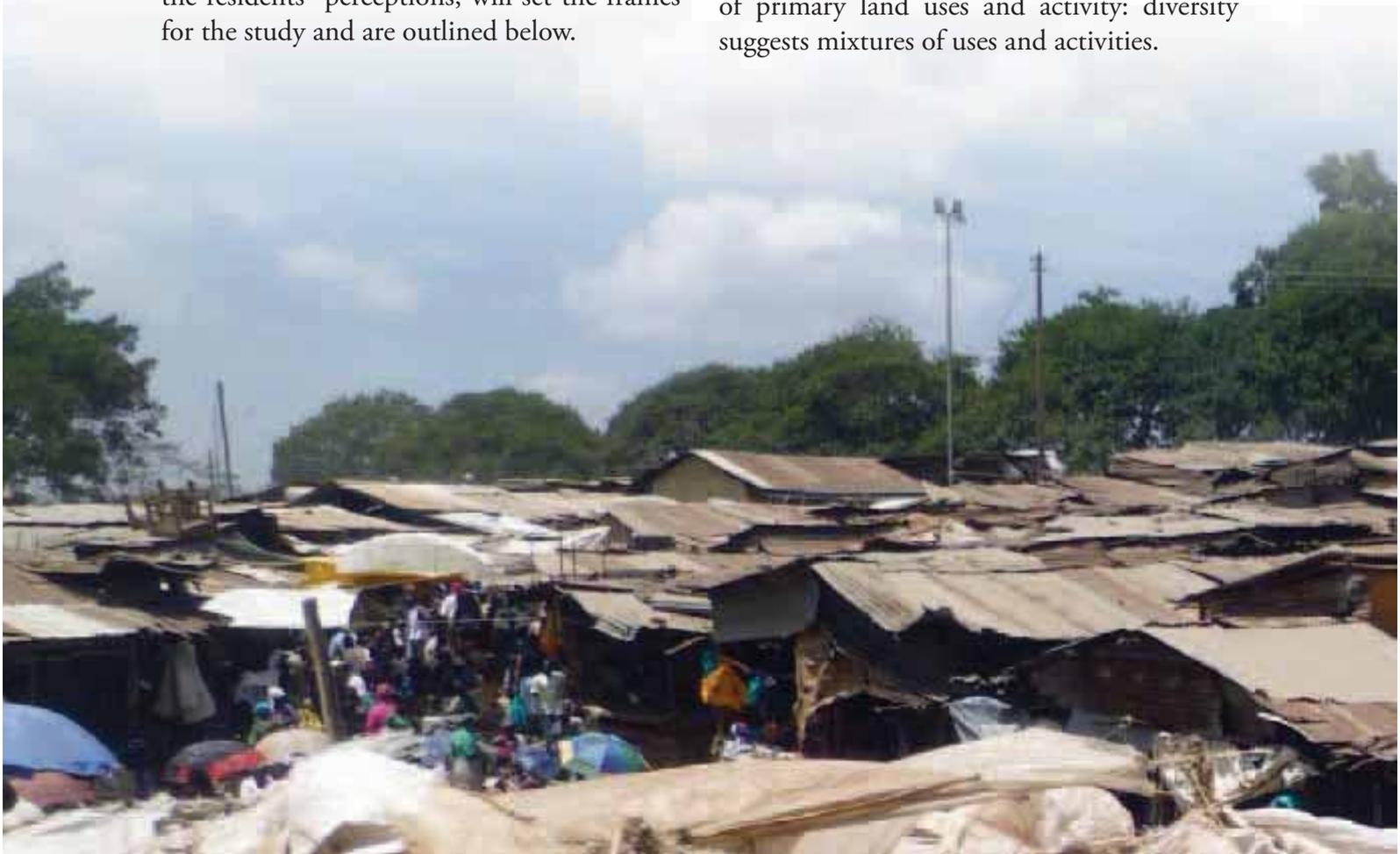
The notion of place combines quality in three essential concepts: physical space (form), the experienced space (conception) and the activity within the space. Overlaid, the concepts define the components of a sense of place and the relationship between them.

Indicators were found revealing tendencies within each concept, and thus knowledge about the role of the streets in an overall upgrading process have been gained. This has served as a guideline in the construction of the *conceptual framework* used in the assessment of the streets and to understand the influence on the community.¹²

CONCEPTUAL FRAMEWORK

The conceptual framework can be structured into the three concepts, that when put together create a sense of place¹³:

Activity: The activities associated with a *place* build upon **vitality** and **diversity**. *Vitality* of a place refers to the number of people in and around the street during different times of the day and night: the presence of an active street life and generally the extent to which a place feels alive or lively. Vitality can only be achieved where there is a complex *diversity* of primary land uses and activity: diversity suggests mixtures of uses and activities.



Conception: Conception is a combination of identity and how a *place* is perceived. To individuals, the conception of a place is therefore their set of feelings and impressions about that place. The conception reflects cultural and individual values and beliefs.

Form: Activity and conception interrelate with form to generate sense of *place*. A city's form can be designed to stimulate activity, a positive conception and therefore a strong sense of place: the form describes the physical shape it takes to support the activities it desires.

From these concepts it can be understood how activity and conception interrelate with form to create a sense of place. **Conception** is established from the built **form** and the found **activities**. Overlaid and put together, the three categories are fundamental components of a place and will provide the basis for a holistic understanding of the dynamics associated with the streets.

To understand the three concepts in the context of Korogocho and how the streets have affected the residents, they have been assigned different *indicators* to enable the revealing of tendencies. The study has been conducted with a heuristic method, refining and adjusting the indicators as the study continues.

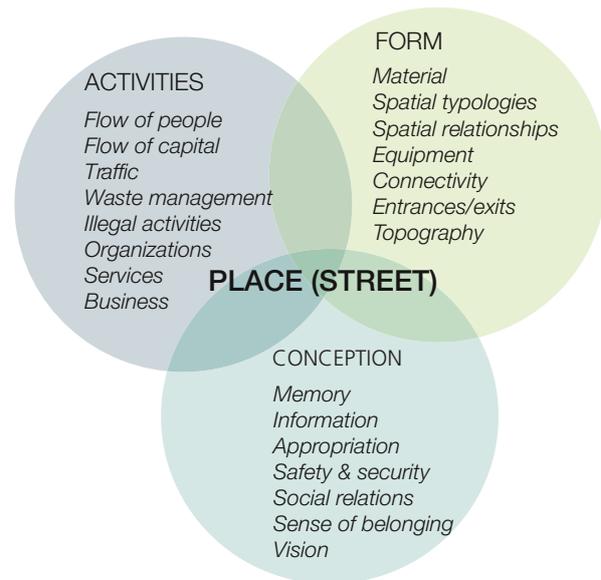
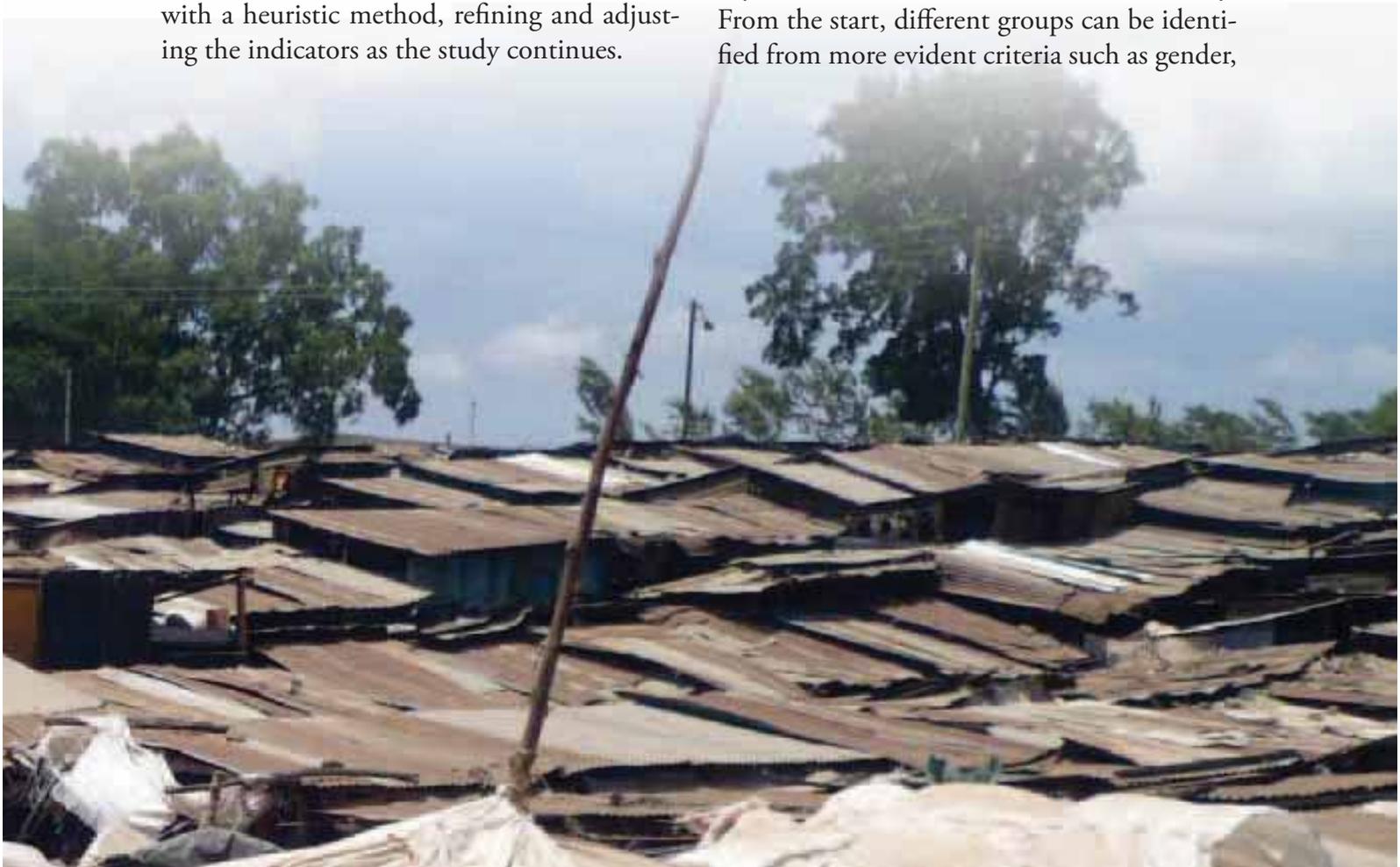


Figure 1. Conceptual Framework

TARGET GROUPS

All groups in the community relate to place, in this case the streets, as co-creators in some way.¹⁴ How different groups use, involve and appropriate place can tell a lot about the social structures and power relations in the community.¹⁵

In order to understand the impacts of the streets fully, it has been important to identify key actors and stakeholders in the community. From the start, different groups can be identified from more evident criteria such as gender,



age, ethnicity and religion and later by occupation or trade followed by location in their settlement.¹⁶ By using the concepts of *activity, form* and *conception* as a framework and simultaneously investigating and comparing how different target groups relate to them, a broad view of the impacts in the community was found.

Particular attention was given to vendors, women, children and youths. Children and youths are the future of the area and their needs are often forgotten in the planning process. Women are also often underrepresented in participatory development¹⁷, even though they have an important role in the everyday life. They act as the caretaker for the family and thereby have certain needs that might have been changed by the construction of the new streets. Women are also often targets for criminals and their fears are supported by statistics on victimization. Vendors play an important role in the public space associated with the streets, as a place of livelihood. A change in this structure may have created an impact to the microeconomics that often is of much value for development in slums.¹⁸

TOOLS

In order to document the impacts of the streets and draw conclusions, three main tools have been used to identify indicators; *observation, dialogue* and a *questionnaire survey*. The use of three different tools has enabled comparison and triangulation of the indicators and thus the tendencies and outcomes of the study. Triangulation is valuable when exploring a problem in a comprehensive manner.¹⁹

STRUCTURE OF THE PUBLICATION

The publication consists of six chapters:

Chapter 1: An Introduction to the structure of the publication and methods of the investigation.

Chapter 2: The Urban Challenge gives a background of urban growth and its impact on slum formation. It studies the Nairobi case in general and²⁰ the Korogocho slum in particular.

It provides information concerning slums and previous slum upgrading programmes, leading to a discussion concerning urbanization and globalization. It ends with a description of the Korogocho Slum Upgrading Programme and the key issues that informed the process. The frames for the field study are set through the theoretical background presented in this section.

Chapter 3: The Role of Streets gives an overview of streets in human settlements in general and streets in slum settings in particular. It discusses the importance of streets, not only as a physical construct improving physical accessibility but also their vital role as public space. This then leads to a description of the Korogocho street upgrading project.

Chapter 4: Field Study provides the results and analyses of the new dynamics connected with the streets in Korogocho. This will guide the recommendations and discussions in the last two parts of the publication.

Chapter 5: Main Findings and Key Lessons summarizes the findings from the field study and points out strengths and weaknesses of the project and its process.²¹

Chapter 6: Recommendations transforms the most important changes to a number of practical recommendations and addresses key issues to consider for future street upgrading projects.

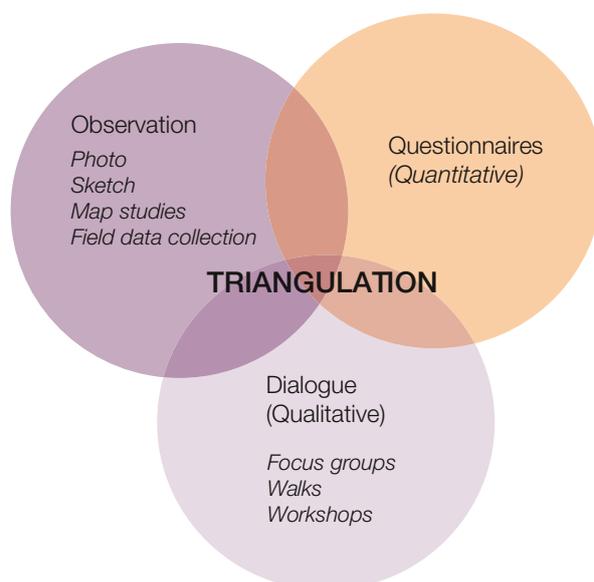
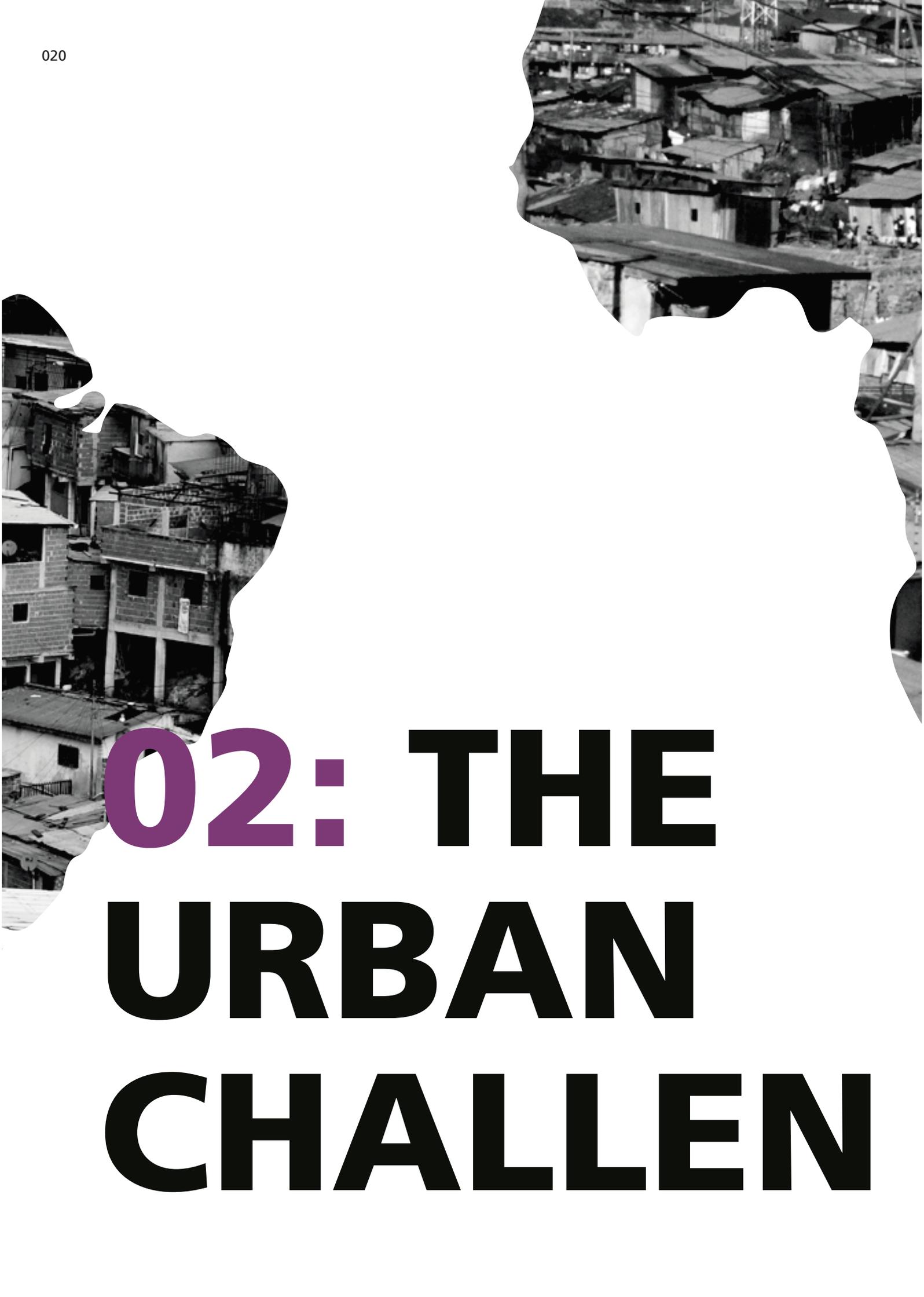


Figure 2. Triangulation

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02: THE URBAN CHALLENGE



GE

“Cities (...) are currently growing by a million babies and migrants each week.”

Davis, M. (2007) *Planet of Slums*. London: Verso.



URBANIZATION AND SLUMS

For the first time in history there are now more urban dwellers than rural residents. Urban places, towns and cities are of vital importance for the distribution of population within countries.¹ Cities are the engines of growth in the developing world and, due to the current level of urbanization, the numbers of urban dwellers are destined to increase.²

Urbanization at the global level is a relatively recent phenomenon. At the end of the 19th Century the extent of world urbanization was limited; less than 3 per cent of the world's population was living in towns and cities. With a changing global urban pattern consisting of *urbanization* and *urban growth*, it is estimated that, by 2025, almost 60 per cent of the population will live in towns and cities.³

Urbanization describes the process of growth in the proportion of people living in urban areas while *urban growth* refers to the proportionate growth of urban areas themselves.⁴ The fastest urbanizing countries at present are those in Africa. African cities have gone through major changes since most countries gained formal independence in the early 1960s. They have grown in size due to rural-urban migration and the lack of urban services and infrastructure is the result of the mismatch between economic and urban growth. In most cases economic growth has not matched population growth.⁵ Global urbanization has so far resulted in close to one billion people living in urban areas and in slums and settlements without adequate shelter.⁶



...Kenya continues to face the vast challenges of urbanization and certainly, the main issue is how to facilitate an enabling environment to increase the provision of adequate shelter, employment, and basic urban services to the slum dwellers...



KENYA

As a result of demographic, economic and political realities many Kenyan cities are facing critical challenges. Perhaps the most important is the ongoing rapid urbanization. People move to Kenya's cities in search of employment and other opportunities than urban areas offer.⁷ Kenya's urban population is at present 40 per cent of the total population of 40.5 million. Kenya's slums have grown at an unprecedented rate, and today more than 70 per cent of the urbanites live in slums.

The prevalence of slums in Kenya is due to a combination of rural-urban migration, increasing urban poverty and inequality, high cost of living, non-transparent land allocation systems, land grabbing and, most importantly, insufficient supply of new affordable low-income housing.⁸ The causes of rural-urban

migration in Kenya are mainly economic factors such as high levels of unemployment⁹, though urbanization has been taking place without the necessary corresponding economic development, industrialization or increased agricultural growth.¹⁰

After Kenya's independence from Britain in 1963 there was a considerable migration of inhabitants from the rural areas to the urban, and Nairobi, as the capital city, received the largest group. With few other housing alternatives, the government implicitly permitted the migrants who could not find accommodation to put up shacks in the urban centres and squatter settlements emerged.

Slums currently account for a substantial proportion of the settlements in Kenya.¹¹ The Urban Regulatory Framework fails to meet

the needs of the slum dwellers that live in the rapidly growing urban centres of Kenya. Consequently, the urban poor have been unable to comply with existing planning standards, regulations and administrative systems.¹² The inadequate policy framework has been a hindrance to the urban poor in their efforts to improve their physical properties and has instead resulted in rapid expansion and densification of slums.¹³

The issue of insecure land tenure has been, and still is, the primary key constraint in improving conditions in slum settlements and has resulted in structure owners building semi-permanent structures for rent, without providing adequate facilities for their tenants and operating completely outside the formal property system.¹⁴ The government considered the formations of slums undesirable and on and off, from the late 1960s to the late 1990s, official government policy was to demolish slums even though a large part of the urban population had no other means of obtaining housing.¹⁵ These demolitions proved unsuccessful as demolition of one settlement resulted in the dwellers moving elsewhere to start new ones.¹⁶

Today, Kenya continues to face the vast challenges of urbanization and the main issue is how to facilitate an enabling environment to increase the provision of adequate shelter, employment and basic urban services to the slum dwellers.¹⁷ The Government of Kenya is now acknowledging the existence of slums and addressing their conditions through upgrading. It is now vital to find sustainable strategies to face the urban growth.¹⁸

NAIROBI

Since its origin Nairobi has been a strictly divided city and has a long history of marginalization and inequity. Slums have existed there since colonial times.¹⁹ Nairobi was founded in June 1899 by the British colonial explorers as a trading centre as a result of the construction of the Kenya-Uganda Railway.

The divisions between the different ethnic groups - Europeans, Asians and Africans - started with the zoning of residential areas, which were the result of the 1948 Colonial Master Plan. The plan defined zoned residential areas according to racial segregation.²⁰ The European residential area was situated west of the city centre. Asians were zoned to Parklands, northwest of the city centre, and Africans were exclusively restricted to areas east of the city centre in what came to be known as "Eastland".²¹

Most of the slums that exist in Nairobi today were established after independence in 1963 mainly being located in the Eastern part of the city. With the high rural-urban migration, and with no restricted movement into the city after independence, which was not accompanied with sufficient supply of low-income housing, there has been a significant growth of slums.²²

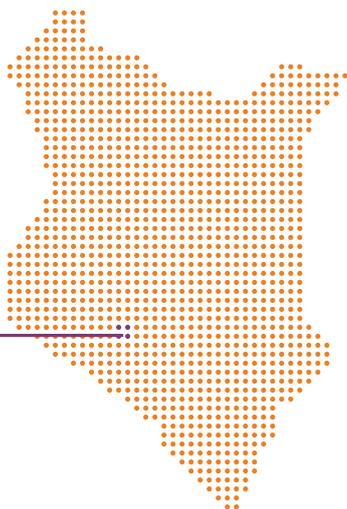
The rate of urbanization and slum growth has been high: 70 per cent of the population in Nairobi lives in slums that occupy only 5 per cent of the total land area. The growth of the slums is alarming and the number of slum dwellers is expected to double within the next 10 years.²³ Nairobi is a two-faced city, presenting a modern front to the world with

...70 % of the population in Nairobi lives in slums that occupy only 5 % of the total land area...

a growing number of its people living in the backyard. One side is characterized by formality and the other by informality.²⁴

As Kenya's capital Nairobi is considered by many to be a successful international city and a gateway to East Africa,²⁵ but the reality for most of the city's residents is very different. The housing conditions remain poor and are some of the worst in the world.

The vast majority of Nairobi's slum dwellers are tenants and lack security of tenure.²⁶ The majority of the slums in Nairobi are let on a room-to-room basis and most of the households occupy single rooms. The rents are high despite poor quality as Nairobi's slums provide low-quality high-cost shelter for low-income residents.²⁷ Several studies indicate that 56 per cent to 80 per cent of the slum households rent from private-sector landlords who, in the past, often had the political connections that helped them gain and protect their investments.²⁸





KOROGOCHO

Korogocho is the fourth most populous slum in Nairobi, estimated to house some 42 000 inhabitants.²⁹ Korogocho extends over 50 hectares and is mostly located on government-owned land, with smaller pockets of private land. It is located roughly 11 km from the central business district in the Eastern part of the city.

High densities, congestion and high unemployment characterize the area. A scarcity of accessible and potable water remains one of the most urgent problems in Korogocho, in addition to inadequate or absent infrastructure, education, electricity and community space for people. Korogocho consists of eight villages: Grogan A, Grogan B, Korogocho A, Korogocho B, Highridge, Gitathuru, Kisumu Ndogo and Nyayo.³⁰

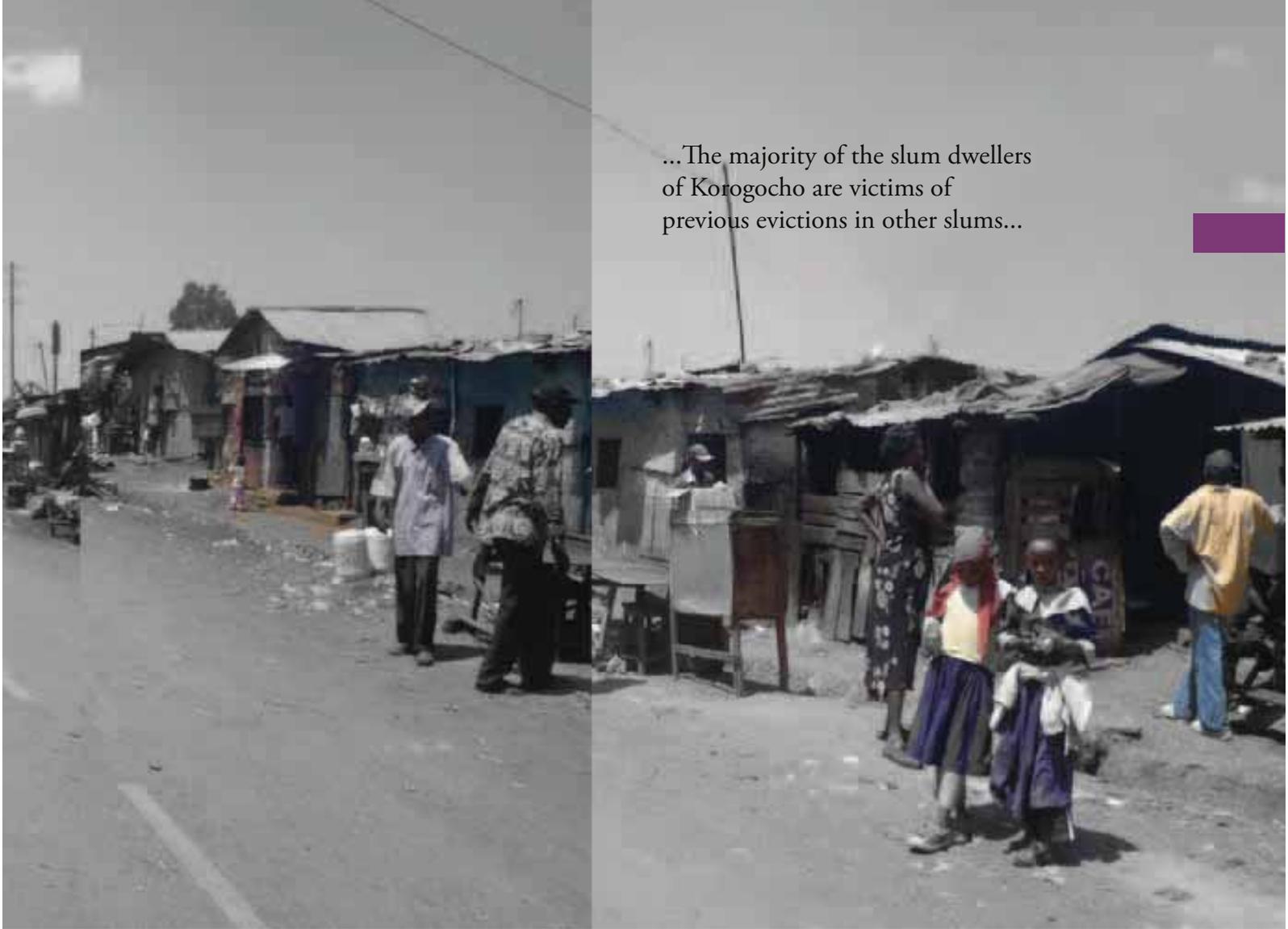
The majority of the slum dwellers of Korogocho are victims of previous evictions in

other slums. The settlement began with quarry workers who settled in the area and built temporary structures in the early 1970s. It expanded during the second phase of settlement with the resettlement of squatters from slums demolished in other parts of Nairobi in the late 1970s.

In the quest to maintain law and order and as a part of an attempt to create urban beautification, the government undertook slum demolitions near the city centre but allowed those affected to settle in the then city fringes, mainly in Korogocho.³¹

Grogan B is one of the villages that is a result of this relocation. It is one of the oldest villages in Korogocho dating back to 1976. The majority of the residents in Grogan B came from the Grogan area, in the modern-day Kirinyaga Road, to make way for new

...The majority of the slum dwellers of Korogocho are victims of previous evictions in other slums...



planned developments.³² Today, Korogocho is part of the inner city and borders Nairobi's largest dumping site, Dandora.³³

A presidential directive in December 2001, that the residents of Korogocho should be permanently settled on the land that they already occupied, raised the issue of land tenure.³⁴ The association of Korogocho structure owners, the Korogocho Owners Welfare Association (KOWA), had lobbied the government to get this directive. This created tension between the structure owners and the majority of residents who were tenants, which brought the issue of who really 'owns' the slum to the fore. Some of the structure owners claim to have sole right to the land while tenants claim that the presidential directive also included them.³⁵

Korogocho faced its first upgrading in 1987, which consisted of streetlights and making the

streets accessible by widening them. Since then, the streets have been appropriated by people and have over time become narrower.

Korogocho has recently undergone major development through the Korogocho Slum Upgrading Programme (KSUP) with one aim to maintain and go back to the width of the streets as they were after the upgrading in 1987.³⁶ Three main physical interventions have been implemented in Korogocho within the framework of KSUP, as entry points to the upgrading of the area prior to the overall participatory planning, inclusive of the integrated development strategy: a footbridge, a community office and a network of streets through the area. The planning process of KSUP has examined the possibilities of using participatory planning steps as a resilient slum upgrading method.³⁷

THE POLITICAL DIMENSION

COMPETING INTERESTS

The future of slums in Kenya is uncertain, they are the most complicated and contested in the world thus any attempt to improve the conditions in the slums is complex. The different interests competing to either eliminate or keep slums in their current state are many.

The official government wants cities without slums to improve their image and to achieve a modern profile.³⁸ This is apparent in the Nairobi Metro 2030, Kenya's second long-term growth and development strategy, which shows visionary images of a modern future without slums. This goal visions a country without slums, reached by the Housing and Elimination of Slums Programme that includes a comprehensive urban regeneration and renewal plan.³⁹ However, it is important to mention the Kenya Slum Upgrading Programme, KENSUP, which is a government commitment and a key programme addressing issues concerning slums and promotes a national approach towards slum upgrading.⁴⁰

A palpable conflict of interest is the relation between structure owners and tenants. The vast majority of Nairobi's slum dwellers are tenants⁴¹ and only 15 per cent are large-scale structure owners.⁴² The scale of private rental accommodation suggests that these forms of housing, while largely developed outside of the regulatory framework, remain a socially legitimate means of meeting the housing demand in Nairobi.⁴³

The structure owners have different perceptions to the tenants within any

upgrading programme. Generally, structure owners want full legal tenure of the land on which their structures are built; tenants want recognition of their right to live there and the possibility of becoming land owners. Structure owners are often influential and have a strong interest in maintaining the status quo, particularly because their tenants are a source of both income and potential votes.⁴⁴ These large conflicts between the formal and the informal create advanced formal informal structures that make the situation even more complex.⁴⁵

Present challenges in urban land management can be partly attributable to the fact that official institutions often have little relation to actual regimes that govern land and provide tenure security.⁴⁶

GENTRIFICATION

The issue of gentrification - former slum settlements increasing in value and being gentrified as lower-income households are forced to relocate because of market pressures - is a major concern in upgrading projects. In particular, the process of legalization has been identified as leading to increases in land value, which in turn creates an opportunity for a profit by upgrading project beneficiaries. This rise in land prices can also translate into increasing rents that can drive out low-income tenants.

The net effect is that upgrading projects aimed at the urban poor fail to reach their original target group and benefit upper-income individuals.⁴⁷



SLUM UPGRADING

HISTORY OF SLUM UPGRADING APPROACHES

“There has been a recognition that effective approaches must go beyond addressing the specific problems of slums – whether they are inadequate housing, infrastructure or services – and must deal with the underlying causes of urban poverty” (UN-HABITAT, (2003). *The Challenge of slums*. London: Earthscan Publications Ltd. p. 166)

It can be observed that the development of policies regarding urban renewal gradually evolved from demolition and eviction approaches to softer, more socially, economically, culturally and environmentally sensitive approaches.⁴⁸

Negligence and inaction towards slums dominated practices in most developing countries until the early 1970s. It was underpinned by two basic assumptions: slums were illegal, and slums were an unavoidable but a temporary phenomenon that could be overcome by economic development.⁴⁹ The focus was therefore on providing formal affordable housing, often through direct government involvement in the planning, design, construction and maintenance of low-income housing. ‘Sites and services’ schemes were also promoted as a way to increase the supply of affordable housing and minimize slum growth.

In the early 1970s approaches towards slums shifted towards evicting slum dwellers. It

became clear to the public authorities that economic development was not going to integrate the slum populations and some governments used a repressive approach, a combination of various forms of harassment, leading to eviction of slum dwellers.⁵⁰

The mass demolitions of slums and dismissal of their residents were justified by stating that slum dwellers were the actual cause of urban poverty and that the presence of them would encourage further migration.⁵¹ Eviction and forced resettlements that were once seen as appropriate actions by governments for improving housing standards were increasingly recognized as a gross violation of human rights.⁵² Since the late 1980s global policy concerning slums has shifted to the improvement of informal areas in situ rather than replacing them, or the large-scale relocation of slum dwellers, to new housing.⁵³

The advancement in the ideas and belief in slum upgrading brought an awareness of the need to involve slum dwellers and ‘participation’ was increasingly recognized as an important component of upgrading approach. During the late 1980s and 1990s enabling policies became prominent in global policy discourse, which called for involving the slum dwellers in the decision-making and design processes to establish priorities for action and to support project implementation.⁵⁴ The legitimacy of local people’s knowledge and

experiences became clear, and much of the attention had shifted from ‘rapid’ to ‘participatory’ approaches.⁵⁵

In 2000, the Government of Kenya acknowledged the presence of slums⁵⁶ and the focus shifted from demolition to a wider context of sustainable development, involving in situ improvement approaches.⁵⁷ The capacity of communities for self-organization and in situ upgrading through participatory planning of slums has become key to developmental policy.⁵⁸ More attention is given to issues concerning the well-being of the community, preservation of social, cultural and economic capital and promotion of economic development as well as the extension of democratic processes.⁵⁹

IN SITU UPGRADING

In situ upgrading of slums is an appropriate improvement strategy as it is arguably the most effective approach economically and socially, and should be considered as a key option for addressing the challenge of slums.⁶⁰ Forced eviction, resettlement and demolition of slums create more problems than they solve. Abolition and relocation destroys a large stock of affordable housing to the urban poor and resettlement can terminate the proximity of slum dwellers to their livelihoods and support networks.⁶¹

In situ upgrading cares for the kinship ties and organizational network that make life viable for those at the margin. It facilitates the transformation of slums into integrated communities, which promotes economic and political stability.⁶²

In essence, in situ slum upgrading often consists of two key components: formalizing slums through legal and regulatory instruments and improving housing, public spaces, streets and basic services. Slum upgrading also involves improving employment and education opportunities, developing new community facilities, and connecting slums into the wider urban fabric, both spatially (roads, streets, etc.) and in terms of urban services (such as public transport, policing and fire fighting services).⁶³

An overall aim is to increase the dwellers’ security against demolition of their shelter as this gives legitimacy and rights.⁶⁴ By treating the residents as an active force in the housing and upgrading process, a greater pride in the neighbourhood is generated and this can safeguard the community structures.⁶⁵

EXPERIENCES WITH SLUM UPGRADING

Over the past three decades many slum upgrading projects and programmes have been undertaken in the world; some have failed while others have succeeded in creating better environments for the slum dwellers and connected slums to their adjacent formal urban environment to make inclusive and integrated cities. By learning from past experiences it is possible to reflect on the outcomes of slum upgrading products and processes.

SPARC & KRVA REINTERPRETING STREETS IN DHARAVI, MUMBAI, INDIA

In 2009 SPARC, one of the largest Non-governmental organisations in India, partnered with architects from Kamla Raheja Vidyanidhi Institute for Architecture (KRVA) to develop a community-led strategy for redeveloping the master plan. The aim was to advise the government and set a precedent in how communities can participate in upgrading projects.⁷³

The plan illustrates a public-space and street-driven approach, combining several types of interventions.⁷⁴ The concept was that the existing urban configuration would determine the upgrading approach.

