

Slum Upgrading in India and Kenya: Investigating the Sustainability



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Abstract

Slums are informal housing settlements commonly found in urban areas of developing countries which are characterised by poor shelter, low service provision and lacking in security of tenure. Slums are growing and new slums are forming. The international development community has been actively working to improve the living conditions of slum-dwellers and to reduce poverty via slum upgrading methods. There are various slum upgrading delivery models and approaches to tackle the urbanisation of poverty in developing countries. Many adaptive and proactive measures have been implemented through a variety of slum upgrading initiatives and partnerships; however there has been limited investigation of the longer term sustainability of such interventions.

This research follows a qualitative methodology to investigate the sustainability of differing slum upgrading interventions. Four case studies have been examined; two in Kenya and two in India, demonstrating a range of physical upgrading approaches. Alternative slum upgrading delivery models have been selected covering housing rehabilitation and in-situ water and sanitation upgrading and demonstrating top-down and bottom-up approaches. The case studies are of varying ages and were implemented via partnerships with differing agents including government, NGO, CBO, private developer and donors.

The influence and design of the delivery model upon the upgrading sustainability has been assessed via stakeholder perception during extensive fieldwork. The data gathered has been analysed according to four key themes; status of life for slum-dwellers today, perception of upgrading success, institutional reform from external factors and development aspirations. Data was gathered via semi-structured interviews with slum-dwellers and project stakeholders using a ground-level methodology that enabled the capture of personal and honest accounts.

Analysis of the data has found that there are many misconceptions around slums which can affect the sustainability of measures to upgrade informal settlements. The way that international development organisations and westerners view slums is often very particular and not always resonant with the way that slum-dwellers view their living situation. Priorities for development are not always consistent across stakeholders.

For sustainability, any slum upgrading activity must be sensitive to the situation of an individual community and culture, and not assume that the residents are unhappy living in desperate poverty, as it has been shown, many choose to reside in a slum. Slums may be dirty, poorly serviced and overcrowded but are also places of great human energy, community spirit, kindness, hard-working, creative and happy places that many consider home.

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Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration, except where specifically indicated in the text. It has not been previously submitted, in part or whole, to any university or institution for any degree, diploma or other qualification.

This is the extended version of the thesis submitted for the degree of Doctor of Philosophy as it contains interview quotes.

Victoria L. M. Cronin

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Glossary and Acronyms

CBO – Community Based Organisation
EIA – Environmental Impact Assessments
EWS – Economically Weaker Section
FAR – Floor Area Ratio
FSI – Floor Space Index
GIS – Geographical Information Systems
GoI – Government of India
HUDCO – Housing and Urban Development Corporation Limited
IoG – Institute of Governance
JNNURM – Jawaharlal Nehru National Urban Renewal Mission
KP – Kamgar Putla
LDCs – Least Developed Countries
MASHAL – Maharashtra Area Social Housing Action League
MDGs – Millennium Development Goals
MHADA – Maharashtra Housing and Area Development Authority
MM – Mahila Milan
MoU – Memorandum of Understanding
MSEB – Maharashtra State Electricity Board
NGO – Non Government Organisation
NSDF – National Slum Dwellers Federation
PMC – Pune Municipal Corporation
PRA – Participatory Rapid Appraisal
RCC – Reinforced Cement Concrete
SA – Shelter Associates
SPARC – Society for the Promotion of Area Resource Centres
SRA – Slum Rehabilitation Authority
SRD – Slum Redevelopment Scheme
TDR – Transferable Development Rights
VAMBAY – Valmiki Ambedkar Malin Basti Awas Yojna

Boudh – Buddhist
Corporation – PMC, Pune Municipal Corporation
Crore – 10 million
Foot print – Ground floor space occupied by building
Jailis – Trellised openings
Kutchra – Non permanent, lower quality, dried brick, mud or tin
Lakh – 100 thousand
Mumbai – Bombay
Nallah – Stream
Patra – Tin sheets
Pucca – Permanent, higher quality, brick, concrete
Sheng – Swahili based slang language
Tenement – Housing Unit
Usafi – Clean water
Watsan – Water and sanitation

Currency conversions (correct as of August 2011)

Ksh – Kenyan Shillings, £1 = Ksh.153

Rs – Rupees, £1 = Rs.75

The term ‘developer’ has been used variably to indicate members of the development project team, including landowner, architect etc.

The words tenement/house/unit/flat/dwelling have been used interchangeably to indicate the individual rehabilitated housing allocated to each household.

The terms slum and informal settlement are used interchangeably.

Chapter 1 – Introduction and Literature Review

This thesis considers the impact of infrastructure and buildings upon quality of life for residents of urban slums in developing countries. The research investigates measures to improve the physical conditions of urban slums and their related social impacts. Alternative delivery models for slum upgrading have been investigated and a theoretical framework for the research has been devised which assesses the sustainability of differing approaches via stakeholder perception. The investigation builds upon the researcher's training in architecture and building services engineering, experience of working with an urban development and infrastructure NGO in India and understanding of foreign culture and society's alternative perceptions of the built environment and services.

Slums

Slum characteristics, perceptions and definitions

A slum can be defined in simple terms as a squalid, overcrowded section of a city, characterised by inferior living conditions (Collins 1994). The essential characteristics of slums cover physical, spatial, social and behavioural criteria; high densities and low standards of housing (structure and services) – physical and spatial; and 'squalor' – social and behavioural. 'The spread of associations is typical, not just for the definition of slums but also of our perceptions of them' (United Nations Human Settlements Programme 2003). Slum dwellers are often trapped residing in slum conditions as they are commonly squatters holding no land rights or title deeds to their properties which prevents them from benefiting from investing and improving their homes.

The United Nations Global Report on Human Settlements 2003 entitled *The Challenge of Slums*, divides the slum into two broad classes:

1. *Slums of hope*: 'progressing' settlements, which are characterised by new, normally self-built structures, usually illegal (e.g. squatters) that are in, or have recently been through, a process of development, consolidation and improvement; and,
2. *Slums of despair*: 'declining' neighbourhoods, in which environmental conditions and domestic services are undergoing a process of degeneration.

The first published definition of 'slum' reportedly 'occurs in the convict writer James Hardy Vaux's 1812 *Vocabulary of the Flash Language*, where it is synonymous with 'racket' or 'criminal trade', Prunty, *Dublin Slums* quoted in (Davis 2006). By the 1820s the term 'slum' became a part of London vocabulary to identify the poorest quality housing and insanitary conditions; 'a refuge for marginal activities including crime, 'vice' and drug abuse; and a likely source for many epidemics that ravaged urban areas – a place apart from all that was decent and wholesome' (United Nations Human Settlements Programme 2003). According to E.R.Dewsnup at the turn

of the century, the slum was 'the physical embodiment of the housing evil' (Dewsnup 1907; Gaskell 1990).

During the 1880s, The Housing Reform Movement in England 'changed a popular word that once described an awkward phenomenon to a general operational concept – as a house materially unfit for human habitation'. This enabled slum areas to be marked on city maps for planning purposes (United Nations Human Settlements Programme 2003).

By the end of the 19th century, slum meant,

'a street, alley, court, situated in a crowded district of a town or city and inhabited by people of a low class or by the very poor; a number of these streets of courts forming a thickly populated neighbourhood or district where the houses and the conditions of life are of a squalid and wretched character...a foul back street of a city, especially one filled with a poor, dirty, degraded and often vicious population; any low neighbourhood or dark retreat – usually in the plural, as Westminster slums are haunts for thieves (Dickens)' (The Oxford English Dictionary, 1989, Clarendon Press, Oxford; UN Human Settlements Programme 2003).

The 20th century started to avoid the use of the term 'slum' in favour of less socially stigmatised assumptions of the area. Terms such as 'tenement house', 'tenement district' and 'deteriorated neighbourhood' were deemed more precise and rigorous. This better fitted the legislation of the 1890s and 1930s which authorised the eradication of the so-called slums.

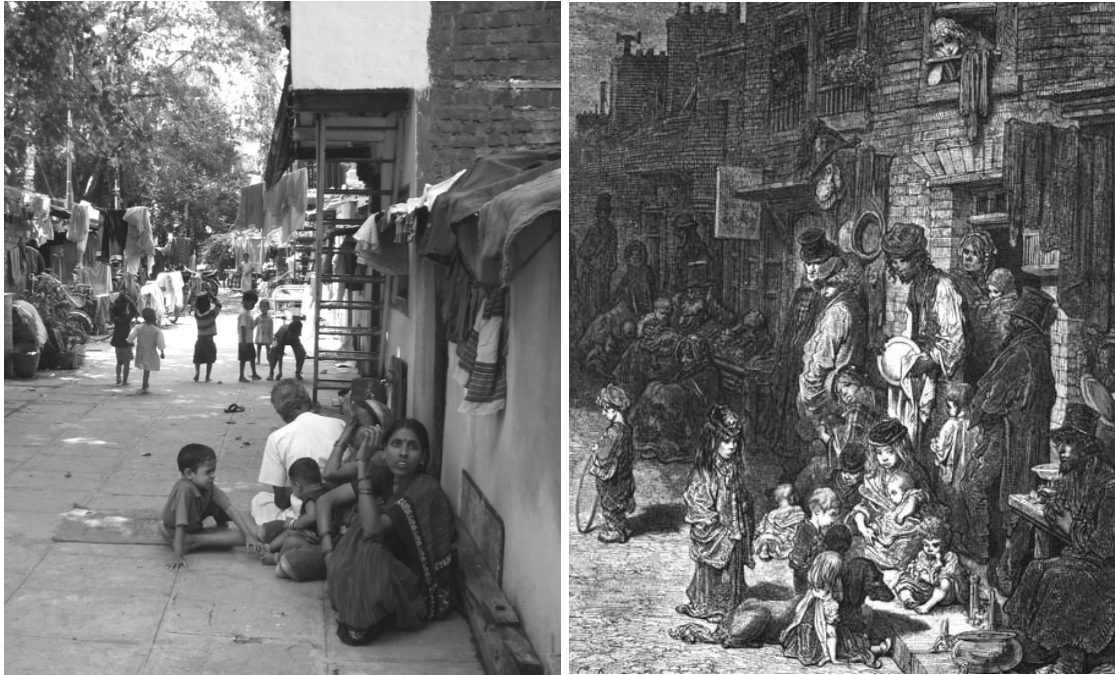
Inequalities within cities have shaped people's perception of slum areas. The stark and shaming contrast that is intrinsic to slum's identity is highlighted by Blanchard Jerrold in his commentary to Gustav Doré's *London*, 'which can still stand as the text for a study on slums' (Gaskell 1990).

'The West End Londoner is as completely in a strange land as any traveller from the Continent. A saunter through the extensive vegetable market of Spitalfield; a turn in Houndsditch, by Bishopsgate church; a pause where Whitechapel joins Aldgate... and so out upon the tea and colonial grandees of America Square and Mincing Lane – will reveal a new world of London to many a Cockney who thought he knew the great city well. The grandest and noblest spectacles of commerce, touch the basest and most heart-breaking...' (Doré and Jerrold 1872; Gaskell 1990).

'Through cheek by jowl with wealthy and respectable neighbourhoods, the slums were isolated and physically cut off from them in a way which reinforced their basic characteristics of terrible housing, foul drainage and inadequate sewerage, abundance of bugs and dirt, extreme unhealthiness and populations of transients, criminals and the unskilled living in extremely poor and impoverished circumstances' (Gaskell 1990).

These areas were regarded a problem and were considered a 'source of shame within otherwise beautiful and improving cities', a challenge that continues to persist today in the developing world. Emotive reaction is no new response to slums and it is a remarkable feature of the slum as a historical phenomenon that its impact and characterisation has barely changed over more than a hundred years (Gaskell 1990). See Figure 1 which shows a slum in Pune, India today and a Victorian illustration of a London slum. There are similarities in the buildings and use of space by the residents.

Figure 1 – Similarities between slums today and a hundred years ago



By the 1920s in London the slum problem was long recognised and at those times was considered to be a cause of the failings of the inhabitants themselves. There was widespread conviction that 'slum-dwellers constituted a special order of society that was undisciplined, thriftless, dangerous and intemperate' (Yelling 1986; Gaskell 1990), until the post-First World War period when a new standard of working-class housing was set (Gaskell 1990).

Nowadays the term 'slum' has many connotations. In some literature the term is avoided, but in developing countries the term 'slum' mostly lacks the pejorative and divisive original connotation, simply referring to lower-quality or informal housing (United Nations Human Settlements Programme 2003). Many inhabitants of such areas use the term slum, well respected United Nations and World Bank reports use the term, and so it shall also be used in this report.

Large areas of squatter or informal housing have become intimately connected with perceptions of poverty, lack of access to basic services and insecurity. Many terms are used interchangeably with slum; shanty, squatter settlement, informal housing, low income community. Some places have no equivalent word for slum so often descriptive words of the local language are used. Although a large number of words exist to describe a slum, a problem arises when seeking an agreed definition for slums, as there is no operational definition existing to classify whether or not a particular area is a slum.