The residential groups chose one of the densest sectors in the plan, to address as a pilot. Structures, land uses, natural

community clusters and activities were mapped and an analysis of the existing pedestrian movement and cooperative boundaries determined a phased hierarchy of streets. Planners and designers observed that it would not be possible to plan larger-scale issues if the focus rested on small cooperative societies. Instead larger community clusters were formed and given the freedom to decide the level of collaboration they wanted to take.⁷⁵

Local neighbourhood communities would control the improved spaces. One of the main ideas was to place educational institutions alongside these spaces, so that the spaces could be used as playgrounds during festivities and religious celebrations.⁷⁶



METRO CABLE, CARACAS, VENEZUELA

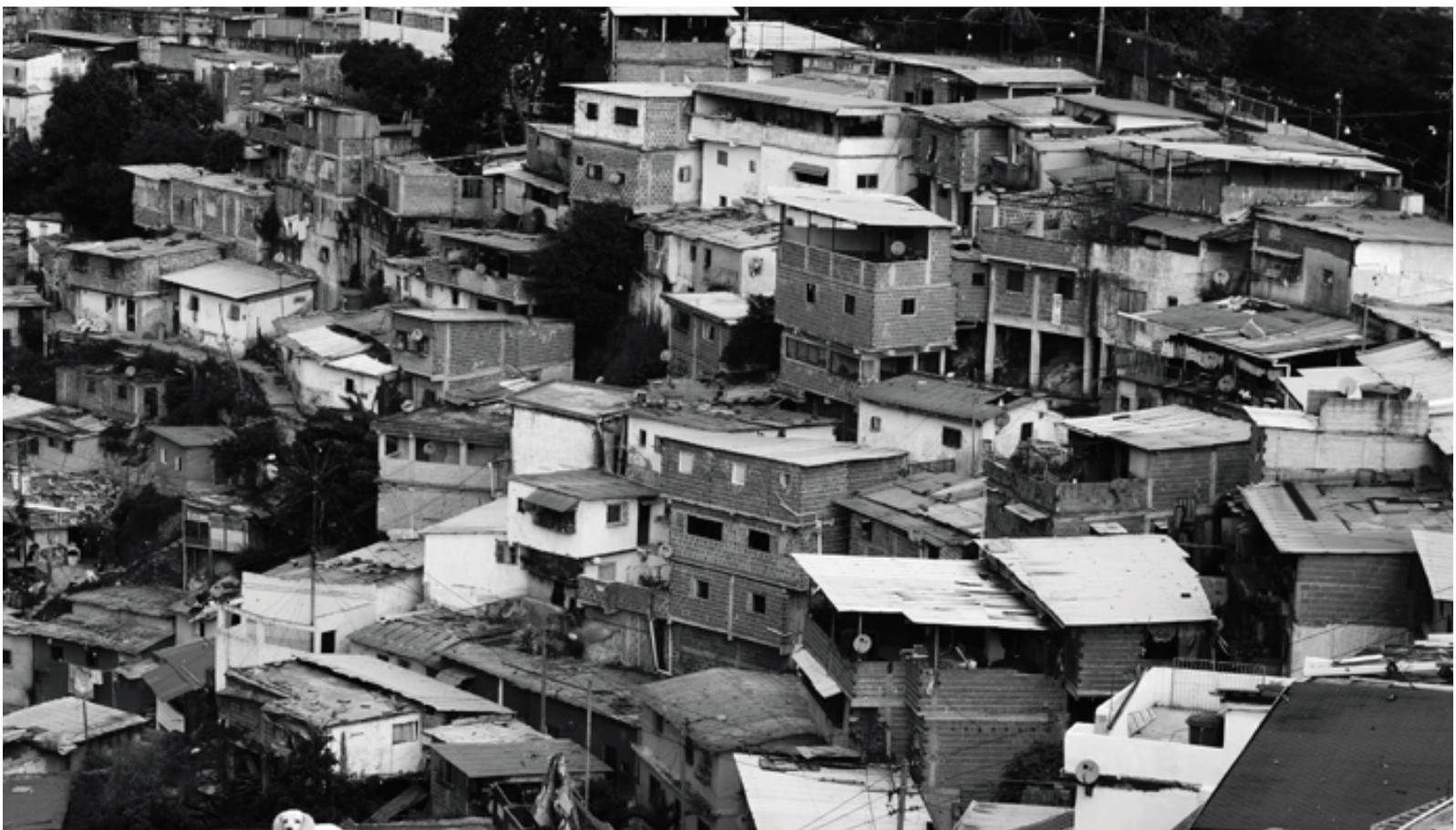
The Caracas Metro Cable, constructed in 2010, operates as a branch of the metro connecting the hilly slums of San Agustín del Sur with the rest of the city. The slums of Caracas have long suffered from exclusion and lack of infrastructure.⁶⁶ Facilities are often situated in the city centre and as a result there is both great physical fragmentation and increasing socio-political isolation.⁶⁷

The introduction of cable cars in the dense slum has the advantage of little demolition of existing structures for the construction.⁶⁸ The local authority implemented the metro system in collaboration with the architectural firm Urban Think Tank. The intention was to design in response to people's needs and their specific conditions of habitation.⁶⁹ The project informs the importance of looking at the city as a holistic system, which can only be functionally transformed

when macro-organization and micro-development complement one another.⁷⁰

Positive outcomes from this physical intervention include basic services and sanitation, increase in physical connections and the enhancement of public spaces. The intervention has a strong focus on identity and representation; a unique identity is important to fight the stigmatization that lingers with many informal and marginalized communities.⁷¹

It is significant to look at the structural limitations of a purely physical intervention to implement a formal intervention in a non-formal city. Physical infrastructure organizes the urban space while social infrastructure ensures that the space is appropriated and productively used and maintained. In any slum upgrading programme, physical and social interventions should be brought together.⁷²



THE KOROGOCHO SLUM UPGRADING PROGRAMME - KSUP

The Korogocho Slum Upgrading Programme (KSUP) started in 2007. It is an initiative that aims to upgrade Korogocho slum in order to improve the living and working conditions for the residents. It is a joint initiative with funding support through a debt for development swap by the Government of Italy and the Government of Kenya.⁷⁷ The project was estimated for a time period of two years with a total budget of KES 210 million (USD 2.49 million).⁷⁸

The KIDDP (Kenya-Italy Debt for Development Programme) aims to empower district communities by achieving sustainable economic growth, increase employment and decrease poverty through a bottom-up community-demand driven approach.⁷⁹

Total cost KSUP Programme	KES 210 million
Street upgrading project (incl. drainage system, pavements, streetlights, etc.)	KES 141 million
Footbridge	KES 3.5 million
Health Facility	KES 15.5 million
Residents Committee House	KES 1.2 million

The Korogocho Slum Upgrading Programme approach involved coordinated support to the community in order to provide the residents with security of tenure through an appropriate land tenure system. The aim was also to prepare and implement actions to improve the physical, economic and social living conditions for the residents of Korogocho. The major outputs of the programme, as defined by KSUP⁸⁰, were:

- Prepare a situation analysis of the area including base mapping, structure numbering and enumeration of residents
- Build capacity of various actors/institutions including community
- Prepare an advisory physical plan for Korogocho
- Prepare sustainable integrated development plan for Upgrading Korogocho
- Provide security of tenure to the residents of Korogocho
- Implement concrete improvements to ensure tangible and immediate impacts on the community

A listening survey, carried out in June 2008, was set out to collect information from the eight different villages in the project area as an initial exercise to inform a detailed understanding of Korogocho and identify the priority needs of the residents. The three main physical interventions were planned and initiated based on the results of the listening survey.⁸¹

Concurrent with the implementation of the three infrastructural projects, a detailed situation analysis inclusive of base mapping, structure numbering and enumeration of residents was implemented and finalized in August 2010. The whole package of data was entered in a Geographic Information System (GIS) platform in order to assist the programme planning and decision-making process. To further inform the planning process, participatory tools were used to highlight problems and opportunities and assist the community to outline a shared vision for the neighbourhood.⁸²

A LARGER CONTEXT

However, the objectives of the programme must be seen in the larger political context of Nairobi. The concentration of poor households in Nairobi is seen as a burden in the competition with other cities and stands in conflict with the neo-liberal visions for the city's future, where a strong economy is seen as the most important driving factor for development. Some suggest that, concealed in the terminology of participation and in situ upgrading, changing Nairobi's social geography has become a part of the strategy for developing the competitiveness of the city. The main means to reach this goal is to change the housing stock in the slums in terms of size, standard and tenure through urban upgrading and renewal projects, resulting in a socio-economic upgrading.⁸³

UN-HABITAT'S ROLE IN KOROGOCHO SLUM UPGRADING PROGRAMME (KSUP)

UN-Habitat's role in the KSUP is limited to a technical advisory role exerted within the multi-partners programme steering committee led by the Ministry of Local Government, and to the joint implementation of specific programme components requiring innovative tools and knowledge.⁸⁴

Together with the implementation of the Korogocho situation analysis and the support to the planning process through its participation in the interagency technical working group established to guide the plans preparation, UN-Habitat qualitatively contributed to the overall upgrading process of the slum, with the initiative dubbed 'Good School Good Neighbourhood' (GSGN).

With the aim at building capacity as well as improving community awareness and

fostering inclusivity to the KSUP planning process, a multi-dimensional approach to safety and participatory planning/design tools was piloted in order to assist the local people to position the school at the centre of the community, influencing the ongoing development.

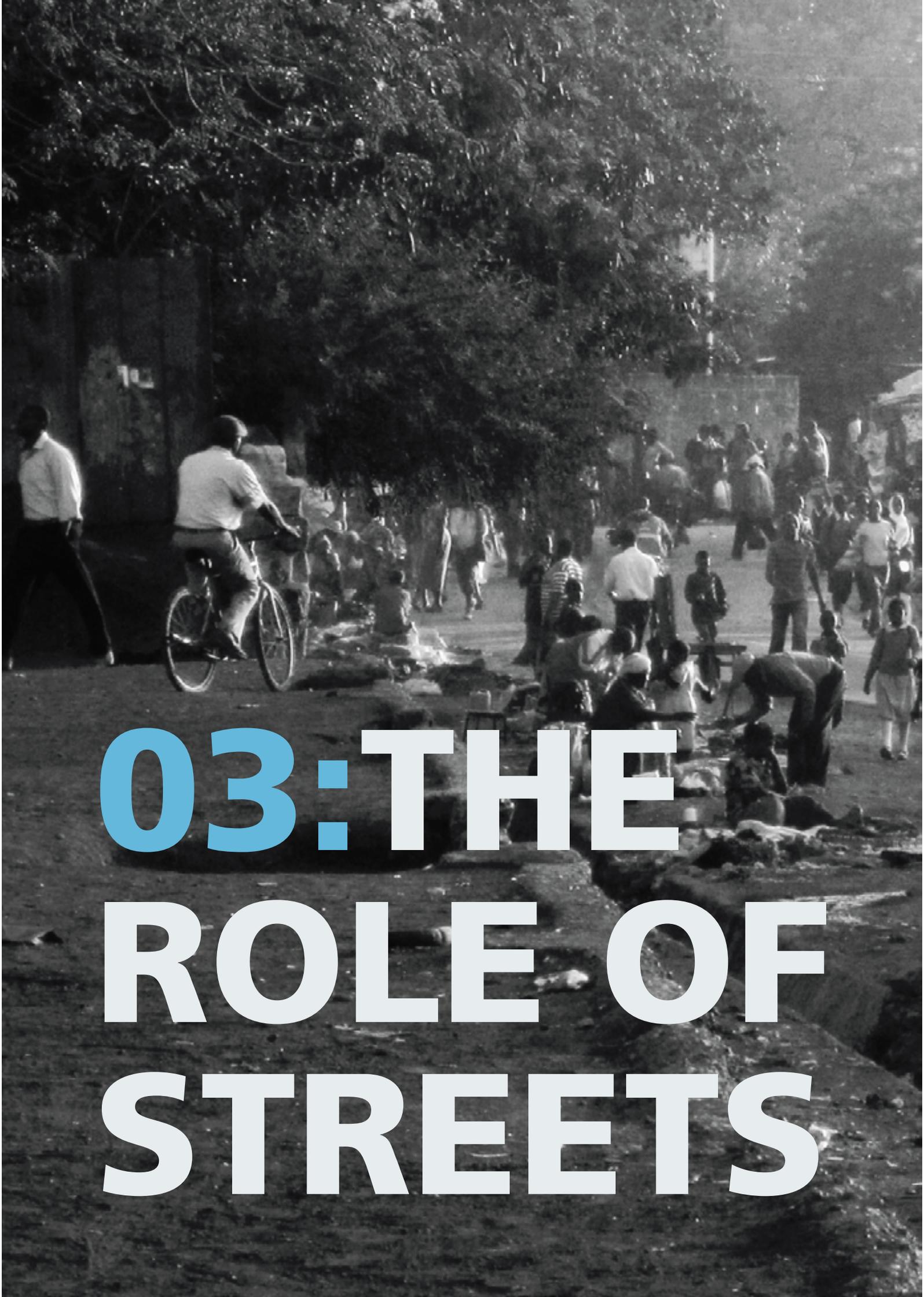
The identification of the school as a potential multi-purpose facility and enhanced community public-space was part of a strategy that intended to create a strengthened network of public spaces to act as platforms for social changes. The public space network was thought to include the two public schools, the reinforced streets and the river reserve created by the plans as well as the market, an upgrading project proposal for which has already been submitted to the programme steering committee for approval.



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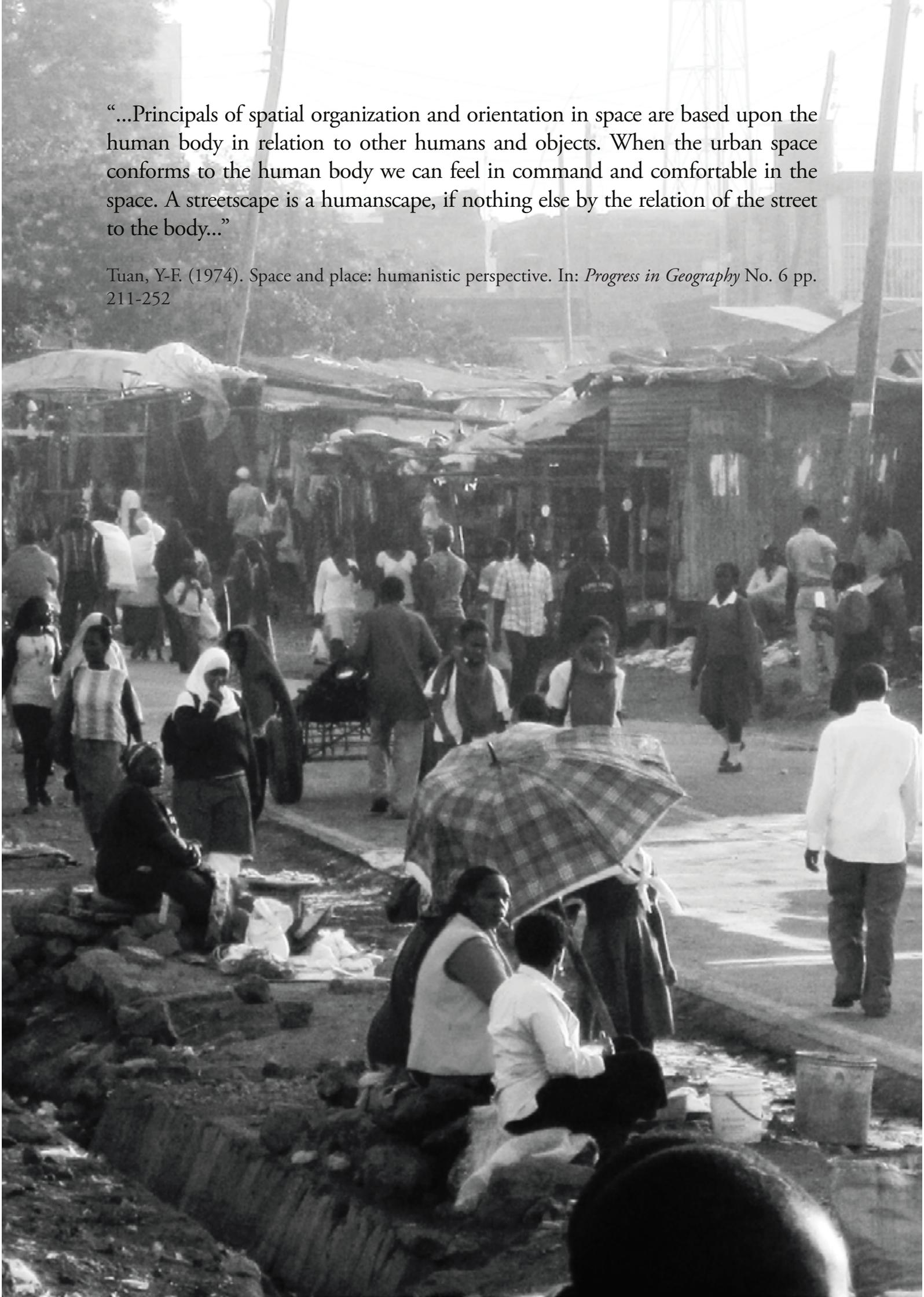
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03: THE ROLE OF STREETS

“...Principals of spatial organization and orientation in space are based upon the human body in relation to other humans and objects. When the urban space conforms to the human body we can feel in command and comfortable in the space. A streetscape is a humanscape, if nothing else by the relation of the street to the body..”

Tuan, Y-F. (1974). Space and place: humanistic perspective. In: *Progress in Geography* No. 6 pp. 211-252



STREETS IN HUMAN SETTLEMENTS

“Good urban places are judged by their street life. For it is in streets as multipurpose spaces - that all the ingredients of city life are combined: public contact, public social life, people-watching, promenading, transacting, natural surveillance and culture. Streets bring together people who do not know each other in an intimate, private social sense, including strangers.”

Montgomery, J. (1998). Making a city: Urbanity, vitality and urban design.
In: Journal of Urban Design. Vol. 3 No.1.

A good street is one that allows people to be in contact with each other but simultaneously gives the option for individuals to remain private and respect the privacy of others.¹ People who reside in a slum and act within the neighbourhood often feel a powerful attachment to their local street. The street is a fine balance of essential privacy and varying degrees of public and private contact.²

Successful urban places are based largely on street life, and the various ways in which activity occurs in and through buildings and spaces. For it is the public realm and the street as public space that provides the terrain for social interaction through activities such as markets, the street vendor and pavement activities.³

Historically, urban streets have served not only as a thoroughfare but also as public space. During the motor revolution, vehicular roads built for the fast movement of traffic replaced these streets.⁴ The creation of such vast road-driven transformation to suburban non-places, which tend to be neatly laid out, organized around a hierarchical pattern of roads, as opposed to streets, has proven dysfunctional for creating new development that lacks identity and vitality.⁵ Streets and roads are perceived as something contradictory.

Merriam-Webster defines streets and roads as parted concepts based on where they are situated: the street is within a city while the road lies outside an urban district.⁶ Today, planners are returning to traditional street-based urban designs for it is the street life that

provides the dynamic quality of successful urban places.⁷

The street, the pavement and the yard can all serve as meeting places. A place can be as small as the node where activities meet. Street corners are places used for activities such as lunch breaks, vending or just to dwell in.

The street, though, is not generally such a place in itself; it is directed horizontal space. When a street is transformed into a centre, where people stay without having a certain direction, it becomes a non-directed horizontal space and thus a place.⁸

The streets of Korogocho contain both directed and non-directed space and thereby become places for spontaneous meetings and social interactions. The street creates opportunities to reside in public.⁹

STREETS AS PUBLIC SPACE

Public spaces are spaces of sociability. Spaces such as streets, street corners and empty lots provide a stage for economic, social and political activities – public spaces in this sense are social spaces.¹⁰ It is debatable whether the physical form and location of public spaces influences the public's perceptions and whether they can create social interaction.¹¹ But through social actions streets are made public.¹²



It can be assumed that public space is the space for public actions¹³ but also provides the opportunity for people to perform private as well as civic roles.¹⁴ This means that public space is multi-functional and, by implication, this allows for questions about public and private space and about the nature of publicity.¹⁵

As the streets act as one of the few open public spaces in Korogocho this is one of the few situations where the private and the public activities meet and form the public space; the street is a space to move through and a place to be in.¹⁶ Today, public spaces are designed to feature necessary activities; due to this, optional and spontaneous activities are washed away.¹⁷

In most slums, open spaces are limited and this indicates that community members meet or socialize along the streets due to a lack of other alternatives.¹⁸ A vast part of the social life takes place in the streets thus open public spaces are vital for spontaneous social meetings and contacts between neighbours and strangers.¹⁹ To create a safe and vibrant street life, the streets have to act as public space that nurtures spontaneous, optional and necessary activities.²⁰ The street is the basis for our experience of cities²¹; in Korogocho the streets have mixed uses and support the making of public spaces.

STREETS AND DEMOCRACY

“Until the urban poor are given an adequate voice to challenge underlying perceptions of the role of public space and its position in the cultural and economic agenda of cities, exclusion will remain the dominant policy response.” (Brown, A. (2006). *Contested Space. Street trading, public space, and livelihoods in developing cities.* Rugby: ITDG. p. 26, p. 26)

As mentioned, public spaces are often appropriated spaces that are transformed and then defended. In the process of taking a new space, democratic sociability can be created and a new kind of public sphere is possible.²² To be in and to be seen in the public space can in itself be seen as a statement; it is a way to represent oneself to a larger audience and it is important in terms of appropriating a space.²³

Due to a lack of open urban spaces in slums, streets are often the only public space available²⁴ and in this sense they are essential to the functioning of democracy. Streets facilitate the representation of organizations and individuals who impact upon the public. Those who have an interest in transforming the current society should therefore see the right of the public to the street as a question of influence and democracy.²⁵



STREETS IN SLUMS

STREETS FOR SAFETY AND SECURITY

Slums are often perceived by outsiders, as well as slum dwellers themselves, as unsafe and insecure.²⁶ As slums seem to lack a clear form and structure, one which can provide the basis for feelings of safety and security, they are often experienced as threatening environments to the majority of people who dwell outside of them.²⁷ The recognition and orientation in our surrounding is crucial; when we feel lost we feel apprehensive and with disorientation comes fear.²⁸

Streets can be vital elements in providing a sense of orientation in an area. Paths with clear and well-known origins and destinations have stronger identities and help tie an area together.²⁹ To add orientation and overview to an area generates an experienced feeling of security for both dwellers within and outside the area.

Building streets to improve access into and within slums has been proven to enhance safety and reduce fear of crime. Access to the rest of the city in combination with easier orientation can increase the number of people from outside who enter a slum area. Thus raising the level of activity and bridging the socio-spatial gap with the rest of the city.³⁰

In highly unequal societies, levels of violence and crime are high.³¹ Social cohesion can reduce social inequalities and exclusion, and bridge the gap of urban segregation. Slum dwellers and the urban poor face a particularly

acute risk of crime and violence. Often, they rank either among the prime victims of urban crime or the common perpetrators. It is not an issue of poverty but rather of the gap between social groups and neighbourhoods that could cause frustration that influences the level of crime.³²

A prerequisite for the situation in a slum to improve is when a slum becomes lively enough to promote and enjoy public life. The wish to reside in a slum is influenced by physical factors in the neighbourhood. The valued security of one's home, in part, is a literal security from physical fear.

Experience has shown that slums where the streets are empty and where residents are unsafe are less likely to improve spontaneously.³³ Streets that gather the movement and activity of people provide a high degree of natural surveillance where the presence of other people generates self-policing.³⁴

The feeling of trespassing on someone else's territory is highly connected with built structure, safety and activities. If there are no public activities in an area then a visitor might experience uncertainty and trespassing.³⁵

How cities are structured can affect incivilities. Cities that have attractive and lively public spaces and streets life combined with little segregation experience higher level of security.³⁶

According to the safety audit conducted in Korogocho before the street upgrading took

place, many crime hotspots were located around street crossings and along thoroughfares.³⁷ Adequate streetlights, streets and community facilities have been shown to have a direct effect on the perceived safety and security.³⁸ There is a difference between actual safety and perceived safety. The perceived security is related to public space; if people feel safe in the public space there are better opportunities for that area to improve, which in turn increases safety.³⁹

STREETS FOR ECONOMIC PROSPERITY

Streets are corridors for the movement of people, vehicles and goods that support the urban economy. Millions of livelihoods in cities of the global south are dependent on the street space.

In most urban centres a range of activities take place in and around the street: vending, hawking, services such as shoe mending, handicrafts, metalwork and also transportation. In addition, urban street vending supports a complex and largely hidden economy of suppliers, money-lenders, landlords, importers and exporters. The informal street economy is often largely unrecognized by urban authorities and dismissed as survivalist, chaotic and peripheral even though it employs many people. In developing countries street vendors are a key element of the urban economy where each layer in the hierarchy gains economic advantage.

The street economy is a wide concept that embraces all the commercial and business activities that to some extent profits from the street. The street economy includes profitable enterprises, which can be a stepping-stone to secure work.⁴⁰

As stated above, the actual construction of streets in slums can provide an immediate economic boost if a local work force is utilized. The increased access of outsiders to the area and better relationships with surrounding economies can also enhance the circulation of money in the area.⁴¹

THREATS TO VIBRANT STREETS

Many stakeholder interests claim city space. City authorities often seek to organize space and 'make the city beautiful'; traffic police want to improve circulation and investors seek a stable environment free of chaos.

The dominant ideology of municipal guidelines in the south is highly influenced by northern city management policies. Concepts of aesthetics and public order lead to a desire to 'tidy' and 'control' public space. Streets located in areas with high levels of competing interests and busy flows of people are more frequently the focus of conflict. This is a dilemma as locations with busy pedestrian flows are key sites for street vending.⁴² When one interest grows overwhelming it can cause over-crowding, traffic problems, public health dangers and petty crime such as pick pocketing.⁴³

Authority's response of to conflict is often the removal of unconventional street uses like roller skating, cultural events or informal vending. Attempts to control street life can have drastic effects both on economy and the level of activity in and around the street.⁴⁴ As stated above, streets with a high level of activity generate more and new activities and are often viewed as safer than uninhabited streets.⁴⁵ The street is the most visible place where police exert authority with a mandate for territorial control.⁴⁶ However, police can never achieve complete street sovereignty because they do not control the social- and gender dynamics that has an effect on the street life.⁴⁷

Access to street life is affected by culture. Usually it is the culture of the group with most resources and influence that dominates space, culturally-controlled environments where privatizing and commercializing takes over the space, which leads to the exclusion of other activities.⁴⁸ Any built environment does not wholly determine how people interact but it does constrain the range of interaction possible. Culture and power in urban design can result in the inclusion and exclusion of certain groups from urban society and urban space.⁴⁹

STREETS AS AN ENTRYPOINT TO SLUM UPGRADING

UN-Habitat recently introduced a shift in the discourse of slum upgrading towards a 'street-led approach'.⁵⁰ The approach is based on streets as fundamental in urban development in general, and in the regeneration of slums in particular. Streets are dealt with as the social place of identity and citizenship formation. When streets connect with the overall city infrastructure they can function as a cross-cutting element for a broad improvement of quality in life in the slums.

UN-Habitat advocates for a move towards the opening of streets in slums as a strategic intervention for citywide slum upgrading. Participation and slum-dweller ownership of the process is key in order to increase confidence, citizenship rights and obligations among residents. This is believed to support the self-improvement of the economic and physical conditions in slums.

Importantly, streets are looked upon not only as the physical entity for mobility and accessibility but also as the public realm that articulates and promotes social, cultural and economic activities. Streets give space a name,

facilitating a gradual regularization and security of tenure. Streets promote connectivity and, through the establishment of street addresses and virtual maps, an improved access to services and infrastructure as well as providing security through the implementation of streetlights and increased interaction.⁵¹

The opening of streets claims space. It must be recognized that social networks are a vast part of the social capital in slum areas. To keep livelihoods intact, governments must ensure availability of land and housing for the resettlement of households required to make way for streets in case there is no possible alternative within the settlement. The proximity and connectivity to a new housing location is vital in order to prevent the disruption of social networks and residents' livelihoods.

Finally, a street-led approach to slum upgrading must be contextual and treat every case in its own terms. Conditions for a successful integration of each individual area must be created in relation to its surrounding urban fabric and to the city as a whole.⁵²



THE KOROGOCHO STREET UPGRADING PROJECT

The Street Upgrading Project was executed as an activity within the framework of the larger Korogocho Slum Upgrading Programme. The programme wanted to implement some initial physical changes while advancing on the community mobilization and trust building, as the preparation of the situation analysis was being finalized. Attempts to upgrade the area had been done before but failed and this was reason for a quick physical implementation. The streets were implemented as quick win projects before the planning was done because planning had to await enumeration and a socio-economic survey.⁵³

The selection of streets as an infrastructure intervention was based on the priorities identified by the residents' committee during the numerous consultations and particularly at the training workshop in August 2008. During this workshop, the main priorities were stated as drainage systems, streetlights and access roads. Consequently, the upgrading of the streets in the community was identified as a project that would help to establish the residents' confidence in the overall upgrading programme. The motivation was to do a project that, covering the whole area and reaching all villages, would make the entire community feel beneficial.⁵⁴

The infrastructure improvement of the streets aimed at integrating Korogocho with other parts of Nairobi, improving accessibility and connectivity to both a larger context and also to neighbouring estates, as well as developing security through increasing business opportunities and street lighting. The project was envisioned to improve the image of the area and bring a sense of pride among the residents. Furthermore, the streets were thought to open up the area for development, facilitate planning and security of tenure provision, together with acting as a testing ground in terms of community acceptance of the programme.⁵⁵

The street upgrading project includes four streets: Kamunde Road, Market Road, Community Lane and Mama Ngendo Road. They cover a total distance of 3.64 kilometres⁵⁶ and were prioritized on the basis that they did not require much relocation and ensured circulation in all eight villages.⁵⁷

Several people from different institutions were involved in the project and created a technical team⁵⁸:

- Resident Engineer (County Council Nairobi)
- Project Surveyor (Ministry of local Government)
- Project Quantity Surveyor, (Ministry of Local Government)
- Project Engineer (Ministry of Local Government)
- 2 Chainsmen (casuals)
- Draughtsman (County Council Nairobi)
- Driver (casual)
- Community Liaison (3 members of the Residents Committee – Chairman, Secretary and Treasurer)

The project was monitored directly by the technical team, and monitored in addition by the KSUP Programme Manager and Programme Coordinator from the Programme Management Unit (PMU), located within the Ministry of Local Government, as well as by the donor (the Italian Cooperation) through the Programme officer.⁵⁹

The Project Surveyor, the Project Quantity Surveyor and the community, through the Residents' Committee, did a pre-study of the streets to ascertain the road reserve, the number of structures to be demolished as a result of the expansion of the road, the terrain and geology and the amount of benefit the project would bring to the community. The layout of the streets was developed according to the mapped village boundaries.⁶⁰

The Project Surveyor and Resident Engineer from the Ministry of Local Government and the City Council of Nairobi did the technical design, including the width of the street, drains, curves, and footpaths. They were also responsible for assuring that the agreed standard for the design was followed and were assisted by the chainsmen who were available daily throughout the construction period. The Engineer gave the contractor instructions on what works should be done. He was in charge of all the overall management of the project and did the official communication to the contractor through written correspondence. He called for regular meetings and site inspection to ascertain the progress of the project attended by the technical team, the Programme Manager, the contractor and the Programme Officer from the donor.⁶¹

The Project Quantity Surveyor did the Bills of Quantity and the estimates. These were then tendered by advertisement in the national newspapers, opening of tenders, evaluation and award of tenders. The total cost for the Street Upgrading Project was KES 141 million. As it is part of the Korogocho Slum Upgrading Programme it is financed by the Government of Italy, through the Italian cooperation, and the Government of Kenya.⁶²

In August 2009, the contract for constructing the streets was handed over during a public event at the chief's camp. In Kenya, contractors are selected through a competitive bidding process governed by the Procurement Act. The

event acted to make the construction official, which sensitized those whose housing structures would be affected by the construction of the streets to the reliability of the project.⁶⁴

The street upgrading project has been undergoing different phases. The Residents' Committee supervised the removal of the encroaching structures facilitating the process of relocation.⁶⁵ The project hired local labour to the largest extent possible in the construction process, which provided occasional employment for several youths.⁶⁶ As the project was a quick win project the public was represented by one representative from each village.⁶⁷

Kamunde Road, leading from northeast to southwest and connecting Kariobangi area to the two primary schools, was started in the beginning of 2010 followed by Market Road, which passes the Market in the southwest of Korogocho. The construction of Community Lane, leading through Grogan area towards the primary schools, and Mama Ngendo Road, connecting Korogocho to Dandora dumping site by a new footbridge, was started in June/July of 2010.

- *Layout Design:* The Engineer from the City Council of Nairobi.
- *Technical Design:* The Programme Surveyor and the Engineer from the Ministry of Local Government and the City Council of Nairobi.
- *Financer:* Government of Italy and the Government of Kenya.

STREET	LENGTH (km)	ROAD RESERVE (m)	PRIORITY
Kamunde Road	1,64	18	A
Market Road	0,9	18	B
Community Road	0,75	12	C
Mama Ngendo Road	0,39	12	D

*Planned length, road reserve and priority of the streets. ⁶³



THE STREET PROJECT PROCESS

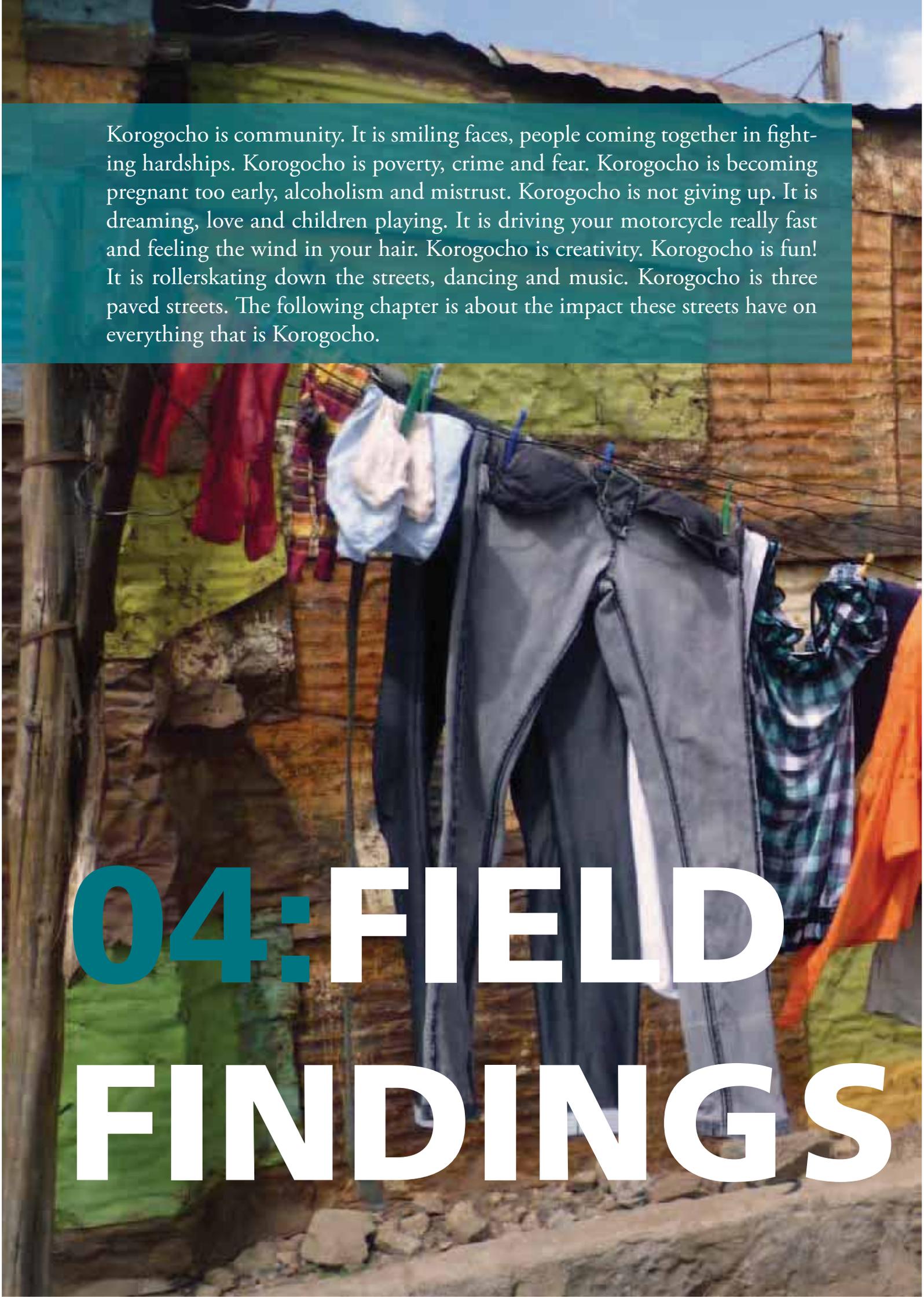
- 2008 August – Workshop. The Residents' Committee was asked to identify the main priority projects that could be done as they await other soft based activities like enumeration of residents, socio-economic survey, planning and security of tenure. The main problems identified by the representatives were poor access roads, drainages, streetlights and water and sewerage system. It was agreed that since by rehabilitating the main streets all the villages would benefit, it was the best project to settle down on. Drainage and streetlights could be resolved as part of the road construction.
- 2009
A layout design was created by the Resident Engineer from the City Council of Nairobi. The Programme Surveyor and the Engineer from the Ministry of Local Government and the City Council of Nairobi created the technical design.
- 2009 August
The contract was handed over to the constructor.
- 2010
The construction of Kamunde Road started.
- 2010
The construction of Market Road started.
- 2010 June/July
The construction of Community Lane and Mama Ngendo Road started.

CHAPTER THREE ENDNOTES

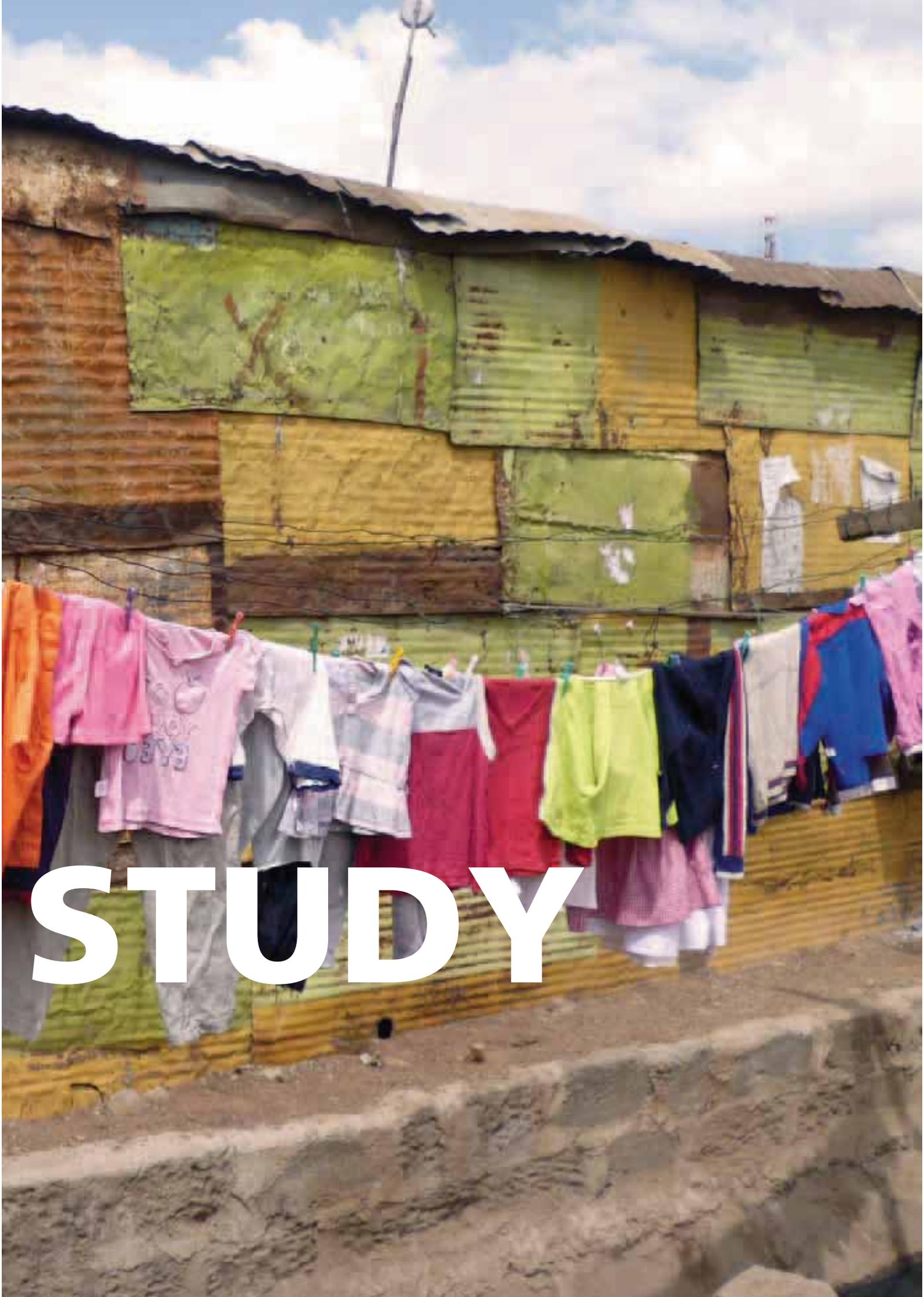
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67. Kago, J. "Re: Questions about Korogocho street upgrading". Personal e-mail dated 22 May 2012.

Korogocho is community. It is smiling faces, people coming together in fighting hardships. Korogocho is poverty, crime and fear. Korogocho is becoming pregnant too early, alcoholism and mistrust. Korogocho is not giving up. It is dreaming, love and children playing. It is driving your motorcycle really fast and feeling the wind in your hair. Korogocho is creativity. Korogocho is fun! It is rollerskating down the streets, dancing and music. Korogocho is three paved streets. The following chapter is about the impact these streets have on everything that is Korogocho.

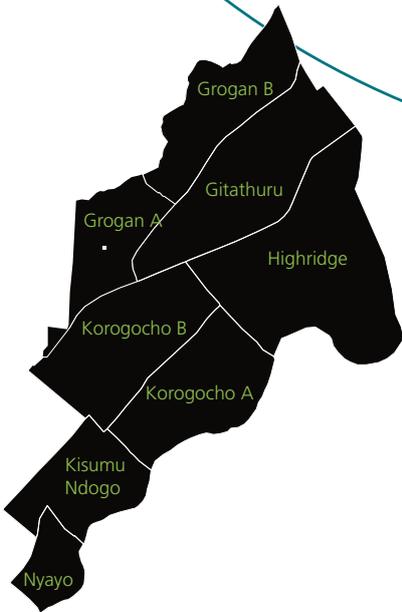
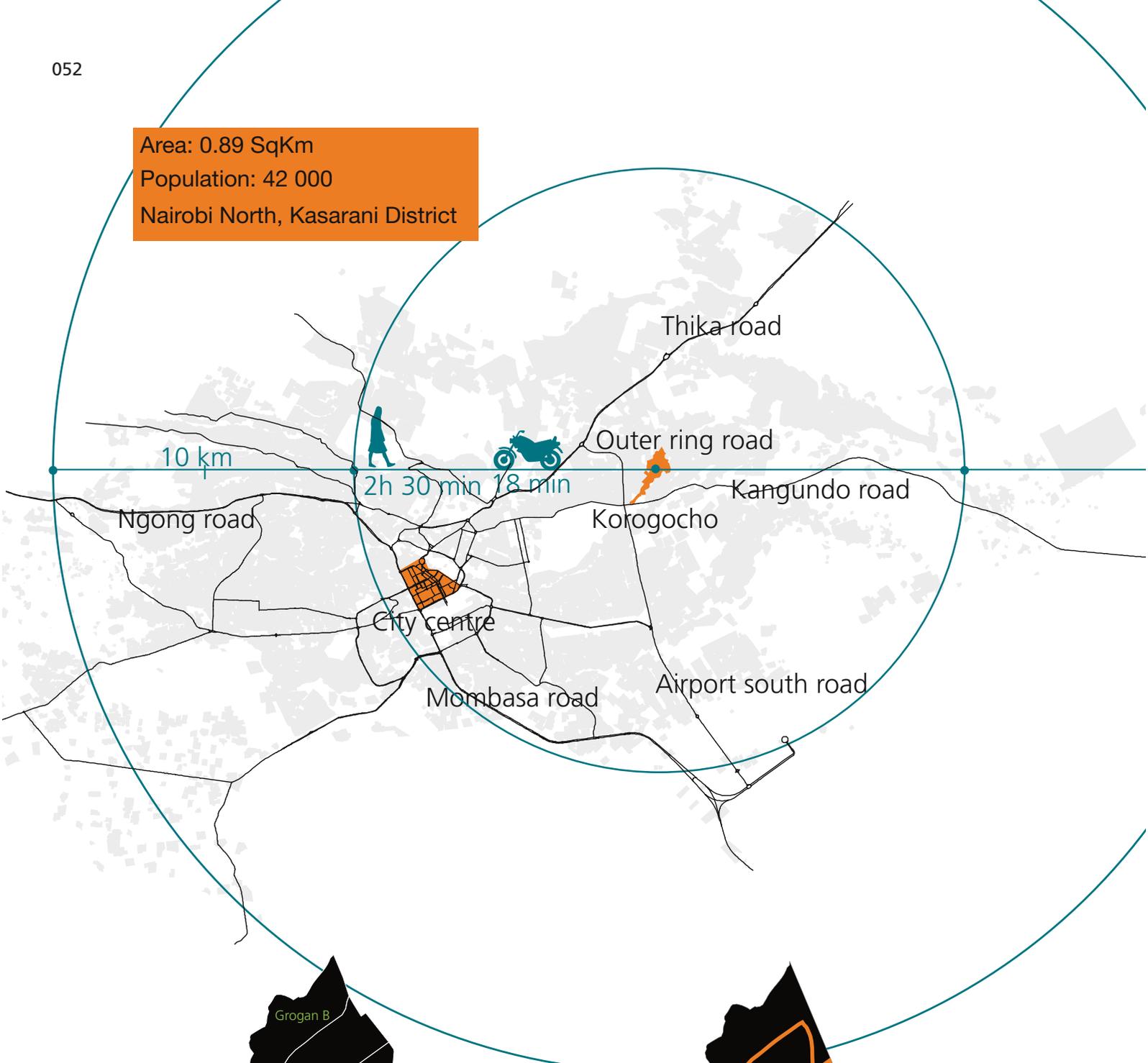
A photograph of laundry hanging on a line in a rustic setting. The laundry includes a pair of grey pants, a white shirt, and a plaid shirt. The background shows a wooden wall and a corrugated metal roof. The text '04: FIELD FINDINGS' is overlaid on the bottom half of the image.