A generic definition suggests that a slum is;

‘...a contiguous settlement where the inhabitants are characterised as having inadequate housing and basic services. A slum is often not recognised and addressed by the public authorities as an integral or equal part of the city’ (UN-Habitat 2002).

The Cities Alliance Action Plan describes a slum as;

‘Slums are neglected parts of cities where housing and living conditions are appallingly poor. Slums range from high density, squalid central city tenements to spontaneous squatter settlements without legal recognition or rights, sprawling at the edge of cities. Some are more than fifty years old, some are land invasions just underway. Slums have various names, Favelas, Kampung, Bidonvilles, Tugurios, yet share the same miserable living conditions’ (Cities Alliance 1999).

Although these general descriptions meet the common perception of a slum, a more universal and objective definition has been lacking, especially when measurement is needed for example for the Millennium Development Goals; ‘as a result, enumeration of slums has not yet been incorporated within mainstream monitoring instruments, such as national population censuses, demographic and health surveys, and global surveys. Some surveys provide proxies or related variables such as ‘proportion of unauthorised housing’ or ‘proportion of squatters’. Participatory poverty assessments in many least developed countries (LDCs) generally provide only qualitative information on urban poverty’ (United Nations Human Settlements Programme 2003).

Although slums are clearly multi-dimensional in nature, some of the characteristics of slums are possible to clearly define (such as access to physical services or density), others are not (such as social capital). After a review of the definitions used by various organisations, The United Nations Global Report on Human Settlements 2003 reveals the following as common characteristics of slums:

- Lack of basic services
- Substandard housing or illegal and inadequate building structures
- Overcrowded and high density

- Unhealthy living conditions and hazardous locations
- Insecure tenure; irregular or informal settlements
- Poverty and social exclusion
- Minimum settlement size

(United Nations Human Settlements Programme 2003)

In 2002 a United Nations Expert Group recommended an operational definition of slums;

A slum is an area that combines to various extents the following characteristics:

- Inadequate access to safe water
- Inadequate access to sanitation and other infrastructure
- Poor structural quality of housing
- Overcrowding
- Insecure residential status

These characteristics are largely quantifiable and can be used to measure progress towards the Millennium Development Goal to significantly improve the lives of at least 100 million slum dwellers by 2020.

Figure 2 – Indicators and Thresholds for defining slums

Characteristic	Indicator	Definition
Access to water	Inadequate drinking water supply (adjusted MDG Indicator 30)	A settlement has an inadequate drinking water supply if less than 50% of households have an improved water supply: <ul style="list-style-type: none"> • household connection; • access to public stand pipe; • rainwater collection;¹ with at least 20 litres/person/day available within an acceptable collection distance.
Access to sanitation	Inadequate sanitation (MDG Indicator 31)	A settlement has inadequate sanitation if less than 50% of households have improved sanitation: <ul style="list-style-type: none"> • public sewer; • septic tank; • pour-flush latrine; • ventilated improved pit latrine. The excreta disposal system is considered adequate if it is private or shared by a maximum of two households.
Structural quality of housing	a. Location	Proportion of households residing on or near a hazardous site. The following locations should be considered: <ul style="list-style-type: none"> • housing in geologically hazardous zones (landslide/earthquake and flood areas); • housing on or under garbage mountains; • housing around high-industrial pollution areas; • housing around other unprotected high-risk zones (eg railroads, airports, energy transmission lines).
	b. Permanency of structure	Proportion of households living in temporary and/or dilapidated structures. The following factors should be considered when placing a housing unit in these categories: <ul style="list-style-type: none"> • quality of construction (eg materials used for wall, floor and roof); • compliance with local building codes, standards and bylaws.
Overcrowding	Overcrowding	Proportion of households with more than two persons per room. The alternative is to set a minimum standard for floor area per person (eg 5 square metres).
Security of tenure	Security of tenure (MDG Indicator 32)	<ul style="list-style-type: none"> • Proportion of households with formal title deeds to both land and residence. • Proportion of households with formal title deeds to either one of land or residence. • Proportion of households with enforceable agreements or any document as a proof of a tenure arrangement.

Note: ¹ 'Well' and 'spring' are considered acceptable sources in the original MDG indicator but are almost certain to be polluted in urban areas.
Sources: adapted from UN-Habitat, 2002a, 2002b.

(United Nations Human Settlements Programme 2003)

Slum society

Slums are not an extraneous part of the city. In the developing world slums are often the dwelling places of much of the labour force of the city providing a number of important goods and services for the formal economy. This informal economy is generating a very large part of the economic value of the country. Informal sector economists such as Hernando de Soto have long argued that the poor are sitting on huge amounts of 'dead capital' (de Soto 2000).

Urban slums are also often interesting communities in their own right. Many of the most important movements in music, dance and politics originated in slums. Many people who are not so poor also live in slums (United Nations Human Settlements Programme 2003).

Some literary descriptions of slums (current and past in different settings) give an account of how a slum can appear to an outsider and highlight the main features and commonalities of slum society. Some of the issues existing in slums today have many similarities with London slums during the Victorian times. For example, according to the following accounts, slum conditions such as poor structure, poor security and poor sanitation were prevalent, as they continue to be now in developing regions. Another common and more positive feature is the vibrant community and industry active within slum society.

The writer Charles Dickens wrote the following to describe slum housing during the 19th century;

'Wretched houses with broken windows patched with rags and paper; every room let out to a different family, and in many instances to two or even three – fruit and 'sweetstuff' manufacturers in the cellars, barbers and red-herring vendors in the front parlours, cobblers in the back; a bird-fancier in the first floor, three families on the second, starvation in the attics, Irishmen in the passage, a 'musician' in the front kitchen, a charwoman and five hungry children in the back one – filth everywhere – a gutter before the houses, and a drain behind – clothes drying, and slops emptying from the windows; ... men and women, in every variety of scanty and dirty apparel, lounging, scolding, drinking, smoking, squabbling, fighting, and swearing' (Dickens 1839).

Another 19th century London slum description in the book *Curiosities of London*;

'... it was one dense mass of houses, through which curved narrow tortuous lanes, from which again diverged close courts – one great mass, as if the houses had originally been one block of stone, eaten by slugs into numberless small chambers and connecting passages' (Timbs 1867).

Many general characteristics of London slums in the Victorian times are similar to Indian slums nowadays.

For example, in Gregory David Roberts' semi-autobiographical book *Shantaram*, the author describes his first sight of a Mumbai slum during a bus ride from the airport;

'Like brown and black dunes, the acres of slums rolled away from the roadside, and met the horizon with dirty heat-haze mirages. The miserable shelters were patched together from rags, scraps of plastic and paper, reed mats, and bamboo sticks. They slumped together, attached one to another, and with narrow lanes winding between them. Nothing in the enormous sprawl of it rose much above the height of a man' (Roberts 2004).

However, it is important to consider the positive and vibrant nature of the communities and activities within slum settlements. Slum discourse is often led by people who do not live in slums and who consider the physical manifestations as demeaning in some way of the human condition. However slum dwellers do not always see the slum as a key feature of their lives and know how to live and function happily in lower conditions.

Roberts goes on to describe;

'I began to look beyond the immensity of the slum societies, and to see the people who lived within them. A woman stooped to brush forward the black satin psalm of her hair. Another bathed her children with water from a copper dish. A man led three goats with red ribbons tied to the collars at their throats. Another man shaved himself at a cracked mirror. Children played everywhere. Men carried water in buckets. Men made repairs to one of the huts. And everywhere that I looked, people smiled and laughed.

I looked at the people, then, and I saw how *busy* they were – how much industry and energy described their lives. Occasionally sudden glimpses inside the huts revealed the astonishing cleanliness of that poverty: the spotless floors, and glistening metal pots in neat, tapering towers. And then, last, what should've been first, I saw how beautiful they were: the women wrapped in crimson, blue, and gold; the women walking barefoot through the tangled shabbiness of the slum with patient, ethereal grace; the white-toothed, almond-eyed handsomeness of the men; and the affectionate camaraderie of the fine-limbed children, older ones playing with younger ones, many of them supporting baby brothers and sisters on their slender hips. And half an hour after the bus ride began, I smiled for the first time' (Roberts 2004).

Urban poverty dimensions and measurement

Slums and poverty are related and mutually reinforcing, but the relationship is not always straightforward. Slum dwellers are not a homogenous population. Some slum dwellers have incomes that exceed the earnings of formal sector employees, yet they choose to live in slum conditions. It is also worth noting that in many cities, there are often more poor people outside the slum areas than within them. 'It is not surprising that the characteristics of the settlement or housing is often confused by act or by implication with the characteristics of the people living in them. The issues of living conditions, poverty and poor people's management of their own situation are amalgamated, and cause and effect relationships are confused' (United Nations Human Settlements Programme 2003).

Poverty in urban areas has been increasing, but urban poverty is difficult to define. Urban poverty may be measured in terms of household income, but monetary measurements do not capture the multidimensional nature of poverty.

The different dimensions of urban poverty have been described as;

- *Low income*: consisting of those who are unable to participate in labour markets and lack other means of support, and those whose wage income is so low that they are below a nominal poverty line
- *Low human capital*: low education and poor health are the components of 'capability poverty' used in the United Nations Development Programme Human Development Index. Health shocks, in particular, can lead to chronic poverty
- *Low social capital*: this involves a shortage of networks to protect households from shock; weak patronage on the labour market; labelling and exclusion. This particularly applies to minority groups
- *Low financial capital*: lack of productive assets that might be used to generate income or avoid paying major costs (for example, a house, a farm or a business)

Figure 3 – The constituents of urban poverty

1. Inadequate income (and thus inadequate consumption of necessities including food and, often, safe and sufficient water; often problems of indebtedness, with debt repayments significantly reducing income available for necessities).
2. Inadequate, unstable or risky asset base (non-material and material including educational attainment and housing) for individuals, households or communities.
3. Inadequate shelter (typically poor quality, overcrowded and insecure).
4. Inadequate provision of 'public' infrastructure (e.g. piped water, sanitation, drainage, roads, footpaths) which increases the health burden and often the work burden.
5. Inadequate provision for basic services such as day care/schools/vocational training, health care, emergency services, public transport, communications, law enforcement.
6. Limited or no safety net to ensure basic consumption can be maintained when income falls; also to ensure access to shelter and health care when these can no longer be paid for.
7. Inadequate protection of poorer groups' rights through the operation of the law, including laws and regulations regarding civil and political rights, occupational health and safety, pollution control, environmental health, protection from violence and other crimes, protection from discrimination and exploitation.
8. Voicelessness and powerlessness within political systems and bureaucratic structures, leading to little or no possibility of receiving entitlements; of organizing, making demands and getting a fair response; or of receiving support for developing their own initiatives. Also, no means of ensuring accountability from aid agencies, NGOs, public agencies and private utilities or being able to participate in the definition and implementation of their urban poverty programmes.

(Satterthwaite 2001)

The Millennium Development Agenda

In September 2000, world leaders met at the United Nations Millennium Summit to establish a series of goals for humanity in the 21st century. The summit resulted in the ratification of the Millennium Declaration and the Millennium Development Goals (MDGs); a set of 8 global goals and 21 targets to be measured through 60 indicators. The goals are focussed on reducing poverty, improving the quality of people's lives, ensuring environmental sustainability and building partnerships to make a positive use of globalisation. The overarching goal is to halve absolute poverty in the world by the deadline of 2015.

For urban settlements, Goal 7, Target 11 is the most important;

Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

Other MDG targets and indicators of particular importance to urban settlements include:

Goal 1: Eradicate extreme poverty and hunger

Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than US\$1 a day

Indicator 1: Proportion of population with income below US\$1 a day.

This is the proportion of people living in extreme poverty – defined by the World Bank as average per capita consumption of US\$1 a day or less.

Goal 7 : Ensure environmental sustainability

Target 10 : Halve, by 2015, the proportion of people without sustainable access to safe drinking water

Indicator 30 : Proportion of population with sustainable access to an improved water source, urban and rural.

Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

Indicator 31 : Proportion of urban population with access to improved sanitation

Indicator 32 : Proportion of households with secure tenure

Measuring poverty

Poverty is commonly measured based on income; see box below. However these income-based measures substantially underestimate urban poverty as they do not make allowance for the extra costs of urban living or intra-household poverty (Where there is unequal power among household members, e.g. it is possible for children and women to live in poverty even though the larger household of which they are a part is not classified as such.), relevant background conditions or the spatial distribution of poverty or its national context. Overall, half the world – nearly 3 billion people live on less than US\$2 a day (United Nations Human Settlements Programme 2003).

'Further research is needed to determine the relationship between the two MDG targets of poverty reduction and assisting slum dwellers, and to delineate, in more specific terms, the extent to which slums are the spatial manifestation of urban poverty, particularly in cities and on a global scale' (United Nations Human Settlements Programme 2003).