04: FIELD FINDINGS



STUDY

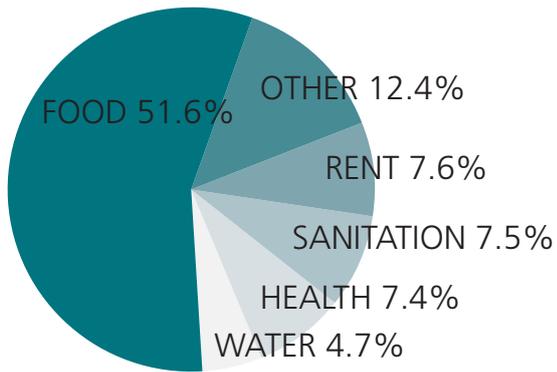
Area: 0.89 SqKm
Population: 42 000
Nairobi North, Kasarani District



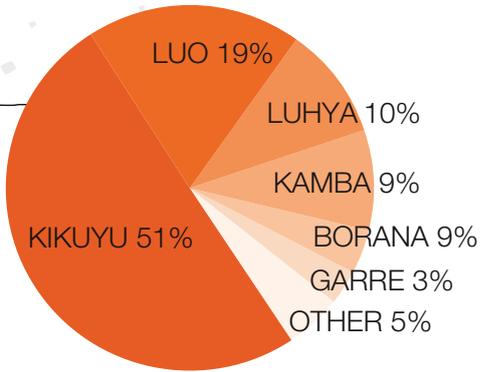
The eight villages of Korogocho



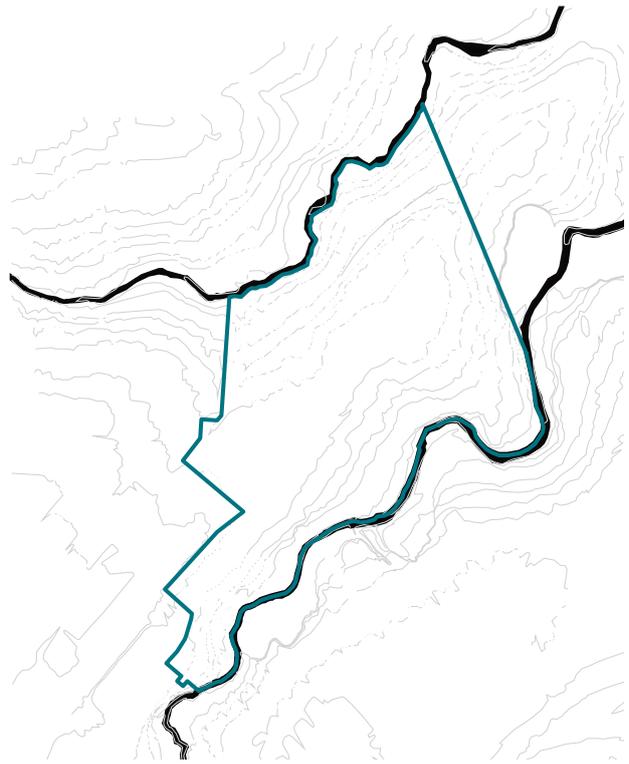
Total length of streets: 3.64 km
Street area (including reserve): 45 800 m



Source: Korogocho Socio-Economic survey 2010



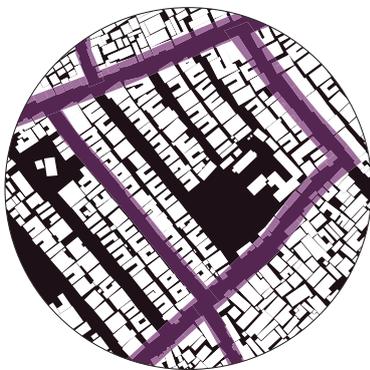
Source: Korogocho Socio-Economic survey 2010



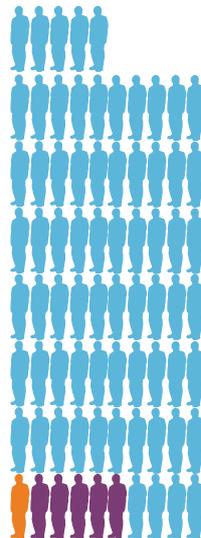
Korogocho is situated on a ridge between Nairobi river, resulting in an articulated topography uncommon for an informal settlement.

average monthly income **KES 5800**

Source: Korogocho Socio-Economic survey 2010



10 600 m² erased structures
(=1766 households of 6 m²)



The Nairobi slums make up over 50% of the population and yet occupy only 5% of the total residential land, giving them just 1% of the total land area. This results in very different population densities.

- Korogocho 47 895 people/km²
- Kileleshwa 3 210 people/km²
- Muthaiaa 576 people/km²

1970

Government policy "to clean" Nairobi from slums.

1971. First residents settle in Korogocho after evictions.

1977. Resettling in Highridge after evictions, new residents given a plot.

Main power lines installed.

1980

1982. Coup d'etat occurred.

1984. Private land eviction, displaced resettled in Kisumu Ndogo.

Korogocho Primary School, Ngunyumu Primary School, Daniel Comboni School built.

Soko Mjinga market starts.

Village Road and paths established.

1987. City Council initiates expansion of roads and routes. Electricity installed. Those displaced resettled in Nyayo.

1990

Drainage system constructed.

Saba saba riots in Nairobi.

Chief camp established. Police station established.

2000

2001. Glory primary and secondary school constructed.

2007. Post-election violence.

Highridge Westlands
Area: 3740 000 m²

Highridge Korogocho
Area: 121 700 m²

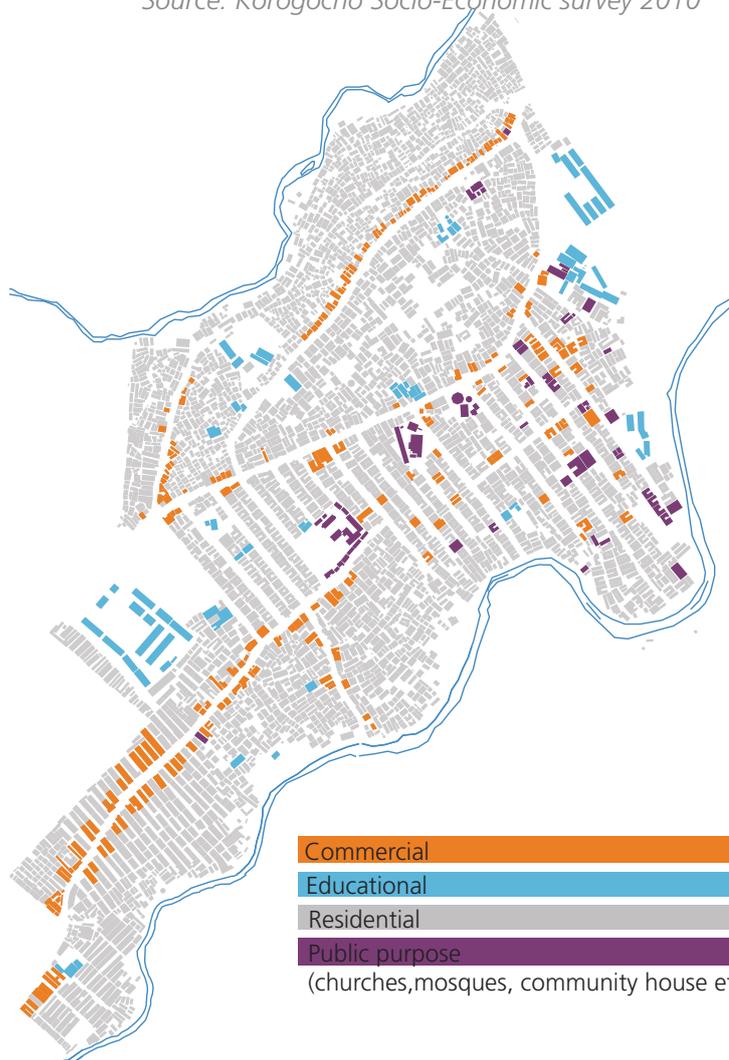
0 5 10 Kilometers

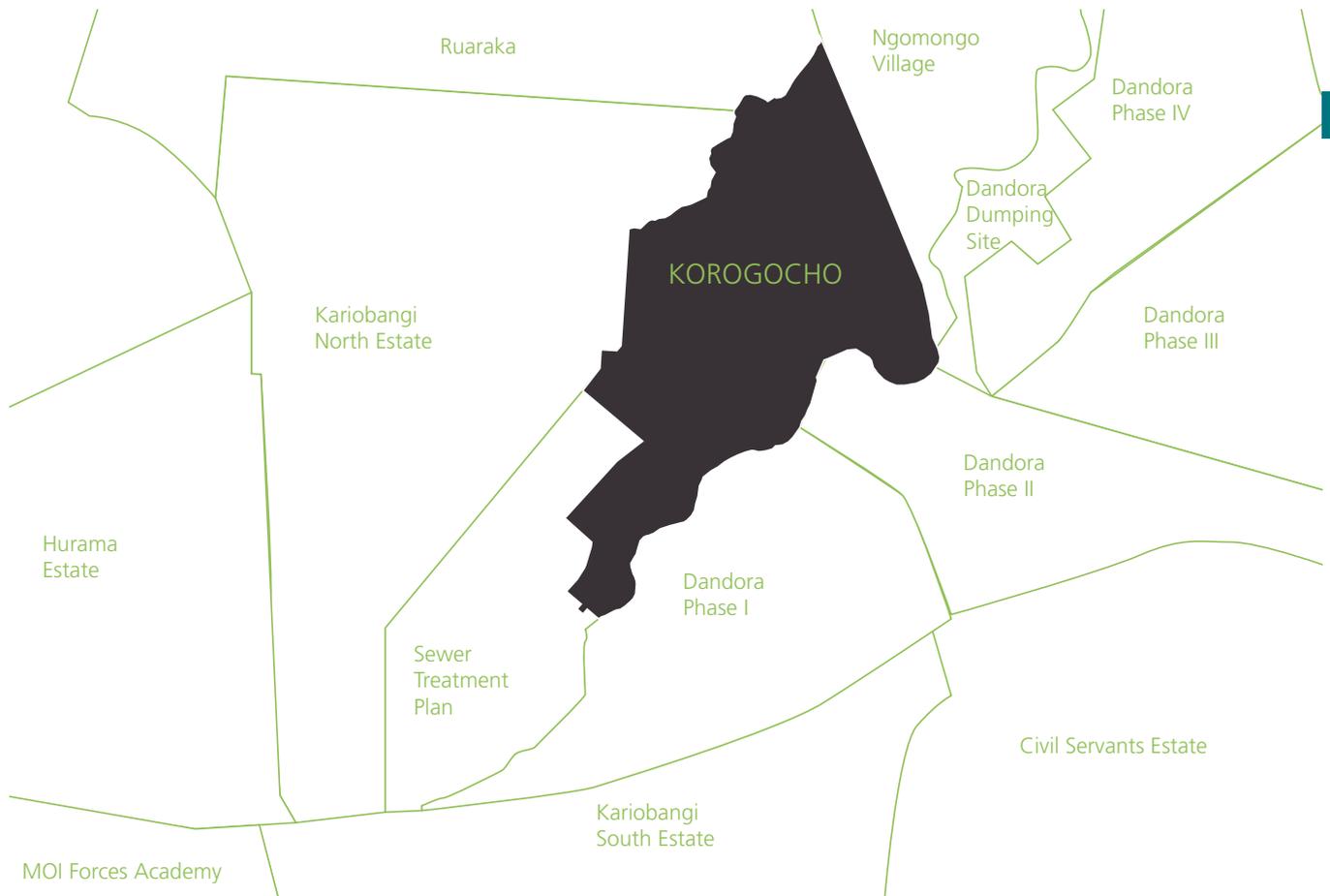
In Korogocho, most houses are made of mud and timber walls with waste tin cans as roofing materials. Houses are built in rows with an average of six dwelling units (rooms) per structure. Korogocho is one of the most congested slum areas in Nairobi with over 250 dwelling units per hectare.

Korogocho main problems

1. Insecurity
2. Poor health facilities
3. Unemployment
4. Inadequate water

Source: Korogocho Socio-Economic survey 2010





Korogocho slum with its surrounding areas.



Korogocho is situated North-East from the City Center of Nairobi. It is located on a ridge between two rivers. It borders the Kariobangi sewage treatment works in West and the Ruaraka industrial area in the East. Next to it lies Nairobi's largest dumping site, Dandora.

2007 Program initiated.
Initial discussion with key stakeholders.

2008 Jun: Listening Survey report.

Aug: Election of the Residents Committee, registration as a self-help group.

Leadership training with residents committee.

2009 Second discussion with key stakeholders, initiated by UN Habitat, agreement signed.

Mapping of area boundaries.

Socio-Economic Survey.

Sep: Road contract handed over.

2010 May: Preliminary findings from Socio-Economic Survey presented.

Sep: Enumeration validated.

Dec: Conference with major stakeholders, renewed donor support.

2011 Received donor money
Consultants hired and area planning started, community meetings and workshops.

Mar: Good school Good Neighborhood participatory exercises.

Community field visits.

2012 May: Plans on display in community for 60 days.



The streets of Korogocho were given names by the community as part of the upgrading process.

KAMUNDE ROAD

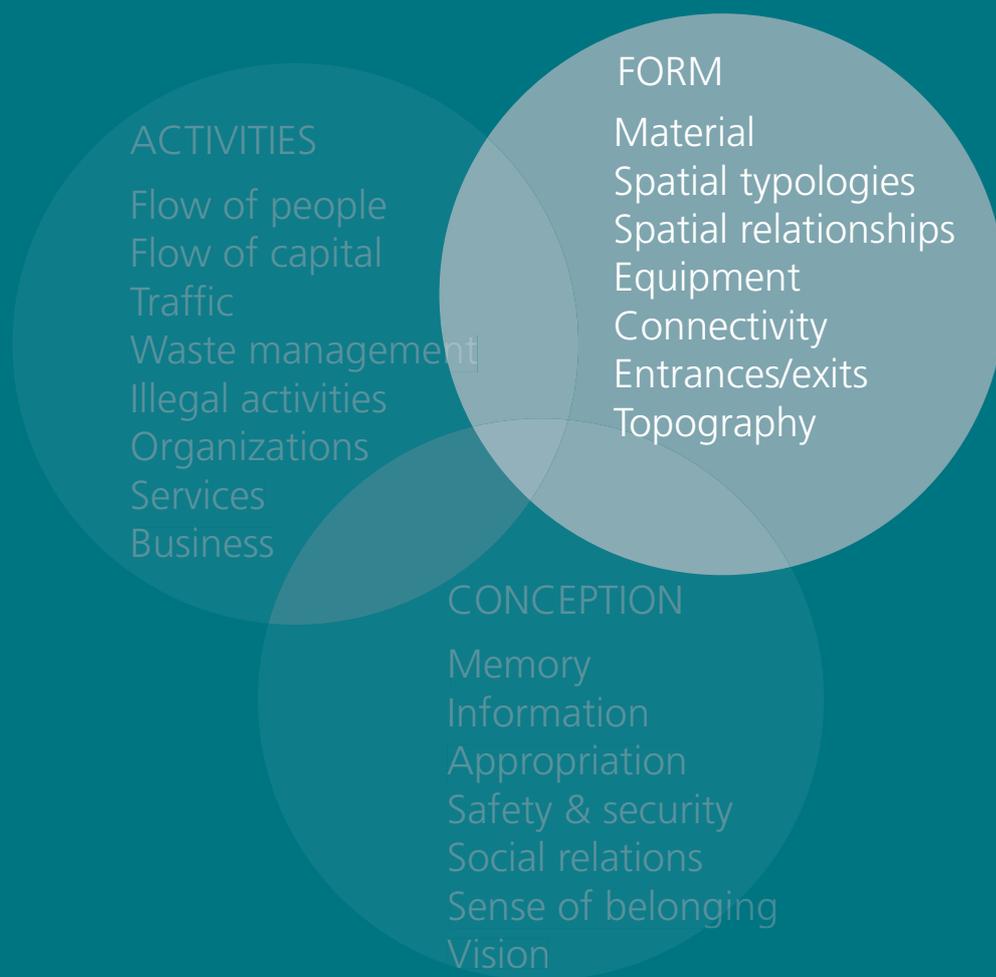
This street runs through Korogocho and is the main access road to the area. It is the most trafficked street and carries the majority of the motorcycle drivers. Main attraction points along the street are the big playfield next to Daniel Comboni School, called Korogocho Stadium by the residents, as well as several churches and mosques. It ends at Ngunyumu Primary School, before connecting Korogocho to Ngomongo and Dandora Phase IV.

MARKET ROAD

This street is a thriving business street, starting in the big market that serves all of Korogocho and surrounding areas. It hosts the majority of the business in the area.

MAMA NGENDO ROAD & COMMUNITY LANE

These two streets are the less used of the new streets. Community Lane cut through the area and connect Grogan with the rest of Korogocho. The last part of it, passing the community centre, is not yet paved. Mama Ngendo Road is leading to the river where a new bridge is planned to connect the area to Dandora estate Phase I.



04.1 FORM

Activity and conception interrelate with form to generate sense of place. A city's form can be designed to stimulate activity, a positive conception and therefore a strong sense of place: the form describes the physical shape it takes to support the activities it desires.¹

This was the first stage of the study and was mainly based on observations and theory.

PURPOSE

- Identify different typologies in the area
- Identify and illustrate different designs of the streets such as differences in width length, edge zone and pavements
- Identify and characterize different materials associated with the different sections of streets: floors, walls and vegetation
- Map the connectivity within the area

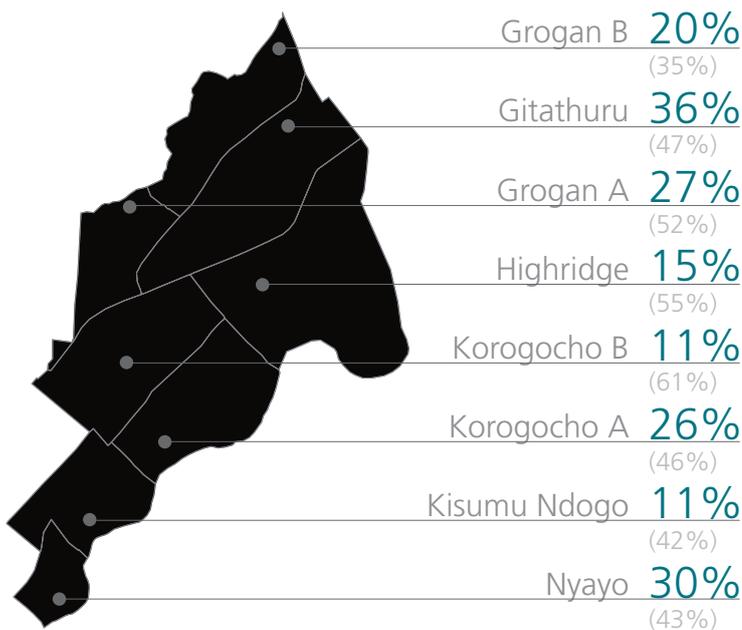


SPATIAL RELATIONSHIPS AND TYPOLOGIES

FINDINGS

The figure-ground diagram gives an indication of how the streets function in relation to their surroundings, and opens up the discussion on socially acceptable amounts, distributions and sizes of open space. The figure ground diagram gives a clear image of the open space and the built form and how it relates to each other. Different typologies can be identified, as presented in the small thumbnail images of the different villages.

Scale is a combination of the ratio of building height to street width, relative distance, permeability and the sense of grandeur or intimacy of space. The spatial relationships between open space, the space without built structures and built form is related to the activities that can take place in the space. When combined with analysis of business and flow, this can indicate different ways in which the residents have reclaimed the different streets. Consequently, this is suggesting successful and less successful forms and designs.



The diagram shows the increase in open space due to the street installation. The number in brackets shows every village's total percentage of open space.



SIX MAIN CHARACTERS

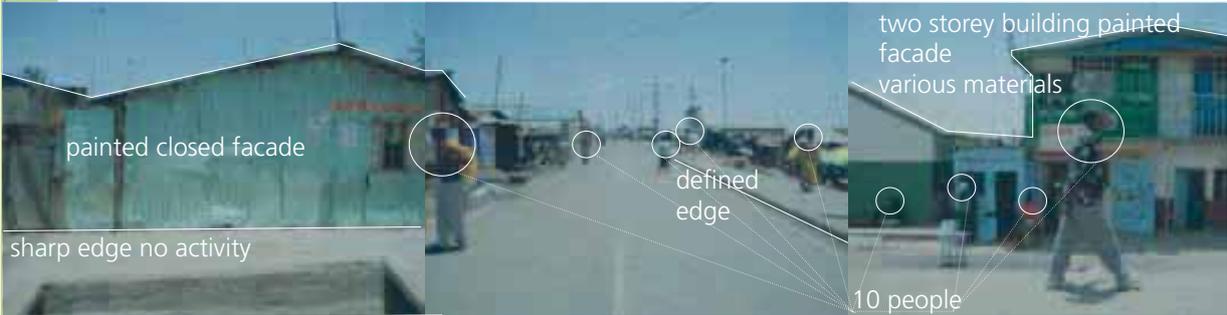
“WIDE STREET/VIEWPORTS/OVERVIEWS”

Overview, one or both sides. High connectivity. Sometimes visual vegetation. Good orientation to the surrounding. Wide and accessible edge zone.



“DEFINED STREET”

Every thing in its place. Pavement. Drainage. Clean. No portable buissnes on the street some in the edge zone. Low activity and varitation in the edge zone. Residential often upgraded structures, various materials, permanent services and business.



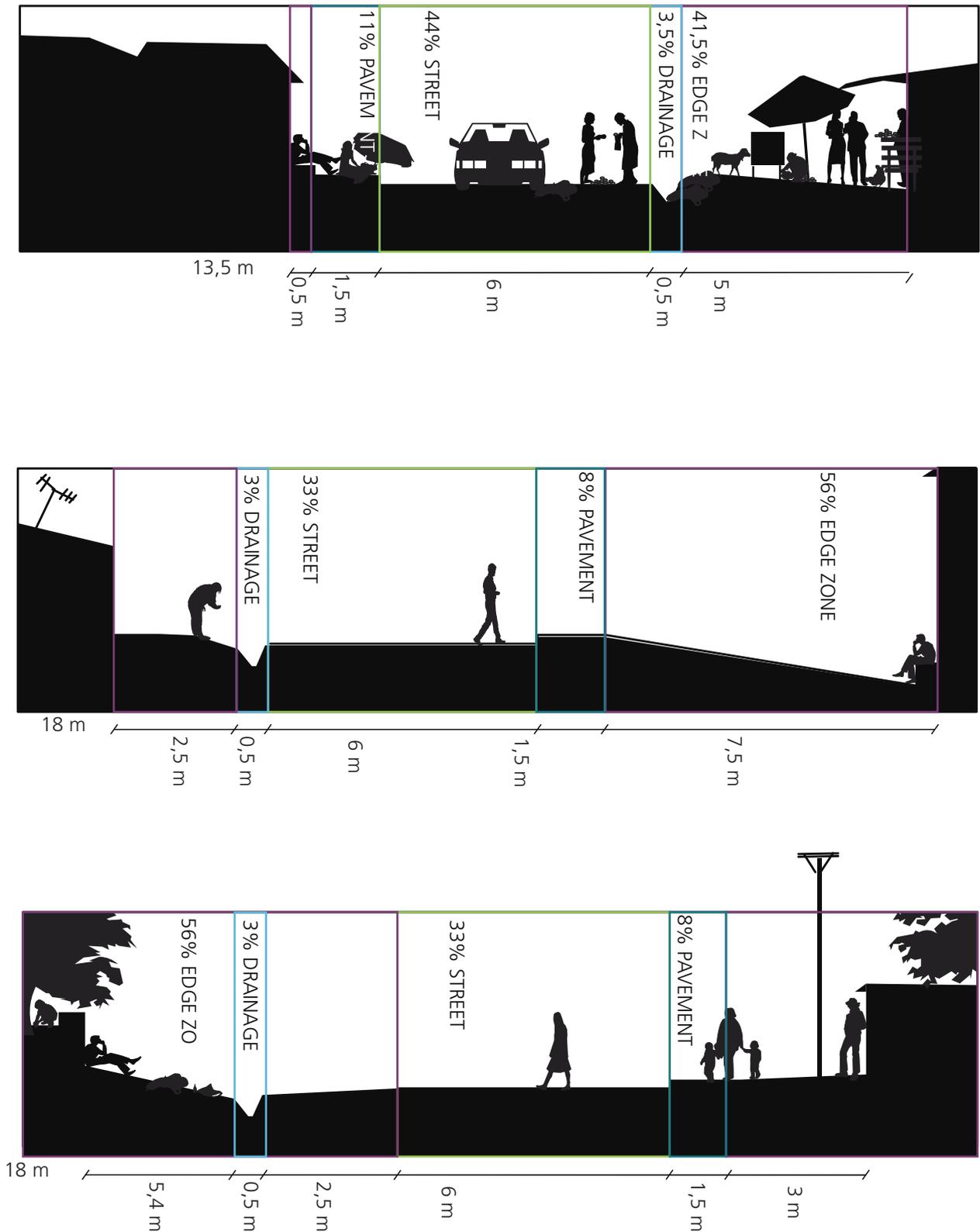
“WIDE STREET/VIEWPORTS/OVERVIEWS”

Overview, one or both sides. High connectivity. Sometimes visual vegetation. Good orientation to the surrounding. Wide and accessible edge zone.



People are sensitive to the spatial properties of the environment. The way space is organized provides information about what one might be able to do in that space². Six main characters have been defined through observation and

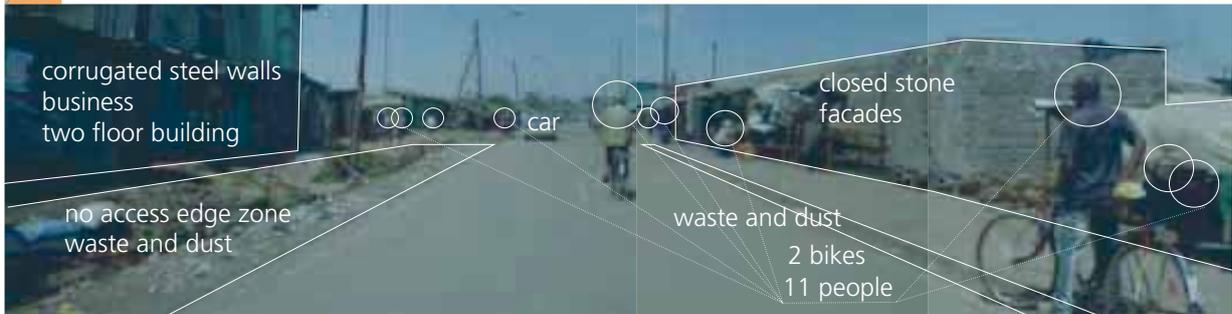
photography. The experience and the level of activity in the place, as well as physical attributes such as difference in edge zone, width and pavement have been defining elements in this investigation.





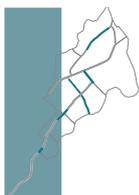
"INACCESSIBLE/NARROW STREET"

No view to the sides. Inaccessible edge zone with high level of waste. High activity/speed on the street. Low connectivity. Enclosed facades towards the street. Pavement. Drainage. Structures various materials.



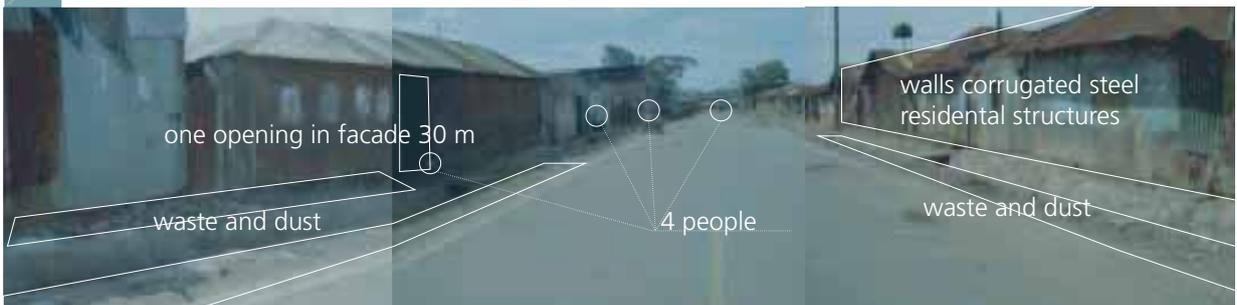
"STREET CORNER"

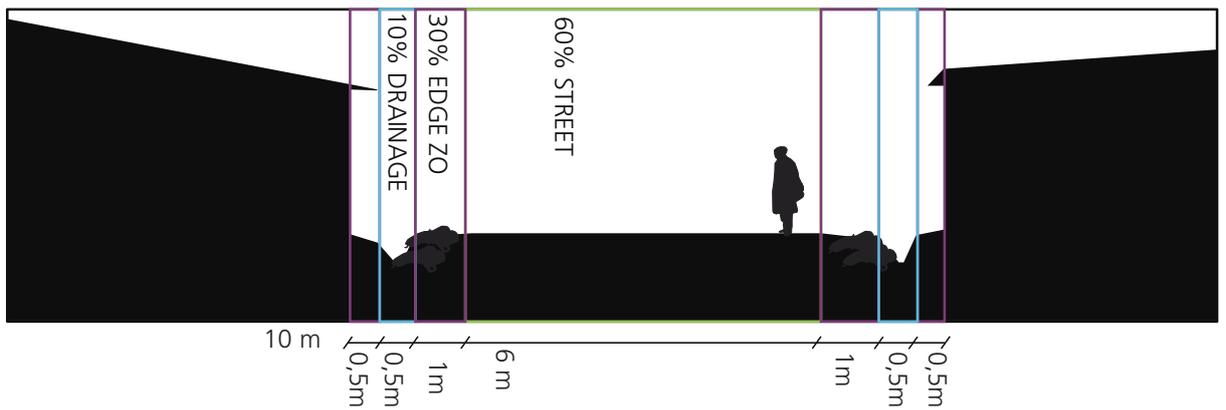
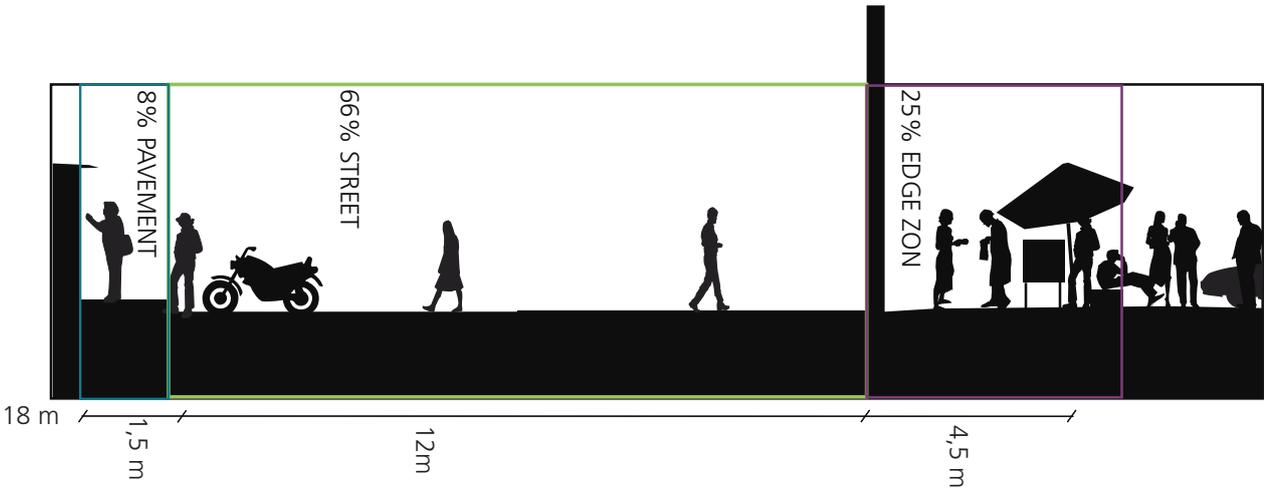
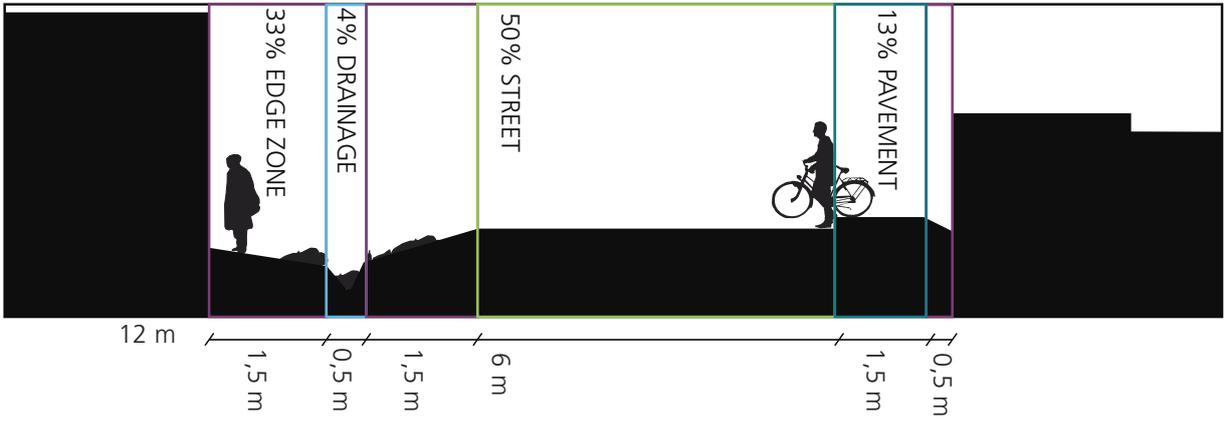
Open wide space. Overview and orientation. High level of various activities. Both permanent and portable business.



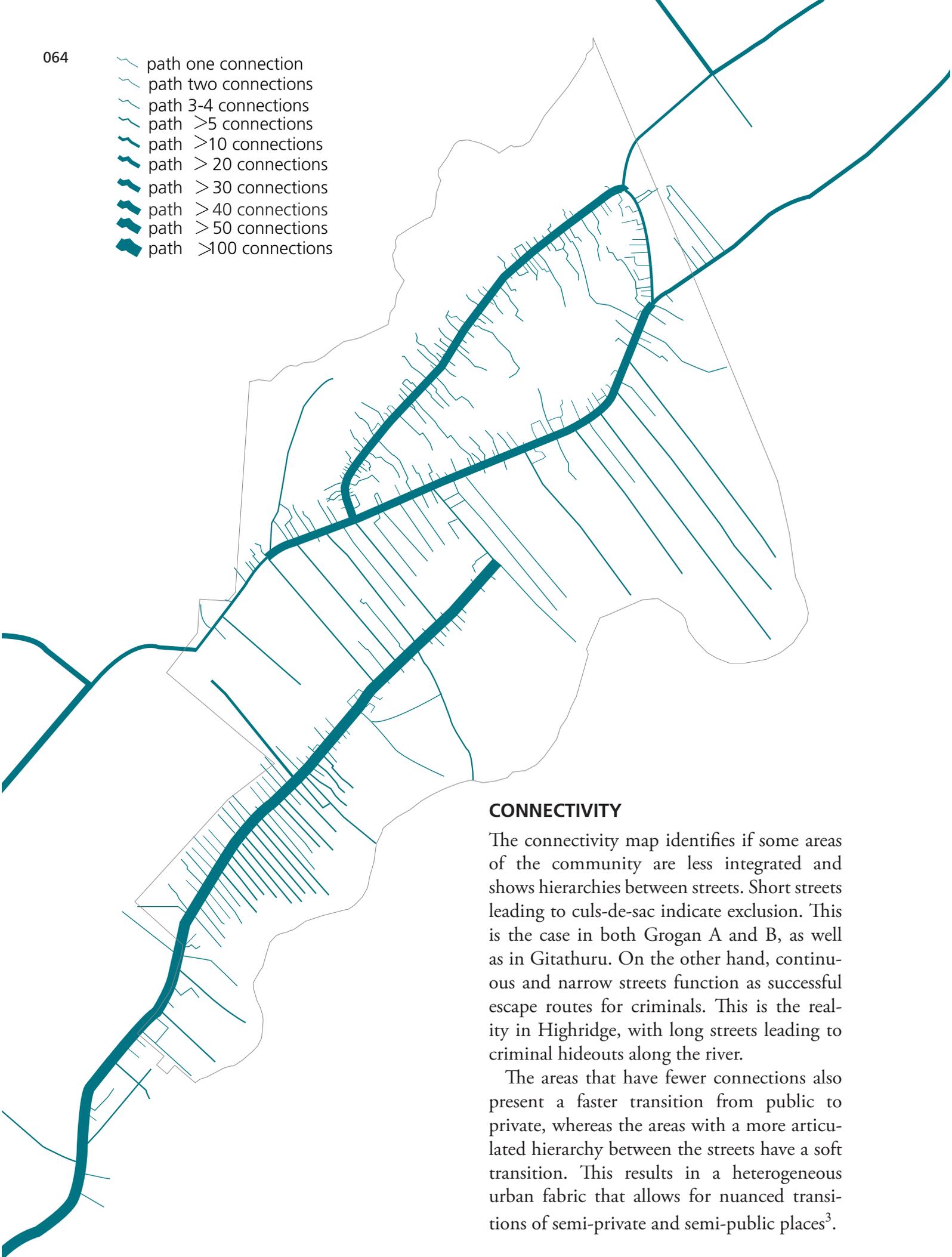
"BACKSIDE STREET"

Residential/private feeling. Low activity. Low connectivity. Enclosed facades towards the street. Often low standard structures.





-  path one connection
-  path two connections
-  path 3-4 connections
-  path >5 connections
-  path >10 connections
-  path >20 connections
-  path >30 connections
-  path >40 connections
-  path >50 connections
-  path >100 connections



CONNECTIVITY

The connectivity map identifies if some areas of the community are less integrated and shows hierarchies between streets. Short streets leading to culs-de-sac indicate exclusion. This is the case in both Grogan A and B, as well as in Gitathuru. On the other hand, continuous and narrow streets function as successful escape routes for criminals. This is the reality in Highridge, with long streets leading to criminal hideouts along the river.

The areas that have fewer connections also present a faster transition from public to private, whereas the areas with a more articulated hierarchy between the streets have a soft transition. This results in a heterogeneous urban fabric that allows for nuanced transitions of semi-private and semi-public places³.



MATERIAL

FLOORS

Paving the dusty and muddy streets of Korogocho was, apart from an infrastructural upgrading intervention, a symbolic gesture that made the area part of the city's continuous urban floor. However, many residents interviewed have expressed a disappointment in the quality of the construction, and even fear that the streets will rapidly degrade.

Using a low-cost approach may communicate a lack of care from the outside and strengthen the community's negative perceptions of upgrading interventions, which might result in less attachment and identification with the streets.⁴ If the streets are not perceived as community property this might result in less care and even generate vandalism.