Absolute poverty: this comprises people who cannot afford to buy a 'minimum basket' of goods – which sometimes is just food and water for minimum nutrition, but should include other necessities, such as clothing, shelter and transport to employment, education or the means to obtain the basic necessities.

Relative poverty: this is the proportion of people below some threshold, which is often a percentage of local median income. However, the World Bank has recently popularized a simple '**extreme poverty**' measure of US\$1 a day or US\$2 a day (both adjusted for purchasing price parity, or local costs). It is on this basis that most of their poverty figures since 1993 have been calculated.

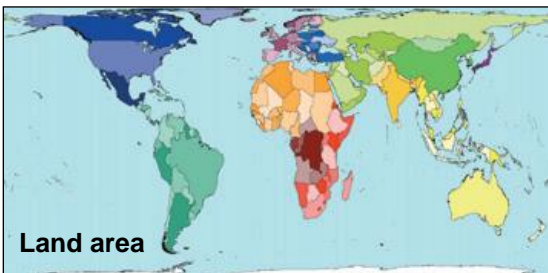
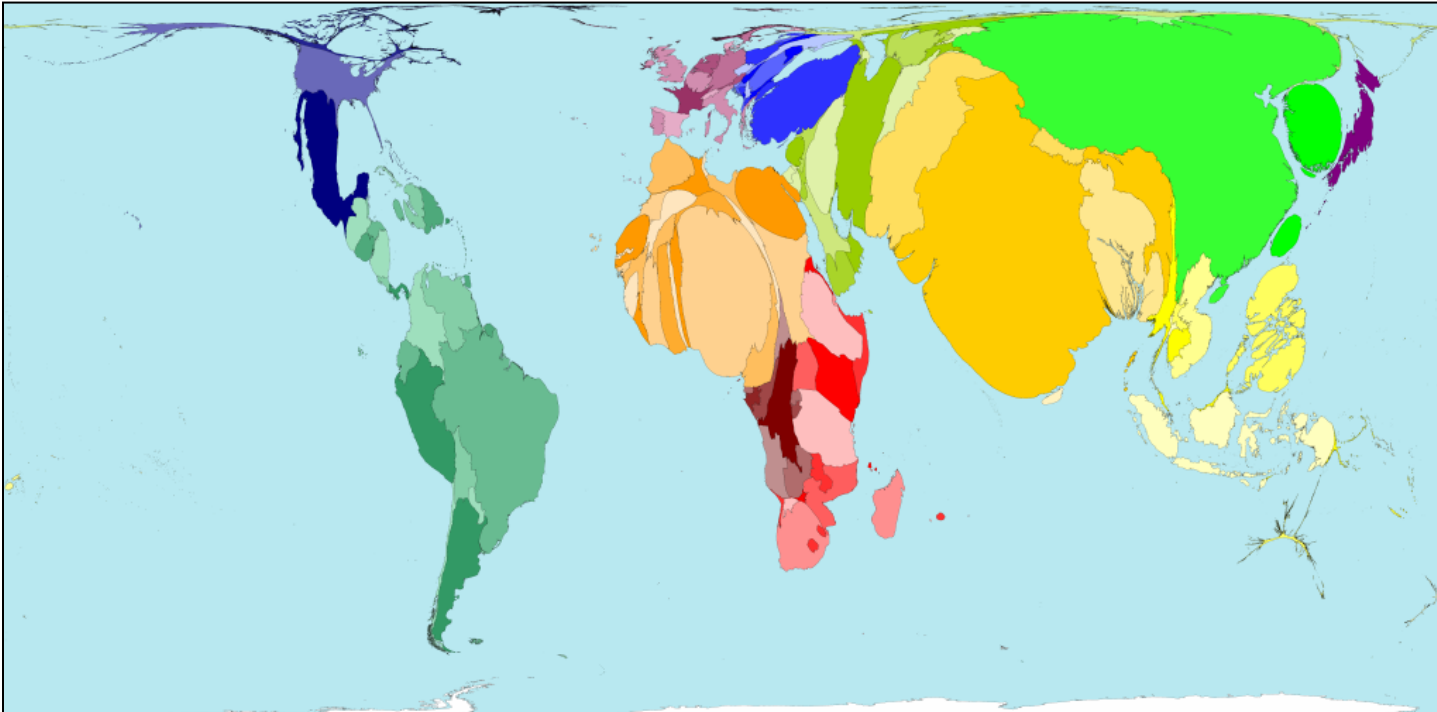
(United Nations Human Settlements Programme 2003)

The UN cannot do other than to measure poverty at least in part by a monetary income. However for slum-dwellers who may have an income of less than a dollar a day, money is often not the means by which their life is conducted or measured. Doubling the monetary income to \$2 a day does not change very much for these people because at those income levels the non monetary economy dominates. In slum communities people often live 'cash neutrally' and swap or trade goods or services directly rather than with money changing hands.

The growth of slums

For the first time in history, more than half the world's population will live in cities; concentrated on less than 3% of its land area (United Nations Population Fund 2007). The huge rise in numbers of urban dwellers has contributed to the growth of slums; characterised by hyper-congested, sub-standard housing, a lack of safe water and sanitation, low incomes, and physical & legal insecurity. Slums make up 30-70% of urban populations. Slum settlements are not an exception within a city; in Africa and South Asia, slum dwellers constitute the majority of the urban population. In 2005 the estimate of the global slum population was one billion, and increasing by 25 million each year. These slums are life-threatening, denying even basic human dignity and spreading fast. 'Daily life in the worst slums ought to be considered a humanitarian emergency and be responded to urgently, as urban populations face both familiar and new city-specific threats from natural and manmade causes. In this sense, the urban poor are living through tomorrow's crises today' (OCHA/IRIN and UN-Habitat 2007).

Figure 4 – Urban Slums



Territory has been re-sized to show the proportion of worldwide population that live in slums that live there, in 2001.

'There are slums in almost all territories. South America is the region with the largest proportion of the population living in slums, at 26%; followed by North Africa, at 25%'

(<http://www.worldmapper.org>)

Technical notes:

Data are from UN-HABITAT, 2005

A slum is defined as housing lacking legal security of tenure. Estimates using proxy measures of housing conditions are often used.

*Seven territories were recorded as having no urban slums

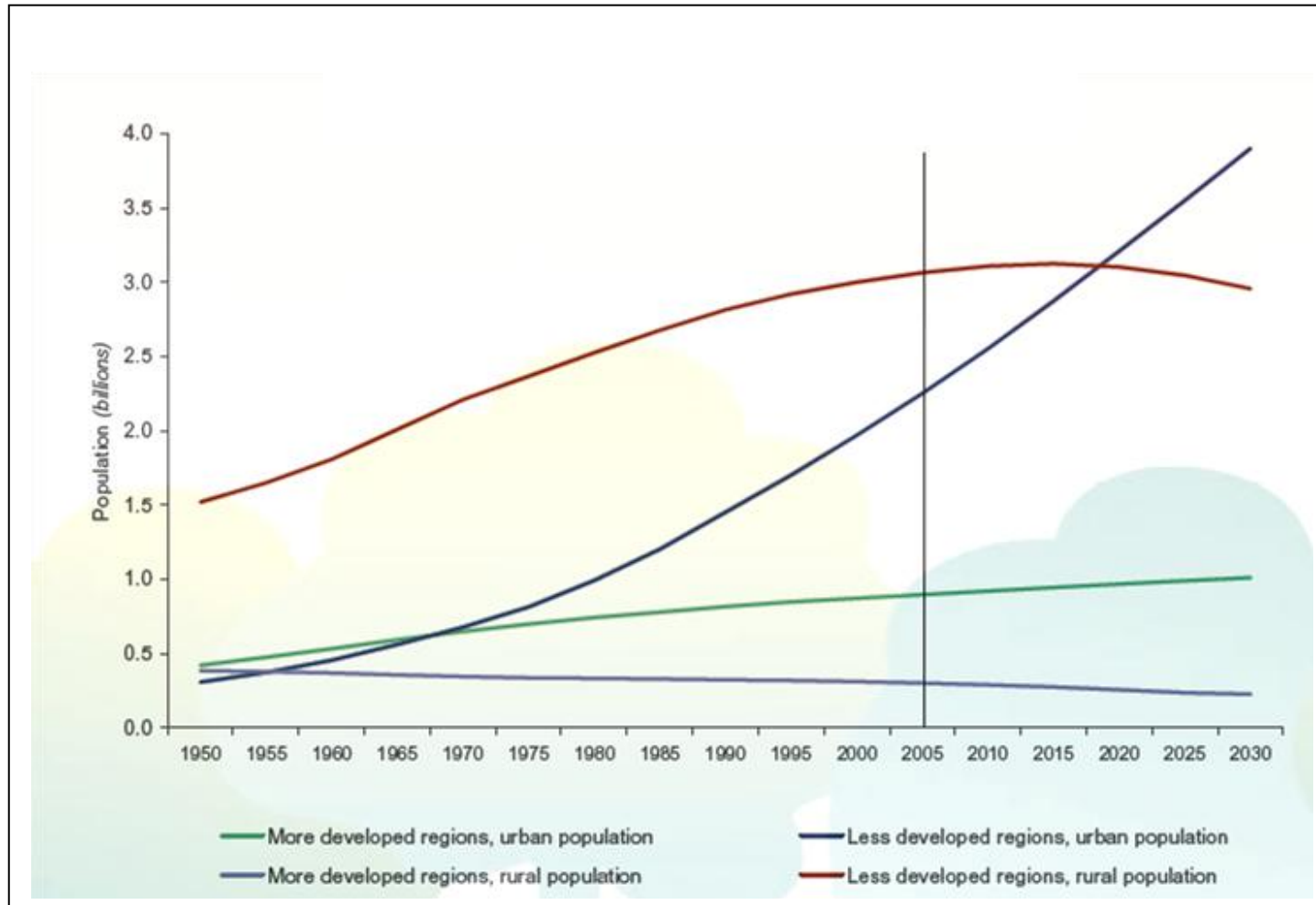
Population, Urbanisation, Inequality & Governance

The Limits to Growth published in 1972 by The Club of Rome modelled the possible consequences of a rapidly growing population within finite world resources. The Club's then controversial 'world model' investigated major trends of global concern and was one of the first publications to bring attention to the potential costs of a rapidly urbanizing world; (Urbanisation is normally defined as the process of growth in the proportion of a country's population living in urban areas). 'If the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity' abstract by Eduard Pestel, (Meadows, Meadows et al. 1972).

As predicted, the twentieth century witnessed the rapid urbanisation of the world's population, bringing with it the critical consequences of stretched resources in urban centres. Millions of people in developing urban regions are not able to meet their basic needs for shelter, water, health and education (United Nations Human Settlements Programme 2003).

The global proportion of urban population increased from 13% in 1900 to 29% in 1950 and reached 49% in 2005. It is projected that 60% of the global population will live in cities rather than rural areas by 2030. Urban dweller population figures have more than quadrupled since 1950 and are expected to rise to 4.9 billion by 2030 (United Nations Department of Economic and Social Affairs 2006).

Figure 5 – Urban and rural population of more developed regions and less developed regions, 1950 – 2030



Source: United Nations, Department of Economic and Social Affairs, Population Division (2006). World Urbanisation Prospects: The 2005 Revision. Working Paper No. ESA/P/WP/200.

Currently there are 19 megacities in the world, each with populations of over 10 million. These megacities are anticipated to take roughly one ninth of the world population growth but the major population growth will now be in medium cities of 1 to 5 million people, and in smaller cities of under 500,000 people, which still have half of the world's population growth (United Nations Human Settlements Programme 2003).

Figure 6 – Rankings and populations in 2007 of megacities

1	Tokyo	35.7M
2	New York–Newark	19.0M
3	Cuidad de México (Mexico City)	19.0M
4	Mumbai (Bombay)	19.0M
5	São Paulo	18.8M
6	Delhi	15.9M
7	Shanghai	15.0M
8	Kolkata (Calcutta)	14.8M
9	Dhaka	13.5M
10	Buenos Aires	12.8M
11	Los Angeles–Long Beach–Santa Ana	12.5M
12	Karachi	12.1M
13	Al-Qahirah (Cairo)	11.9M
14	Rio de Janeiro	11.7M
15	Osaka-Kobe	11.3M
16	Beijing	11.1M
17	Manila	11.1M
18	Moskva (Moscow)	10.5M
19	Istanbul	10.1M

(Thomas 2008; United Nations Department of Economic and Social Affairs 2008)

Population and urbanisation implications for both developed and less well developed regions are significant. In more developed regions, a higher proportion of the population live in urban areas, however, despite lower levels of urbanisation, less developed regions have more than double the number of urban dwellers than more developed regions (2.3 billion vs. 0.9 billion). It is expected that over the coming decades the urban areas of the less developed regions will absorb all of the population growth expected worldwide, predicted to peak at 10 billion in 2050 (Lutz, Sanderson et al. 1997; Davis 2006). Thus, global population growth is becoming a largely urban phenomenon accounted for by the less developed regions (United Nations Department of Economic and Social Affairs 2006). It is accepted that the main cause of urbanisation today is natural increase – about 60%, while the other components of urban growth, migration and the reclassification of rural areas as urban, constitute about 40% (United Nations Population Fund 2007; Thomas 2008).