The layout principle of the streets is pavement on one side and drainage on the other. However, the pavement changes from side to side irregularly and limits a continuous flow of pedestrians. Pavements are important features in an urban setting and should be wide enough to accommodate commerce but not too wide as to make the street itself over spaced.⁵

The paving has reduced dust and mud on the streets even though some residents are dissatisfied with stagnant water on the streets and in the poorly constructed drainage during rainy seasons. It is apparent that the ground texture should be smooth to enable envisaging of how one could function in a setting.⁶

The total amount of waste has decreased in most villages according to the questionnaire

survey. However, Korogocho A had a slightly different result where 80 per cent of the participants experienced more waste on the streets. One reason for this could be the high amount of new vendors in the area and the concentration of activities.

WALLS

Many of the walls along the upgraded streets have fresh paint. It is unclear whether this is the effect of an increased care of one's structure or the effect of many houses being partly or fully demolished and hence repaired. The majority of the structures are one-storey high and the most common materials on the walls are corrugated iron, mud, or (sometimes) brick stonewalls.

More permanent material could signal continuity and diligence for the future. It is said that a community feeling that contains confidence makes people want to stay in the neighbourhood and improve it.⁷ The places where we are most attached are fields of care, locations where we have had various experiences results in feelings of affections and response. We have an eagerness to preserve them and let the memories they possess stay there.⁸

As the majority of the inhabitants in Korogocho do not own their homes, the strengthening of attachment to their neighbourhood is important in order to create sustainable and community driven improvements.⁹

How the facades in the area relate to the streets varies. This greatly affects the character of the streets. As human beings naturally prefer a certain amount of complexity and surprise in the surrounding, monotone facades with no gaps for connecting paths might be perceived as negative. Wide, open undefined landscapes and dense impenetrable structures both lack point of reference. Suggestions of paths and transparency raise accessibility and orientation to the surrounding.¹⁰

EQUIPMENT

New streetlights have been included in the upgrading. This is widely mentioned in the questionnaires and among the people interviewed as a major crime-reducing factor. Streetlights are important both for the perceived safety and the actual level of illegal activities. For women, the lack of lights in the public realm means that they are more likely to be sexually assaulted at night.¹¹

In Kibera, where high streetlights have been implemented, there have been positive social and economic impacts with ability of traders to keep their businesses open late and a decrease of mugging and rapes. However, it is important to remember that sufficient lighting does not eliminate the actual reason for insecurity.¹²

The upgrading in Korogocho also constituted of improved drainage, although this has been criticized by residents for being of

poor quality. There is a fear that it will rapidly degrade. Poor maintenance and management results in the drainage being congested and limits the flow of water. As the residents expect the government to manage the drainage, having it be congested by waste is seen as a betrayal from the formal city.

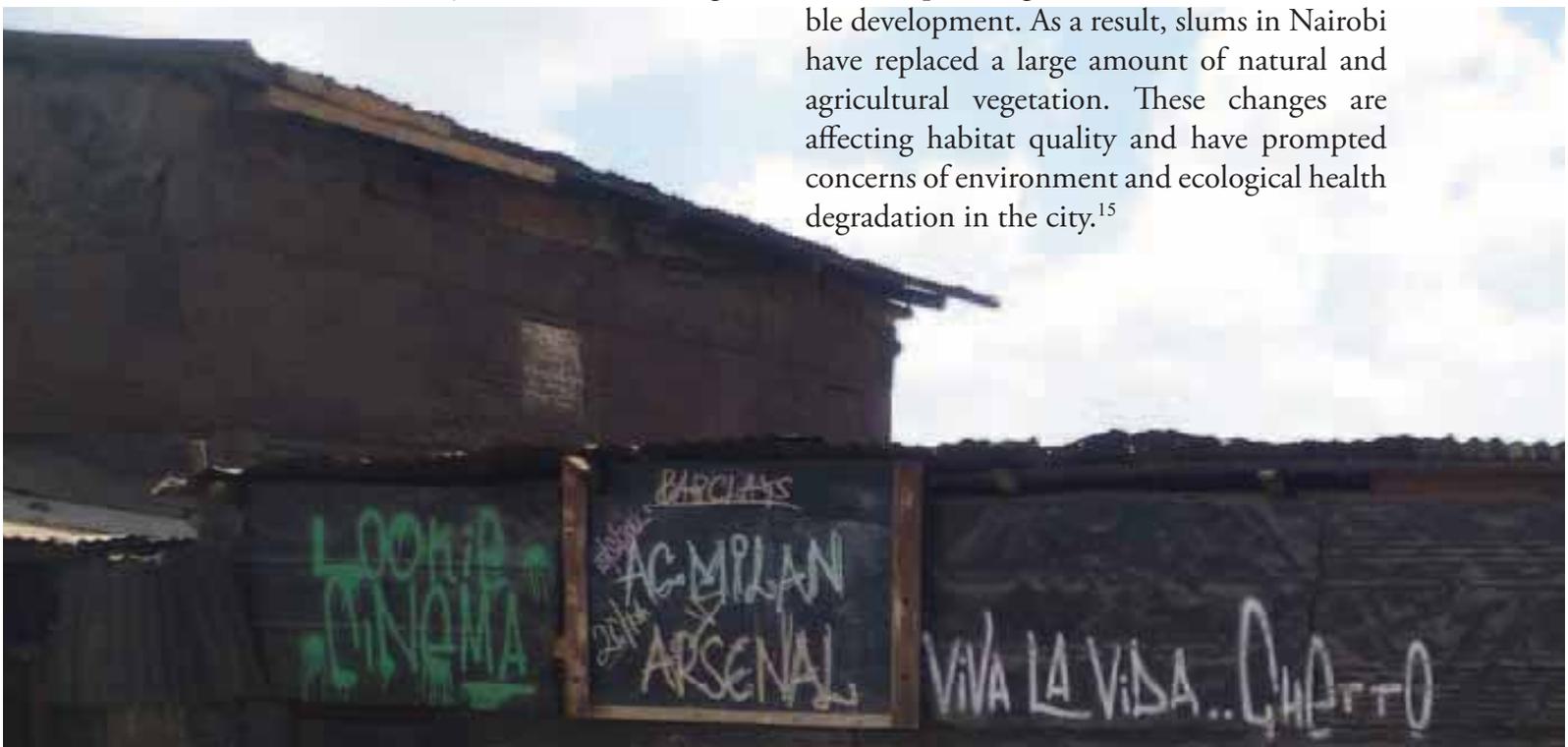
As there is a very low amount of urban furniture in the area, people often use secondary sitting spaces along the streets or sit on the ground on spots with climate protection, mainly from the sun. It is also common for residents to appropriate the public space with private furniture.¹³

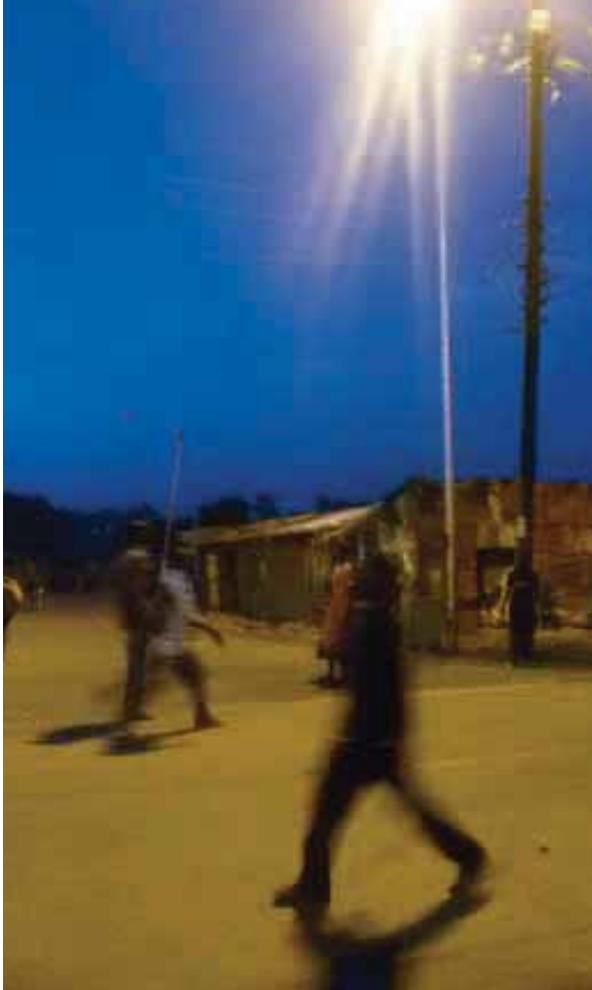
VEGETATION

From elevated locations the surrounding vegetation is very much present in the experience of Korogocho. In the dense slum setting, vegetation can function as landmarks and a link to the surrounding areas.

Several studies show that visual and physical contact with vegetation has positive effects on human conditions and microclimates in the urban environment. Cooler temperatures, dust and pollution reduction are examples of environmental beneficiaries. Trees have a placemaking quality and often function as social gathering points.¹⁴

Vegetation also has positive effects on the environment in a larger scale for the rapid growth of slums has led to lack of appropriate land-use planning and measures for sustainable development. As a result, slums in Nairobi have replaced a large amount of natural and agricultural vegetation. These changes are affecting habitat quality and have prompted concerns of environment and ecological health degradation in the city.¹⁵





FORM – KEY MESSAGES

The form of the streets is interrelated with activity and conception and generates a sense of place. A city's form can be designed to stimulate activity, a positive conception and therefore a strong sense of place: the form describes the physical shape it takes to support the activities it desires.

The upgraded streets in Korogocho vary in form and appearance and six main characters have been found throughout this chapter. Aspects of form that have been investigated are: spatial relationships and typologies, characterization, connectivity, floors, walls, equipment and vegetation.

The paving of the streets has created a continuous urban floor connecting Korogocho with the wider city and facilitating movement and activity in the area. The walls that are mainly constituted of facades of permanent or temporary structures can inform the amount of care and improvement the residents put into their environment. The equipment in appearance of implemented streetlights has

had a vast impact on the sense of safety in the area and created possibilities for the appropriation of urban space during wider hours of the day. The vegetation has an important function in Korogocho as landmarks and shade.

- The streets vary in character, material and spatial organization
- The form of the streets highly affects the use
- There is less mud and dust on the streets, which facilitates movement and improves quality of life for residents
- Streetlights are an important factor for actual and perceived safety
- Some residents are dissatisfied with the management, quality and construction of the streets and drainage
- The total amount of waste has decreased due to facilitated collection.
- People often use places with protection from the sun to conduct optional activities in the streets



04.2 ACTIVITIES

The activities associated with a place build upon diversity and vitality. Diversity suggests mixtures of uses and activities, complex variety, and an economic diversity. Vitality of a place refers to the number of people in and around the street across different times of the day and night as well as the uptake of cultural events, facilities and celebrations over the year: the presence of an active street life.¹⁶

ATTRACTION POINTS

QUESTIONS TO BE ANSWERED

- What and where are the important attraction points?
- What streets carry the highest amount of attraction points?

METHOD

FIELD DATA COLLECTION:

By walking along the streets, and interacting with the residents, an understanding of important functions can be noted and key sites for public interactions studied

MAP STUDIES:

Digital and physical maps complement field data findings and informs about attraction points

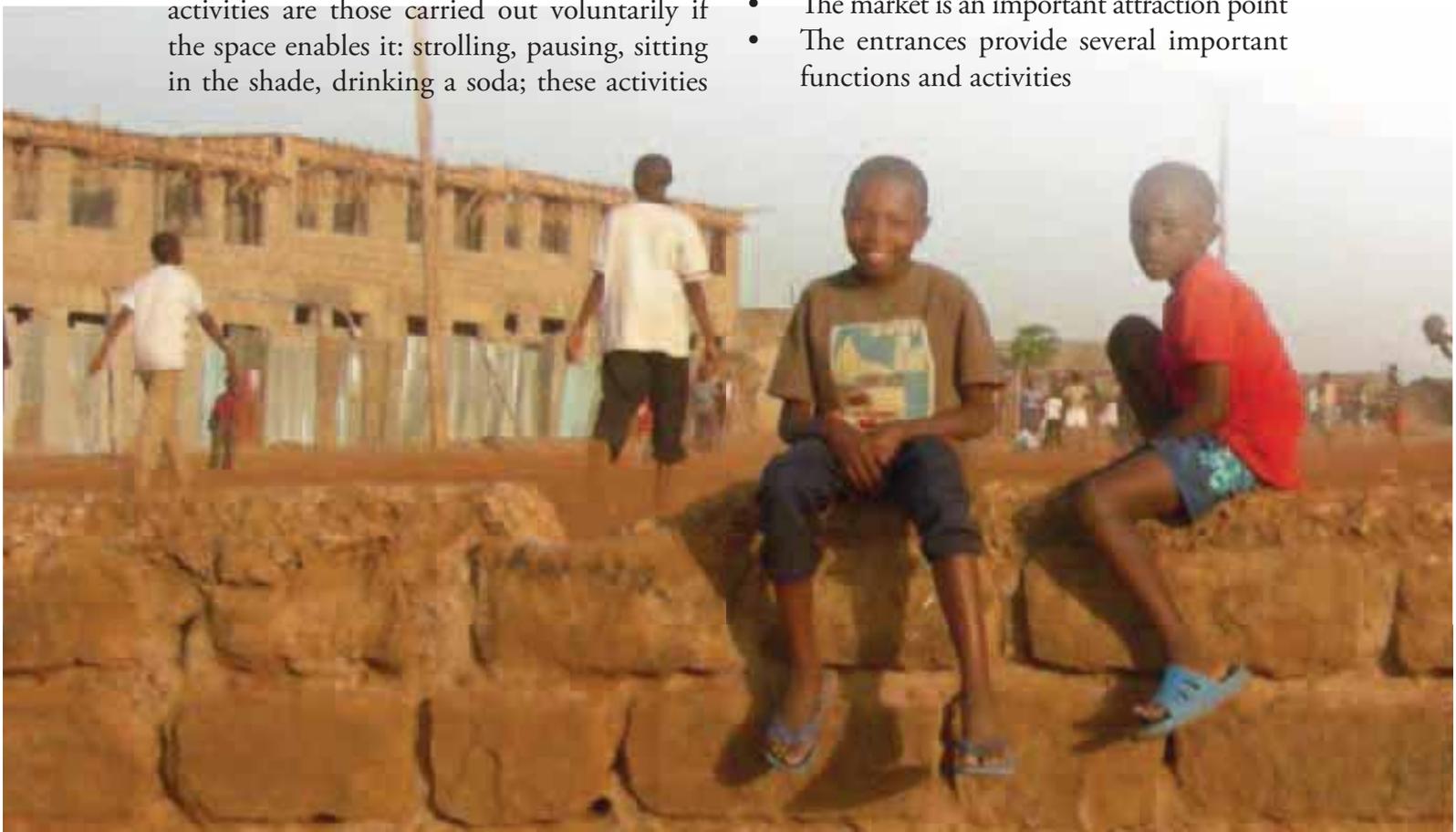
Activity often generates more activity.¹⁷ Important attraction points for optional social activities in the public space along the streets in Korogocho have been mapped as they are indicators of the quality and character of the public space.

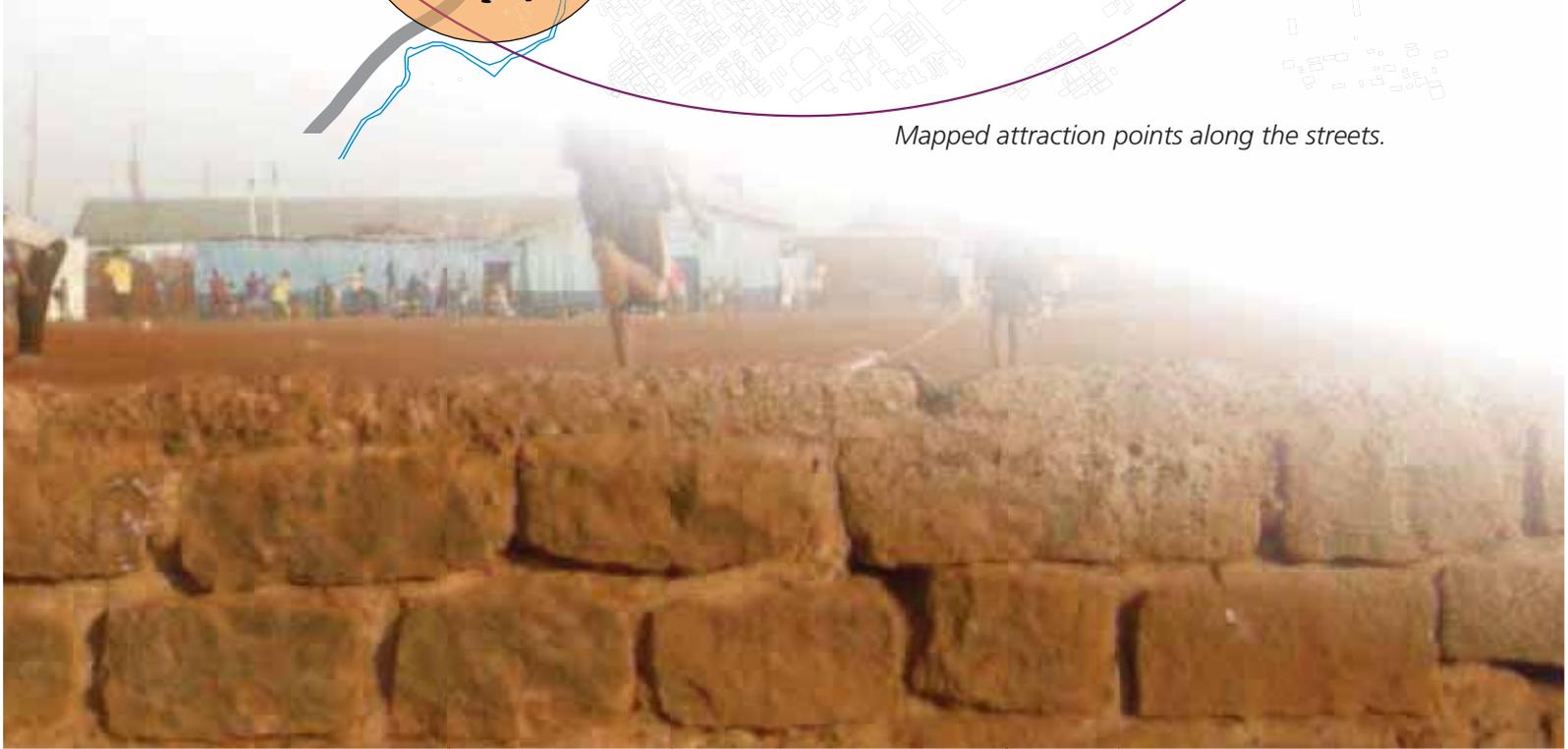
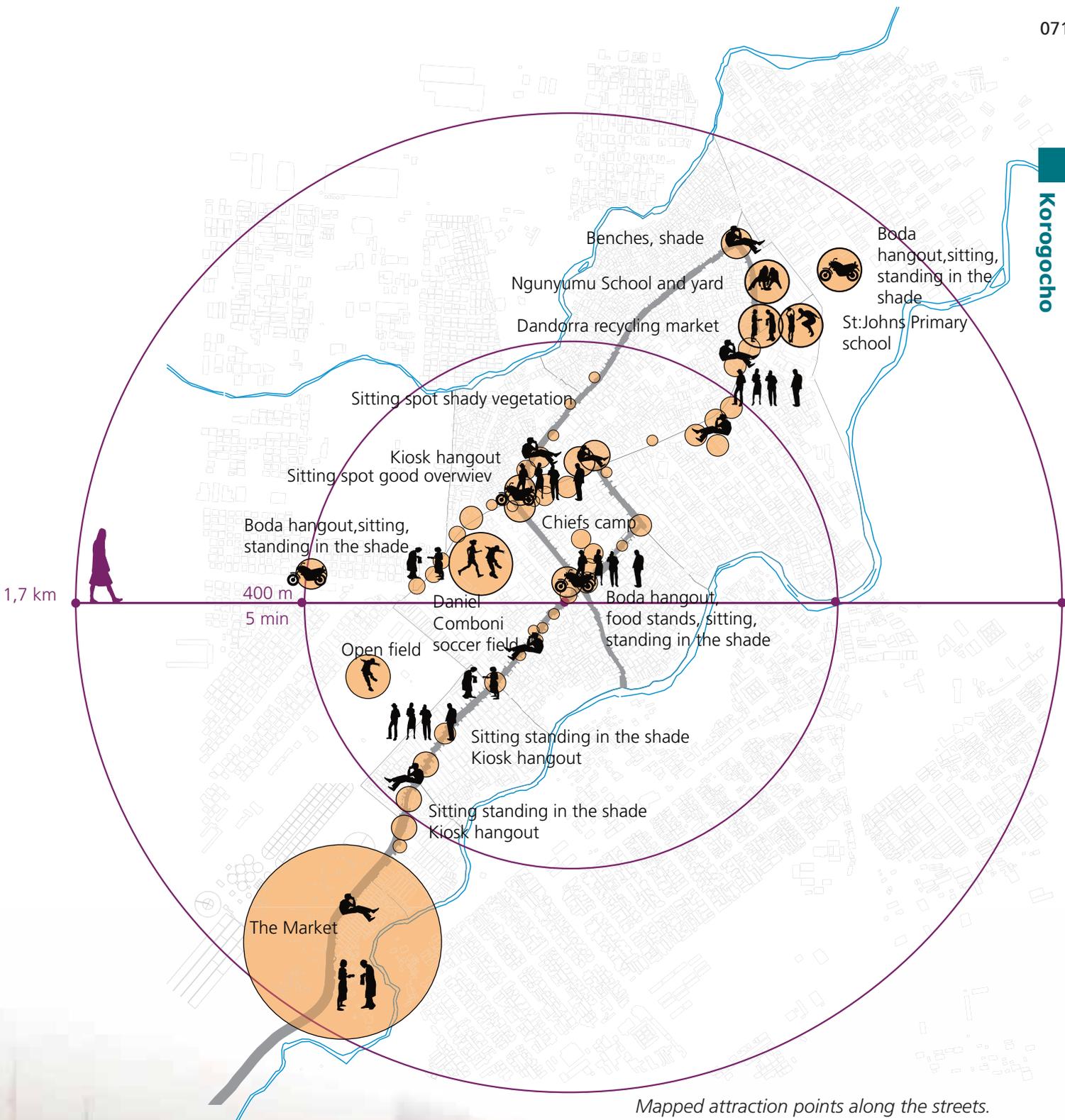
Outdoor activities can be divided into three categories: necessary activities, optional activities and social activities. Necessary activities involve going to work and school, buying food, waiting for the bus; everyday activities that are not so dependent on the physical structure (mainly walking activities). Optional activities are those carried out voluntarily if the space enables it: strolling, pausing, sitting in the shade, drinking a soda; these activities

are highly dependent on the physical structure of the public space. Social activities are dependent on interaction with other people in the public space; children playing with other children, saying hello, having a chat, group activities, seeing and hearing other people. The social and optional activities often share space. Where there are social activities there are often also optional activities.¹⁸

SUMMARY

- Kamunde Road and Market Road carry the majority of attraction points
- The market is an important attraction point
- The entrances provide several important functions and activities





ACTIVITY MAPPING

QUESTIONS TO BE ANSWERED

- Have the services/functions of the surrounding buildings changed due to the street installation?
- What are the activities on the street and edge zone? Have the activities changed? Has the street acted as a catalyst and facilitated new activities? Do the activities change during the day?
- Have illegal activities decreased or increased?

METHOD

FIELD DATA COLLECTION:

By choosing seven key sites along the streets, noting ongoing activities, conclusions of activity levels and types were investigated through observations, documentation and dialogue. The investigations were conducted at three different times: morning, midday and evening to indicate whether the activities changed during the day. By walking along the streets taking photos and observing activities, important sites and types were found.

QUESTIONNAIRES:

The questionnaire survey studies the perceived changes in amount and type of activities since the streets were improved. It revealed if new activities have been generated through the upgrading project and what functions have been created.

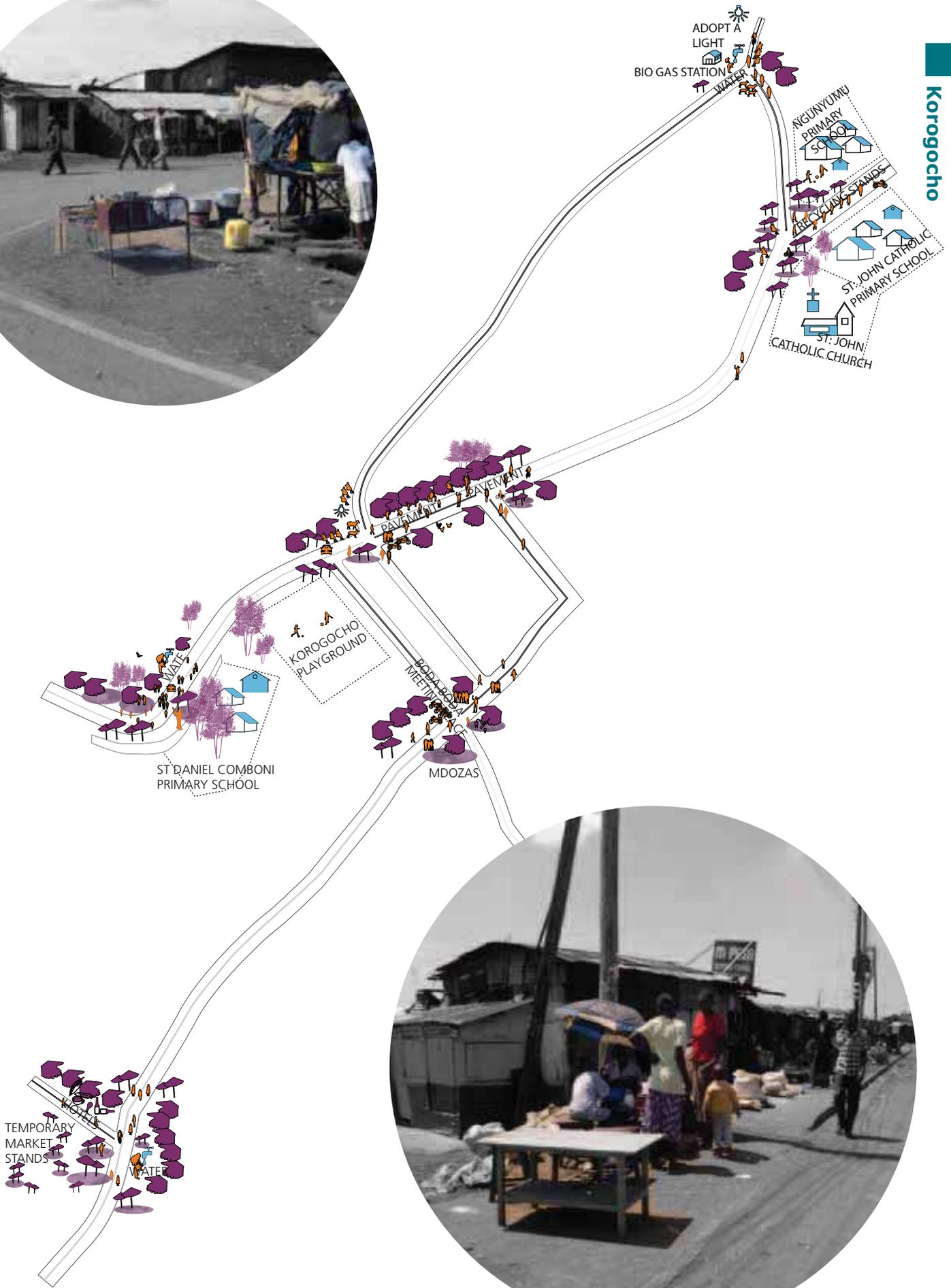
*“Spaces such as streets, street corners and empty lots provide a stage for economic, social and political activities – public spaces in this sense are social spaces” (Staeheli, L.A. & Mitchell, D. (2008). *The people’s property? Power, politics, and the public*. Oxon: Routledge.)*

To understand streets and street corners as a stage for economic, social and political activities the mapping of activities on the streets is essential to grasp their meaning as public



space. By choosing key sites along the streets, noting ongoing activities at different times of the day, conclusions of activity levels and types can be understood. As activity often brings more activity¹⁹ it can be assumed that some places have the possibility to become positive economic and social nodes in the community. The questionnaires support the observations and highlight the perceived changes in activity nodes and type and amount of activity.

The mapping of activity levels led to the conclusion that the level and variety of activity was often high in street corners. To investigate this phenomenon further, a more in-depth study of street corners was done noting street vending, business structures and leisure activities. Type and amount of activities varied within the different street corners chosen. The northwest entrance had a high amount of different activities; both temporal and permanent market vending structures, selling a variation of goods. As the Korogocho playground is situated nearby, different sport activities are practiced during the day.



FINDINGS

Hangouts, spaces where residents congregate and spend time, were found along the streets, especially along Market Road and Kamunde Road. Street vending was found everywhere and the permanent structures have in many places expanded onto the edge zones. Most of the temporary vending was found on the informal entrance on Market Road where the empty ground in the west is used for vending during day and evening. The water facility nearby is another attraction point that also provides shadow and generates activities on site. Several new hotels and businesses have been put up close to the crossing and act as supplements for the businesses that were demolished during the upgrading process.

On Market Road, intersection activities such as Mandazi selling and electricity shops were found. These places are also hangouts for the motorcycle business even though the activities are fewer than in the northern sites.

On Kamunde Road, the majority of the activities were found in the northern parts. The two crossings have permanent business structures and several people spend time sitting around the crossings. Where Kamunde Road and Dandora Entrance meet, connecting Korogocho to Dandora dumping site, a lot of vendors and customers operate and sell recycled material on the edge zone. Other activities observed are children playing on the schoolyard opposite the crossing and a few businesses selling fruit. Grogan - Ngomongo Entrance has very few temporary vending structures but the water facility and the biogas station works as attraction points and makes people reside in the crossing.

Most of the participants in the questionnaire survey (69 per cent) said that new activities have been created on the streets since they were constructed. Only in Highridge did the survey indicate less activity. In general, these activities consist of an increasing amount of people moving on the streets, motorcycles, small businesses, vending, and cleaning. Roller skating is also mentioned from participants in Nyayo.

The highest amount of new activities are said to be found in Korogocho A where 92 per cent of the questionnaire participants noticed an increase. Korogocho A is situated along Market Road, which many of the participants mentioned as important because of the selling of goods and prosperous business. Here are also characteristics such as open street space, wide edge zones with good views, connecting streets and transparency, motorcycle hangouts and some portable businesses in street corners.

The illegal activities in Korogocho seem to have decreased in Nyayo. The majority (94 per cent), of the questionnaire participants in Nyayo say that the illegal activities have been reduced. In Korogocho B and Kisumu Ndogo on the other hand, the majority noticed an increase in illegal activities. They mention the selling of fake phones and second-hand equipment, local brews, drug trafficking and bhang as examples of these activities. It could be debated whether the increase depends on the street upgrading or if it is an argument for saying that the illegal activities still exist.

Grogan B was mentioned among many of the participants as an area with an increase of illegal activities, but what is interesting is that the majority of the people living in Grogan B - 52 per cent - had not noticed any change. This might be a reason to assume that Grogan B is perceived as more insecure outside of the village than inside.



The security has become better, more people are moving on the streets and sightlines have created security. Now I can see who is coming from a distance and the hideouts for criminals are almost gone. The improvement of sight makes my area safe, I can see around the corners and now I can even be out until 10 at night!

Enemi, vegetable vendor



SUMMARY

- New services like motorcycle transportation have been generated through the upgrading project. Near the Market Road’s informal entrance, new business structures have been built to accommodate some of the business owners that had to be relocated for the street upgrading project.
- The activities that can be found along the streets and edge zones are businesses such as food vending, selling of goods, hotels and motorcycle transportation
- Many businesses have extended their space by appropriating the edge zones with temporary structures
- There are more vendors operating on the streets since the street upgrading and the streets have facilitated business activities
- The activities operating are quite the same during the course of the day
- Overall, illegal activities seem to be a continuing problem in Korogocho

STREET FLOW

QUESTIONS TO BE ANSWERED

- Has the flow of people changed?
- Who uses the street? Are certain groups underrepresented? Is there a change in use and movement according to time of day? Is it easier to use the street now? Where is the highest density of people?
- What are the activities on the street and edge zone? Has the activities changed? Has the street acted as a catalyst and facilitated new activities? Are the activities changing during the day?
- Has the illegal activities decreased or increased?

METHOD

FLOW SURVEY:

The flow survey quantifies movements, including both motorized and non-motorized vehicle traffic plus pedestrians. Data from the flow survey describes peak traffic volumes and accessibility. It complements the analysis of the streets in favor of pedestrian security and tells in what extent the public transport is implemented and where.

The flow survey takes into consideration the gender perspective in order to understand hierarchies and functions, and studies for what purpose the different streets are used. During the survey people and vehicles were counted at selected key-sites on three different times of the day, five minutes at a time. While doing so gender, age group and constellation are studied. The calculation of vehicles noted type of vehicle and gender of the driver.

QUESTIONNAIRES:

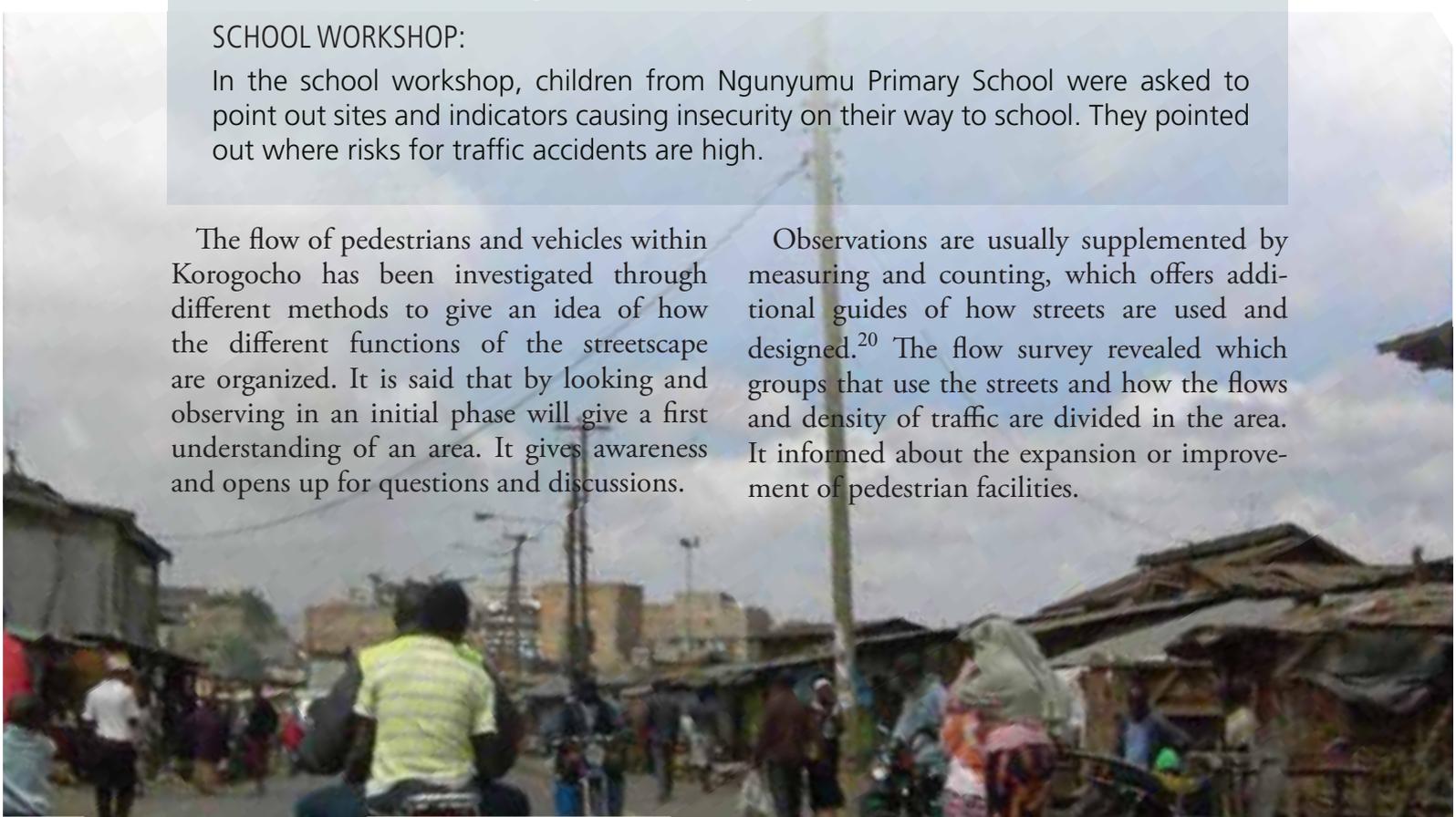
The questionnaire survey investigated the perceived changes in traffic and pedestrian flow that is brought by the upgrading project, changes such as amount of traffic, new functions and purpose of use. The survey led to the discussion with the residents of how traffic could be organized differently.

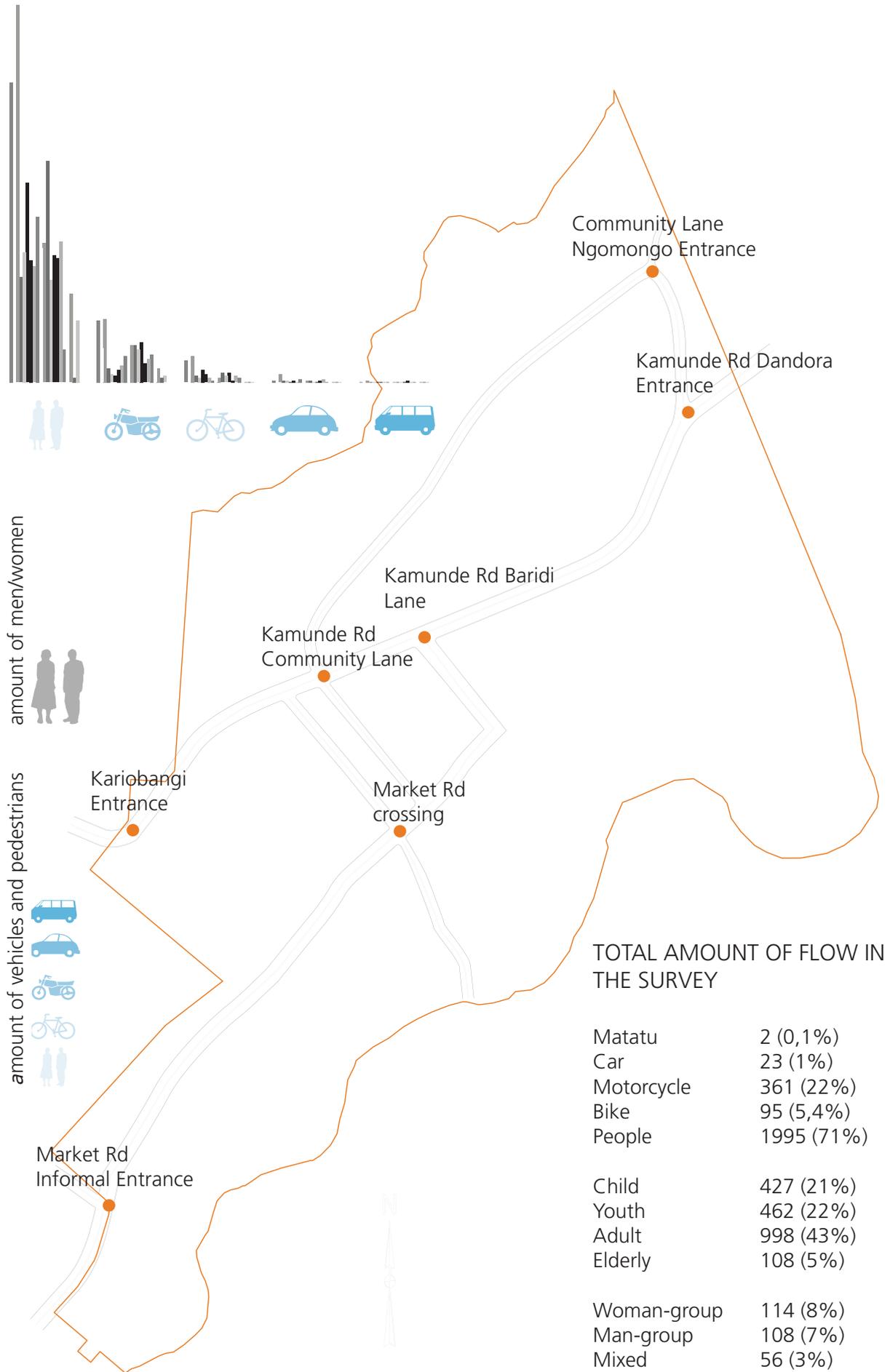
SCHOOL WORKSHOP:

In the school workshop, children from Ngunyumu Primary School were asked to point out sites and indicators causing insecurity on their way to school. They pointed out where risks for traffic accidents are high.