In some developing countries, this rapid urbanisation is the cause of critical challenges for urban areas, increasing urban poverty and the growth of slums. However, the average rural resident often fares worse than the urban dweller with respect to access to basic services such as drinking water, sanitation, electricity or educational facilities (National Research Council, 2003

cited in UN DESA Population Report 2006). 'Experience shows that across the world, urbanisation has been associated with improved living standards' (UN-HABITAT 2010) and urbanisation in Asia has been shown to enhance productivity and increase gross domestic product per head (UN-HABITAT 2010/11). Thus urbanisation in developing countries does not have only negative consequences. 'The concentration of people in cities is often a response to a concentration of dynamic activities as well as political and cultural change which lead to social and economic benefits;

'Often, the development of rural areas is inextricably tied to the dynamism of the urban centres to which they are linked. Cities are therefore engines of economic, social, political and cultural change. Urbanisation can thus be viewed as an indicator of development, with higher urban levels generally associated with more industrialized and technologically advanced economies' (United Nations Department of Economic and Social Affairs 2006).

But despite the possible benefits of urbanisation, cities can be a concentration of 'greed, inequity, poor planning and disrespect for human rights' (Davis 2006). The significant challenges affecting developing regions desperately needs to be addressed;

'The world's cities are simultaneously places of great human progress and deep human destitution. Rural poverty has long been the world's most common face of destitution. But urban poverty can be just as intense, dehumanizing and life-threatening' Kofi Annan, 2006 (OCHA/IRIN and UN-Habitat 2007).

Urbanisation has aggravated inequity within cities which is creating wide contrasts of extreme wealth and poverty. 'The inequitable distribution of resources and anti-poor policies have led to a rising urban poverty which impedes the sustainability of cities and impacts their economic viability' (UN-Habitat 2006). The challenge and/or opportunity facing developing countries today is to take advantage of rapid urbanisation. The UN Population Fund's 2007 World Population Report states; 'Cities concentrate poverty but they also represent the best hope of escaping it.... The challenge is learning how to exploit [a city's] concentrated population' (OCHA/IRIN and UN-Habitat 2007).

The high rates of urbanisation that are now occurring across the developing world parallel that which happened in England and some other European countries during their industrial revolutions in the 18th and 19th century. Unfortunately, the current urbanisation is not being matched by the adequate economic growth needed in many developing countries (United Nations Human Settlements Programme 2003). In order to sustain growing urban populations, rapid economic growth and good governance must coincide with urbanisation. It is vital that issues of governance - when cities lack the capacity to provide the necessary services to all the city's inhabitants - be addressed through development initiatives to make the best of the opportunities that growing urban centres can bring (United Nations Department of Economic and Social Affairs 2006). It was highlighted in the *UN Global Report on Human Settlements 1996, An Urbanizing World* that 'while there is no evidence that a threshold population size exists

beyond which cities generate more negative than positive effects for their countries, in many countries the rapid pace of population growth and enormous size of the population have overwhelmed the capacity of municipal authorities to respond' (United Nations Human Settlements Programme 2003).

A shift is needed in national and international poverty-reduction strategies. At present, many donors and NGOs have no urban policy, while some local authorities and development agencies neglect cities assuming poverty is a rural issue. Many politicians and planners regard slum formation as temporary and believe the less intervention the better, although a significant amount of infrastructure provision will be needed to accommodate the increases forecast in the world's urban population. 'Rather than try to prevent the expansion of urban areas, planners should examine the various policy options for addressing it and building on its possibilities' (Thomas 2008). Leaders must accept that urbanisation is inevitable and important for government, however, almost 75% of developing countries have enacted policies to reduce the movement of people from rural to urban areas such as policing, incentive and new area measures (Jenkins et al 2000; United Nations Department of Economic and Social Affairs 2006; Thomas 2008). The election of mayors in cities such as London, Tokyo and Seoul during the 1990s have enabled strong political leadership bringing with it advantages such as significantly reducing congestion in London city centre (Cities Architecture and Society 2006; Thomas 2008).

Governance is key to improving the situation and capacity needs to be increased in three policy dimensions; urban planning, urban development strategy and good governance, Jeffrey Sachs quoted in (OCHA/IRIN and UN-Habitat 2007). 'The absence of effective governance results in a lack of planning, development control, and infrastructure provision. In an increasingly urbanised world, effective planning policies are needed for both urban and rural areas' (Thomas 2008).

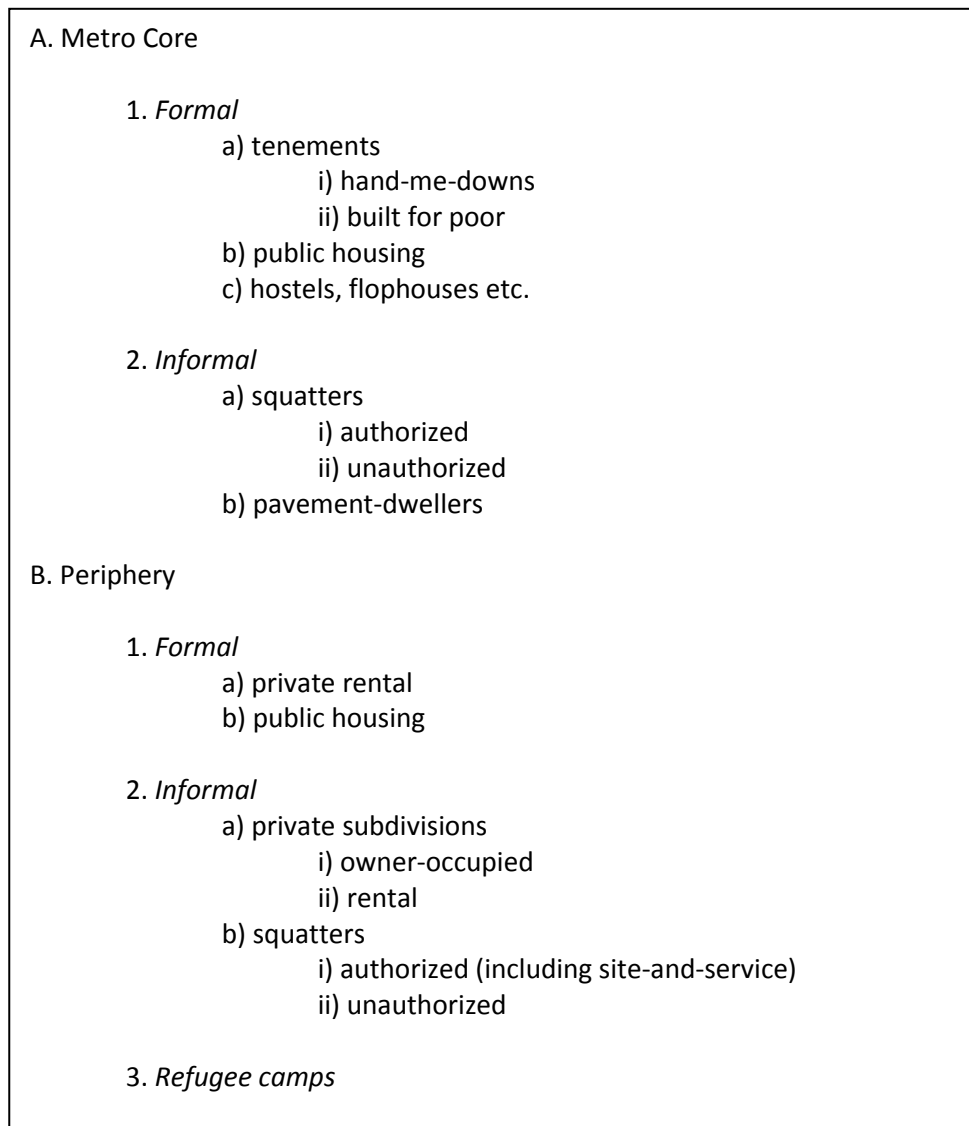
Forces shaping slums

Although different slums often share common characteristics in terms of physical and social conditions, the differences between slums can vary significantly according to local cultures and conditions, accidents of history or politics, and topography of the built environment. Slums do however have commonalities wherever they occur which differentiate them from the rest of the city, such as the economic, social and spatial forces that create and shape them. 'There are a number of theories of spatial distribution, residential differentiation and ecological succession that have been developed by urban researchers to understand why people live where they do, why cities have particular forms, and why people congregate in particular locations' (United Nations Human Settlements Programme 2003). For example, many cities are market-driven (where land use is determined by economic competition – although many cities of the developing world are still undergoing transitions from more traditional exchange and land tenure regimes). Macro and other external forces acting on cities can also be responsible for slum formation, such as demographic changes caused by urbanisation, migration and poverty incidence. New international regimes of economic liberalization and globalization also impact on urban inequality and the formation of slums (United Nations Human Settlements Programme 2003).

The famous architect John Turner (Turner 1976) developed a model based on his work in Peru during the 1960s; within which rural migrants initially move to city centre locations to find jobs, and then with employment security they move to the periphery of the city where land ownership is more attainable for them. Turner described this housing formation as progress from “bridgeheader” to “consolidator”, but acknowledged that it is an idealisation which may only reflect a historically transient situation in that specific context (Turner 1968; Davis 2006). Slums are often used as the first port of entry for immigrants as they provide a place which has the lowest costs and social expectations, which enable newcomers to establish themselves and then later emerge into the community.

The urban theorist Mike Davis has compiled a number of models of urbanisation shaping slums in order to consider slum typologies. Figure 7 shows Davis’ analytic simplification of slum typology;

Figure 7 – Slum Typology



The *Global Report on Human Settlements, The Challenge of Slums* presents a number of characteristics, see Figure 8, ‘used in combination, serve to identify issues pertaining to vulnerability, the social networks, physical and economic assets with the potential to improve livelihoods, and levels of and incentives for community organization and representation’.

Figure 8 – Major categories of slum spatial analysis

Origins and age	Historic city-centre slums Slum estates Consolidating informal settlements Recent slums
Location and boundaries	Central Scattered slum islands Peripheral
Size and scale	Large slum settlements Medium-size slum settlements Small slums
Legality and vulnerability	Illegal Informal
Development stages	Communities/individuals lacking incentive for improvement
Dynamic and diagnosis	Slums with ongoing individual- and community-led development Intervention-led improved slums Upgraded slums

(United Nations Human Settlements Programme 2003)

There are a number of forces which shape the formation and growth of slum populations. Many new-comers to urban areas come seeking a better quality of life and others have no choice. Up to 30% of migrants arriving in urban centres are environmental refugees, who due to environmental degradation, population pressure or climate change are having to abandon land that no longer supports their survival. Other new comers are escaping war and conflict.

The main features of contemporary urbanisation have been determined by political, economic, environmental and social factors;

Political factors: instability, civil war and repression;

Economic, Environmental and Social factors:

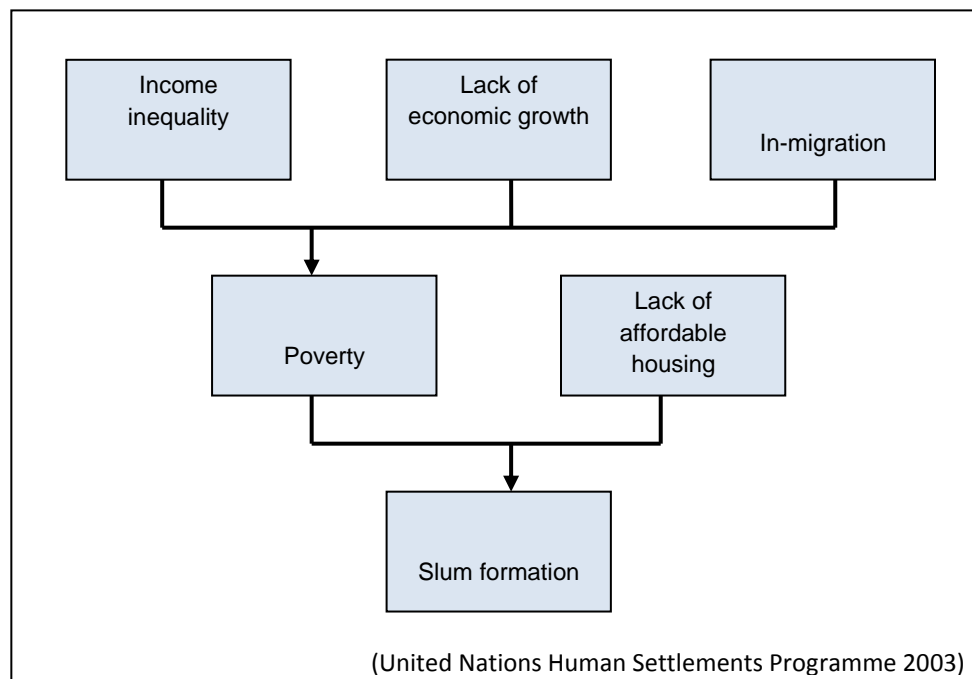
– *pushing*: environmental degradation and declining productivity of cropland; low rural incomes from agriculture; lack of new lands for farming; move to export rather than subsistence farming; enclosure and consolidation of farm holdings; limited off-farm employment;

- *pulling*: higher incomes in urban areas; greater employment opportunities; economic safety nets; availability of social services, education and health care; improved water supply and other environmental services and infrastructure.

(United Nations Human Settlements Programme 2003)

The growth of the poor urban population is no longer solely due to rural-urban migration. 'Natural population growth of the existing urban poor will ensure that slums continue to grow rapidly even if all inward migration ended today' (OCHA/IRIN and UN-Habitat 2007). This natural population growth is largely due to the success of modern medicine in raising life expectancies by 40% over the century – which could be rated as the greatest human achievement of the period (United Nations Department of Economic and Social Affairs 2002), although it has taken several generations for social behaviour to adjust to these new conditions by also reducing birth-rates (United Nations Human Settlements Programme 2003).

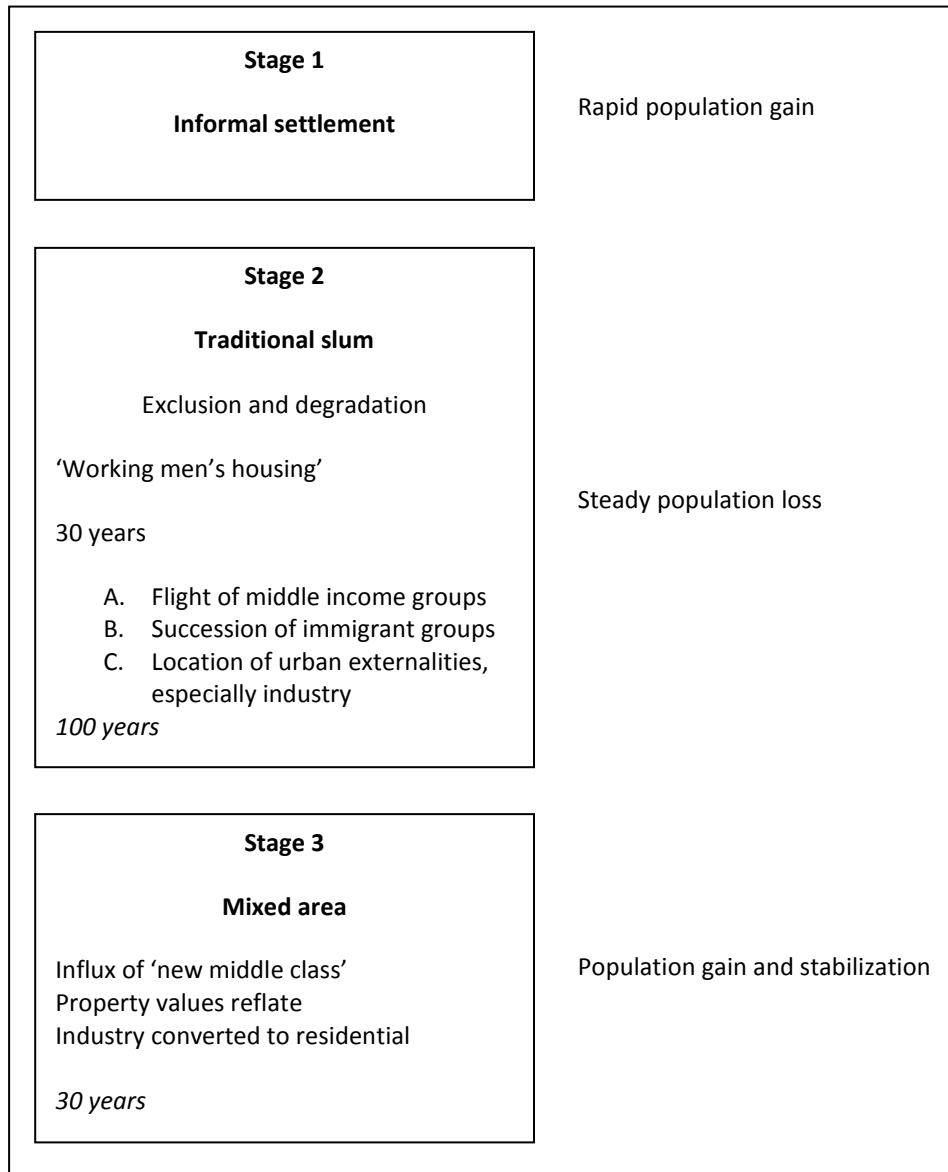
Figure 9 – Inequality, poverty and slum formation



Slums result from a combination of poverty or low incomes with inadequacies in the housing provision system, so that poor people are forced to seek affordable accommodation and land that can become increasingly inadequate. The numbers of urban people in poverty are, to a large extent, outside the control of city governments, and are swelled by a combination of economic stagnation, increasing inequality and population growth, especially growth through in-migration, as depicted in Figure 9.

Slums developed in much the same way in the 'Old world' as in the 'New world'. Figure 10 shows the progression of an inner-city slum in Surry Hills, Sydney.

Figure 10 – Progression of an inner-city slum, Surry Hills, Sydney



(United Nations Human Settlements Programme 2003)

Low incomes mean that new urban dwellers cannot afford to pay for permanent housing. Governments rarely assist incomers in finding affordable housing and so people act by building their own dwellings or informal rental accommodation for each other;

‘Rather than being assisted in their efforts by governments, they have been hounded and their homes frequently demolished, they have been overlooked when basic services are provided, and they have been ignored and excluded from normal opportunities offered to other urban citizens’ (United Nations Human Settlements Programme 2003).

The courage required to move from a rural village to the city is often rewarded with hard indifference as shelter and work must be competed for among millions of other urban poor people ‘while avoiding the attentions of at-best unwelcoming city authorities that would rather they did not exist’ Jockin Arputham, leader of the Slum Dwellers International Organisation and Mumbai slum dweller himself (OCHA/IRIN and UN-Habitat 2007).

Newcomers to urban areas often seek opportunities but in reality are faced with major obstacles; lack of housing, absence of services and infrastructure, lack of property rights, unemployment and harsh nature. The urban poor are often the most vulnerable to natural disasters as they inhabit overcrowded, marginal, unstable and dangerous land with no financial cushion or security. When flooding, fire, earthquakes, landslides and cyclones strike, the urban poor are often the worst hit. The circumstances of the urban poor also make them more vulnerable to dangers such as organised crime and epidemics (OCHA/IRIN and UN-Habitat 2007).

Figure 11 – Largest Megaslums

30 Largest Megaslums (2005) ³⁰			
	(Millions)		(Millions)
1. <i>Neza/Chalco/Izta</i> (Mexico City) ³¹	4.0	16. <i>Dharavi</i> (Mumbai)	0.8
2. <i>Libertador</i> (Caracas)	2.2	17. <i>Kibera</i> (Nairobi)	0.8
3. <i>El Sur/Ciudad Bolívar</i> (Bogotá)	2.0	18. <i>El Alto</i> (La Paz)	0.8
4. <i>San Juan de Lurigancho</i> (Lima) ³²	1.5	19. <i>City of the Dead</i> (Cairo)	0.8
5. <i>Cono Sur</i> (Lima) ³³	1.5	20. <i>Sucre</i> (Caracas)	0.6
6. <i>Ajegunle</i> (Lagos)	1.5	21. <i>Islamshahr</i> (Tehran) ³⁵	0.6
7. <i>Sadr City</i> (Baghdad)	1.5	22. <i>Tlalpan</i> (Mexico City)	0.6
8. <i>Soweto</i> (Gauteng)	1.5	23. <i>Inanda INK</i> (Durban)	0.5
9. <i>Gaza</i> (Palestine)	1.3	24. <i>Manshiet Nasr</i> (Cairo)	0.5
10. <i>Orangi Township</i> (Karachi)	1.2	25. <i>Altındağ</i> (Ankara)	0.5
11. <i>Cape Flats</i> (Cape Town) ³⁴	1.2	26. <i>Matbare</i> (Nairobi)	0.5
12. <i>Pikine</i> (Dakar)	1.2	27. <i>Agnas Blancas</i> (Cali)	0.5
13. <i>Imbaba</i> (Cairo)	1.0	28. <i>Agge</i> (Lagos)	0.5
14. <i>Ezhet El-Haggana</i> (Cairo)	1.0	29. <i>Cité-Soleil</i> (Port-au-Prince)	0.5
15. <i>Caçenga</i> (Luanda)	0.8	30. <i>Masina</i> (Kinshasa)	0.5

30 Scores of sources were consulted and median figures were chosen over extremes.

31 Includes Nezahualcoyotl (1.5 million), Chalco (300,000), Iztapalapa (1.5 million), Chimalhuacan (250,000), and 14 other contiguous delegations and *municipios* in the southeast quadrant of the metropolis.

32 Includes S. J. de L. (750,000), Comas (500,000), and Independencia (200,000).

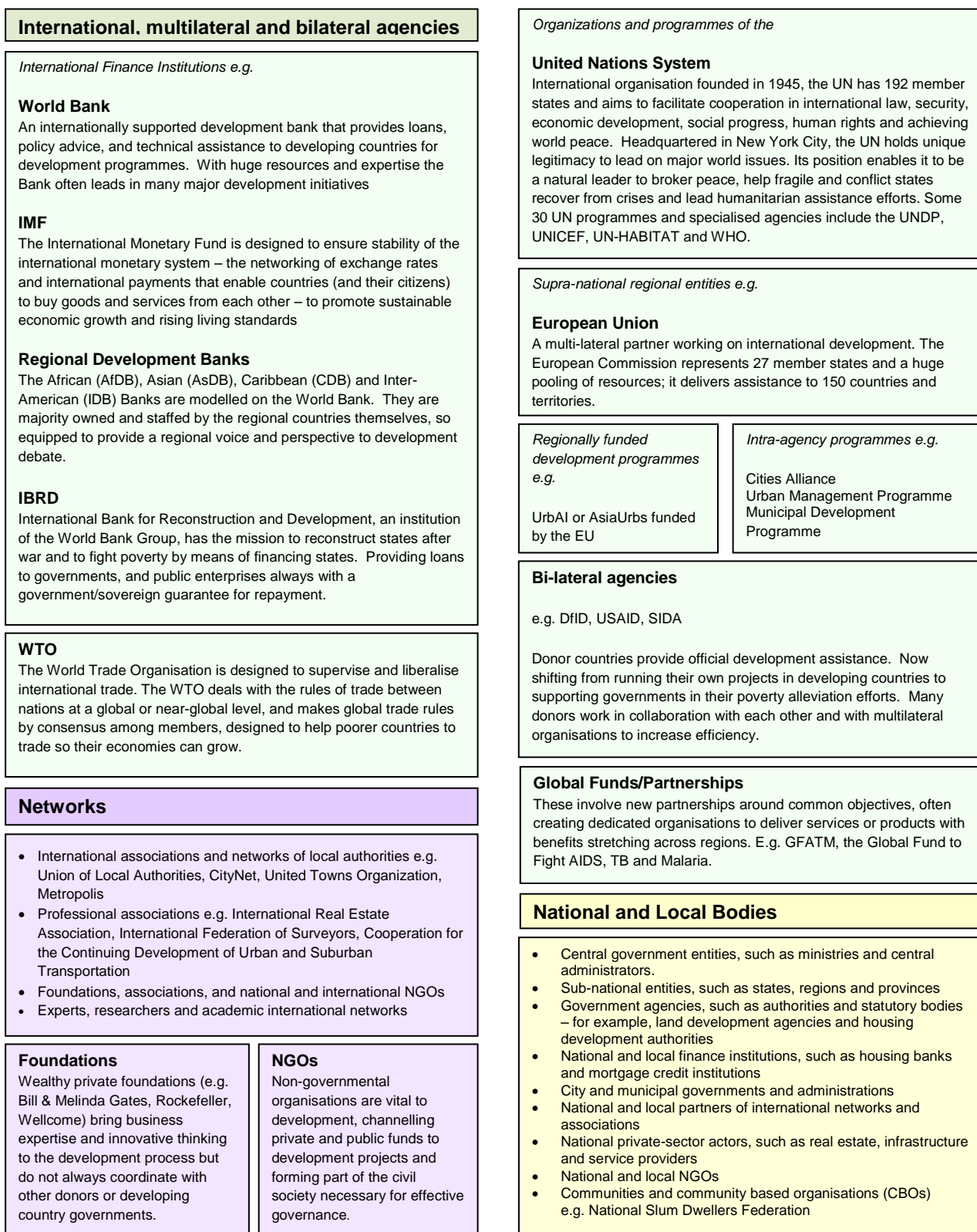
33 “Cono Sur” = Villa El Salvador (350,000), San Juan de Miraflores (400,000) and Villa Maria de Triunfo (400,000).