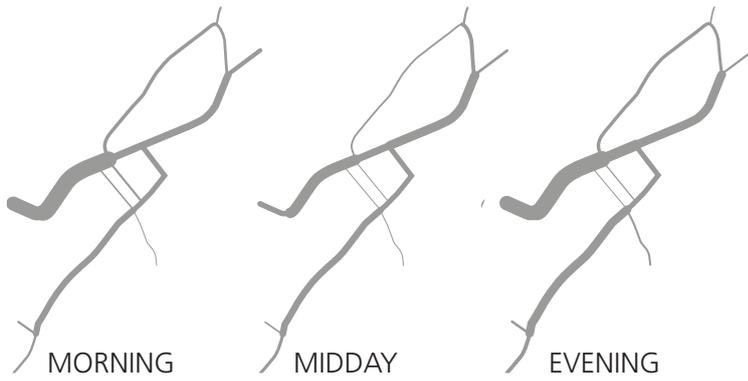
The flow of pedestrians and vehicles within Korogocho has been investigated through different methods to give an idea of how the different functions of the streetscape are organized. It is said that by looking and observing in an initial phase will give a first understanding of an area. It gives awareness and opens up for questions and discussions.

Observations are usually supplemented by measuring and counting, which offers additional guides of how streets are used and designed.²⁰ The flow survey revealed which groups that use the streets and how the flows and density of traffic are divided in the area. It informed about the expansion or improvement of pedestrian facilities.





Name of intersections for Flow Survey.

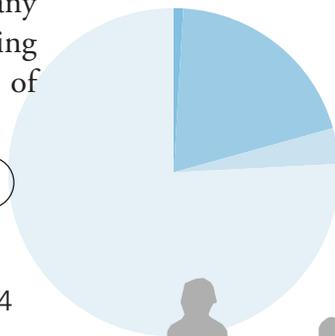


Concentration of flow depending on time of the day.

KAMUNDE ROAD / COMMUNITY LANE

The second most numerous flows of people and vehicles. Pedestrians increased during mid-day and evening whereas the amount of motorcycles was greatest in the morning. Children, youths and adults were higher than average and many elderly were passing during evening. The flow was 17% of the total.

Matatu	0	0	0
Car	2	1	1
MC	35	24	24
Bike	6	3	6
People	87	90	143
Child	10	15	43
Youth	27	38	30
Adult	47	35	55
Elderly	3	2	15
W-group4		7	5
M-group2		5	4
Mixed	0	3	9
Single	67	43	82
Other	0	0	0



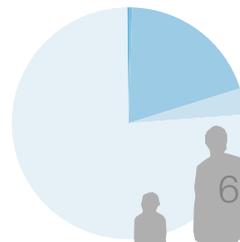
54%

46%

KAMUNDE ROAD / BARIDI LANE

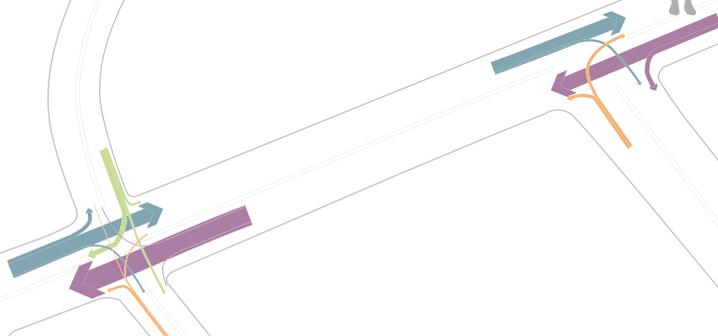
Medium traffic flow. Matatus were not very common but did at times pass the crossing when searching for passengers. Most pedestrians passed during day time and were mostly adults, even though several youths and children did pass as well. The majority of the pedestrians were walking alone and we found the highest amount during mid-day. The flow was 12% of the total.

Matatu	0	0	0
Car	2	1	1
MC	35	24	24
Bike	6	3	6
People	87	90	143
Child	10	15	43
Youth	27	38	30
Adult	47	35	55
Elderly	3	2	15
W-group 4		7	5
M-group 2		5	4
Mixed	0	3	9
Single	67	43	82
Other	0	0	0



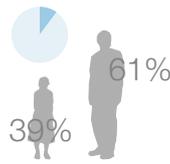
60%

40%



COMMUNITY LANE / NGOMONGO ENTRANCE

The crossing with least amount of flow in Korogocho. It accounted for only 6% of the total flow and the majority of people and vehicles were coming or going from or to the crossing “Kamunde Road / Dandora Entrance”. This crossing had the largest amount of pedestrians in comparison to the total flow and most of them were walking alone. The crossing is located next to a water point which appeared to function as an attraction point for many of the people passing by. It also had the largest amount of men, even though 39% of the people were women. Cars, matatus and bicycles were absent during the study and there were only a few motorcycles.

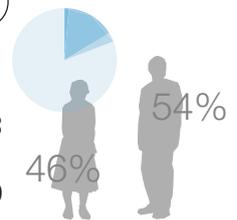


Matatu	0	0	0
Car	0	0	0
MC	9	3	4
Bike	0	0	0
People	57	3	40
Child	8	5	7
Youth	9	12	11
Adult	39	27	21
Elderly	1	1	1
W-group 3	4	3	
M-group 3	5	4	
Mixed	0	0	0
Single	45	21	16
Other	0	0	0

KAMUNDE ROAD / DANDORA ENTRANCE

Situated in southeast of Korogocho and is located by the two most important schools; Ngunyumu Primary School and St John’s Catholic Primary School. Many children passed, especially in the morning and the evening. As it is an exit and leads to Moi International Sports Centre and the Lucky Summer village. The total flow was 13% of the total in Korogocho.

Matatu	0	0	0
Car	2	0	2
MC	15	18	13
Bike	4	3	0
People	91	21	89
Child	14	4	45
Youth	16	13	20
Adult	59	41	23
Elderly	2	1	1
W-group 3	8	9	
M-group 8	1	11	
Mixed	5	1	2
Single	39	46	37
Other	1	0	0



KARIOBANGI ENTRANCE

The most active location in Korogocho as 27% of the total flow was found here. Both pedestrians and motorcycles were numerous but increased during morning and evening hours. The largest varieties of vehicles were found here; cars, matatus, motorcycles and bicycles were spotted. The entrance connects to Kariobangi where the matatus to downtown Nairobi depart. The amount of people at the location increased in morning and evening and the majority were adults. It could thereby be assumed that many of the people passing are working outside of Korogocho.

Matatu	0	0	1
Car	1	3	5
MC	40	22	41
Bike	14	7	17
People	194	86	244
Child	17	5	59
Youth	32	34	46
Adult	136	37	116
Elderly	9	10	23
W-group 4	1	17	
M-group 7	4	16	
Mixed	5	6	6
Single	154	59	154
Other	0	1	0

42%



58%

MARKET ROAD INFORMAL ENTRANCE

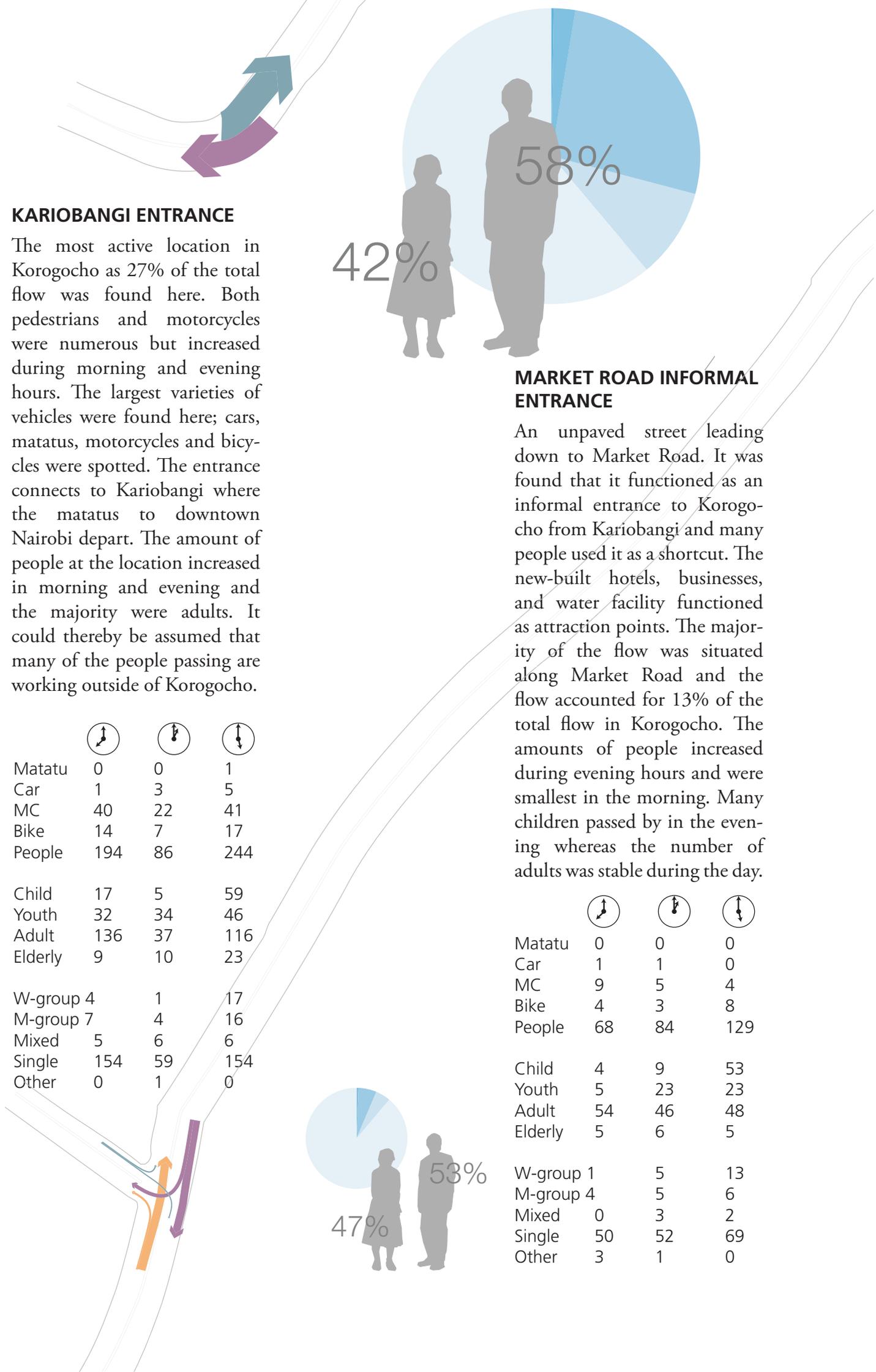
An unpaved street leading down to Market Road. It was found that it functioned as an informal entrance to Korogocho from Kariobangi and many people used it as a shortcut. The new-built hotels, businesses, and water facility functioned as attraction points. The majority of the flow was situated along Market Road and the flow accounted for 13% of the total flow in Korogocho. The amounts of people increased during evening hours and were smallest in the morning. Many children passed by in the evening whereas the number of adults was stable during the day.

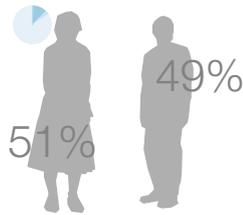
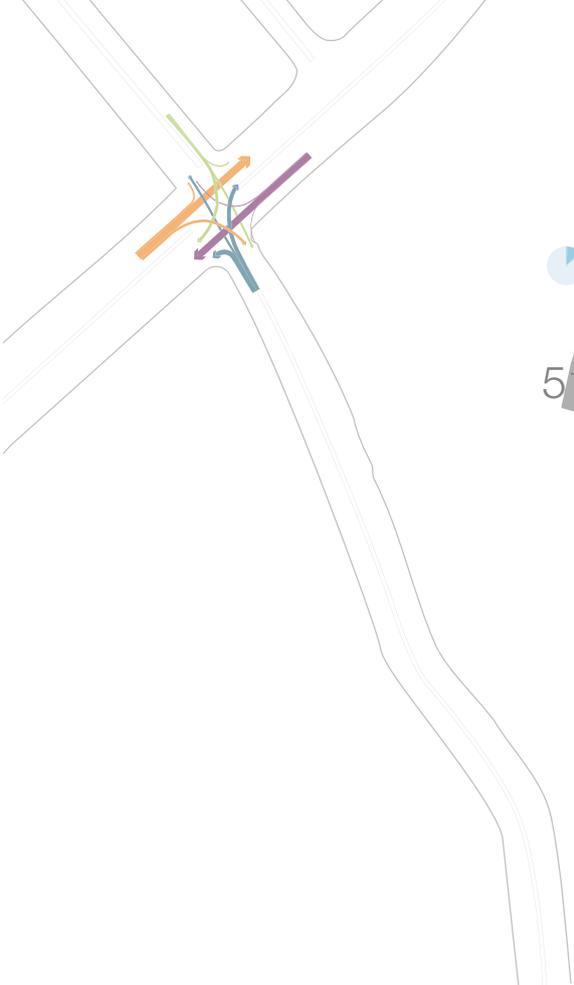
Matatu	0	0	0
Car	1	1	0
MC	9	5	4
Bike	4	3	8
People	68	84	129
Child	4	9	53
Youth	5	23	23
Adult	54	46	48
Elderly	5	6	5
W-group 1	5	13	
M-group 4	5	6	
Mixed	0	3	2
Single	50	52	69
Other	3	1	0

47%



53%

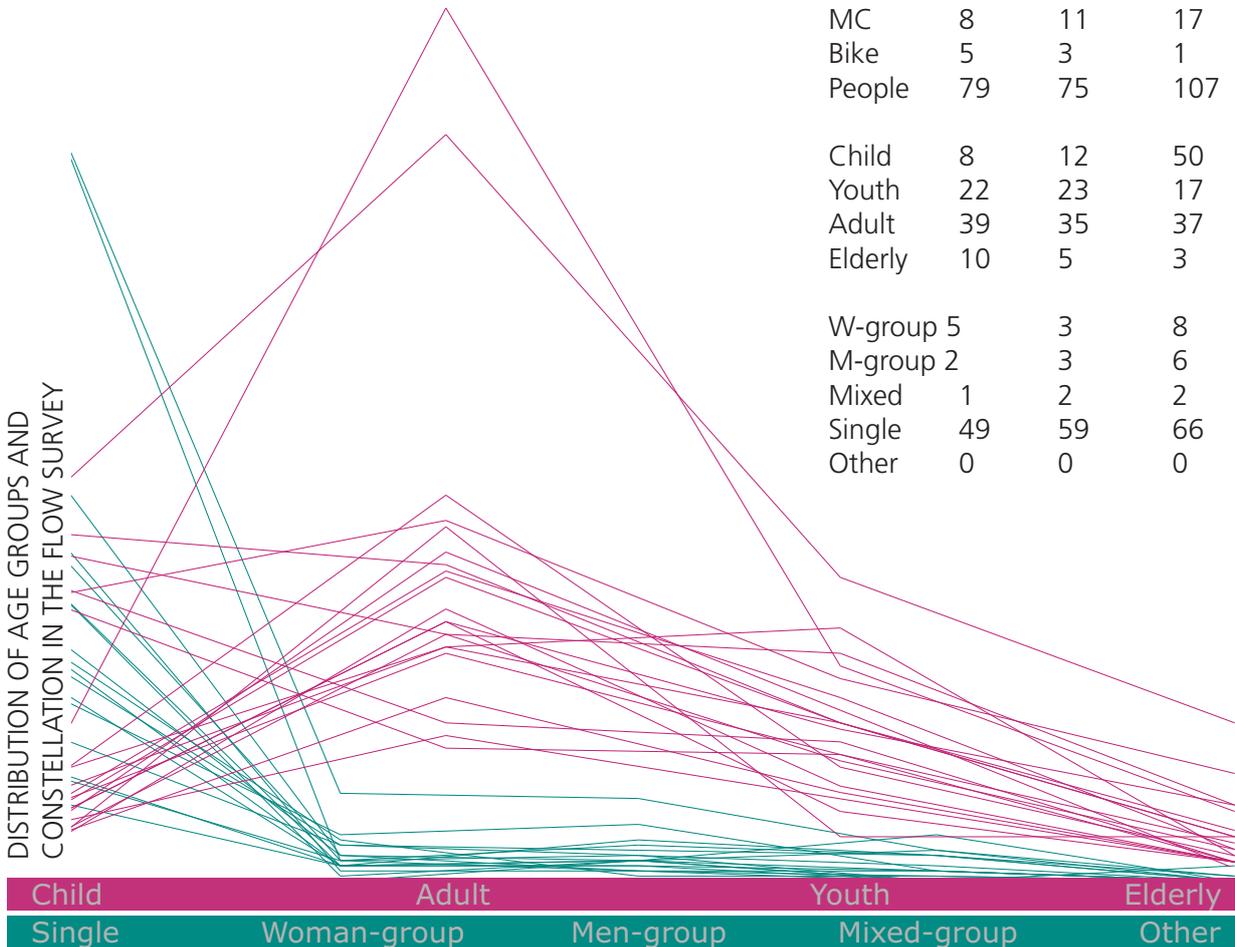




MARKET ROAD CROSSING

Connecting to the Dandora dumping site in southeast through a new built bridge for pedestrians. The bridge was used mainly by people working at the dumping site and pedestrians were the most common users. The crossing accounted for 12% of the total flow and the majority of the flow was found along Market Road as it was an important place for many activities. Very few people used the north part of Mama Ngendo Road even though it connects to Kamunde Road, which had the highest amount of flow in Korogocho.

DISTRIBUTION OF AGE GROUPS AND CONSTELLATION IN THE FLOW SURVEY



Matatu	0	0	0
Car	1	0	2
MC	8	11	17
Bike	5	3	1
People	79	75	107
Child	8	12	50
Youth	22	23	17
Adult	39	35	37
Elderly	10	5	3
W-group	5	3	8
M-group	2	3	6
Mixed	1	2	2
Single	49	59	66
Other	0	0	0

FINDINGS

The total amount of pedestrians and vehicles calculated in the Flow Survey was 2480.

- 33 per cent of the total flow was found in morning
- 27 per cent of the total flow was found during midday.
- 40 per cent of the total flow was found in the evening.

The total amount of flow was similar during the whole day, but the concentrations changed locations. During midday the amount of people and vehicles were more spread out over the different streets while in the morning and evening they were concentrated around the northwest entrance towards Kariobangi as many people were leaving or coming back from work. The flow survey indicated that this street was used more in the evening and residents proclaimed the importance of it as a generator for business and activities.

Although Market Road was mentioned as an important street for activities the flow of people and vehicles in Korogocho differed a lot between the streets. Most frequently used was Kamunde Road, where the flow of both pedestrians and motorcycles were highest at all times of the day, while Community Lane and Mama Ngendo Road had the least amount of flow at all times. The limited flow found in Grogan could be a result of the area's reputation with high criminality or perhaps the lack of attraction points. It could also be discussed whether the street has facilitated or reduced the possibility of operating and spending time on the street as the activity within this area, which lacks pavement, was observed to be very limited.

According to the participants of the questionnaire survey the flow of vehicles has changed since the streets were constructed. In every village, more than 70 per cent answered that the amount of traffic has increased due to better paved, and more accessible, streets.

The increased amounts of motorcycles are the most relevant change as they have influenced

the area a lot. According to the flow survey, they accounted for 14 per cent of the total flow within Korogocho. The questionnaire indicated that this has created job opportunities and helped with the transportation of goods and people within the area. Unfortunately, they also appeared to generate negative changes. As the pedestrians made up 81 per cent of the total flow (according to the flow survey) it was not surprising that the amount of accidents has increased with the arrival of more motor vehicles. Of the total amount of participants in the questionnaire survey, 69 per cent said that the accidents have increased and the children were mentioned to be the most affected group. A total of 70 per cent of the children were noted during evening times around the northwest entrance to Kariobangi and on Market Road. The children who participated in the school workshop also indicated the risk of traffic accidents near Kariobangi.

Places where less women and children spend time could lead to a discussion of places that are perceived less safe but as the results show, almost as many men as women were noticed in all crossings at all times of the day. However, all vehicles were driven by men.

During the morning most of the pedestrians moving in the area walked alone while in the afternoon or evening, many were moving in constellations of two or more people. Very few elderly people were moving on the streets, only 5 per cent of the calculated people. The largest age group was adults, constituting 50 per cent of the total amount of people, while children and youths represented 44 per cent.

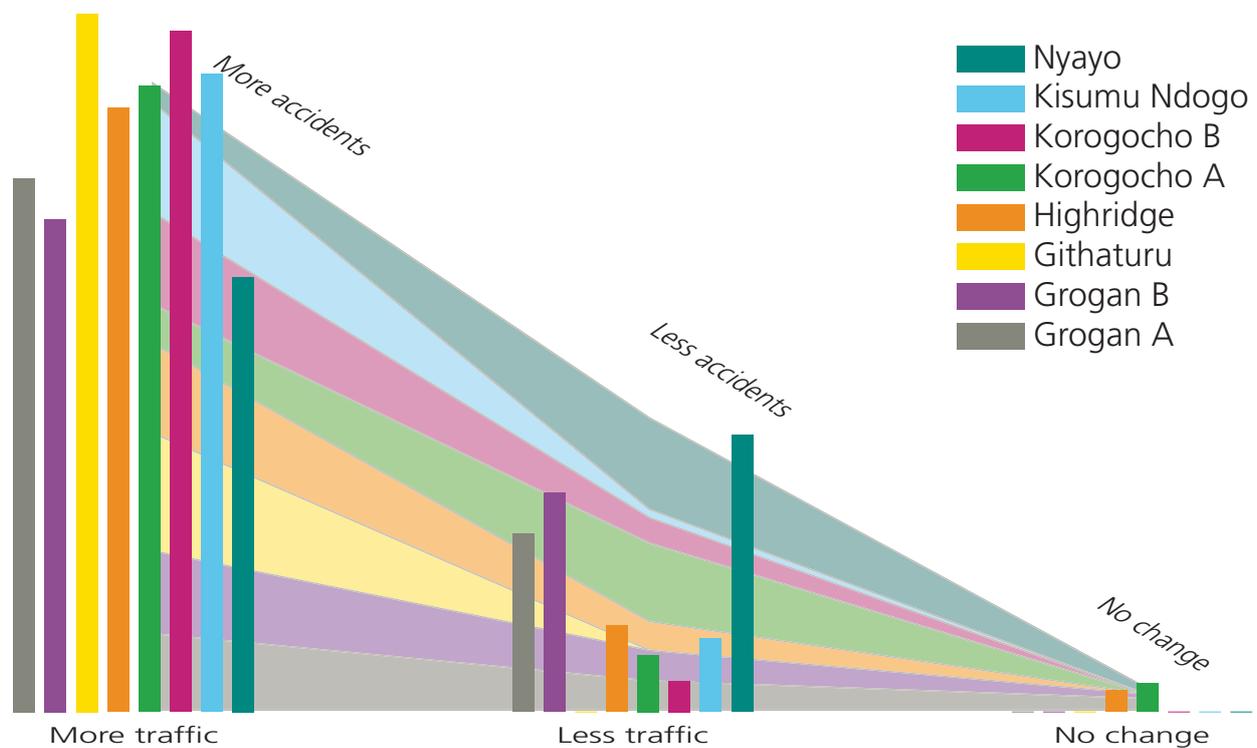
As pedestrians constitute most of the flow within the area the streets should be available and accessible to them. Today, the pedestrians share the space with fast-driven vehicles, which raises the risk of accidents. It could be presumed that accidents are more common in the northwest entrance as the amount of traffic was intensified in this area. Improvement of the hierarchies between pedestrians and vehicles could help in decreasing traffic accidents. Pedestrian or Zebra crossings and more speed

bumps were requested from the participants in the questionnaire survey and there were also suggestions to create more space for pedestrians by constructing more pavements and even widening the streets as there are many people and vehicles sharing the space.

As most people were moving along Kamunde Road, this street should not be overlooked in terms of security for pedestrians. The northwest entrance should also be examined as it is an important place in Korogocho. Many people moved here and to avoid congestion and accidents it could be improved in its design both as providing space for flows but also in terms of its role as an entrance to Korogocho.

SUMMARY

- 33 per cent of the total flow was found in morning, 27 per cent during midday and 40 per cent in the evening
- The pedestrians constituted the majority of the flow within Korogocho at all times of the day and are perceived to have increased since the streets were upgraded
- Almost as many men as women were moving on the streets
- The flow was constant during all day but the concentrations changed location
- Community Lane and Mama Ngendo Road had the lowest amount of flows
- Motorcycles were the most common vehicles and have increased since the streets were upgraded
- Many people were moving from or to Kariobangi, especially in the morning and evening
- More people were moving on Market Road in the evening
- The elderly were underrepresented in the flow survey
- Most people moved around alone especially in the morning but as the day passed the amount of constellations with two or more people increased
- Traffic accidents have increased and children are a vulnerable group concerning traffic accidents



Questionnaire outcome. Perceived change in amount of traffic and amount of accidents since the streets were constructed.

CAPITAL FLOW

QUESTIONS TO BE ANSWERED

- Have new microeconomies been created? Informal or formal? Have they facilitated existing business? Has the availability of goods changed? Have prices and competition between vendors changed? Is the market more established? Has the business turned in to a more permanent structure?
- Have the house and land values changed? How is the value distributed in the area? Has this affected the rents?
- Have new job opportunities been created and what type of jobs?
- Have the prices on goods changed?

METHOD

FOCUS GROUP INTERVIEWS:

The interviews were conducted with 26 business owners along the streets with both permanent and temporary structures, asking questions about the changes that came with the upgrading. Questions about change in supply indicated if improved access to the area has affected the availability of goods.

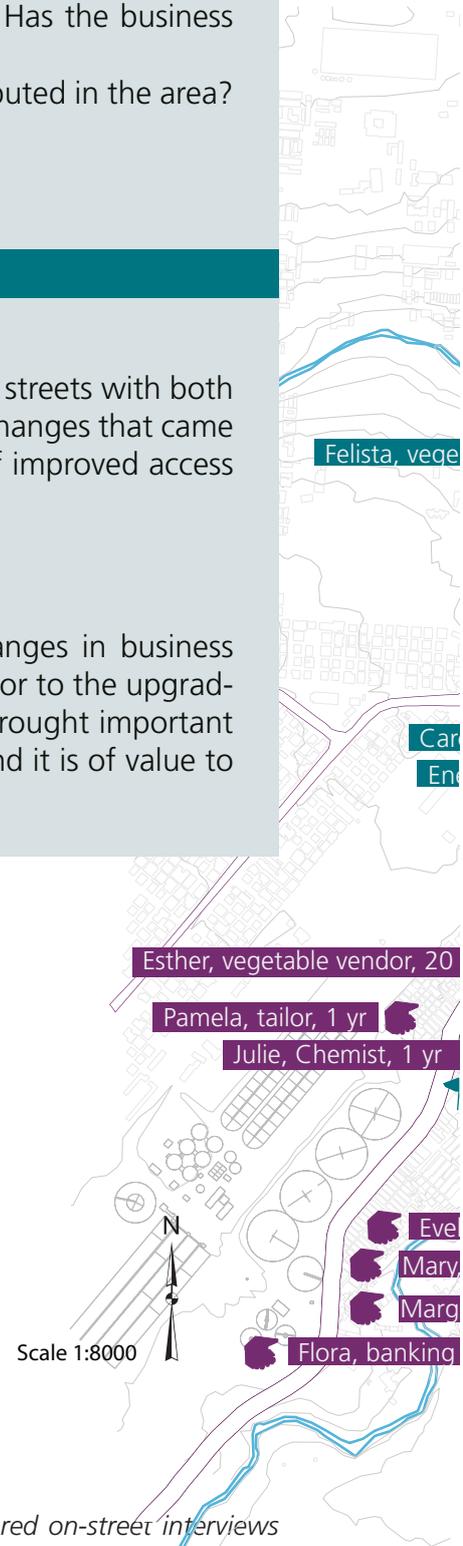
QUESTIONNAIRES:

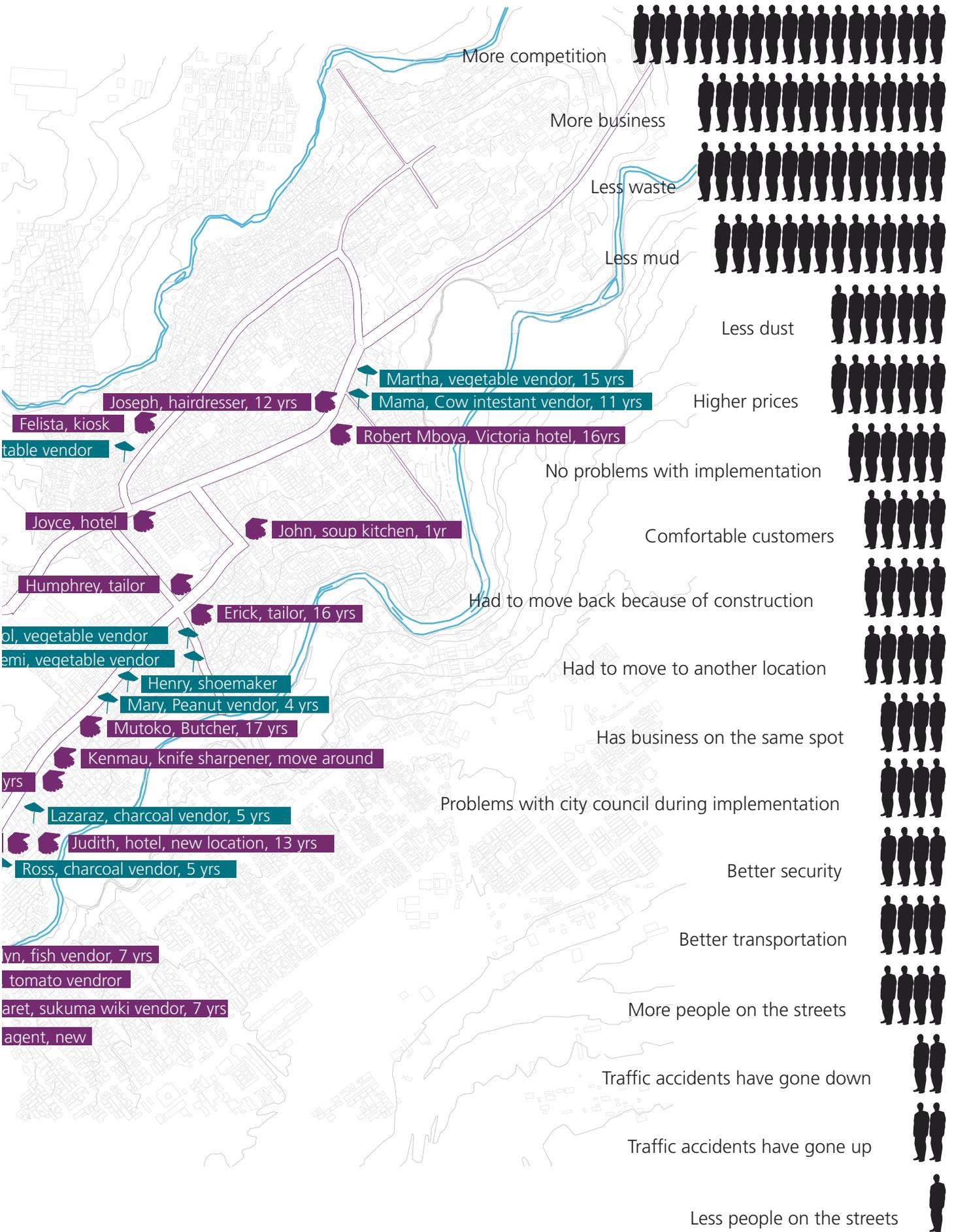
As a complement, the Questionnaire surveyed the perceived changes in business activity and job opportunities. As the businesses within the area prior to the upgrading project was situated in connection to the streets it may have brought important changes. Different areas appear to experience different changes and it is of value to understand where the changes have taken place.

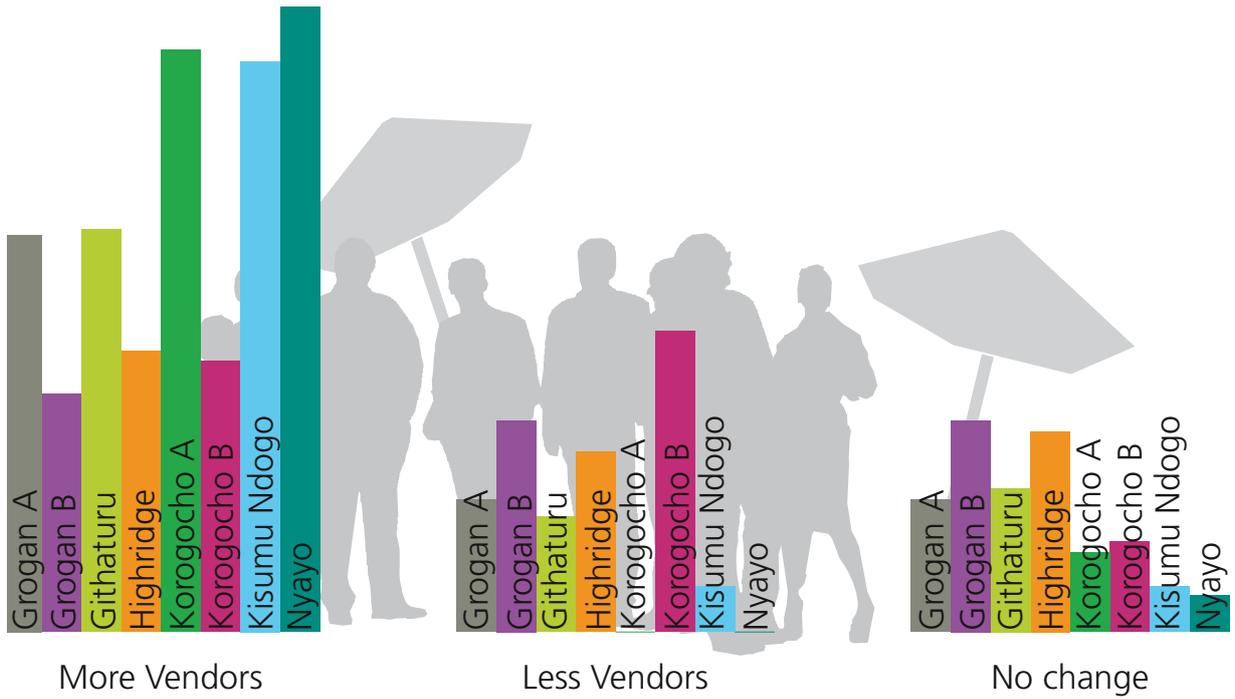
Local business supports the local economy. The businesses in Korogocho have experienced changes since the streets were improved and widened. Because of more activity, it can be assumed that more microeconomics has been created as the amount of vendors has increased.

The vending in Korogocho has changed since the streets were improved. The streets have provided more space for the vendors but as the businesses have increased in amount, the space is still small and the competition high. Even though several business owners had to move or limit the space, the majority feel positively towards the improved streets.

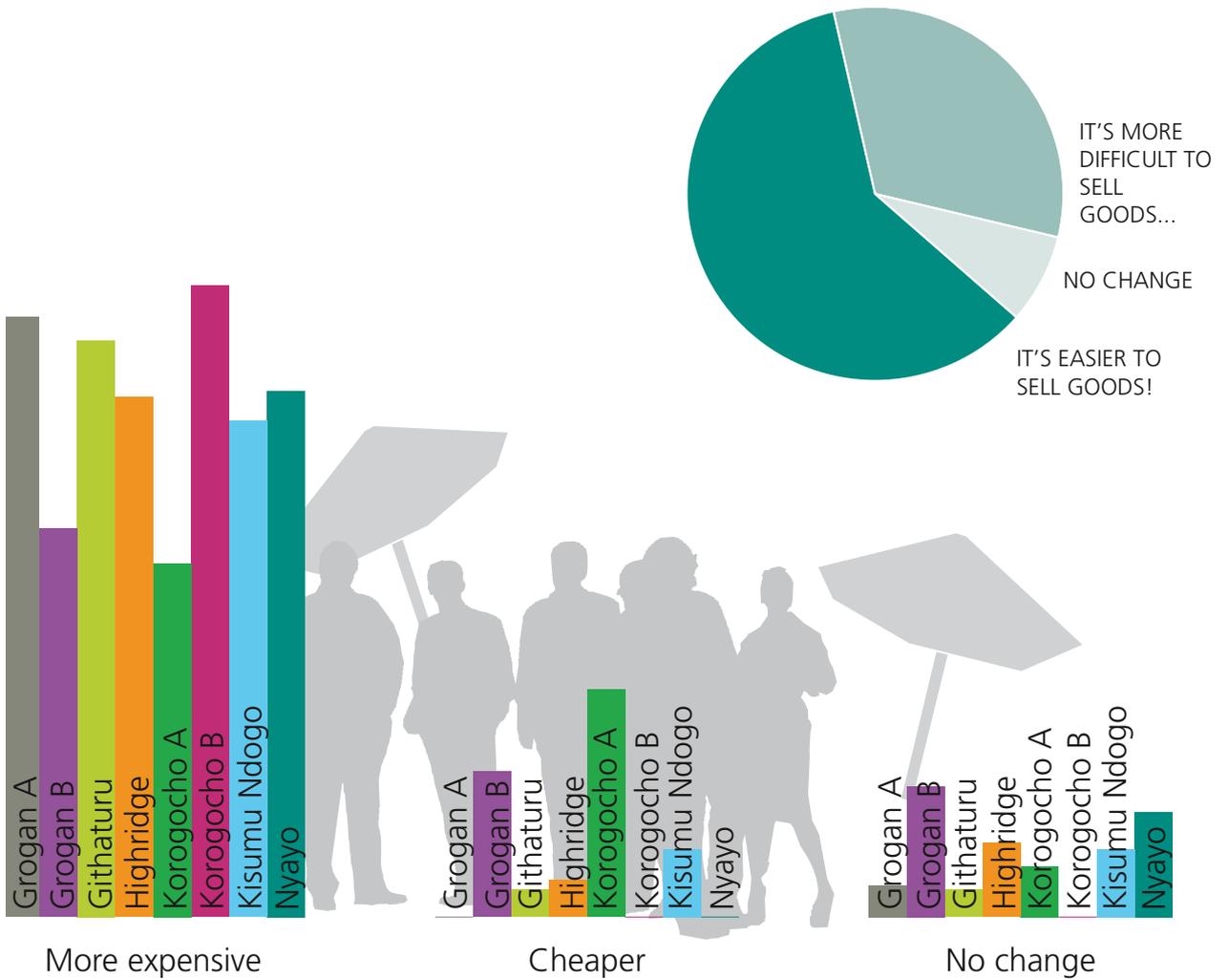
Left: Map of interviewees in business survey and a summary of the semi-structured on-street interviews during the business survey.







Questionnaire outcome. Has the construction of the streets changed the amount of vendors in Korogocho?



Questionnaire outcome. Has the streets made it easier/more difficult for vendors to sell their goods in the streets?

FINDINGS

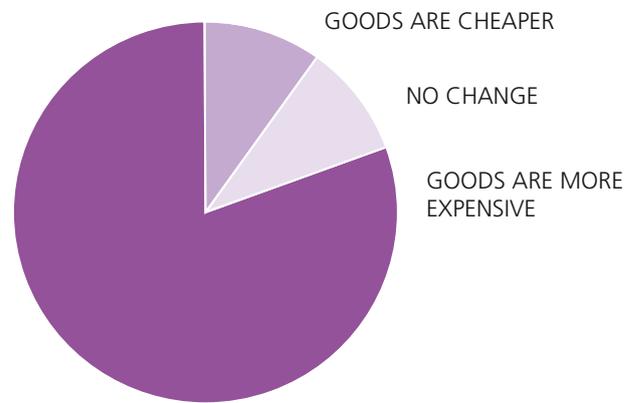
In all villages except Korogocho B, an increased amount of vendors have been noticed. The answers from the focus group interviews implied that there is more competition due to more business, which is also indicated by the questionnaire survey. In Grogan B, for example, 59 per cent of the participants in the questionnaire survey said it has become more difficult to sell goods due to the greater amount of businesses and vendors that create competition between them. Grogan B also appears to suffer due to lack of security and many people fear to visit the area. During the interviews some as well mentioned the insecurity as a continuing problem, which results in fewer customers.

The displacement or demolition of businesses was brought up several times during the focus group interviews and in the questionnaire survey. Most of them found the movement difficult while others thought of it as an improvement because of the positive changes the upgraded streets generated. Many vendors interviewed have moved their structures and were now operating in smaller indoor space than before. Others chose to move their business or

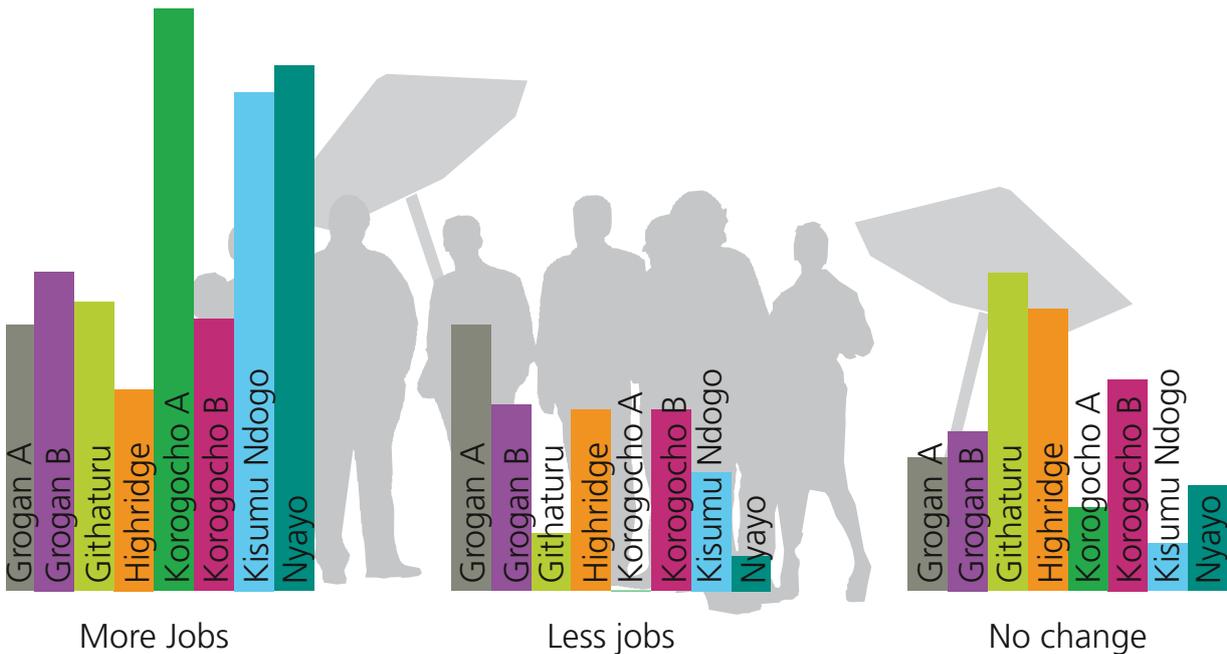
limit the living space behind the shop in order to save space for the actual business.

In Grogan A, the participants of the questionnaire survey said that the vending had become more difficult because of competition, higher food prices, lack of security and that the police were requesting finance. Participants from Gitathuru added that the selling of goods was more difficult because of expensive rents.

According to the questionnaire survey Korogocho A, Korogocho B, Kisumu Ndogo and Nyayo, in comparison to Grogan A,



Questionnaire outcome. Have you noticed a change in the prices of goods in Korogocho after the streets were constructed?



Questionnaire outcome. Did you experience that the job opportunities in Korogocho changed after the streets were constructed?

Grogan B and Gitathuru, stated that it was easier to sell goods. Reasons mentioned by both business owners and participants of the questionnaire survey were that the streets are accessible even when it rains, the transportation of goods is much easier as the streets are widened and paved, there are more people on the street and that means more customers, the streets are more secure due to the new width and the streetlights which make it possible for vendors to work at night.

The participants of the questionnaire survey mentioned that the transportation is less expensive and has improved the possibility of moving the goods. On the other hand they also mention that the prices of goods have gone up. It has generated more job opportunities for people who work as porters. Several new types of goods such as fish, different vegetables and bread have been noticed, and the interviewees added that the visibility has increased.

The areas that experienced the easiest selling of goods were concentrated around the streets mentioned to have the highest amount of activity and flows of people. Market Road captured the highest amount of new jobs and is characterized as a “market/business street with temporary businesses on the edge zone and permanent business structures behind, high activity and movement, wide edge zone with high activity and with high complexity and pavements” (see Characterization map in Chapter 4). The vendors interviewed in this area were mostly positive to the changes in comparison to those in Grogan A and Grogan B that complained about the limited amount of customers, even though they experienced an increase in activity. From the questionnaire survey participants want tarmac on edge zones and less open drainage to provide more space for business.

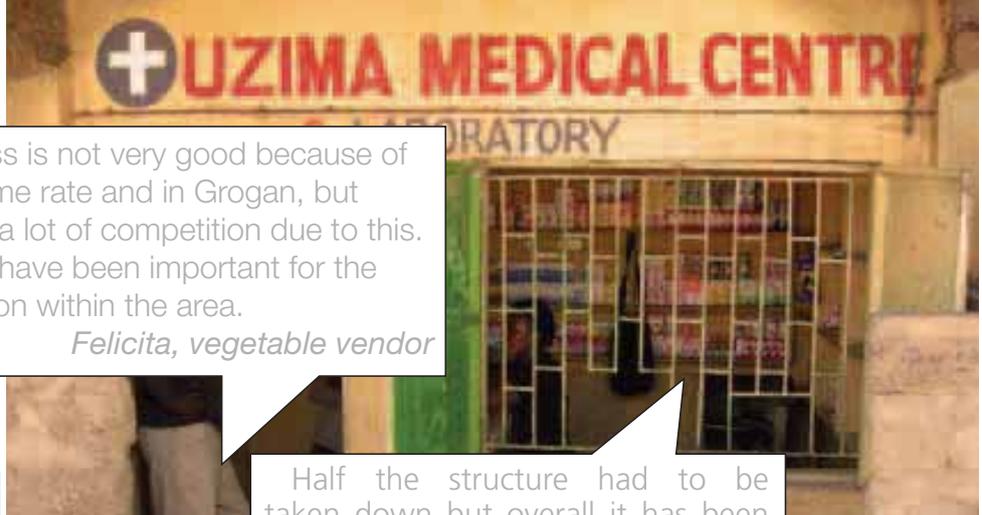
SUMMARY

- New microeconomic activities have been created, mostly informal, small businesses, street vendors and motorcycle transportation
- There are more vendors and businesses in Korogocho
- The competition is high which makes it more difficult to sell goods
- There are more people moving on the streets, which give more customers
- More jobs have been created in all areas
- Goods have become more expensive (it can be discussed whether this is a cause of the improved infrastructure or because of changes in the national economy)
- The streets have facilitated transportation and availability of goods
- The business found in Korogocho today is not the same everywhere due to the demolition of many businesses
- Less mud and waste have facilitated the operation for vendors
- Streetlights have improved the security and made it possible to operate businesses at night



The business is not very good because of the high crime rate and in Grogan, but there is not a lot of competition due to this. The streets have been important for the transportation within the area.

Felicita, vegetable vendor



The authorities were arrogant to those who did not cooperate.

Zara, vegetable vendor

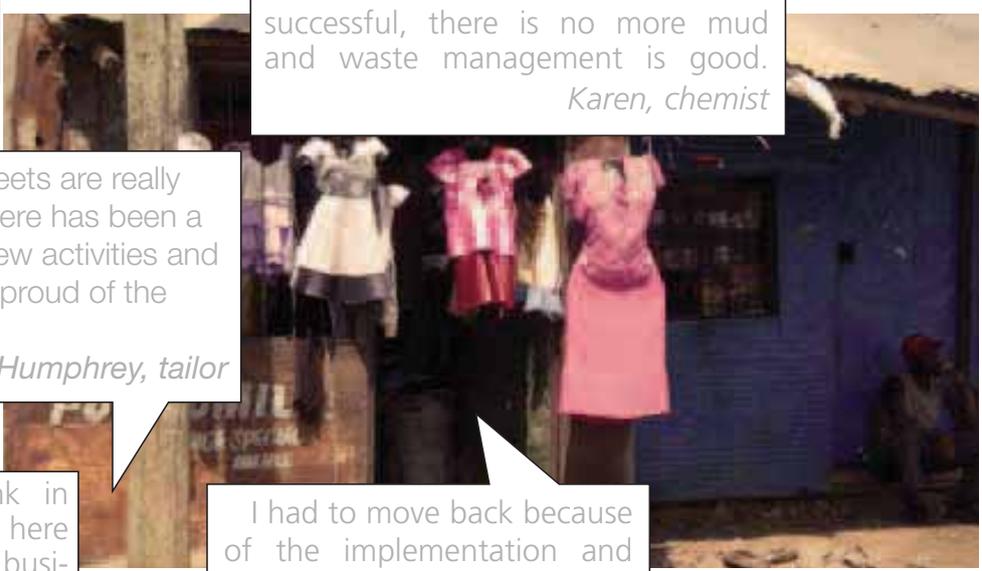
Half the structure had to be taken down but overall it has been successful, there is no more mud and waste management is good.

Karen, chemist



The streets are really nice, there has been a lot of new activities and we are proud of the streets!

Humphrey, tailor

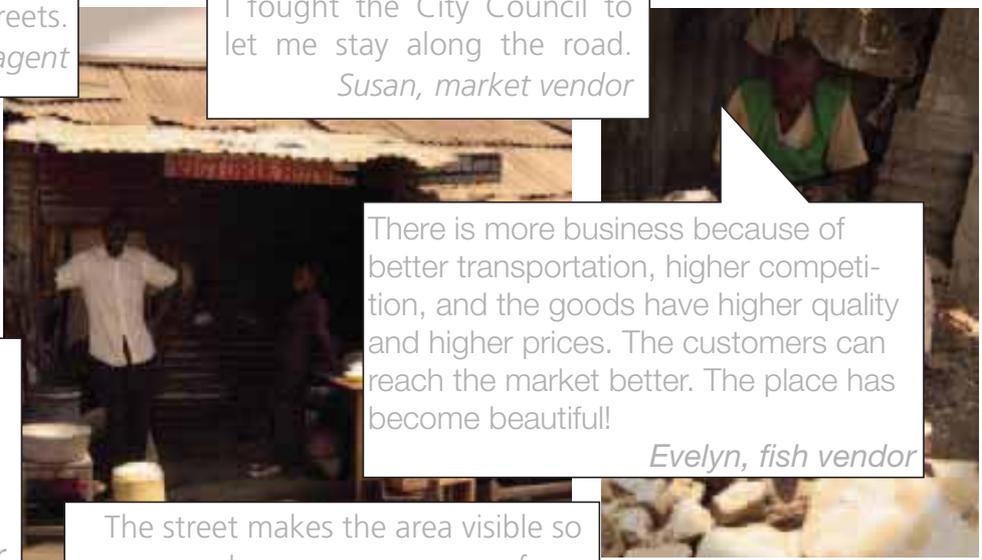


We were the first bank in Korogocho and opened here because of all the new business that came with the streets.

Merriam, banking agent

I had to move back because of the implementation and I fought the City Council to let me stay along the road.

Susan, market vendor



My business is thriving because of the size of the streets. The security has been better because of the openness which also has affected my business, people see me.

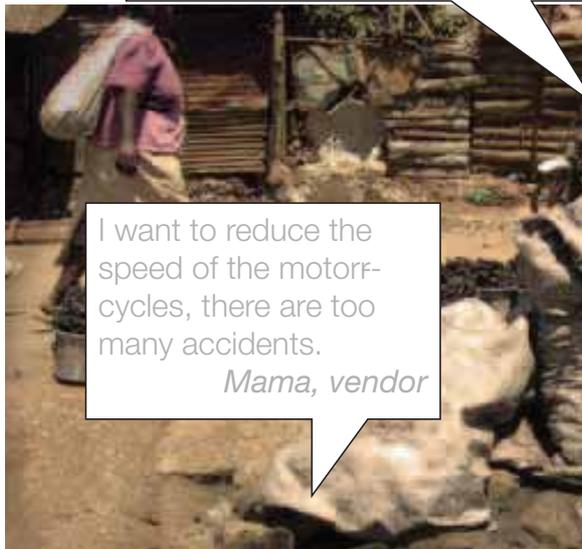
Erick, tailor

There is more business because of better transportation, higher competition, and the goods have higher quality and higher prices. The customers can reach the market better. The place has become beautiful!

Evelyn, fish vendor

The street makes the area visible so more people can see me, even from a distance. The place has risen a bit.

Stephen, knife sharpener



I want to reduce the speed of the motor-cycles, there are too many accidents.

Mama, vendor

People have moved their vending from the market place to their homes because it is easier to have a temporary structure along the streets.

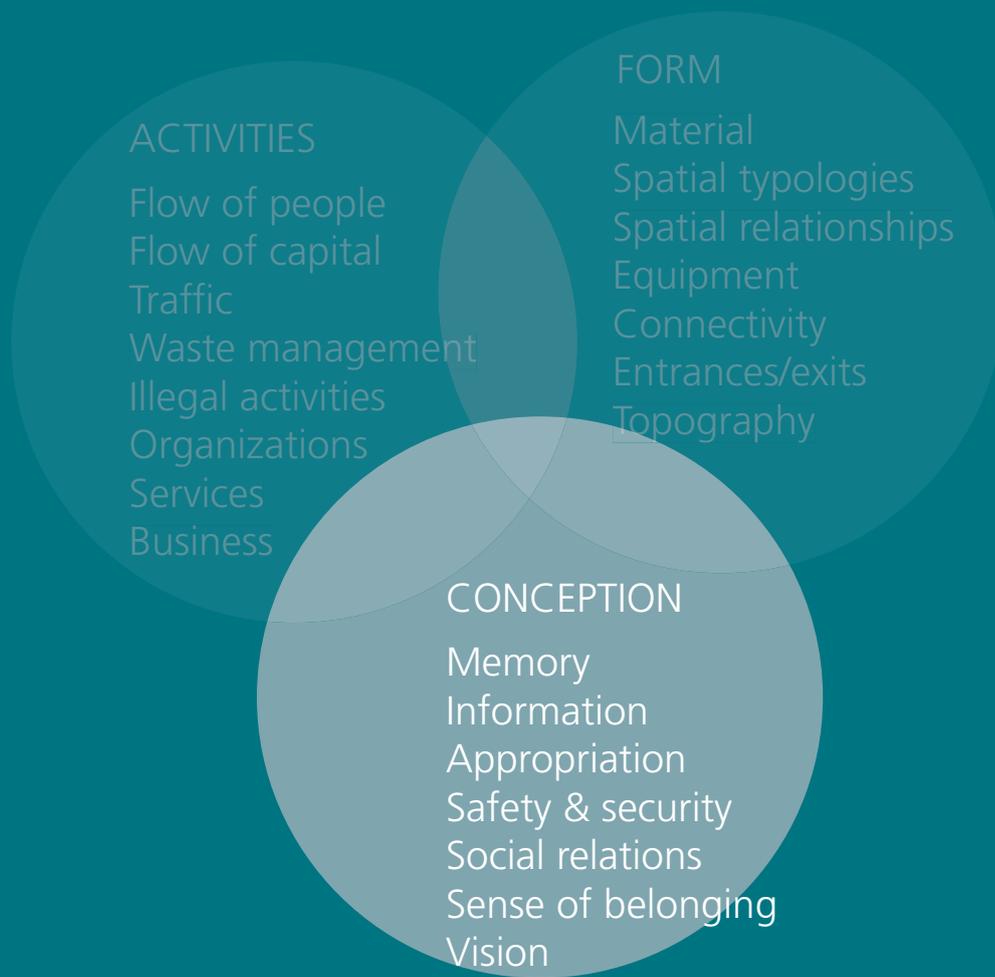
Mary, tomato vendor



ACTIVITIES - KEY MESSAGES

This section reveals the high level and various activities taking place in the streetscape of Korogocho. There is a notion among the residents that the street upgrading has inspired new activities. Often, activity generates more activity but it can also lead to conflicts as they limit some to the advantage of another. The main activities on the streets are transportation, vending and social interaction. Walking is the most common mode of transportation and during rush hours the streets of Korogocho are congested with people walking to work or school or performing their daily chores. In this section the activities in the streets of Korogocho have been studied to get an understanding of how the form and perception of the streets affects the activities taking place. Locating where people dwell and what activities they perform in the streets can set the design for people-oriented streets. In this chapter, activities were explored through the study of street flow, capital flow and mapping of existing activities and attraction points.

- New services and microeconomics like motorcycle transportation and street vending have been generated by the street upgrading
- There are more permanent business structures in Korogocho and the streets have facilitated transportation and availability of goods
- The competition between businesses is higher even though more people/customers are moving along the streets
- The upgrading has facilitated vending activities along the streets
- There are more temporary business structures in the edge zones
- Illegal activities are a continuing problem in Korogocho but have decreased in most parts of the area due to the street upgrading
- Pedestrians constitute the majority of the flow within Korogocho and are perceived to have increased since the streets were upgraded
- Traffic accidents have increased with the street upgrading due to the increase of vehicles in the area and children are a particularly vulnerable group



04.3 CONCEPTION

Conception is a combination of identity and how a place is perceived. To individuals, the conception of a place is therefore their set of feelings and impressions about it. The conception reflects cultural and individual values and beliefs.²¹

SAFETY AND SECURITY

QUESTIONS TO BE ANSWERED

- Has residents' experiences of security changed?
- If so, in which direction and where?

METHOD

SCHOOL WORKSHOP:

The workshop was held at the public school, Ngunyumu Primary School, in Korogocho and aimed at investigating changes in the actual and experienced safety along the children's route to school. The school was chosen as it targets a wide geographical group of children located throughout the area.

Children are addressed as an important target group when assessing security as such issues often affects them. Hence, their view can indicate the perspective of other groups in the community as well.²² By assessing the routes it is possible to reveal which of the streets that are used most frequently and if routes have changed with the new streets. Asking the children to mark areas along the route that they experience as more frightening, safer or more unsecure than before the completion of the streets, provides a picture of how the children experience safety.

The second part of the exercise was a design workshop where the children were asked for ideas on how the streets could be designed safer/better. This informs recommendations for future design and upgrading.

QUESTIONNAIRES:

The questionnaire survey investigated the perceived changes in safety and security that arrived with the upgrading project. Questions such as if the streets have become safer or less safe after the construction were asked and complemented with the main reasons for the eventual difference.

In Korogocho, as in many slum areas, the high level of crime is a major concern. This affects the perception of security. Before the upgrading many crime hotspots were located around street crossings and along thoroughfares.²³ Therefore, it is essential to investigate if and how the upgrading has affected the perceived safety and actual security in the community and how this influences engagement and mobility in the area.

The experienced safety and security within Korogocho has been investigated through different methods to give an idea about how and if the upgraded streets have changed perceptions in the area. Using various methods for the investigation gives possibility of triangulation.²⁴ Observation and dialogue has

been used in the initial part of the investigation to understand the main conception of safety in the area. To understand the situation before the implementation, street dialogues and questionnaires have been used jointly with comparisons with the safety audit from the socio-economic impact assessment. In order to target a group sensitive to issues of security and safety a mapping workshop has been held at Ngunyumu Primary School in Korogocho.

FINDINGS

The next section is a comparison of safety audit before the street upgrading, with the safety assessment based on interview and dialogue after the street upgrading.

PRE-STREET TENDENCIES²⁵;

- Grogan A was the only village where murder was mentioned.
- The outskirts of Korogocho were targeted as critical areas.
- The central part of Gitathuru was targeted as a critical area.
- Many crime hotspots were located near entrances to the area.
- Several crime hotspots were located in street corners and along paths.
- Numerous crime hotspots were located near open places.

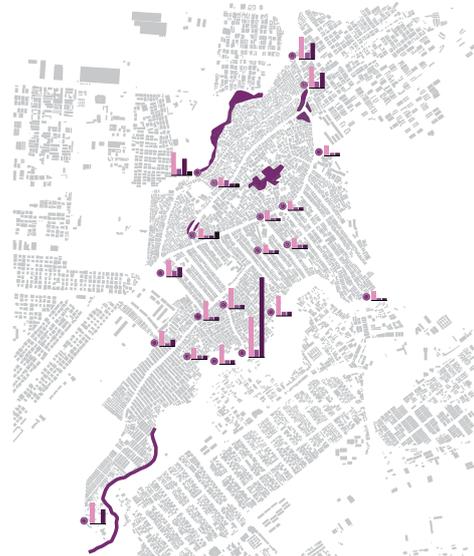
POST-STREET TENDENCIES;

- Grogan A and B were experienced as unsafe.
- The upgraded streets, except in Grogan and the low part of Mama Ngendo Road were experienced as safe.
- Open places with overview were experienced as safe.
- Escape ways for criminals were experienced as fewer.
- Outskirts of the area as Dandora, along the river and some parts of Kariobangi were experienced as unsafe.
- Spaces with low activity were experienced as unsafe.
- Mugging and motorcycle accidents were the issues of insecurity most frequently mentioned.
- Streetlights were mentioned as an important factor for safety.
- Orientation in the area was experienced as better and as a positive factor for safety.
- The long paths through Highridge from Kamunde Road were experienced as escape ways for criminals.

- Pre-street security Hotspots
Issues mugging, rape, robbery murder

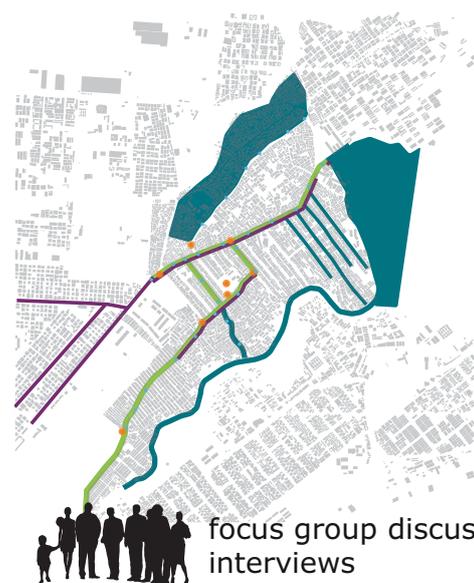
mugging
rape
robbery
murder

- ◆ Pre-street critical areas specifically targeted in focus group discussions



Safety perception prior the street upgrading, according to the Socio-economic Survey.

- ◆ Post-street critical areas
- ◆ Post-street safe/good areas
 - Spots with overview and orientation
 - Streetlights
- ◆ High-risk traffic accidents



focus group discussions,
interviews

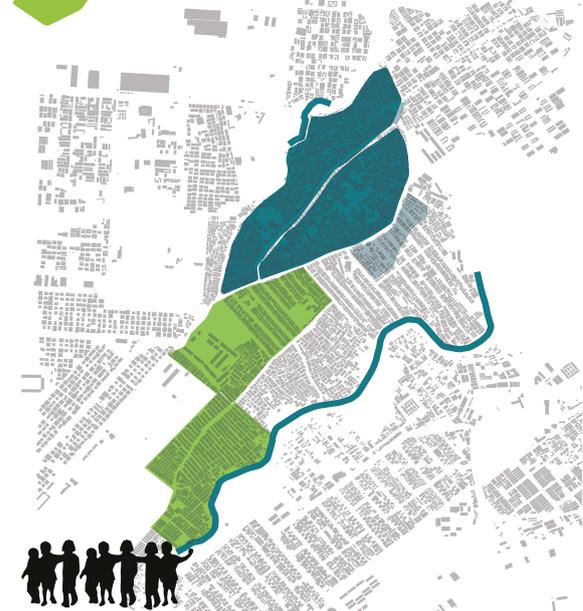
Safety perception after the street upgrading, according to this case study in Korogocho.

POST-STREET TENDENCIES FOUND DURING THE SCHOOL WORKSHOP;

- Grogan was experienced as unsafe.
- Gitathuru was experienced as unsafe.
- Dandora was experienced as unsafe.
- The river was experienced as unsafe but with potential.
- Parts of Highridge were experienced as unsafe.
- Korogocho B with the chief's camp and the football field was experienced as safe.
- Kariobangi was experienced as unsafe because of traffic accidents.
- Nyayo was experienced as safe.
- Home neighbourhood and well-known areas were experienced as safe.

Post-street security issues; rape, robbery, killers, thieves, accidents, dirt, drugs

- ◆ Post-street unsafe areas
- ◆ Post-street safe/good areas



specific targeted in focus group discussions
Target group; children Ngunyumu Primary school

The outcome from the mapping exercise revealed that 48 per cent of the children used parts of Kamunde Road (measured after the crossing with Community Lane), 20 per cent used parts of Market Road, 37 per cent used parts of Community Lane, and 30 per cent used parts of Muthenya Road on their way to school. Of the children living in Korogocho B, only 8 per cent used Market Road, 17 per cent Community Lane and as many as 75 per cent used Kamunde Road to school.

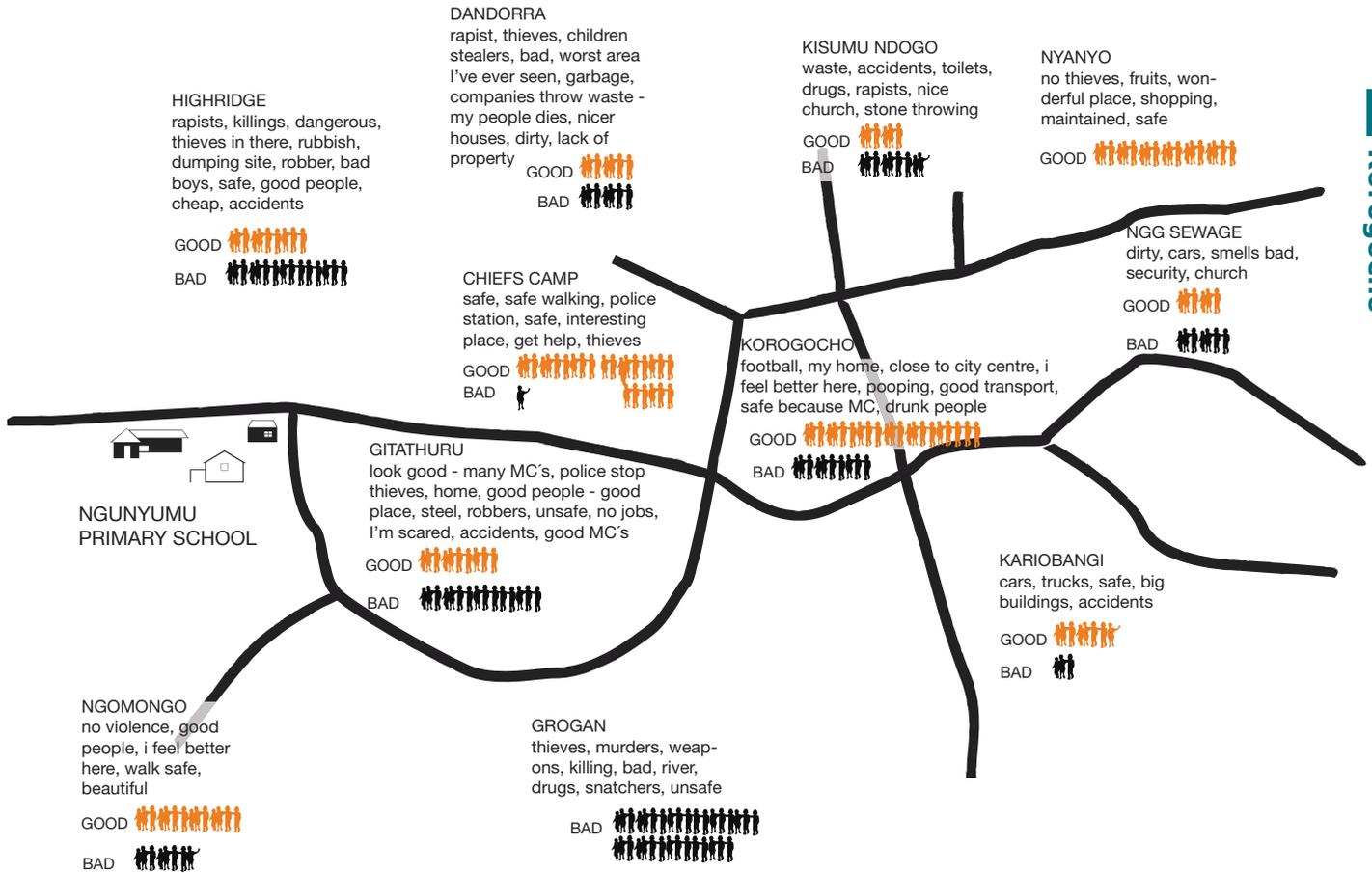
The children were asked if they walked the same way to school after the street upgrading, 40 per cent answered 'yes' and 60 per cent answered 'no'. There was no great difference between boys and girls. When the children were asked if they walked to school alone 44 per cent said 'yes' and 56 per cent said 'no'. Slightly fewer girls than boys answered that they walked to school alone. The total amount of children asked were 40 - 20 boys and 20 girls - and 4 of them did not give an answer to

Do you walk the same way to school since the road was constructed? (no answer 4)

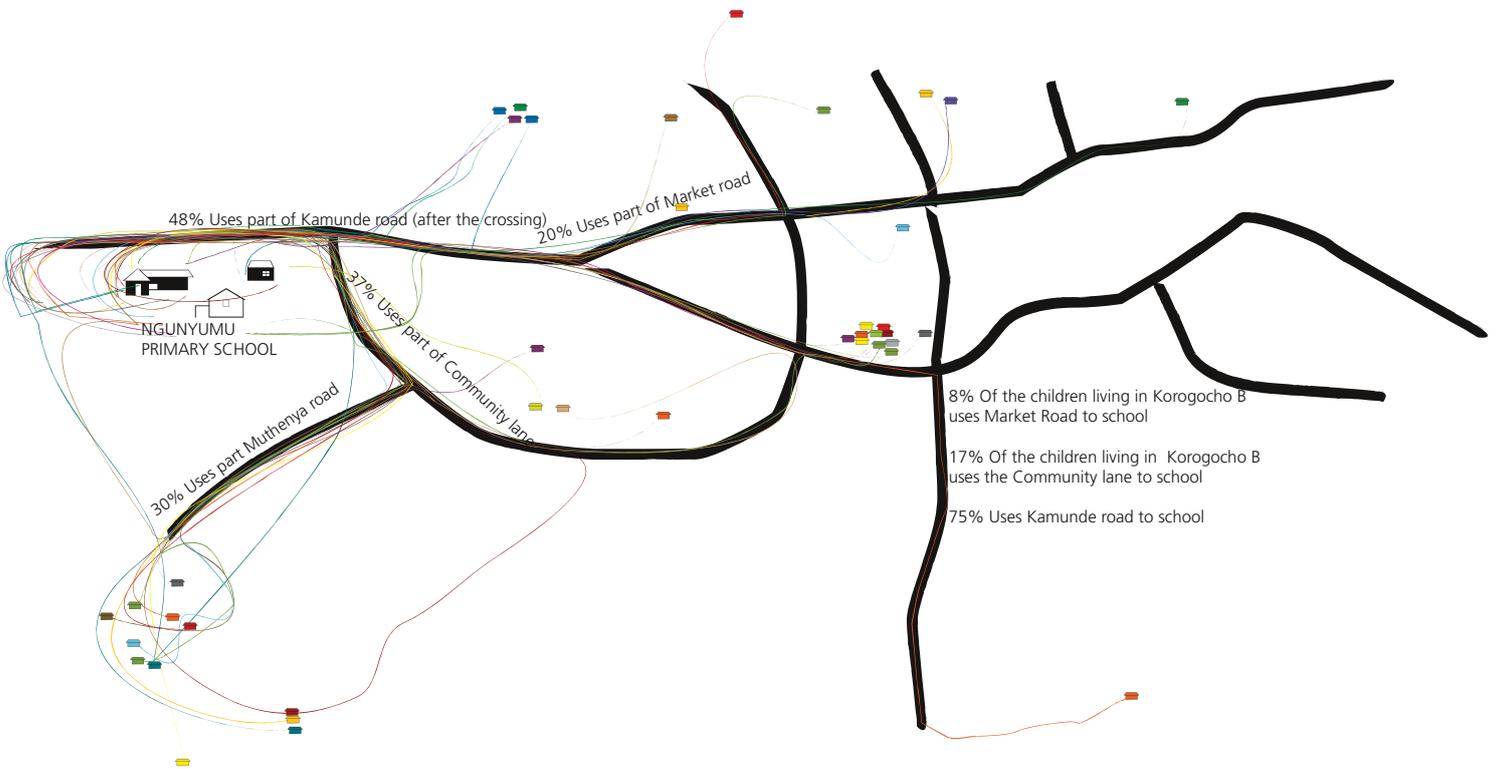


Do you walk to school alone? (no answer 4)

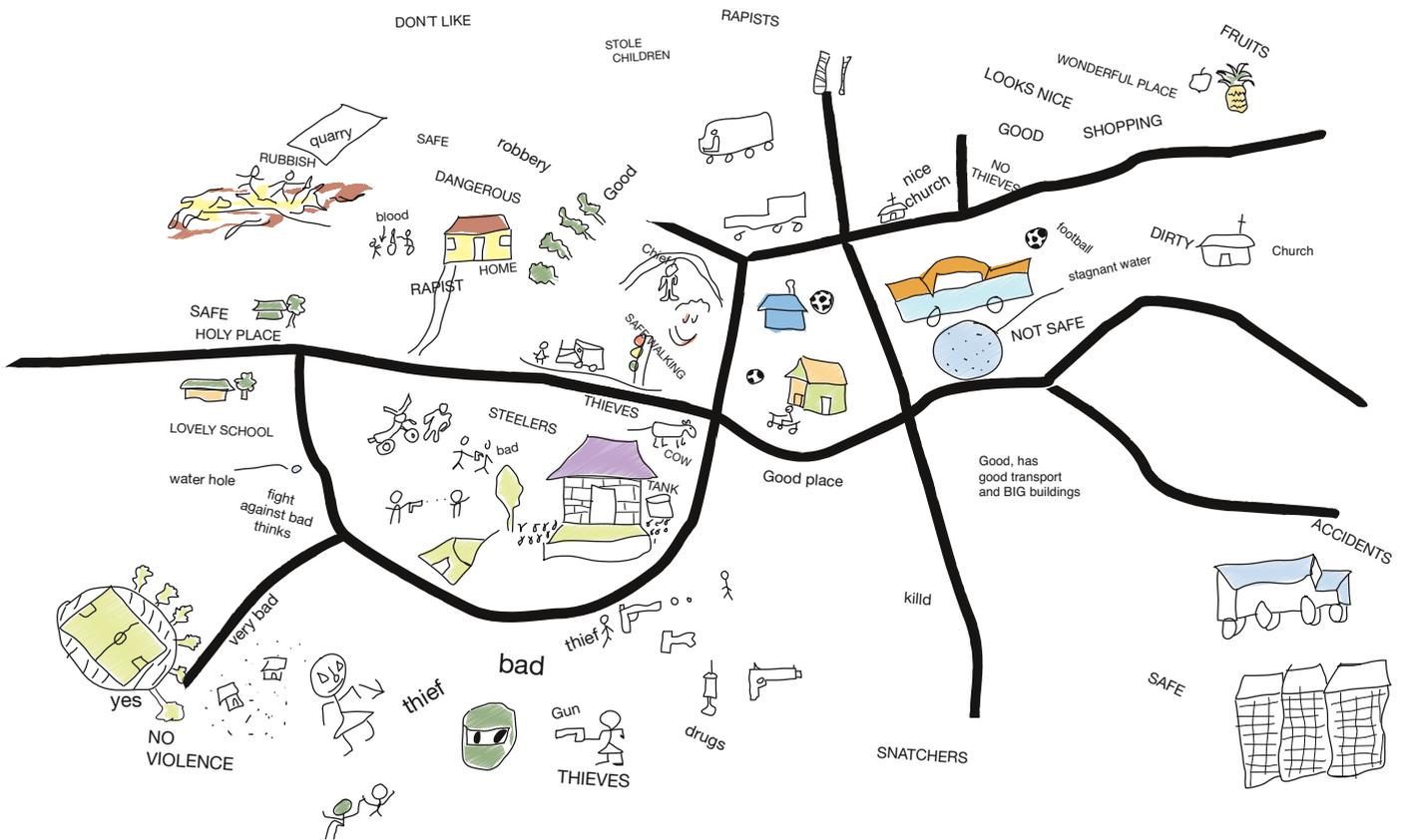




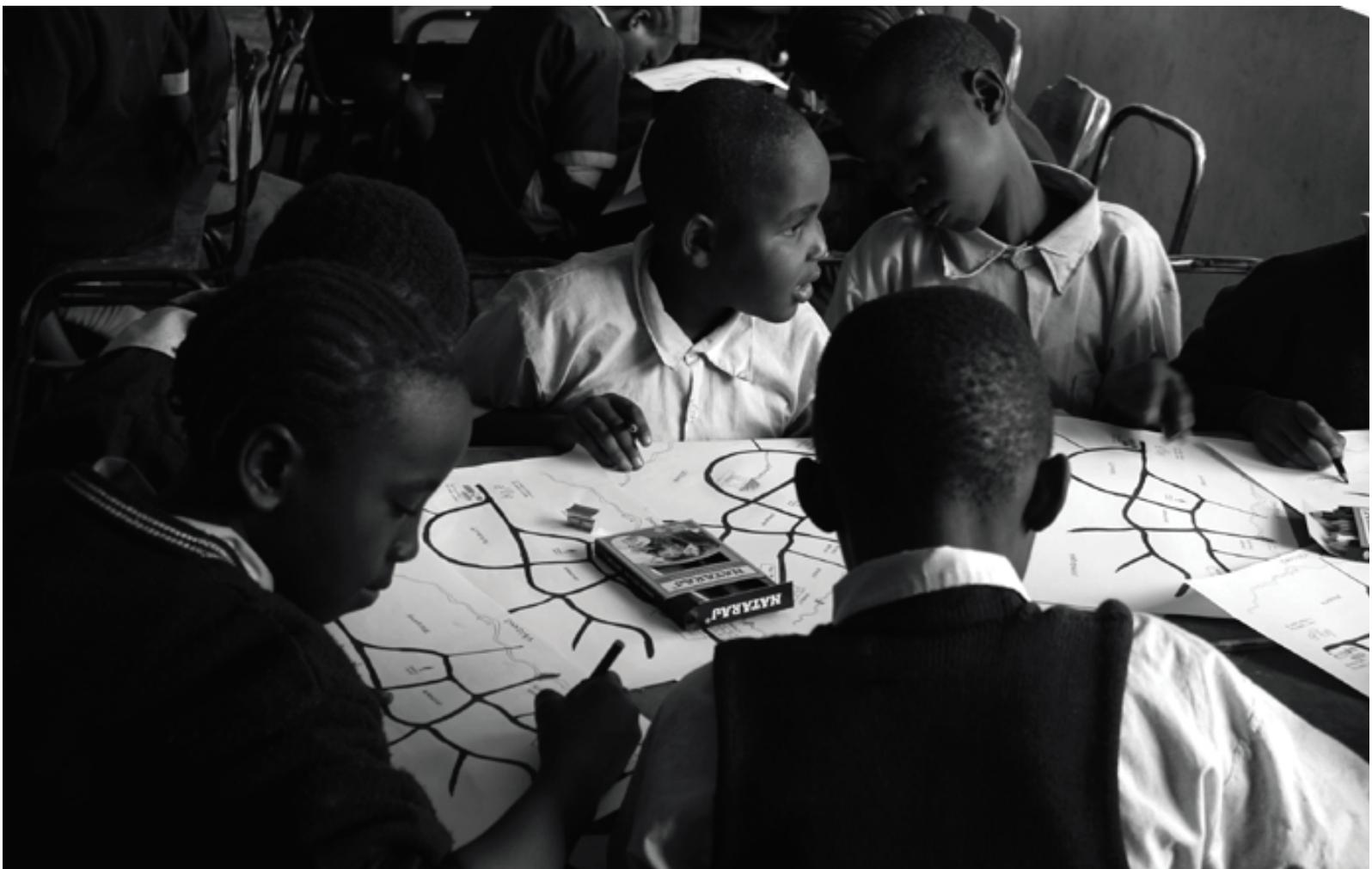
This map is a summary of the places that were listed as good and bad by the students, and the characteristics associated with them.



This map represents the way all students that participated in the workshop take to school.



This map is a combination of the places that the students pointed out in the mapping exercise, representing the places they perceive as dangerous or appealing.

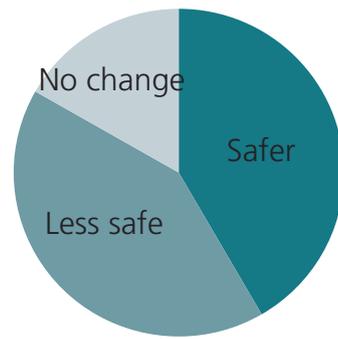


either of the questions above. Of the participants in the questionnaire survey, 42 per cent answered that Korogocho has become safer, 42 per cent said that it was less safe and the rest did not notice any changes. This indicates that there are still security problems even though the security in some areas has been improved.

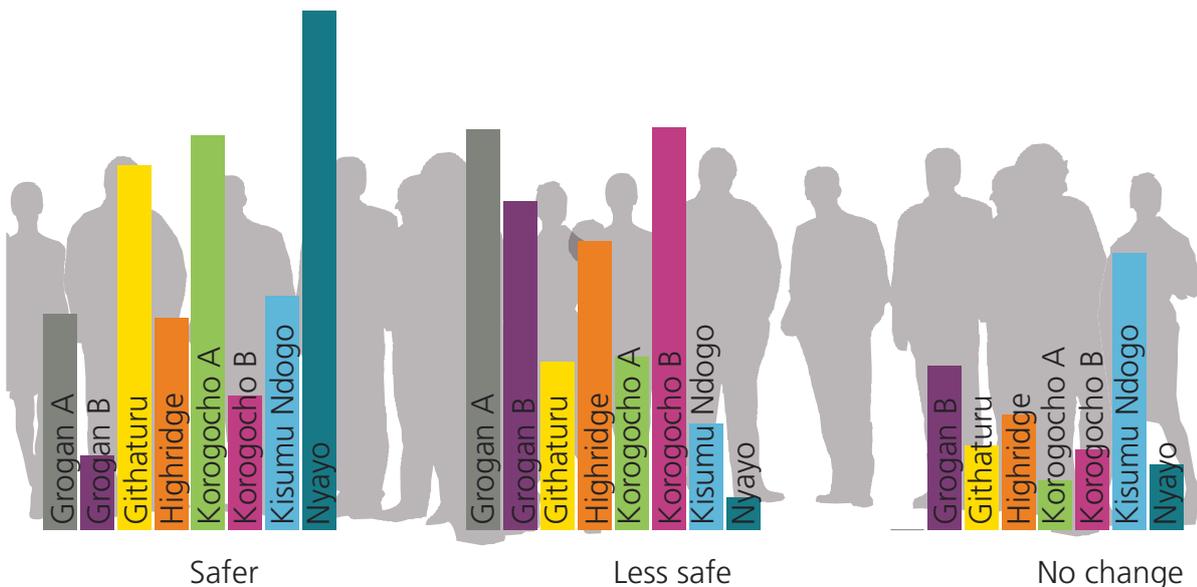
When looking at the villages separately, Nyayo had noticed an improvement in security with 84 per cent of the participants from the questionnaire survey saying so. People answered that the wider streets has enabled the spotting of criminals from a distance. The streetlights and the motorcycles were mentioned by all participants as factors that have improved security and reduced the amount of criminal activities. The possibility of travelling easily by motorcycle has even facilitated walking through insecure areas as it makes it possible to get away at any time.