34 “Cape Flats”, Khayelitsha (400,000), Mitchell’s Plain (250,000), Crossroads (180,000), and smaller townships (from 1996 Census).

35 Islamshahr (350,000) plus Chahar Dangeh (250,000).

(Davis 2006)

Figure 12 – International actors involved with slums



(United Nations Human Settlements Programme 2003; DfID 2008)

More than 150 multilateral agencies, 40 bilateral agencies and a growing number of global funds and partnerships make up the network of international aid and development architecture (DfID 2008). Figure 12 shows the wide ranging bodies and associations involved in cooperation and aid programmes in the urban sector. Although some are directly involved in housing and slum improvement projects and programmes, others have a more indirect impact through interventions such as sustainable urban development, decentralization, governance, capacity building, poverty alleviation and supporting innovative partnerships (United Nations Human Settlements Programme 2003).

According to *The Challenge of Slums*, different international actors have different priorities;

Bilateral cooperation

Policies often reflect differing priorities according to the political objectives of each donor country and their view of the role of the public sector;

- Cooperation emphasizing accelerated economic liberalization, commodification of land and housing markets and integration of the informal sector within the sphere of the formal market
- Cooperation emphasizing social integration objectives
- Cooperation that combines the two objectives

Multilaterals

The United Nations and World Bank approaches have changed significantly over the last few decades. Approaches to slums are nowadays situated within wider, integrated urban development and anti-poverty programmes.

‘The new urban strategy is directed at correcting sources of market failure in the urban economy, *as well as* government failure, paying particular attention to poverty and inequality issues (World Bank 2003). This reflects the limits or failure of conventional aid and cooperation policies to deal with the growth of urban poverty (particularly in peri-urban areas), acknowledges the impact of urban poverty on social and political stability, and highlights the emergence of new social forces in cities. The new approach argues that cities must be sustainable and functional in four respects: they must be *liveable* (in order to ensure quality of life for all residents, including the poorest), *competitive, well governed and managed*, and *bankable* (financially sustainable)’. (United Nations Human Settlements Programme 2003).

The Habitat Agenda, of UN-HABITAT came out of the Habitat II conference in Istanbul, June 1996. The Agenda focuses on shelter as a human right, it acknowledges the global dimension of

urbanisation and the need for global resources to housing. Implementing the Agenda depends on the willingness of partner states and institutions. The Agenda focuses on;

1. Adequate shelter for all
2. Sustainable human settlements
3. Enablement and participation
4. Financing shelter and human settlements
5. Integrating gender perspectives in human settlements-related legislation, policies, programmes and projects

(United Nations Human Settlements Programme 2003)

Other notable UN agendas include the Global Campaign for Secure Tenure, Global Campaign for Urban Governance, The United Nations Housing Rights Programme, Public-Private Partnerships for the Urban Environment.

The EU has only in recent years begun to take interest in the urban affairs of non-member states; previously rural development was emphasised (United Nations Human Settlements Programme 2003)

Inter-institutional programmes and initiatives

The Cities Alliance is a global coalition of cities and development partners who work together to scale up approaches to poverty reduction in direct dialogue with bilateral, multilateral agencies and financial institutions to promote the development of local governments with coherent international support and sustainable financing strategies. The Alliance helps to prepare and plan for the future growth of cities by promoting the positive impacts of urbanisation.

The Alliance is made up of the urban poor, local authorities, national governments, bi-lateral and multi-lateral agencies. Together they focus on urban poverty reduction through City Development Strategies (CDS), Citywide and nationwide slum upgrading, and Sustainable financing strategies (Cities Alliance 2005).

The Urban Management Programme (UMP) is a joint UN-Habitat, UNDP programme 'to strengthen the contribution that cities and towns in developing countries make towards economic growth, social development and the alleviation of poverty; to promotes innovative urban management practices, establish and strengthen municipal networks, and influence local and national urban policies and programmes' (UN-Habitat n.d.).

The Municipal Development Programme (MDP) aims to facilitate dialogue between states and local governments on issues of decentralization to contribute to the development of African local governments. 'The Program reflects the belief that since locally-elected officials are usually more in touch with the public than their central government counterparts, there is greater likelihood that the policies chosen will reflect the concerns of the communities and also be more accountable to them'(World Bank Group 1994). The MDP concentrates in particular on slum upgrading programmes for African cities. The MDP puts emphasis on the ability of local

governments to supply basic and sustainable urban services (United Nations Human Settlements Programme 2003).

Policy Responses to Slums

Policy approaches to slums in some cities are the same as they were over 100 years ago. For example, slum eviction and clearance in 19th century European cities is still practiced in some places today. Although it would be expected that policy approaches learn from the lessons of the past, the evolution of policy over the decades has not been a straightforward process. Clear changes in the accepted wisdom of how to best deal with slums have occurred and resulted in changes to policy approaches, but many 'old' approaches continue to be in practice today (United Nations Human Settlements Programme 2003).

Up to early 1970s - 'Negligence'

This approach predominated in most developing countries, based on two assumptions;

- Slums are illegal
- Slums are an unavoidable but temporary phenomenon (linked with rural-urban migration)

Slums were ignored, and hence the rights of slum-dwellers. Slums and informal urban settlements were often omitted from land use maps, instead being shown as areas of undeveloped land.

This was perhaps influenced by post World War II reconstruction policy models based on heavily-subsidised low cost housing (within a high and steady growing economy) bringing improved housing conditions, resulting in the elimination of urban slums. However, attempts to repeat this model in the developing world aimed to deliver low cost housing to the poor rather than through slum-upgrading or integration policies. Using public land reserves and public subsidies, governments' housing schemes (although aimed at low and middle classes) were actually 'allocated to the middle classes, government employees and political clients' thereby bypassing the poor and 'often resulting in increased social inequalities and spatial segregation in cities' (United Nations Human Settlements Programme 2003).

1960s - 1970s - 1980s - 'Eviction'

The eradication and relocation of slum residents to resettlement sites often outside of the city was one typical but failed attempt to control the growing numbers of the poor (World Bank 2000). Eviction was a common response to slums, 'particularly in political environments predominated by centralised decision-making, weak local governance and administration, non-democratic urban management, non-recognition of civil society movement and lack of legal protection against forced evictions' (Cohen 1983; Badcock 1984; Murphy 1990; United Nations Human Settlements Programme 2003). Negotiation with slum dwellers (considered illegal squatters) and offers of alternative solutions or compensation were rare. Evictions were often justified by the implementation of urban renewal projects. This resulted in the shifting of slums

to the periphery of cities which is not viable for the poor who need access to affordable transport and informal income opportunities which do not exist on city outskirts (World Bank 2000). 'Demand for land and housing from the urban poor during the 1970s and 1980s gave rise to the rapid development of informal markets and to the commodification [sic] of all informal housing delivery systems, including those in squatter settlements (United Nations Human Settlements Programme 2003).

Resettlement

Resettlement is commonly associated with many approaches to slums. Relocation is best undertaken with the cooperation of slum-dwellers, or worst takes the form of forced eviction to sites often with no access to infrastructure or transport on peripheral sites of the city. This results in little improvement in slum conditions contributing to a growing population of global slum-dwellers, 'except where large-scale slum upgrading and tenure regularization programmes are combined with the production of serviced sites and low-cost housing programmes' (United Nations Human Settlements Programme 2003). It can be seen that there has been an evolution of policy approaches to slums, now with recognition that the underlying causes of urban poverty must be addressed simultaneously to the specific problems of slums.

In-situ 'clearance and redevelopment'

This approach meant temporarily moving residents while the slum land was cleared and new housing developed on the site (World Bank 2000). Often well established slums have caused large cities to grow around them, making their previously 'un-wanted' land, now prime real estate. Many private developers find this land attractive but still need to deal with the slum-dwellers. The common 'solution' is to move the low income dwellers into high density high-rise buildings to free up land space for private developments. However, high-rise living is often not appropriate for the living styles of low income communities and such 'in-situ redevelopments' often fail. These high social costs are matched by the high economic costs. Clearance and redevelopment is at least 10-15 times the cost of improving slum infrastructure (World Bank 2000).

1970 – 1990 - Self-help and in situ upgrading

Upgrading a slum is the alternative to moving people or replacing their homes. 'Upgrading rejuvenates the existing community with minimum disruption and loss of physical and social assets' (World Bank 2000).

Focussing on:

- Provision of basic services
- Provision of secure tenure for slum dwellers and the implementation of innovative practices regarding access to land
- Innovative access to credit, adapted to the economic profile, needs and requirements of slum dwellers and communities

(United Nations Human Settlements Programme 2003)

'This approach stemmed from the late 1970s, recognising slums as a durable structural phenomenon that required appropriate responses' (Benton 1994; COHRE 1999; COHRE 2002; United Nations Human Settlements Programme 2003). 'This new approach was fostered by increased awareness of the right to housing and protection against forced eviction at international level and the definition of new national and local political agendas in the context of an emergent civil society as well as processes of democratization and decentralization' (United Nations Human Settlements Programme 2003).

Slum upgrading initiatives from 1970 to 1990 appeared to be cheaper than other alternatives but most of the projects existed in isolation from both the government and communities making them unsustainable. Governments did not follow through with services, communities did not maintain the facilities, and government structures disappeared once the international experts were gone' (United Nations Human Settlements Programme 2003).

1980s - 1996 - 'Enabling approach'

It became increasingly aware that there was a need to involve slum dwellers in the construction process as well as decision making and design process of slum upgrading (Hamdi 1984). From the mid 1980s to the Habitat Agenda of 1996, the 'enabling approach' was devised to coordinate community mobilisation and organisation, and to encourage support for local determination and action rather than the state provision of housing goods and services. 'Enabling policies are based on the principles of subsidiary and they recognize that, to be efficient, decisions concerning the investment of resources in domestic economic, social and physical development have to be taken at the lowest effective level' (United Nations Human Settlements Programme 2003), i.e. the community level. Often communities need support (such as training, organisational assistance, financial and managerial advice) from the local government or if not, civil society organisation and NGOs. 'The politics of devolution, decentralisation and deregulation that is associated with such approaches is complex. The mechanisms for implementing such politics undermine many of the principles and practices upon which local bureaucracies are built' (United Nations Human Settlements Programme 2003).

Current Best Practice

Various participants and organisations involved with slums have published their best practice recommendations from which there are a number of common themes to address; e.g. Community participation, cross-sectoral partnerships, supportive economy, governance, secure tenure, infrastructure provision, financing, monitoring etc.

'The accepted best practice for housing interventions in developing countries is now participatory slum improvement' (Hamdi N and Goethert R 1997; United Nations Human Settlements Programme 2003), although so far many have been demonstration projects or only on a limited scale (United Nations Human Settlements Programme 2003). An integrated and cross-sectoral approach to slums with efforts to promote partnerships and inter-institutional

networking, and an emphasis on decentralization have emerged as a common theme when dealing with slums (United Nations Human Settlements Programme 2003).

Slum upgrading

In-situ slum upgrading is perceived to be one of the most sustainable approaches for dealing with urban poverty today;

Slum Upgrading consists of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities. Actions typically include:

- installing or improving basic infrastructure, e.g., water reticulation, sanitation/waste collection, rehabilitation of circulation, storm drainage and flood prevention, electricity, security lighting, footpaths, streets and public telephones
- removal or mitigation of environmental hazards
- providing incentives for community management and maintenance
- constructing or rehabilitating community facilities such as nurseries, health posts, community open space
- regularizing security of tenure, security from eviction
- home improvement
- relocation/compensation for the small number of residents dislocated by the improvements
- improving access to health care and education as well as social support programs to address issues of security, violence, substance abuse, etc.
- enhancement of income-earning opportunities through training and micro-credit
- building social capital and the institutional framework to sustain improvements.

(Cities Alliance 1999; World Bank 2000)

A positive aspect of in-situ slum upgrading is the effect of the community participation in regeneration, 'upgrading when done well can strengthen the communities' voice and ability to transform its condition... It has been shown that for every dollar of infrastructure invested in upgrading, about seven dollars are invested by residents in home improvements and small

business expansion' (World Bank 2000), thus city citizens are created, as well as infrastructure. The transfer of tenure rights has also been shown to motivate home-owners to 'invest two to four times the amount of funds that the government invests in infrastructure improvements in a slum area' (World Bank 2000).

Cities Alliance is in the process of implementing its *Cities without Slums - Action Plan for moving Slum Upgrading to Scale*. The plan seeks to improve the lives of 100 million slum dwellers by 2020, but assumes contribution from the international development community. This target is now reflected in MDG 11.