In Korogocho B, 65 per cent of the participants answered that the area has become less

safe after the streets were improved. Unemployment was mentioned as a cause of criminality in the area. The youth was perceived as a big issue as many of them are unemployed or underemployed. Several of the participants in the survey stressed that they wanted more police to patrol the streets in order to increase security.



Questionnaire outcome. Do you experience that the streets became safer after they were constructed? (total respondents)



Questionnaire outcome. Do you experience that the streets became safer after they were constructed? (villages specified)

SUMMARY

The safety comparison, the school workshop and the questionnaire survey, confirmed that Grogan A and B are still experienced as the most insecure villages in Korogocho. The river and Dandora are also targeted as unsafe mainly by the children, due to rapists, thieves, 'children-stealers', waste and lack of property. Based on interviews and dialogue, the general conception was that crime has gone down within the settlements but some residents meant that crimes have only been relocated to other more remote spots in the area.

The residents no longer mentioned Gitathuru as particularly insecure, which also was indicated by participants in the questionnaire survey. Streets and street corners were frequently mentioned as where the largest change in security has occurred, especially during night due to the new streetlights. Open spaces with overview and fewer escape possibilities for thieves and muggers were viewed as safe and the general conception was that crimes like murder and rape have gone down while mugging and traffic accidents were issues most frequently mentioned as sources of insecurity.

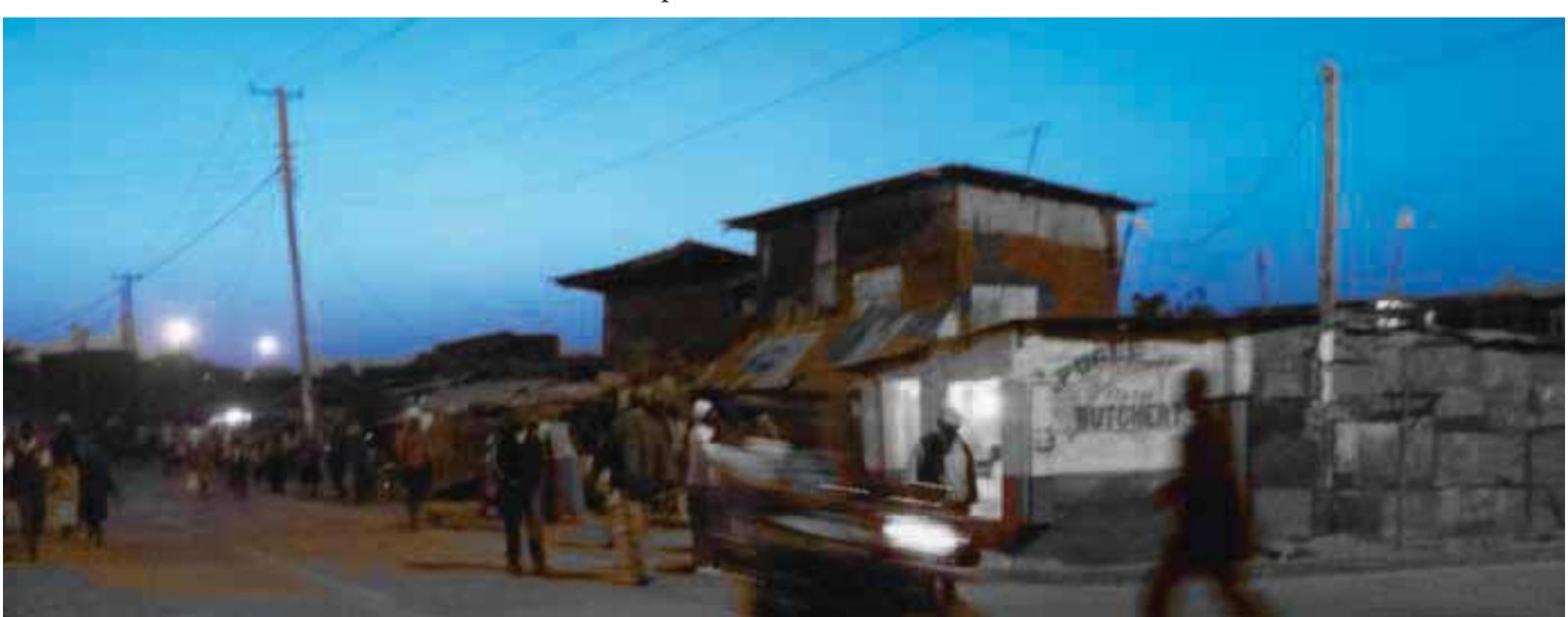
Places with low activity were experienced as unsafe. An example of this was the lower part of 'Mama Ngendo Road' and the long paths through Highridge from Kamunde Road as they were mentioned as escape routes for criminals. Orientation in the area has increased with the street upgrading, which was frequently mentioned as a positive factor for security.

From the children's workshop it can be concluded that the children often perceive

their own neighbourhood and home as more secure than other areas. They also perceive places where a lot of people and other children spend time as secure as well as the chief's camp, the St John's Primary School, their own schoolyard and Daniel Comboni football field.

Before the upgrading, many crime hotspots were located along streets now perceived as secure and this might have caused the children to change their route to school. When the children answered how the insecure places along the streets could be redesigned in order to provide more safety, the most frequent answer was better/more houses, trees, security, signs, traffic lights, cars on the streets, bus/matatu stops and shops.

- Grogan was perceived as the most insecure of the villages
- Outskirts of Korogocho and the area close to the river were perceived as insecure
- Most of the criminals are thought to be youths, especially in Korogocho B
- The street upgrading had improved the security in the area
- Streetlights and the widening of the streets have helped in improving the security as criminals can be spotted
- The improved streets have created the possibility to avoid walking through insecure areas and allowed for safer transportation in the form of motorcycles
- Nyayo village was perceived as safer after the upgrading



SENSE OF BELONGING AND APPROPRIATION

QUESTIONS TO BE ANSWERED

- Has the sense of belonging changed?
- Have the streets been appropriated for new uses?
- What signs of appropriation can be seen?

METHOD

FIELD STUDY:

The investigation of changes in sense of belonging was based on observations and dialogue with residents. Observations reveal information about the visible structures of place (the form) and the level of appropriation and individual improvement in the urban space can be seen as an indicator for the sense of belonging.²⁶ As conceptions combine identity with feelings and impressions about a place it was crucial to understand how the sense of belonging in the community had been affected by the upgrading. To get a deeper understanding of the residents' perceptions and reveal local invisible issues, dialogue and group discussions were an important tool to gather information.

When adapting to and using the urban setting, a sense of home and belonging can be achieved. This sense of belonging, together with being in the general public, creates the urban culture and this helps create its identity.²⁷ It is a basic human need to be attached and have connections to certain places.²⁸

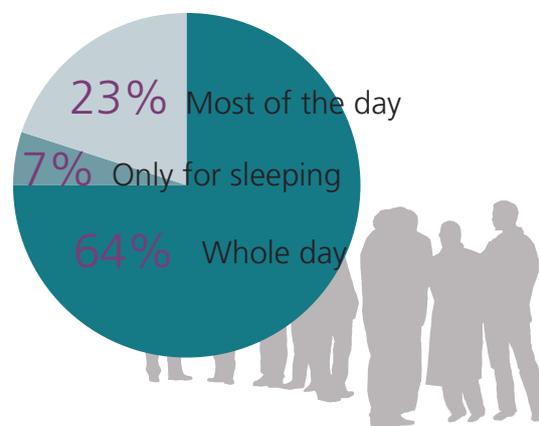
As stated, a community feeling that contains confidence makes people want to stay in the neighbourhood and improve it.²⁹ Hence a sense of belonging is strongly connected to the appropriation of public space, attachment to and identification with the streets.³⁰ A prosperous sense of belonging is crucial for a slum to successfully upgrade.³¹ The understanding how the sense of belonging has changed in the area due to the street upgrading is important for recommendations and future knowledge.

FINDINGS

Findings from dialogues and interviews revealed that people in general are proud of living in Korogocho. Even though some people were not satisfied with the construction of the streets and still see them as government property, they (the streets) represent stability and continuity.

The perception of the streets as not belonging to the community might strengthen the sense of belonging in the community but widen the gap with the rest of the city. At the same time, many residents expressed the feeling that Korogocho was more connected to the surrounding city after the streets were constructed.

A general opinion among the residents was that mobility of people from outside and inside Korogocho was easier. This might have



Questionnaire outcome. How much of your time do you spend in Korogocho?

strengthened the sense of belonging to Nairobi City and the positioning of the residents in a greater context. It might also have resulted in positive feelings about the future.

How much time a person spends in Korogocho and where the time is spent could inform which type of places trigger a strong sense of belonging and which type of setting in the area is most important to the residents.

According to the questionnaire survey, most of the participants spent their whole day in Korogocho and home and work were the places where they spend most of their time. This indicates that the dwelling within Korogocho is very important as well as the streets as many people work there.

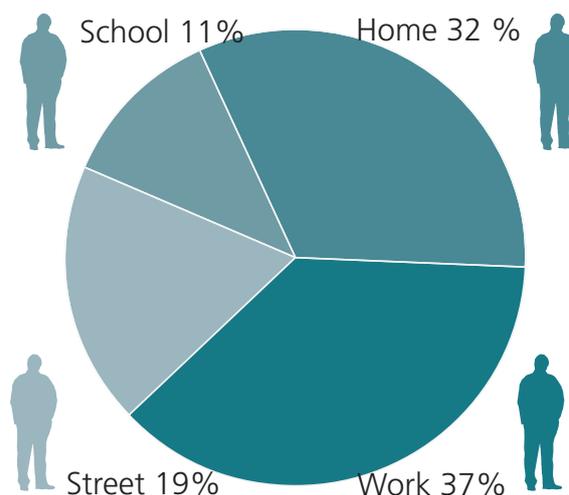
Dialogue and observations revealed that people spend time in places they perceive as safe and places become safe because people spend time there. Being in the public space is a form of appropriation in itself and the general view was that the area is safer; the sense of belonging is stronger in Korogocho after the upgrading. It is hard to determine if the actual level of security has increased but an important finding was that the perceived safety is increased and with it the possibility of being in the public space. Observations informed that there is a high level of physical appropriation in Korogocho. People bring furniture onto the streets, expand their businesses on the edge zones and build bridges over the drainage. Whether this is a result of the low amount of available space and poor maintenance of the public space in Korogocho or if it is an indicator of greater sense of belonging is difficult to determine.

The fact that it is physically easier to walk on the streets and to orientate within the area will facilitate appropriation. The revelation that streetlights have made it easier to spend more hours of the day in the public space also enables appropriation, especially for groups that might spend the most of their daily time outside of Korogocho.

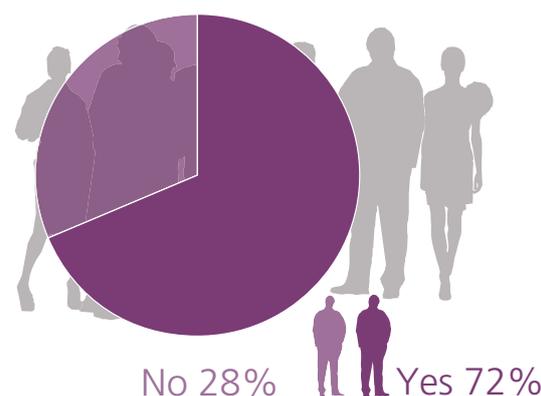


The general notion from the questionnaires and interviews was that people were available to spend more time outside. Activities that would normally take place inside one's home can now happen in or along the streets, also later in the day. Observed activities such as roller skating could not take place in Korogocho before the streets were paved and this kind of activity appropriates the streets for new uses and widens the possibilities of activities that could take place there. Many people have also stated that it is now easier to meet and communicate after the upgrading of the streets. The streets, and essentially the street corners, could function as public meeting places.

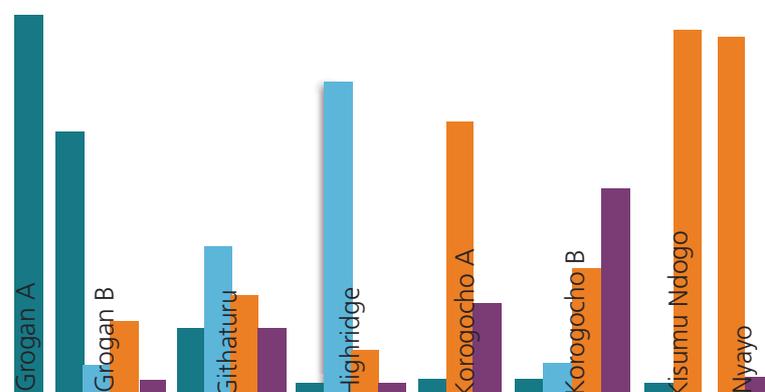
On average, the most important street for participants of the questionnaire survey was Market Road due to business and shopping. Many also considered the street closest to their home or the street that provided space for their business as the most important. Kamunde Road was mentioned several times as important due to its well-functioning streetlights and drainage system. This appeared to have improved the perception and conception



Questionnaire outcome. Where in Korogocho do you spend the most of your time?



Questionnaire outcome. Have you noticed new activities in the streets since they were improved?



Questionnaire outcome. Which street in Korogocho is most important for you? (villages specified)

of the area. Streets connecting to religious centres that provide toilets and peace were also mentioned as important.

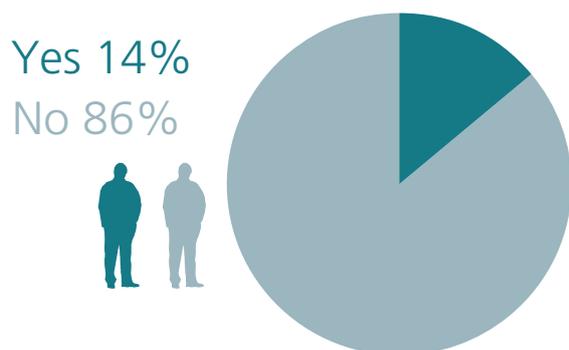
Particular appropriation of the street space may limit the opportunities for other uses and users. The appropriation by vendors is a positive factor for the sense of belonging due to increased street life. However, the vendors demand a lot of space on the pavements and edge zones that forces pedestrians to walk on the actual streets.

The motorcycles are a form of appropriation that has increased with the new streets. Because of high speed and risk of accidents, they limit the possibilities for children to appropriate the street as playing area and safe walking space.

Some residents expressed a desire not to stay in Korogocho if there was a possibility

to move. But the desire to make Korogocho improved and 'not a slum' was yet stronger. The fear for a future upgrading and that the roots might be pulled out has a destructive effect on sense of belonging.

Understanding what processes were undertaken in the area, and how the community related to this kind of initiatives, plays a crucial role in how new projects will be received. The participation in the layout process tells how the residents related to the improved streets. Some 86 per cent of participants in the questionnaire survey did not feel involved in the layout process of the streets. It could be concluded that some of the respondents may sense less care for the improved streets. On the other hand, a few of the participants were employed during the construction.



Questionnaire outcome. Did you feel involved in the layout process of the streets? (all respondents)

CONCLUSIONS

- Many residents are more proud of their area since the streets were constructed
- Korogocho has now better connections to the surrounding and is thereby able to feel a greater social inclusion to the greater city of Nairobi
- Streets with a high level of activity and appropriation are perceived as important in the area



SOCIAL RELATIONS

QUESTIONS TO BE ANSWERED

- Did the upgrading of the streets increase/decrease social conflicts in the area?
- How is the situation now?

METHOD

DIALOGUE:

Dialogue reveals the hidden social and economic structures of place that can be formal or non-formal. There are sometimes conflicting groups in a community, different interests, cultures and practices. As co-creators of place, all groups in the community relate to place in some way.³²

Korogocho

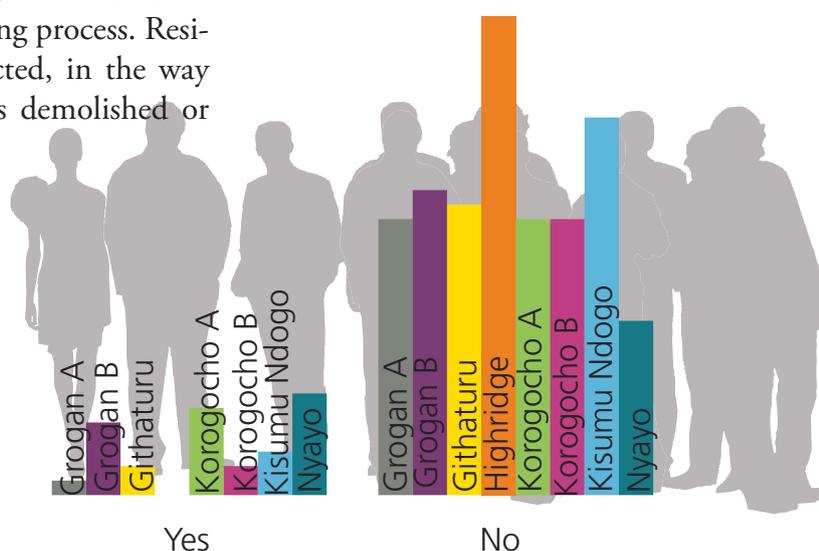
In order to understand the impact the street upgrading has on the community it is important to reveal different stakeholders and their interests. Conflicts and changes in social relations can inform about the complex web of power dynamics present in the community. Cooperation with different civil society groups is vital in accomplishing good governance in a participation project.³³ The different civil society groups are establishing partnerships that could be both formal and informal and, to get a deeper understanding of the residents' perceptions and reveal local invisible issues, it has been important to find these groups and recognize their concerns.

diminished in size, felt particularly unsatisfied with the process. According to the findings they were mainly structure owners that resided directly along the streets, hence they were the largest group directly affected.

It is more difficult to draw conclusions on how the tenants were affected. Interviews and dialogue informed that some conflicts between tenants and structure owners occurred due to resettling as a result of the street construction. The majority of the participants from the questionnaire survey did not feel involved in the upgrading process. Several of them stressed that they wished to be more involved and many were upset by the rapid and unsatisfied

FINDINGS

Many residents feel that they have not been involved in the street upgrading process. Residents that were directly affected, in the way that their house or shop was demolished or



Questionnaire outcome. Did you feel involved in the layout process of the streets? (villages defined)

handling of the displacements although there were a few who had the opportunity to join in the construction of the streets. Among the participants, 14 per cent said that the project generated some job opportunities. Even though they felt involved in the process they did not have the power to spread ideas and influence the layout of the streets.

The possibility to be involved in the construction generated a positive feeling and pride among the people that had the chance to participate. The questionnaire revealed that the social connections and cooperation between vendors and residents have improved since the streets were constructed. Many residents mentioned that the new social bounds have helped people to work together within the area; this might strengthen the feeling of Korogocho as one unit instead of separate villages.

The fact that it is easier to move around, meet and have a better overview of people moving in the area widens the social network, which has a positive effect on personal security and stability. Observations at various hours of the day revealed that a lot of people spend time outside their houses, orientated towards the streets, watching and saying hello to people

passing by. Some residents also mentioned that there are fewer conflicts in the area due to the establishing of the Residents' Committee that helps solve land disputes and other issues in the settlement.

CONCLUSIONS

- Few residents felt involved in the layout process of the streets, which resulted in conflicts and negative feelings concerning the process
- Conflicts have arisen due to resettling and land reorganization during the process
- Improved social connections and cooperation were facilitated due to the street improvements



VISION

QUESTIONS TO BE ANSWERED

- Has residents' vision for the future in Korogocho changed?

METHOD

This chapter mainly builds upon earlier investigations and is mostly a point for discussion. The residents' visions will also be presented as narratives from different individuals that engage in the street.

The hopes and visions of the residents in a community can say a lot about the conditions there. As stated previously, a precondition for slum upgrading and the residents to stay after the upgrading is a belief in a future in the setting, without the fear of being excluded by gentrification or by more powerful interests.³⁴ Communities are often hesitant towards changes and when the break with the past is

too vast or happens too fast, dwellers in the affected setting are more likely to oppose and dislike it.³⁵ It is also likely that fast changes in slum settings lead to gentrification.³⁶ Hence the visions of the residents in Korogocho can inform how well the upgrading project was received in the community and guide recommendations for future implementations.

FINDINGS

Residents that were positively affected by the project in general had a positive vision for the future and stated that they were in Korogocho to stay. Residents that felt that they had been negatively affected and were discontent with the process felt a strong concern and insecurity about the future. The notion that Korogocho stands before a vast and unknown change limits the possibility for the residents to have a clear vision about the future.

The various stakeholders and interests have different visions for Korogocho. The Kenyan government wants a Nairobi to become a city without slum areas – ‘Nairobi without slums’³⁷ - where a strong economy is the most important factor for development of the city.

The Korogocho Slum Upgrading Programme wants a Korogocho where the community provides the residents with security of tenure and where physical, economic and social living conditions are improved. The residents want a stable and safe community where they know that their flourishing businesses will not disappear and where children can have safe places to play and go to school. The Kenya-Italy Dept for Development Programme (KIDDP) wants to empower communities through the improvement of access to basic social and economic facilities. Conflicting interests within the settlement, or with the city, were often mentioned by the people interviewed as a hindrance for reaching the vision of a better Korogocho.

There are community-based organizations in Korogocho that have strong beliefs in the future and a determined desire to improve the area. There are also conflicting interests who benefit from maintaining the status quo. Many dwellers have confidence and trust in themselves as containers of great knowledge of what is best for the future, while others are influenced by the prevailing models proposed by the global community through the media, often negating the community’s social values and fostering instead a competitive individualism and privatization of public good. A

common notion is that without the involvement of the community, sustainable change cannot take place and the presence of constant conflicting interests might undermine the prospect of a thriving transformation.

There is a suspicion of the community representatives given the experience drawn from the political arena where the representatives of the people often forget them after they are elected, preferring to pursue other interests than those of the community. The fears of gentrification, higher living costs and rents that are related with the upgrading process are also considered a hurdle for the achieving of improvement. The visions among the residents show that the most important thing is better housing, more hospitals, schools and basic services such as water and sanitation. People often see insecurity as a result of the economic situation and crime, viewing this as an obstacle to reaching a better life.

CONCLUSIONS

- Visions are highly personal and dependent on how the residents were affected by the programme
- There is a wide variety of visions within Korogocho and from outside often in conflict with each other
- Many residents consider themselves to have knowledge and capacity for how to improve Korogocho and want to take part in future processes



CONCEPTION - KEY MESSAGES

The conception of a place, neighbourhood or street is a complex notion created by various aspects such as memory, position in society and previous experiences. To change the conception about a place is a slow process; conceptions of residents of any urban setting does not always reflect the actual reality. The conceptions of a place, or a cause of events, are often more influential on the use of the place than the reality. This is reflected in the conception of safety, which affects the way people move and act in the urban space on a higher level than the actual security. Conceptions from the residents are highly personal but given time to be comprehended and jointly with other findings they can provide an important understanding of aspects hidden from an outside observer. In this chapter, the aspects of conception that will be discussed are safety and security, appropriation, sense of belonging, social relations and visions.

The evident change among the residents due to the upgrading is the improved perception of safety in the area. The widening of the streets has strengthened the notion of connectivity to the surrounding city context and perceived movement within the area. Visions for the future and confidence in Korogocho have grown but the residents also feel uncertainty for the future and some feel a lack of connection and care for the upgraded streets.

- Confidence among residents has increased due to the street upgrading
- Orientation and overview in the area is seen as better and as a positive factor concerning safety
- The residents perceive Korogocho as more integrated with the surrounding parts of Nairobi
- Streets with high levels of activity and appropriation are perceived as important and safe within the area
- The improved streets have generated the possibility of avoiding walking through insecure areas due to safer transportation by motorcycles
- Mugging and motorcycle accidents are the issues of insecurity most frequently mentioned
- Few residents felt involved in the layout process of the streets, which resulted in negative feelings concerning the process
- Social connections and cooperation were facilitated due to the street improvements
- Visions for the future are dependent on individual priorities and how the programme has personally affected the residents so far
- There are a wide variety of stakeholders and interests on different levels within Korogocho, some in conflict with each other
- Conflicts have arisen due to resettling and land reorganization



04.4 IMPROVEMENT IDEAS

The result from the Questionnaire survey reveal the most negative, accidents, and the most positive, transportation, effects of the street upgrading project. The participants were also asked to give some ideas on how the upgrading could be improved.

IMPROVEMENT IDEAS FROM THE COMMUNITY

The participants in the questionnaire survey were asked to list the main advantages and the main disadvantages which the street upgrading has generated. It is remarkable that the main advantage is thought to be the facilitated transportation while the main disadvantage is the increased amount of accidents. These effects are both caused by the increased traffic.

During the field research, the community was asked to come up with ideas on how to improve the street environment. The most prominent criticism from the community was the increased number of accidents along the streets. This is mainly due to the increased amount of motorcycles on the streets, and the lack of street hierarchies.

As can be seen below, the improvement ideas from the community were therefore mainly based around the issue of traffic safety. Ideas on how to reduce the speed on the streets were common, such as the implementation of street bumps, traffic lights, more police and street signs. Other ideas comprised measures to organize and accommodate the flows of traffic and pedestrians better, such as the implementation of pavement on both sides of the street, safe crossings for children, widening of the streets and the allocation of places to allow business.

A number of the interviewees mentioned a concern about the quality of the streets and wished it had been higher.

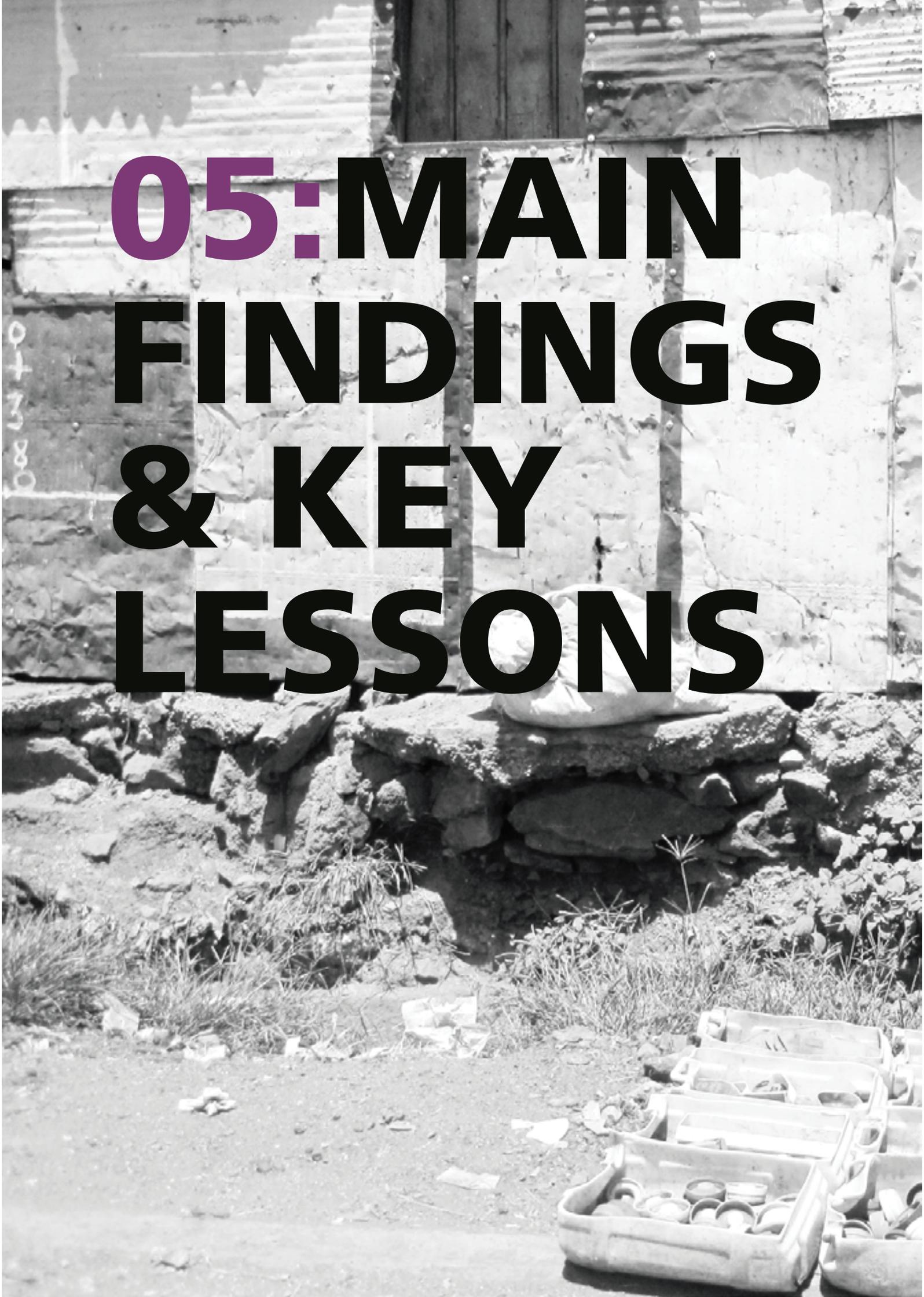
IMPROVEMENT IDEAS FROM RESIDENTS

- Street signs
- Zebra crossings
- Vegetation
- Bumps
- More police
- Places allowing business
- Involve everyone in the process (involve mothers)
- Streetlights first
- Pavements on both sides
- Sewer lines
- Make the streets bigger
- Bridges
- Smooth the process of evictions
- Extend the infrastructure in all villages
- Improve construction quality
- Improve waste collection
- Provide parking for trucks at the market
- Parking for motorcycles and other vehicles
- Water taps



CHAPTER FOUR ENDNOTES

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05: MAIN FINDINGS & KEY LESSONS



MAIN FINDINGS

The main findings of this study are based upon the experiences and perceptions of the residents of Korogocho. The findings are mainly on a local level concerning the everyday life of the residents. However, the findings can also inform street upgrading theory and practice in more general terms.

In general, the majority of the residents that were reached during this study are satisfied

with the upgrading of the streets. The streets have boosted public activities, microeconomies and brought positive visions about the future to many of the residents. Importantly, the streets have served a big role in improving the overall perception of safety in the area. This section aims to articulate the main findings from the study.

RESIDENTS MAIN PRIORITIES STATED IN THE SOCIO ECONOMIC SURVEY IN RELATION TO THE FOCUS OF THIS STUDY

PRIORITY	ACTION	OUTCOME
Availability of business opportunities	Widening and paving of streets, implementation of streetlights.	More business activities in form of motorcycle taxis and vending activities. Facilitation of opening and running business
Construction of good drainage and sewerage lines	Construction of open drainage system along main streets	Less water on the road but accumulation of waste in the drainage. Residents fear a fast deterioration due to bad quality
Good and enhanced security (police post)	Implementation of streetlights	The overall conception of security has improved
Good permanent houses with title deeds and affordable rents	Enumeration and preparation of plan where some of the structure owners get a title deed	Not yet implemented; an on-going process
Improved infrastructure (better roads)	Improvement of main streets and construction of footbridge	Mobility within the area is facilitated and access to the surrounding city
Improved sanitation (toilets), and access to water and sewerage services	Street improvement	Access to water points are facilitated
Installation of power and streetlights	Installation of streetlights	The perception from the community is that the streets lights have brought a lot of positive aspects to the area in terms of security and the extending of the active and productive hours of the day
More and better primary schools	None	Some of the children has mentioned that the access to school has been facilitated due to the upgraded streets

STREET UPGRADING OBJECTIVES IN RELATION TO OUTCOMES OF THIS STUDY

**Overall programme objectives from the Socio Economic Impact Assessment.¹*

OBJECTIVE	ACTION	OUTCOME
Implement concrete improvements to ensure visible impact.	Widening of main streets, paving and implementation of drainage, streetlights and footbridge.	The perception among the residents is that the implementation has brought positive change to the area.
Implement drainage in the area.	Construction of open drainage along the main streets.	The implementation is valued among the residents, but some have articulated a concern regarding management and quality of the drainage.
Implement access roads to improve accessibility and connectivity to the city.	Implementation of street and footbridge.	Many residents feel increased levels of social inclusion within the city of Nairobi.
Establish residents' confidence in the overall upgrading programme.	Meetings, events, display of plans, questionnaire survey, and enumeration undertaken.	Residents that were involved in the process feel confident mainly due to the enumeration.
Cover the whole project area and reach all villages.	Improvement of main streets connected to all eight villages.	Residents not reached by the participatory actions feel less confidence in the programme and the future.
Improve security through the increasing of business opportunities and streetlights.	Implementation of streetlights.	All villages except Grogan are experienced as more included within Korogocho by the residents.
Improve the image of the area.	Street improvement.	The residents perception is improved security and increased business activity.
Bring a sense of pride among the residents.	Street improvement.	Residents have expressed a renewed confidence of living in Korogocho.
Open up the area for development.	Street improvement.	Residents are proud that people now dare to enter Korogocho, and they feel more confidence in the future of Korogocho in general.
Involve and engage the community throughout the assessment process.	Community meetings, events and involvement in the construction work.	Public activities and microeconomics have been boosted. Some residents feel that they were not involved in the process.



1. KOROGOCHO HAS BECOME MORE SPATIALLY AND SOCIALLY INTEGRATED WITHIN NAIROBI AND MOBILITY INSIDE THE AREA HAS INCREASED

The study found that the general perception among residents is that Korogocho has become more integrated within Nairobi and that the mobility in Korogocho has improved in three different aspects: spatial integration within the city, social inclusion within the city and spatial mobility inside Korogocho and wider social connections.

SPATIAL INTEGRATION WITHIN THE CITY

The paving of the streets created a continuous and integrating urban floor, attaching Korogocho to the larger Nairobi. The improved access streets have opened Korogocho as an alternative bypass and more vehicles now enter the area. The streets have increased the connectivity to a larger urban setting and the residents believe that the streets have played an important role in opening up the area and inviting people from outside.

EXPERIENCED SOCIAL INCLUSION WITHIN THE CITY

The residents have articulated a renewed confidence of living in Korogocho and are proud that people now dare to enter the area. The sense of belonging to a greater context and to Nairobi City has been strengthened. This decreases the feeling of marginalization, which is often experienced in slums.

FACILITATED SPATIAL MOBILITY INSIDE KOROGOCHO AND WIDER SOCIAL CONNECTIONS

The cognitive and the actual physical mobility within Korogocho have improved. The streets have brought better access, safer transport and increased the possibility to move around in Korogocho. The residents can now move in the area during night, either carried by a motorcycle taxi or walking in the light from the streetlights. As more people move on the streets it is also easier to have a wider social network.



Theory suggests that there is a distinct conflict of mobility and local place that might result in functions which essential for the residents being pushed out from the settlement.² Protagonists for integrating slums in the city claim that it is crucial to consider the city as a holistic system where all areas are integrated.

To integrate slums with the rest of the urban context includes improvements in provision of basic services and the enhancement of physical conditions. Inclusion also helps fight the socio-political isolation and stigmatization that linger with many informal and marginalized communities.³

Some state that not all aspects of segregation are negative. Sometimes segregation enhances a sense of mutual dependence and increases the sense of neighbourhood and community.⁴

2. INCREASED BUSINESS ACTIVITIES AND INCREASED ACCESSIBILITY AND AVAILABILITY OF EVERYDAY COMMODITIES

The general perception of the residents during this study is that the total amount of business has increased throughout the area. Business is mainly constituted of small shops, kiosks and portable vending structures selling everyday commodities, and motorcycle taxis transporting commodities and people throughout the area.

EXTENDED VENDING ACTIVITIES AND MOTORCYCLE TAXIS

Many residents stated that the street upgrading had facilitated the implementation of new businesses. With more people moving in the streets during more hours of the day, the businesses attract more customers creating a beneficial circle.

The businesses' operating hours have been extended as an effect of improved security and environmental conditions. The streetlights prolong the daily operating hours and the paving has reduced the amount of waste and mud on the streets, opening the possibility of operating even during rain seasons. The increased business has resulted in higher competition, something that was widely

mentioned among shop owners. Another type of business is the motorcycle taxi that has increased in the area and generated job opportunities.

ACCESSIBILITY AND AVAILABILITY OF COMMODITIES

The increased vending activities and the renewed consistency of them have affected the accessibility and availability of commodities in Korogocho. The improved access roads and the augmented use of them contribute in supplying the area with a greater variety of goods. The increased amount of motorcycles also plays a role in enabling the increased supply, since they can now easily transport goods within the area.

3. RESIDENTS' PERCEPTION OF SAFETY HAS IMPROVED

The study found that the general perception among residents is that the perceived and experienced safety within Korogocho has improved mainly due to three different aspects; increased activity, the form and design of the streets, and the facilitated mobility in the area.

INCREASED ACTIVITY

The improved streets have helped increase the amount of activities and flows of people. In areas with the highest flows it is now easier to sell goods. Vendors interviewed along streets with high activity were mainly positive to the changes due to the upgrading, and content with the increased amount of activities in the area as it stimulates their business.

However, vendors in streets with low activity complained about the limited amount of customers but increased amount of competition. Streets with a high level of activity and appropriation are perceived as being as important as safe streets. Residents often mentioned the level of activity and especially vending activities as an indicator of safety. This pinpoints that the livelihood of a street is mainly a self-generating process, and that activity feeds activity and is highly connected with the perception of safety.

ALTERED FORM AND DESIGN OF THE STREET

During the study, high activity and movement was often observed in street sections attributed with a wide edge zone with high complexity and pavement on either side of the street. More activities and movement on the streets has generated greater perceived security in those open spaces. A large number of the residents that were reached during the field study emphasized the reduction of illegal activities due to the new streetlights.

Many residents also highlighted the improved overview in Korogocho. Before the street upgrading begun, numerous crime hotspots were located near open places. Today, open places with overview are viewed as safe. The wider, more open streets have imposed visual control on many of the escape routes that were a security issue in the area before the upgrading.

MOBILITY

The possibility for safe travel by motorcycles in insecure areas was largely mentioned among the residents as a factor for increased safety.

The motorcycle business has also provided jobs for many previously unemployed youths (some of whom were previously engaged in criminal activity), which has positively affected the overall perception of security in Korogocho. The facilitated orientation in the area due to the street grid is also a contributing factor as residents mentioned that they find it easier to locate themselves in the wider context, which has a positive impact on the experience of security.

4. THE FORM OF THE STREET DOES NOT RESPOND TO, OR EXPLOIT OPTIONS FOR DIFFERENT USES

A street is a public space and provides a stage for economic, social and political activities.⁵ Streets are the platform upon which urban life unfolds every day. They should be representative of our lifestyle and culture, with a design that responds to the multitude of activities and functions that streets perform.⁶ The study indicates that the streetscape has failed to adequately accommodate the multiple functions, uses and activities that are competing over space in Korogocho.



LACK OF ACCESS TO PHYSICAL OPEN SPACE

At selected times, particularly in the morning and evening hours, the streets of Korogocho are highly congested. When vending activities expand to the pavement, people are forced to walk on the street and pedestrian accessibility and safety is threatened. Traffic accidents are common and considered the main concern of the residents associated with the upgraded streets.

During the study a wide range of hybrid functions has been observed with open drainage reappropriated through the construction of temporary bridges and platforms to run business being one example. As access to physical open space is low, hybrid functions and multiple uses often occur in and along the streets. The study informs that there are possibilities to maximize the use of the streets with hybrid functions.

THE ORGANIZATION OF STREET SPACE IS NOT PROPORTIONED TO TRANSPORTATION MEANS

The study informs that pedestrians constitute the largest amount of traffic and the number of motor vehicles is relatively low in Korogocho. Hence the part of the street that is reserved for motor vehicles is proportionally too big due to planning and design standards formulated by the Government of Kenya. This highlights the need to reorganize the street to accommodate all its necessary uses. The fear of accidents, and the lack of organization in the street, limits the potential of the street.

5. THE MODES OF PARTICIPATION IN THE PLANNING PROCESS DID NOT RESPOND TO ALL GROUPS IN KOROGOCHO

Participation in slum upgrading processes increases the likelihood of care for the outcome and attachment to the implementations among the residents. When local knowledge and skills are considered there is also an increased efficiency and building of local capacities. At the same time, participation demands expenses in time and sometimes money for both the programme and the residents. The importance of participation

can be degraded when local livelihoods need to be secured.