Upgrading of un-serviced settlements is justified as the *centrepiece* of a global strategy for improving the living conditions of the urban poor because:

- Upgrading makes a highly visible, immediate, and large difference in the quality of life of the urban poor.
- Investment in local public goods through upgrading catalyzes private investment by residents, unleashing their vast productive energy and leveraging private capital.
- The international community has successful experience supporting upgrading.
- While it should be the linchpin of an urban poverty strategy, upgrading needs to be complemented by other measures to reduce urban poverty.
- Upgrading also needs to be complemented by policies to forestall the growth of future slums.
- Improved performance of the local government is needed in managing future urban population growth.

(Cities Alliance 1999)

The United Nations Human Settlements Programme (UN-Habitat) has published guidelines on slum upgrading;

Figure 13 – The dos and don'ts of slum upgrading

Do	Don't
Promote good urban governance systems.	Assume that slums will disappear automatically with economic growth.
Establish enabling institutional frameworks involving all partners.	Underestimate the role of local authorities, landowners, community leaders and residents.
Implement and monitor pro-poor city development strategies.	Separate upgrading from investment planning and urban management.
Encourage initiatives of slum dwellers and recognize the role of women.	Ignore the specific needs and contributions of women and vulnerable groups.
Ensure secure tenure, consolidate occupancy rights and regularize informal settlements.	Carry out unlawful forced evictions.
Involve tenants and owners in finding solutions that prioritize collective interests.	Discriminate against rental housing or promote a single tenure option.
Adopt an incremental approach to upgrading.	Impose unrealistic standards and regulations.
Associate municipal finance, cross-subsidies and beneficiary contributions to ensure financial viability.	Rely on governmental subsidies or on full-cost recovery from slum dwellers.
Design and negotiate relocation plans only when absolutely necessary.	Invest public resources in massive social housing schemes.
Combine slum upgrading with employment generation and local economic development.	Consider slum upgrading solely as a social issue.
Develop new urban areas by making land and trunk infrastructure available.	Provide unaffordable infrastructure and services.

(United Nations Human Settlements Programme 2003)

As has the Cities Alliance;

Figure 14 – Essential ingredients for slum upgrading

The Cities Alliance notes that slum upgrading consists of a whole range of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, private-sector actors and local authorities. It has identified the following essential ingredients for any successful national slum upgrading programme:

- 1 *Demonstrate political will:* both national and local governments must provide the vision, commitment and leadership required to sustain nationwide upgrading.
- 2 *Set national and city targets:* set clear targets and ensure public-sector accountability by engaging stakeholders in planning and monitoring results.
- 3 *Put it in the budget:* support slum upgrading as part of core business, nationally and locally.
- 4 *Implement policy reforms:* ensure necessary reforms dealing with land, finance and institutional frameworks.
- 5 *Ensure open and transparent land markets:* reform closed and opaque land markets that encourage corruption, patronage and exploitation of the urban poor, as well as constrain capital markets.
- 6 *Mobilize non-public-sector resources:* engage slum dwellers themselves, who have both the ability and the interest in promoting upgrading, and the private sector, which should be engaged as a risk-sharing partner rather than a mere contractor to the public sector.
- 7 *Prevent the growth of new slums:* facilitate access to land and services by planning realistically for future growth.

(Cities Alliance 2003; United Nations Human Settlements Programme 2007)

The UN Millennium Project Task Force on Improving the Lives of Slum Dwellers 2005 report '*A Home in the City*' suggested a number of practice-based operational recommendations for ameliorating slum conditions;

1. Recognise that the urban poor are active agents and not passive beneficiaries of development
2. Improve governance
 - Recognize the 'right to the city'
 - Plan for development
 - Adopt local strategies
3. Support and enact local pro-poor policies
 - Enact legislation against forced evictions and provide security of tenure
 - Provide adequate and affordable infrastructure and services
 - Enable community contracts and partnerships
 - Build and maintain public transport systems and services
 - Ensure that water, sanitation, and health services reach poor urban dwellers
 - Enact building codes and regulations
 - Plan for adequate alternatives to the formation of new slums
 - Involve the private sector
 - Create jobs citywide
4. Mobilize resources and investments
 - Financial resources
 - Land resources
 - Human resources
5. Empower local action
 - Develop and strengthen networks
 - Support local poverty reduction strategies
 - Create 'Millennium Cities' (Networks of local authorities in partnership with UN system and civil society)
6. Monitor target 11 (MDG)

(Garau, Sclar et al. 2005)

Engineering Development

International Engineering

There are various actors who are involved in slum upgrading partnerships, often these are outsiders or foreign professionals. For physical slum upgrading, the foreign engineer may have a significant role to play in poverty alleviation and development. Engineering¹ could address the huge lack of infrastructure² and basic services that exacerbate global poverty and hold back sustainable development. Globally, many nations lack the basic requirements to survive and develop; safe drinking water, basic sanitation, shelter and infrastructure, aggravated by an increasing population putting even more strain on the earth's resources. Engineering has the potential to deliver solutions to these problems.

A major historical engineering contribution to development was Joseph Bazalgette's design and implementation of an efficient sewerage system in 19th century London. 'Bazalgette's defining issue [*sic*] was dealing with the problem of urban sewage and its disposal into local water courses and the resultant occurrence of water related diseases such as cholera and their impact on public health' (Jowitt 2006). Bazalgette's sewer solution resulted in not only an improved appearance of London's streets but most significantly a huge increase in standards of health (BBC n.d.), the sewer network is said to have added an average of twenty years to life expectancy (Engineers Without Frontiers 2004).

Figure 15 – Bazalgette's sewers



(Cannadine 2008)

¹ Engineering means the application of scientific and technical knowledge to solve specific questions.

² Infrastructure is used within this report to describe the facilities, structures, associated equipment, services, and institutional arrangements that facilitate the flow of goods and services between individuals, firms and governments (Juma 2006).

Engineering could provide the vital infrastructure needed for societies to develop. International contribution to development engineering poses a number of challenges due to cultural, perceptual, technical, economical, social, environmental, political etc. reasons. The typical 'western' culture may assume that development is positive and risks imposing this view on other cultures (see the development discourse literature review on accompanying CD). For example, many international contributions to development (although with good intentions) may not actually be satisfying a need, may be a one-off demonstration project, may not be affordable, reproducible, maintainable or culturally sensitive, and could result in doing more harm than good to the recipient community.

'The organizational imperatives of the [development] industry have generally worked against our ability to act on what we do understand about real development, rendering us not only ineffective but often harmful as well' (Dichter 2003).

Today, the international community acknowledges that engineers do in fact have a key role to play in the delivery of the MDGs, and engineering professionals are learning from the lessons of the past and beginning to understand how their role should adapt to deliver sustainable solutions for the future.

The role of infrastructure and associated engineering fields are now accepted as vital for the implementation of sustainable development strategies and reaching of the goals, as is the need for the delivery of engineering within an *appropriate integrated strategy*;

'The field's contribution can reduce poverty by contributing to sustainable development (for example, by creating job opportunities and raising agricultural productivity); and alleviate hunger by providing the physical infrastructure needed to advance agriculture. These technological measures themselves, however, do not solve the challenges of poverty and hunger; they must be to be part of an integrated strategy aimed at improving overall human welfare' (Juma 2006).

'The role of engineers in delivering infrastructure schemes needs to change significantly' (Singleton 2003). Paul Jowitt stressed this point when discussing the role of the engineer in the delivery of the MDGs in the 6th *Brunel International Lecture* delivered at the Institute of Civil Engineers in 2006.

'In the past, engineers have driven highways and railroads across continents, dammed mighty rivers, tunnelled under the sea and put men on the moon. As engineers we are a key profession in the implementation of society's desires and needs. Yet, our profession needs to change in response to new social and environmental challenges – where we claimed to "direct the powers of nature for the use and convenience of mankind" we now need to focus on "working with the powers of nature for the use and benefit of society" ' (Jowitt 2006).

The capability of a nation to initiate and sustain economic growth depends on its ability to provide clean water, good health care, adequate infrastructure, and safe food, which

undoubtedly rely on engineering capability. Domestic competence needs to be built at the local level. Engineering capabilities such as information and communication technologies (ICT), healthcare dependant on infrastructure, improved technological knowledge and innovation, are vital for sustainable development.

‘When the preconditions of basic infrastructure (roads, power and ports) and human capital (health and education) are in place, markets are powerful engines of development. Without those pre-conditions, markets cruelly by-pass large parts of the world, leaving them impoverished and suffering without respite’ (Sachs 2005).

The importance of investment in infrastructure and associated human capital development was emphasised by Calestous Juma in the *2006 Hinton Lecture*. He highlighted that more attention needs to be paid to investing in people and promoting technological innovation rather than simply short term palliatives that relief activities often deliver. He highlights that a new focus on competence building is replacing a traditional focus on emergency relief activities. ‘This shift will involve building capabilities in key areas related to production, project execution, and technical innovation... Much of the work to build local competence entails training in engineering and related management fields’ (Juma 2006).

Obviously, engineering has a positive role to play in alleviating the global problems of poverty and delivering sustainable development, but the inter-linking conditions that impact such issues must be carefully considered. The Institute of Civil Engineer’s commission Engineers Without Frontiers states;

‘If engineering is truly to deliver the best possible outcomes to society, engineers must understand their role in this wider field, and shape their work and their contribution accordingly.

This is the new challenge that faces engineering, both at home and in the global arena. Engineers must remain experts in their field but must also understand the interaction between their work and the environment, culture and society, and the economy. It is no longer an apolitical activity – indeed if it ever was. Engineering constructions are not monuments, but just parts of complex, changing systems – both human and environmental’ (Engineers Without Frontiers 2004).

The Fourth Brunel International Lecture, 2003 presented by David Singleton stresses that the wider issues of sustainability must be addressed when developing strategies to alleviate poverty. Singleton states that engineering solutions are integral to mitigating poverty, but these must be balanced with attention to social, economic and political influences in order to deliver *appropriate engineering*.

The conditions necessary for sustainable engineering projects;

- The local community must be empowered by the decision-making process
- The local community must be involved in the ongoing operation and maintenance
- National and regional governments must also be involved in the project
- Project selection must favour those projects that lead to economic growth
- Strength of the market economy is a prerequisite to economic growth
- Close involvement of the local community will improve the chances of project success, it needs to be 'owned'.

Life-cycle engineering – takes into account the operational and maintenance cost of the engineering solutions proposed.

Empowered engineering – takes into account the capabilities of the local communities.

Appropriate engineering – will consider various options that meet the engineering needs of the project. For example, these may adopt techniques of labour-based construction, (differing from labour intensive construction) which facilitates knowledge transfer, creates jobs, encourages private enterprise, creates ownership and may reduce costs.

(Singleton 2003)

Prerequisites for development

In order for a state to develop and for international development assistance to succeed, there are a number of prerequisites needed. These include; reasonable governance structures, a functioning civil society, freedom from persecution, conflict, and corruption.

'The main responsibility for the achievement of the MDGs lies with governments. In particular, there is a need for good governance, rule of law, human rights, ongoing efforts to tackle conflict and corruption, and implementation of international norms and standards. There is a need for more generous and effective assistance from donor governments, debt relief and fairer access to global markets for exports from developing countries. It is within such a framework of government leadership that the private sector can most effectively play a constructive role'

(Prescott and Nelson 2003). However, there can also be challenges when involving the private sector in development projects.