One risk is the dependence on strong voices in the community and political pressures that might lead to favouring the interests of some stakeholders and that the needs of other groups are pushed aside or concealed.⁷ The majority of the residents reached by the questionnaire survey did not feel involved in the layout process of the streets. Many residents do not feel that the streets belong to them, which affects the attachment in the whole area.

The ability to influence the design layout was also limited by certain design and planning standards set by the government and other national authorities.

INFORMATION ABOUT THE PROCESS DID NOT REACH ALL RESIDENTS

The field study indicates that information about the street upgrading process failed to reach some of the residents. Several of them stressed that they had wished to be more involved. Residents who claim they were victims of short notice displacements due to the widening of the streets are especially unsatisfied with the lack of communication. The lack of communication and understanding of the resettling and reorganization process of land gave rise to conflicts in the area, mainly between landlords and tenants.

Some residents have expressed the sense that the streets belong to the government and that they have no power to influence the outcome; this risks the sense of care and ownership negatively. Power relations, especially the owner-tenant relation, can risk obstructing the flow of information to the disadvantage for the tenants.

RESIDENTS THAT WERE INVOLVED IN THE PROCESS HAVE A MORE POSITIVE ATTITUDE TOWARDS THE PROGRAMME

The residents who had the opportunity to join the construction of the streets believe that the project generated job opportunities. Those who were engaged in the construction felt involved in the process even though they did not have the power to spread ideas and influence the layout of the streets.

6. THE RESIDENTS EXPRESS VARYING CONCERN FOR THE FUTURE OF KOROGOCHO

Streets are valuable spaces for the residents as they often feel a powerful attachment to their local street and use it for both private and public interaction.⁸ Visions for the future are highly dependent on individual priorities and how the programme personally affected the residents so far. Concerns about the future also depend on the individual resident's experiences of slum upgrading in a citywide context.

FEAR OF RELOCATION

Many residents, both tenants and structure owners, have expressed a fear that once the area upgrading starts they will not be guaranteed a place to stay, or they might be responsible for friends and family who will be affected by this process. This fear of an impending eviction has a destructive effect on the sense of belonging. Knowing that an area upgrading is waiting around the corner might also decrease the effort one puts into the structures connected to the street.

FEAR OF GENTRIFICATION

Another concern among the residents is that when the area will be upgraded, rents will rise and people will be forced to move. It is noticeable that many of the residents knew very little about the upgrading programme. They are aware that something will happen and construct an image of what they think it will be. Transparency of the process and information concerning the relocation seems to have been lacking in the street upgrading programme.

7. STREETS ARE NOT THE SOLUTION TO EVERYTHING

The street upgrading has solved many issues in Korogocho but there are still problems that need further attention. The street upgrading should continue and the outcomes should be studied in more depth to understand how the area is developing in order to identify what negative and positive aspects the streets have generated in the long term.

CHANGE OF RESIDENTS' PERCEPTIONS IS A SLOW PROCESS

The part of Community Lane going through Grogan has constant low activity and is perceived by the majority of the residents as very unsafe. As in the other upgraded streets, new paving and lights have been installed. Despite this, the street is still deserted and residents from other villages fear to go there. During the Socio Economic Survey, Grogan A and B were highlighted to be treated as specific cases due to the extreme security conditions in the areas. However, the perception of insecurity and the high level of criminal activities appear to remain.

SOFT AND HARD IMPLEMENTATIONS SHOULD BE COMBINED

During weekends Community Lane in Grogan A & B is temporarily appropriated by youths roller skating. The street is transformed with children reclaiming and occupying the streets and many people entering to take part of the event. People then walk the streets of Grogan without fear, which demonstrates the importance of creating platforms for activities. The people make the place safe; when people spend time in an area more people will accumulate.

One of the major concerns associated with the upgraded streets is the increased number of motorcycle accidents. The outcomes from the school workshop revealed that almost half of the children use Kamunde Road to go to school. Children are a particularly vulnerable group of users of the street and Kamunde Road is considered to be the busiest for traffic with a high amount of accidents. Residents have tried to limit the speed of motor vehicles through the construction of speed bumps, demonstrating the necessity of traffic-calming elements.

According to the study there were no efforts for social cohesion when the streets were constructed. Some residents have stated that they were not acquainted with the use of streets and the children especially have had no education in how to use the streets.



KEY LESSONS FOR STREET UPGRADING PROJECTS IN SLUMS

The key lessons from this study can underpin street upgrading interventions in slums.

PARTICIPATION

To reach social sustainability in slum areas, it is essential to include residents in the upgrading process.

As streets in slum settings are largely residential, participatory methods are the key to finding sustainable solutions to the design and implementation process. Different participation strategies are possible but a vital key is to include residents from all parts of the area, since they tend to use the streets for different purposes. Gender and age are also important to consider, as they use public spaces

differently; women and children are more vulnerable to insecure places and children are often the victims in traffic accidents.

When using participatory strategies it is also important to consider the time of day for meetings and how to spread information. Many people are available at different times of the day depending on the daily routines and security. The participatory process opted for the strengthening of communication, transparency and accountability when delegating decision-making authority. It is also important to advocate for flexibility on the regulatory framework in order to allow the adoption of appropriate standards that participatory design solutions may require.



SAFETY

The safety of a street has many dimensions. Primarily, streets have to be designed in such a way that they accommodate all users of the street and complicate criminal activities.

Widened and paved streets facilitate high-speed traffic. Therefore it is important to consider high-risk places where pedestrians are more vulnerable, such as crossings, busy areas, and streets in connection to schools and children activities. Zebra crossings, bumps and traffic division could accommodate protection and slow down motor vehicles. Further, it is important to consider what users will be in the streets - pedestrians, vehicles etc - to be able to create a design that is secure and successful.

A well-organized street provides orientation and overview, components that increase the perceived safety. Overview and streetlights

can generate protection from criminal actions as criminals can be spotted and seen from a distance. An open and clear street also minimizes the number of hideouts used by criminals. Streets as public places increase the amount of people moving on the streets, which also generates protection from criminal activities.

MOBILITY

As part of the infrastructure system streets facilitate mobility within the area. Streets function as links between destinations. Good access is crucial for a slum settlement to feel included and connected to a larger context.

Main entrances and important places such as markets and hospitals need good access, as they often play an essential role in the daily life for many residents. Improved transportation can also make possible the creation of new microeconomics, such as street vending, and the import and export of goods is facilitated. Good overview, as well as clear signage and orientation, enhances the perception of mobility and access.

MIXED USE

Streets in slum settings have to accommodate many different kinds of transportation.

The streets need to accommodate different uses although pedestrians constitute the majority of the flow in many slum areas. Pedestrians should be prioritized in the layout as their accessibility is the key for a sustainable, lively street. Pavements on both sides of the streets facilitate the pedestrian flow and create hierarchies between pedestrian and motor traffic.

LIVEABILITY

One of the main roles of streets in slum settlements is its significance as a vibrant public meeting place.

The street is the place where democratic processes of the society take place, as well as

optional and necessary activities. This function of the streetscape becomes even more important in slum areas where public open space is scarce. A well-organized street has the prospect to accommodate functions which increase the livelihood of an area.

THE EXISTING SOCIAL CONTEXT

It is key to develop the design of streets in slum settlements in relation to the situation prior to the design.

Through the studying of street patterns in terms of density, attraction points, functions and activities it is possible to understand exciting places and values that are important to preserve. If the street is to accommodate a wide variety of necessary activities and functions it has to be organized in relation to existing social context found on site prior to the layout.

FLEXIBILITY

As streets in slum settlements make up one of the few open spaces, a large amount of different groups operate on the streets at different times of the day. The streets need to be flexible to satisfy all needs and provide temporary structures as well as permanent ones.

In a slum settlement, streets as public spaces tend to accommodate different functions and uses. The edge zones are used for activities such as dwelling, vending, shopping, social interactions, eating, parking and playing. A flexible design could create flexible streets and edge zone. During daytime, when traffic is low, some places could be used as playgrounds or hangouts for residents, if they are provided with shadow and benches. In evening, when the streets are more crowded, this space might be used by vendors and motorcycles. Some places could also be designed as central public places where people gather for information meetings and other events. However, it is important to understand the probable consequence - that popular places along the streets

may be appropriated by dwellers unwilling to move or adapt to new circumstances.

MAINTENANCE

Providing long-term maintenance in terms of waste management, cleaning and repairing of the streets in slum settlements can bring resilience.

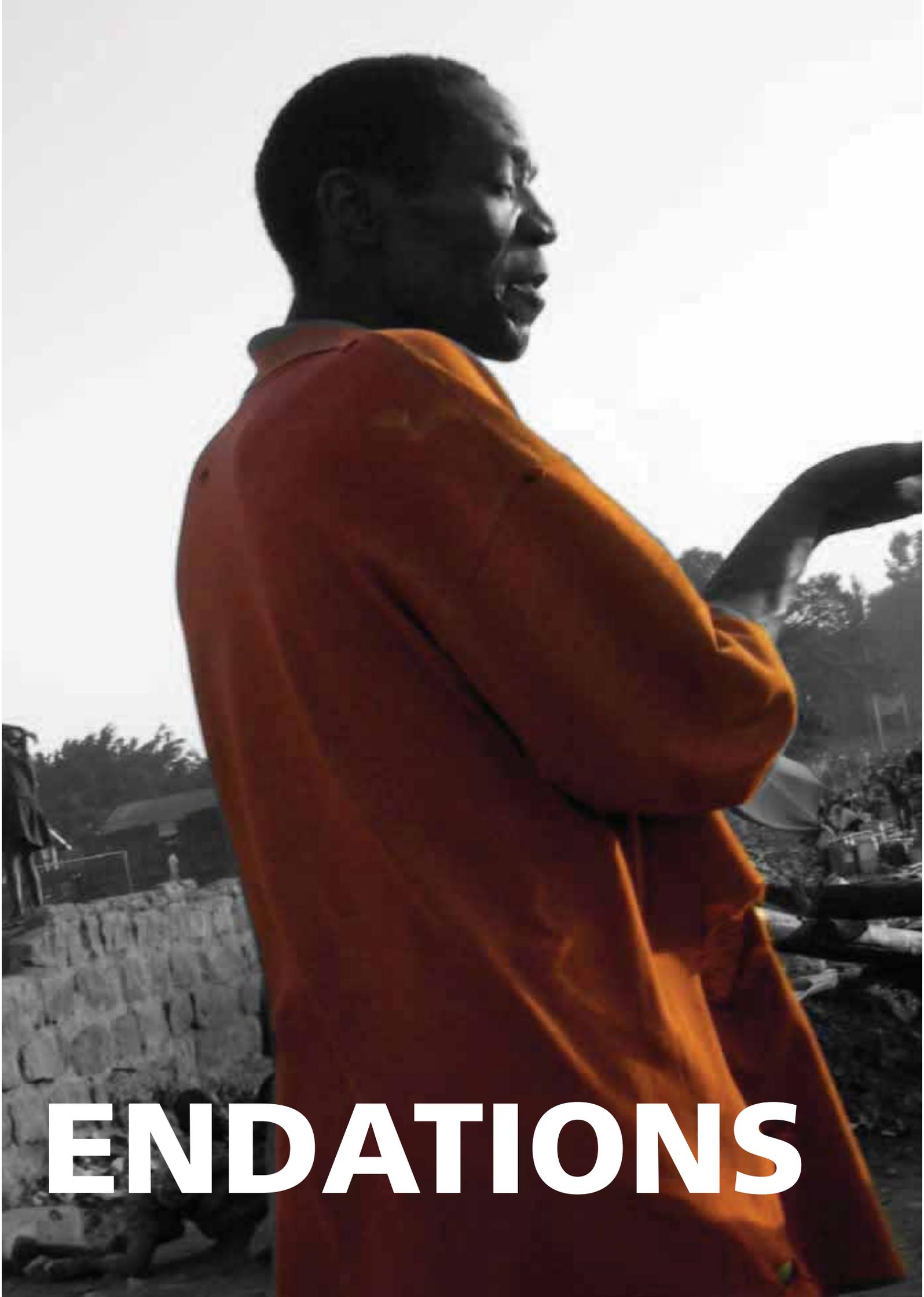
Considering current values and including them in the design can achieve social, economic and environmental sustainability. It is important to think of the street in slum settings as an organism carrying a variety of different functions and values that should be kept in the new design. By changing street patterns, new conceptions and functions are also created that will change the future for many of the residents. By maintaining, cleaning and repairing the streets those values can be kept and resilience reached.

CHAPTER FIVE ENDNOTES

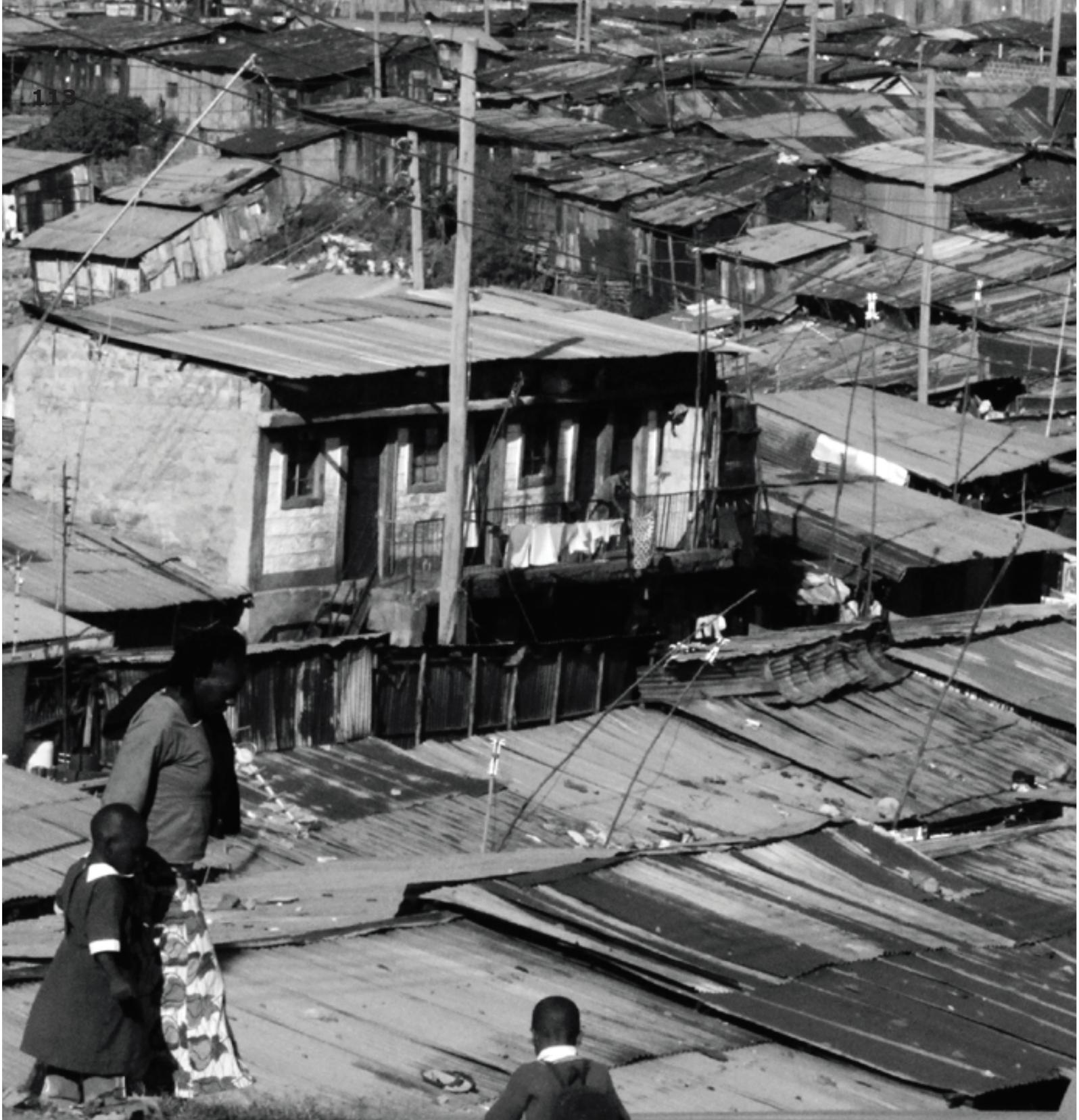
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06: RECOMM



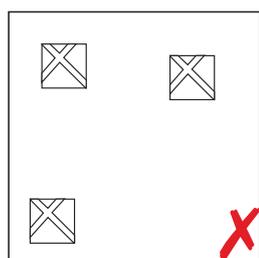
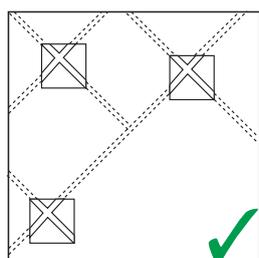
ENDATIONS



This section offers eleven recommendations for street upgrading practice. Each recommendation will outline an issue that was encountered during the study, elaborate on its causes and conclude by providing a number of action-based recommendations. This chapter is aimed to be a practical tool for policy makers; however, the content will be of interest to all practitioners who are involved in slum upgrading processes.

1

INTEGRATE STREETS WITH WIDER UPGRADING PROGRAMMES



Streets should be looked upon as components of wider upgrading programmes. It is vital to think about upgrading processes not as single interventions but as a continuum of broader, inter-connected processes. The objective should be to join the individual interventions, both within and across slums, to build a city-wide approach to slum upgrading.

Streets function as an entry point that facilitates continuous improvements of an area but if they are not connected to other parts of the urban fabric and parallel programmes, they will risk repeating the failures of past initiatives. Hence, the goal of upgrading processes should be to improve the situation in the project area but it is equally important to prevent the formation of new slums through the establishment of partnerships and the mainstreaming of objectives. It is unlikely that a city without slums, as stated in the *Nairobi 2030 Vision*, will be possible unless slum

upgrading programmes are mainstreamed to take on a citywide approach.

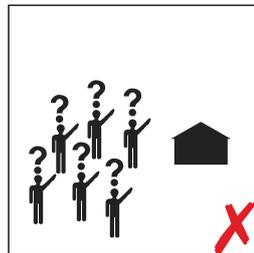
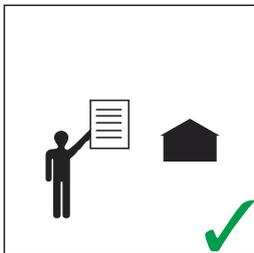
The city consists of multiple and complex networks of processes. When these processes are interlinked, the urban fabric will evolve as more integrated, diverse and resilient. Development initiatives should be flexible in character, allowing many alternative scenarios for the urban future. Crosscutting platforms to form partnerships and networks between different initiatives, programmes, agencies and administrative units should be established. Horizontal and vertical communication channels should be established to promote collaboration between multiple stakeholders, both on the micro and macro levels. This will enable coherent, long-term upgrading processes that will improve the image of the entire city and the life of all its residents.

RECOMMENDED ACTION

- Develop frameworks to enable the collaboration between different agencies, programmes and political levels
- Establish platforms for information exchange
- Evaluate the process and communicate the lessons learned for future implementations

2

PROMOTE SECURE TENURE WITH STREETS AS AN ENTRY POINT



Streets facilitate new legal boundaries and, importantly, they put down the basis for regularization of land tenure. Security of tenure can stimulate private investment in one's home, such as building improvements and rehabilitation, providing benefits to the overall urban fabric and, incidentally, this can increase the supply of new housing units with the additions of extra floors, rooms and apartments which can stem the growth of new slums.

Furthermore, the improvement of streets plays an important role in the citizenship foundation for slum dwellers. Their existence will be acknowledged in official maps, and streets facilitate their connection to the overall city infrastructure through increased

integration and mobility. Streets give names to space and are an incitement to the establishment of physical addresses, supporting place attachment and identity.

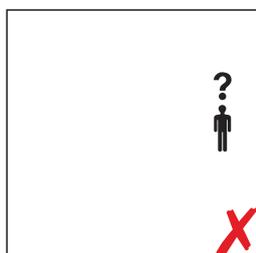
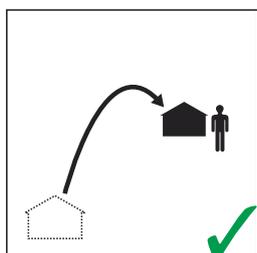
Regularized property boundaries will also support the definition of public and private domains. Local authorities will benefit from this since regularized property boundaries lays the foundation of the physical and economic property registration that will enable the capture of property tax and users' charges on infrastructure and public services.

RECOMMENDED ACTION

- Make enumerations prior to any physical intervention
- Ensure that costs and finance are kept within affordable ranges for all stakeholders
- Emphasize an incremental process to limit the shock of gentrification
- Address and map ownership structures to promote security of tenure for all

3

PROHIBIT FORCED EVICTIONS AND FACILITATE RELOCATION



Forced evictions are illegal and should by no means be the consequence of a street upgrading process. The provision of land for relocation, as well as housing construction, is one of the key requirements when initiating a street upgrading programme. In cases where there is no available land within the settlement, proximity and connectivity to the former housing location is fundamental to avoid disturbance of important social networks and livelihoods.¹

The Korogocho Slum Upgrading Programme completed the enumeration of households before the construction of the roads started, providing stability and confidence to the residents in acknowledging their status as residents in Korogocho. Although it was agreed that structure owners and tenants

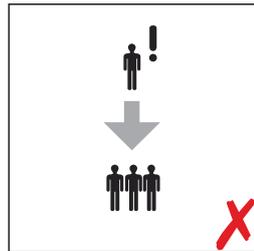
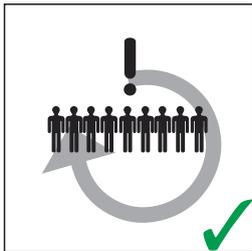
that stayed in the area for more than ten years will be prioritized. The worst off are at risk of being marginalized and more disempowered. Security of tenure should extend beyond the borders of the project area, to avoid the creation of new slums and take the poorest residents into consideration. Scarcity of sufficient land for relocation may result in the rise of multi-family housing, creation of new slums and the evolution of housing typologies that contrasts the visions of a city-wide slum upgrading initiative.

RECOMMENDED ACTION

- Prepare and make certain that there is land available for relocation
- Ensure that the relocation land is located in proximity to the former area of residence
- Do not only provide land. Support people in the whole relocation process, assist in building houses as sustainable investments for the future.

4

LET THE RESIDENTS OWN THE PROCESS TO INCREASE THE LIKELIHOOD OF CARE ABOUT THE PROJECT OUTCOME



The residents' perceived level of participation in the layout process of the streets influences how they both convey and feel their attachments to the intervention. Many residents in Korogocho said they believed that the streets belong to the government and they themselves were unable to influence their function and layout.

This reflects the feeling of insufficient involvement in the process and the hindrance of the rigid regulatory system related to spatial standards and design, which is often what pushes people towards the informality. If the residents feel attached to the intervention it is more likely that they will feel a higher level of responsibility in ensuring that the project is maintained and does not degrade. This will help in the long term and make the work perdurable after the project has ended. If the residents' involvement in and care for their physical environment is reinforced it is also more probable that the benefits from the intervention will spill over on other areas as it is more feasible that the residents care for and improve other parts of their physical environment.²

Different stakeholders in the community of Korogocho form complex power relations with conflicting interests. Participants will naturally be part of these relations, which can make it difficult to participate fully, even when there is a wish to do so.³

During consensus-building meetings, the most vulnerable individuals and groups tend to

remain silent or passively agree.⁴ Consequently, strategies and tools to involve all stakeholders are crucial for an inclusive participatory process.

A key question for participation in slum upgrading is whether the development activities will strengthen the position of the residents. However, this question is rarely asked in decision-making processes.⁵ Focus is often put on physical outcomes and the reaching of a specific development goal. This kind of process is short-term and stresses the objective rather than the soft benefits of participation.

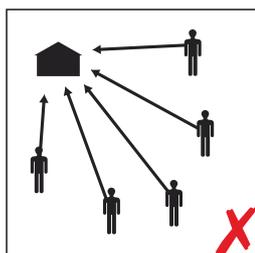
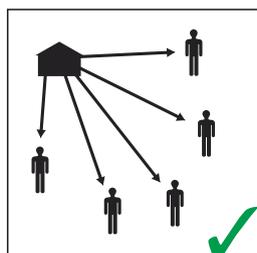
Upgrading processes should be empowering, not merely housing or infrastructure delivery mechanisms.⁶ A settlement and the people who live in it have existed prior to a professional intervention and will continue long after that presence. It affirms that their knowledge is critical to the processes of environmental change and management.⁷ It is therefore key to establish and share programme principles at the beginning of a process, and ensure that the stakeholders adhere to them.

RECOMMENDED ACTION

- Develop and use tools to address power relations and hidden interests that ensure involvement of affected stakeholders in the participation process
- Identify the less vocal groups in the community and make sure that they are addressed
- Balance acupunctural interventions with long-term implementations: the community needs results in order to invest their time
- Allow the participation process to take time, the project outcome will benefit from it in the long-term

5

DEVELOP APPROPRIATE COMMUNICATION CHANNELS FOR TRANSPARENCY IN THE PROCESS



Contextual communication channels are key to reaching all stakeholders in an upgrading process. Many residents of Korogocho felt that the process of the street upgrading failed to communicate the different phases of the programme. This resulted in a feeling of instability and fear of eviction among the residents. Based on the survey, the participatory framework of Korogocho Slum Upgrading Programme seems to have had limited success in reaching out to all residents, hence alternative communication channels should have been considered.

Most participatory events and actions were held adjacent to Korogocho's chief camp, a very politically-loaded place. It is located in one village, risking residents in the other seven villages feeling excluded. Power relations associated with a place can threaten to limit the level of participation within an area.

Consequently, alternative methods should focus on actively reaching out to different stakeholders and on identifying neutral locations for dialogue. It is important to consider the effect of the location on residents' ability and comfort in expressing values and opinions.⁸ Furthermore, the records from the participatory planning process should be publicly displayed on large sheets, in newsletters or through other forums of communication. The

residents that do not take an active part in the community should be identified and introduced to the plans. If enough time is allowed and knowledge generated to mentally prepare the residents for changes and potential relocations, the process will be more manageable and rising conflicts will be avoided.⁹

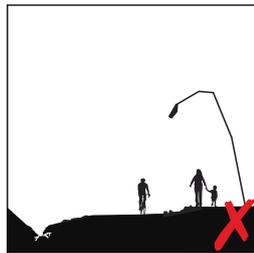
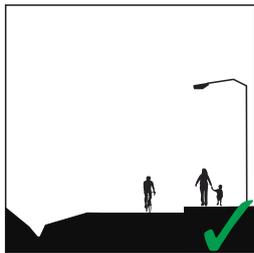
RECOMMENDED ACTION

- Develop and use tools to reach out to residents that do not actively take part in community activities. Information walks, text message newsletters, flyers and local radio are useful channels.
- Identify and use available (neutral) public places and institutions as platforms of information, such as schools, streets, hospitals and churches
- Consider the temporal aspect when staging participatory activities. Some stakeholder groups might not be available at certain times of the day.



6

ACKNOWLEDGE THAT QUALITY MATTERS



Street paving has a symbolic value. The perceived status of an area can change overnight by adding street paving, since it will then be perceived as part of the formal or developed part of the city.¹⁰ Paving the streets creates a continuous and integrating urban floor and is a symbolic acknowledgement from the government of citizenship and inclusivity. However, the quality of the paving carries another, sometimes conflicting, symbolism. Many residents of Korogocho have expressed a concern regarding the quality of the streets, and they are worried that the streets will degrade quickly. Furthermore, the residents consider the streets to be government property and this reduces their attachment to and ownership of the streets.

The vision to integrate the slum with the city through the connectivity of streets will fail if there is no attention paid to the quality of them. It is a gesture that communicates a lack of care from the outside and strengthens the community's negative perception of upgrading interventions. This might result in less attachment and identification with the streets.¹¹

To keep slum-upgrading costs down, low standards of infrastructure are often proposed

by development agencies. Quality of construction is often de-emphasized by the contractors, particularly in settings where corruption is high and supervision inadequate. Consequently, the new facilities will rapidly deteriorate.¹² Using better quality reduces future maintenance costs and is, if well managed, the cheaper solution in the long-term.

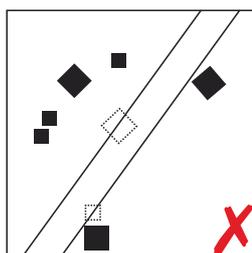
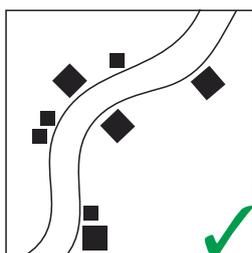
However, quality is not only connected to physical measures. It is equally important to consider the perception of the residents and what the intervention communicates to them. In situations where the budget is limited, participation in the planning process is key for the residents to understand the issues and limitations and give them ownership over the process. If the residents themselves are involved in making the priorities, the outcome of the project is likely to be received better.

RECOMMENDED ACTION

- Ensure that the best physical quality possible is implemented
- Discuss design and quality issues and limitations with stakeholders, such as budget and environmental issues, and come up with priorities and solutions together.
- Engage local labour. This creates local job opportunities, empowers the community, brings attachment to the project and lowers implementation costs (leaving more resources for using high-quality materials).

7

IDENTIFY EXISTING SOCIAL NETWORKS AND ACTIVITIES AND RESPOND TO THEM IN THE LAYOUT



The layout of the street in a slum upgrading process should respond to the existing social networks and activities in the area. Streets are important in sustaining economic activities and meaningful in accentuating cultural diversity and self- and group-identity.¹³ Residents' attachment and values connected to a place are important aspects of how they will care for the place, hence these bonds are important to consider in the layout process.¹⁴ Social networks are part of the social capital in slums and must be integrated in any upgrading strategy. Breaking up social bonds or networks risks provoking conflicts, hence taking the existing into account is crucial for the project outcome.

Using the term 'open' is precarious in the street upgrading discourse since 'opening up' often results in 'straightening up'. This risks demolishing micro-environments and cutting through organic structures and forms. Current zoning and development control practice in most urban areas of colonial origin still has an acutely modernist drive, highly influenced by northern and western development policies.

A modern city norm, with geometric street grids and crescents, is favoured but this is potentially at the cost of vibrant city diversity.¹⁵

Slums often stand at bright contrast to the modern city with their organic structures and multi-functional use of space. Therefore, it is important to elaborate more on the concept of street upgrading to make it a sustainable and reliable approach to slum upgrading, and to avoid intentional misinterpretations from policy-makers and politicians.

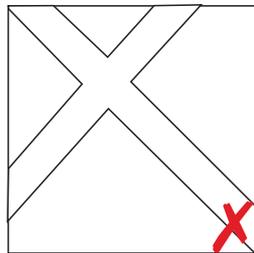
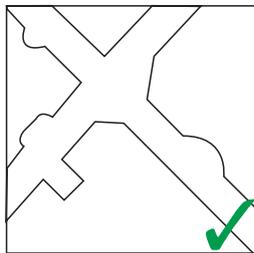
The layout and design of the street should make appropriate connections to the surrounding areas in the urban fabric. A careful analysis of the major public institutions, attraction points, important functions and other destinations that are part of the residents' social infrastructure should be done early in the process. Deep local knowledge, obtained by intensive and permanent dialogues and analysis of local forces and conditions is crucial. Subsequently, the forces of the city such as networks, micro-forces of culture and the forces of everyday life can be recognized and incorporated in the planning and design.¹⁶

RECOMMENDED ACTION

- Make a comprehensive situation analysis of the existing social infrastructure in the area, and use the streets as a link to support and improve it
- Identify existing spatial components in the area that function as boosters for activity and urban life and build the intervention around these
- Identify hidden attraction points and destinations through meaningful dialogue and interaction with residents

8

DESIGN STREETS AS NETWORKS OF PUBLIC SPACE



In order to generate successful urban areas, it is crucial to think through the sequences, proportions, relations and dimensions of the public realm. Instead of thinking about streets as links leading from point A to point B, designing an area around its streets should incorporate other elements of a public realm into the urban form such as meeting places and areas for upholding optional activities.¹⁷

During the field study in Korogocho, street corners were found to be public meeting places, providing visual vantage points and working as accumulators of activity. An analysis of how the street corners can be designed to sustain these activities should be studied in the planning process.

Streets have the opportunity to function as networks of public space. Visual connections within public space are important in order to sustain the connectivity to one's surroundings. Streets designed with an angle, differences in width and a heterogeneous form are more appealing for people to spend time in and hence are more likely to accommodate more of the vital processes of urban life.¹⁸ The existing activities should be recognized and the new layout should support their spatial requirements.

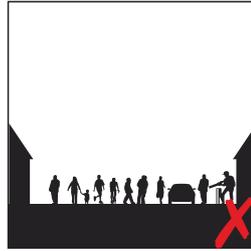
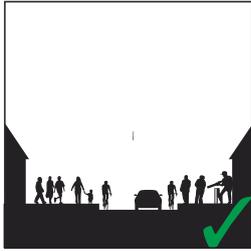
RECOMMENDED ACTION

- Identify unobvious meeting places and space linkages through intensive dialogue and interaction with residents
- Involve the community in the design of the public space connected to the streetscape
- Ensure that the layout of the street provides pockets of public space that is free for the residents to collectively appropriate





DESIGN FLEXIBLE STREETS THAT RESPOND TO MULTIPLE USES AND TEMPORAL ASPECTS OF STREET LIFE



The street has an important function as a meeting place, as a business place, as a playground and as a space for flows of capital, people and of vehicles. Particularly in slums, where open space is often scarce, all these different functions must be considered to make a sustainable street layout.

Different groups and cultures operate in the street at different times of the day and particular urban events claim space according to seasonality. To respond to all needs and activities that the street is set out to accommodate so planners have to be flexible in the layout. The streets of Korogocho fail to respond to the multiple uses and users of the street with an increased number of accidents and activities competing over space. Though, it is important to note that it takes time for residents to become accustomed to new uses of streets. Hence educational exercises on how to use the street are appropriate to improve the way the street is used.

The upgraded streets of Korogocho are designed from the centreline and outwards, giving the priority to motorized vehicles. When the increasing number of vehicles has claimed street space, what is left over has to accommodate pedestrians, utilities, vending activities and social activities. All these components become competitors for space and when

not sufficient, they will end up using the space that was appointed to motor vehicles. Consequently, clear hierarchies and divisions between vehicles and pedestrians should be defined, with the walking space dimensioned to the number of users it will host.¹⁹ If the available space does not allow for this division, the residents must be carefully sensitized to the concept of shared space. Shared space is designed to improve pedestrian movement and comfort by reducing the dominance of motor vehicles.²⁰

The streetscape should respond to the place's requirements of adjacent activities and functions. The edge zones are used for several different purposes and display the potential of providing flexible uses of street space. Formalizing street vending may be seen as a means of poverty alleviation and it makes the space more vibrant, promotes social supervision and improves safety.²¹

Successful urban areas accommodate complex patterns of diversity, mixture and economic grain. The essential condition for achieving urbanity is to generate enough diversity through the mixture of uses and activities to be self-sustaining.²² Similarly, the roller skaters that reclaim the streetscape every weekend provide another example of temporal and flexible use of public space. These activities should be supported in the layout and subsequent management of the street.

Strategic planning should shift its present focus on product and spatial form towards process and performance. This performance should allow different ideals and functions to coexist to embrace fluidity and struggle as inevitable and necessary

aspects of urban environments. The future of the area then becomes a realm of potentialities, one of many alternative futures rather than one linear and fixed.²³ This approach reflects social acceptance, inclusion and urban resilience.

A street layout that acknowledges potential future changes of the context will be better prepared to host alternative uses. The life of streets and urban areas is longer than the life of individual buildings; equally, the life of buildings is longer than the life of their original function. Therefore, the successful street is one that offers built-in adaptability.²⁴

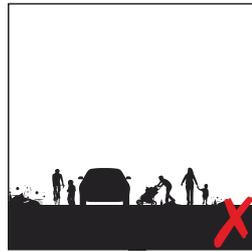
RECOMMENDED ACTION

- Make a comprehensive survey of existing traffic flows and activities early in the layout process. This should identify activities, temporal aspects and densities of different uses in streets.
- Educate the residents on how to use street as part of the layout process. As children are the most vulnerable group the schools could be used as entry points.
- Ensure that the street design responds to the temporality of everyday urban life.
- Work with, not against, the informal in slums (activities, commerce, etc.). Attempts to constrain and formalize the informal are seldom successful in improving the lives of slum dwellers.
- Allow for urbanity to remain a process, create a flexible street design, one which it is possible to modify according to upcoming activities and change in conditions
- Ensure that the place can accommodate multiple uses. Plan for more than two uses.



10

MAKE COMPREHENSIVE STREET DESIGNS, DON'T JUST LAY PAVING



A street is much more than paving. The objective of upgrading should be to achieve improvements in the overall quality of life, not just physical improvements through in situ upgrading. So infrastructure, employment opportunities, recreational spaces and environmental improvements should all be included in upgrading programmes.²⁵ Only when the street environment incorporates both infrastructural and social functions does it have the potential to grow as a motor of change in a community.

Infrastructural implementations include integrated waste management systems, drainage, the implementation of streetlights and electricity and the implementation of water facilities. Social implementations should include street furniture, signs and vegetation. Sitting areas, shading, and the implementation of vending stands, tables, permanent roofs and water taps were all mentioned during the study as improvement ideas from the residents. They can make the local environment 'more human'²⁶, can support the incremental formalization of street vending and are key to improve the livelihood of the street.²⁷

Attention should also be paid to the safety of the street by promoting natural as well as organized surveillance, by managing them properly and by installing high-standard lighting systems.²⁸ Furthermore, the increased

motor traffic requires traffic calming elements to ensure that the streets remain safe for pedestrians, the main users of the street.

The residents of Korogocho have already started to implement these kinds of improvements through the voluntary construction of street bumps, which articulates this need in the community. Traffic calming elements are particularly important in locations where children are many, such as schools, playing fields and so on. Physical measures such as bumps are often the most efficient way to improve the safety of a street. However, signs are another important implementation not only to promote security but also to enhance the sense of place and orientation within an area.²⁹ When the residents are involved in the identification and staging of these areas, it expands the social implementations beyond physical measures to include soft values such as education and empowerment practices.

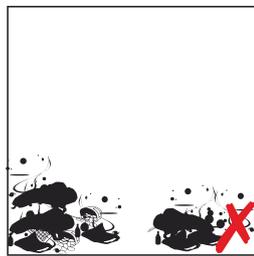
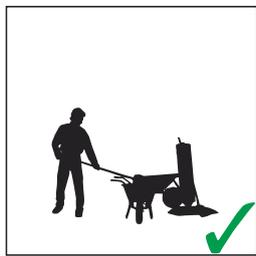
RECOMMENDED ACTION

- Sitting possibilities, climate protection and street signs all support the livelihood of the street. They should be acknowledged as a crucial part of the layout and 'street design'.
- Consider physical components to ensure vital aspects of social life in the streets are upheld
- Use the street as an entry point to improve physical conditions such as drainage, waste management, sewer lines, streetlights, electricity lines and access to basic services
- Expand social implementations beyond physical measures to include soft values such as education and empowerment practices



11

IT DOESN'T END HERE: RECOGNIZE THE IMPORTANCE OF MAINTENANCE



When the upgrading project is implemented the area will keep evolving; urban space is a network of never-ending processes. Consequently, it is crucial to look at upgrading processes as long-term interventions and to introduce maintenance plans when the physical implementation is done. Otherwise, the implementation stands at risk to degrade quickly and soon the area will stand where it started before the upgrading. The streets of Korogocho faced a primary street upgrading in 1987.³⁰ When the Korogocho Slum Upgrading Programme started in 2007 much of the space that had been reserved for the streets back in 1987 had been re-appropriated by the residents.

While there are many reasons for a lack of maintenance, financing appears to be the most prominent while municipalities and utility companies are also not providing the services needed.³¹ Hence, there has been a search for alternatives such as community-based approaches. The users of the streets should be encouraged to ensure that they are kept in good condition.

This might affect the attachment of a place and raise awareness of maintenance issues. However, it has been seen that neither the community nor the government alone can ensure the sustainable maintenance of infrastructure - partnerships are needed. In this process, the attribution of clear roles and responsibilities is key together with sensitization, capacity development and building a sense of ownership.

Shared responsibility is likely to strengthen the relation between the involved partners.³² Operation and maintenance are key factors in determining residents' satisfaction with urban services and public space, which in turn will lead to better governance.³³

RECOMMENDED ACTION

- Keep maintenance in mind during the street layout and planning process. This should ensure a street design that responds to an appropriate level of maintenance.
- Develop long-term maintenance plans in conjunction with the residents and define clear roles and responsibilities
- Establish partnerships between the community and the government to implement sustainable management plans
- Monitor and evaluate maintenance plans and adjust accordingly before interventions are beyond repair.

CHAPTER SIX ENDNOTES

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Successful urban places are based predominantly on streets and the connected street life. Streets serve as democratic, open public space and as platforms for economic and social development. Therefore, streets play a fundamental role for the public life in cities, and particularly in slums where open space is scarce.

This report explores the role and potentials of streets in slum upgrading, using the street upgrading project in the Korogocho slum in Nairobi, Kenya as a case study. It focuses on the experiences and perceptions of the residents in Korogocho, and the changes 'on the ground'.

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