Challenges of private sector involvement

- Must conform to humanitarian law and basic principles of humanitarian aid - Red Cross Code of Conduct
- Retain level of impartiality
- Commercial interests overtake principles of humanitarian aid
- Profiting from others' misfortune
- Private sector gain partnering with public sector money – will be scrutinised, all must be accounted for, transparency
- Flow of private sector aid may be unpredictable
- Recipients may become dependent and form expectations. Raises the question of when to pull out
- Permits governments to diminish responsibility
- May struggle to build upon community relations that NGO sector has
- Must consider coordination, long-term partnerships
- Danger of replacing the humanitarian community – should learn from and contribute to it

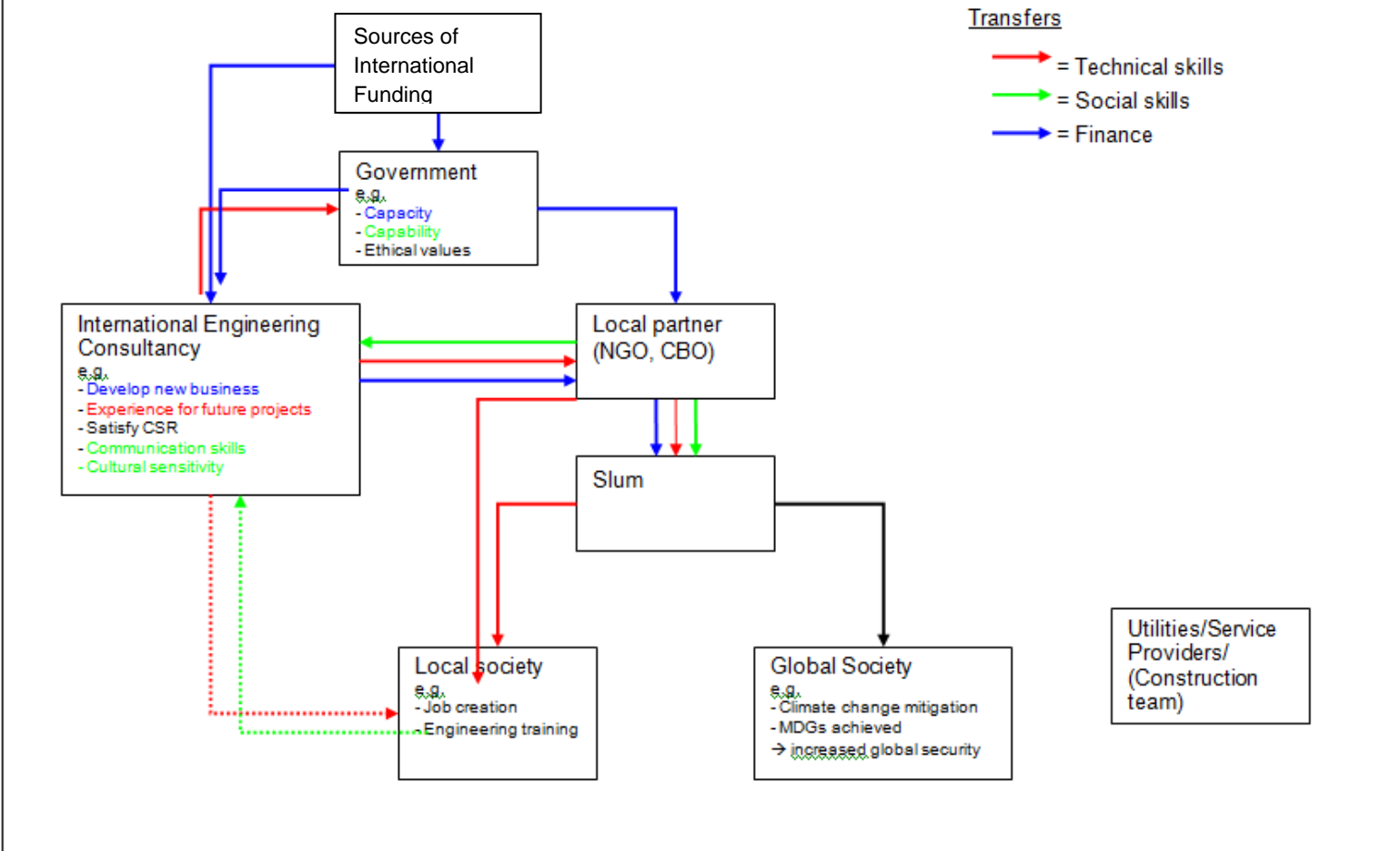
Adapted from (Tickell 2007)

Such partnerships will be required to overcome organisational cultural differences. For example bilateral donors (e.g. DfID, USAID) do not have the flexibility that companies have of choosing their recipient countries. Donor agencies and other public service organisations prefer predictable arrangements, avoid risk and are involved in work that is not always necessary to measure or quantify. Whereas private sector business is about generating profits, taking risks and engaging in work for which successes are easy to measure. If the interface between these differing organisations can be managed effectively, a significant advantage could be possible by merging different skills and expertise.

The great potential of partnerships lies in the different assets that each sector could bring. The challenge of cross-sectoral partnerships, including cultural differences, could be overcome through a shared commitment to success, clearly defined goals and ownerships, and

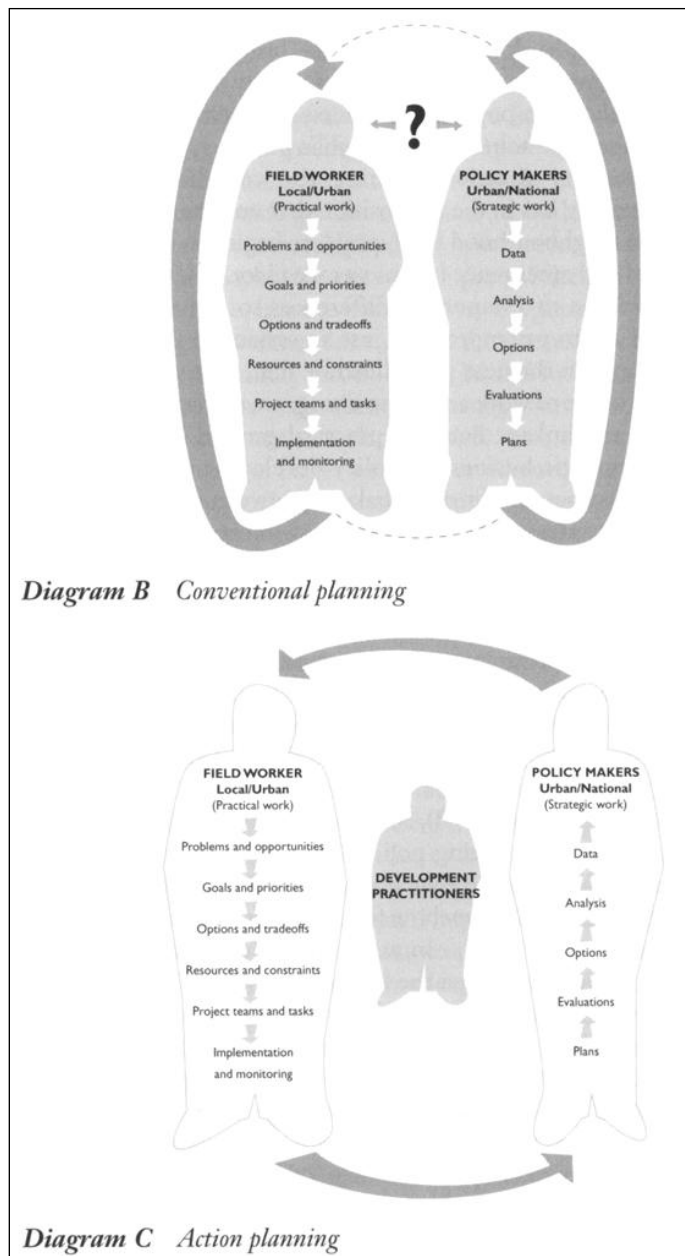
accountability from both partners. The challenge for effective partnerships for development lies in harmonizing the approaches of public and private giving e.g. ensuring that the diverse flows of financing (traditional development assistance and the new forms of giving are aligned for greater development impact) and ensuring the actions of private donors are made consistent with long-term country development strategies (UN ECOSOC 2008). Figure 16 shows possible transfers and relationships between stakeholders involved with (and partnering for) slum upgrading projects.

Figure 16 – Stakeholder relationships



Nabeel Hamdi illustrates in his book *Small Change* that ‘we need to reverse the order of work and, in so doing, create more synergy and strengthen the linkage between practical ground-level work and the more strategic business of policy development and structure planning...we must increasingly move our territory of operation outside of these [NGOs, CBOs, Local authorities, Governments, Private entrepreneurs] individual realms and place our practice firmly in between’ (Hamdi 2004). Hamdi shows the differences between the ‘top-down’ and ‘bottom-up’ conventions and the alternative ‘action planning’ which ‘offers a different process and, at the same time, consolidates the role of the outsider as a catalyst, mediator, facilitator or enabler’;

Figure 17 – Planning processes



(Hamdi 2004)

A review of the literature available on slum upgrading reveals a body of knowledge on why slums come about, measures to deal with slums and policy responses to slums. Impact assessments have been conducted and evaluating accounts of slum upgrading measures are common, but there has been limited investigation of the longer term effects of slum upgrading intervention and sustainability assessment. The key insight drawn from the literature review is that there are various partnership approaches to physical slum upgrading which bring together the expertise of different actors, practitioners and communities; but there is a gap in knowledge which combines the perceptions of all the stakeholders involved in these partnerships. This has identified the need for research into the longer term sustainability of upgrading and accounts from all stakeholders in order to gain a better understanding of how slum upgrading can become more socially, economically, environmentally, politically and technically effective long term, and for the widest range of stakeholders working together.

Chapter 2 - Theoretical Framework & Case Studies

There are numerous housing delivery systems, slum upgrading and slum prevention approaches to tackle the urbanisation of poverty in developing countries. Many adaptive and proactive measures have been implemented through a variety of slum upgrading initiatives and partnerships; however there has been limited investigation of the longer term sustainability of such interventions.

Multi-sectoral and partnership approaches often involve external actors who plan and implement a project, successfully engaging with the community and facilitating participation. However, after project completion, these actors may leave the scene, community groups may break up and poor people's priorities may change with time. Many slum upgrading projects are standalone, pilot, innovative practice projects which are not always scalable or sustainable. Such projects may incur high delivery costs and the technologies, processes and institutional structures involved need ongoing resources which limit their scalability and therefore sustainability.

Current good practice literature states that community participation is vital for long term project success and latest thinking highlights the need for integrated approaches which simultaneously generate livelihoods alongside physical improvements while reforming government capacity to repeat or scale up projects.

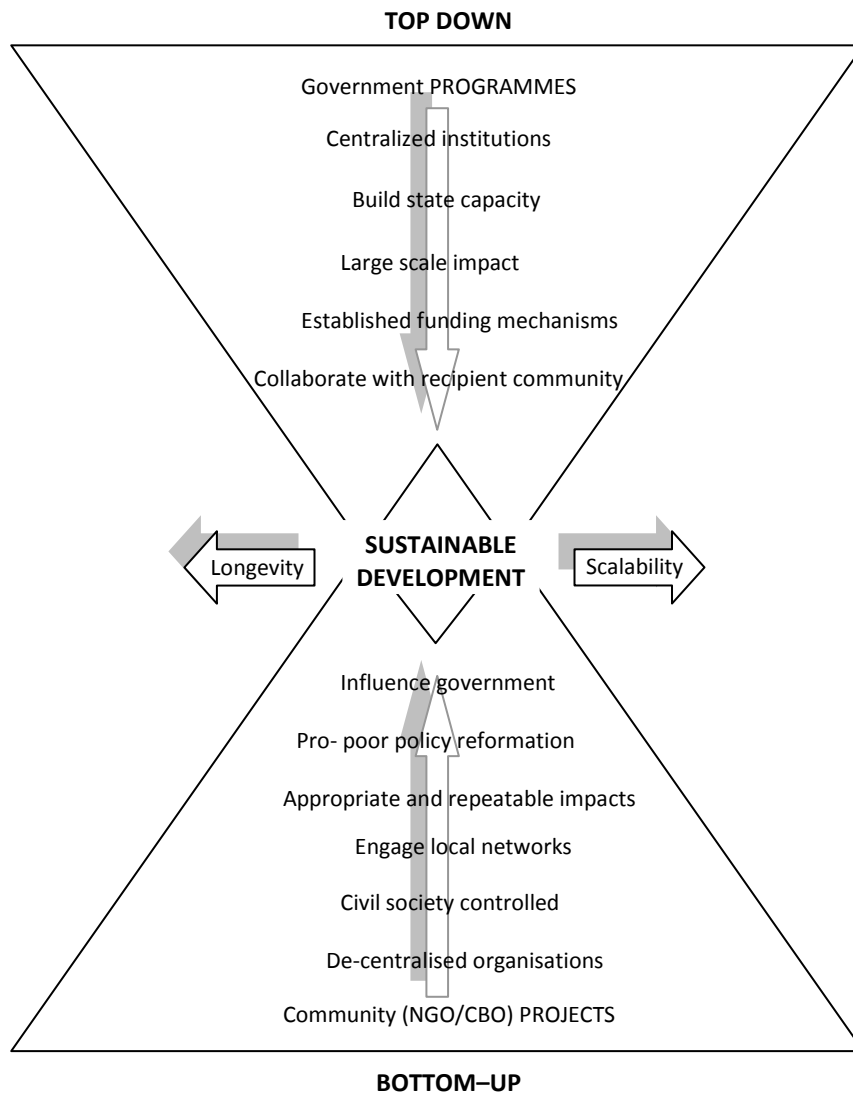
Approaches to urban slums

Many slum upgrading programmes are initiated and funded by external organizations, multi-lateral agencies, bi-lateral agencies, the private sector and NGOs which initiate collaboration with the recipient governments and civil society communities. Some good practice approaches to urban slums can be *generalised* as being 'top-down or centralised' and some as 'bottom-up or decentralised'. Each approach has had successes, each has an alternative delivery method and each can result in a sustainable development.

Some good practice slum upgrading takes the form of city wide programmes which engage with governments to ensure state control of the upgrading while seeking to reform centralised, institutional structures which enable the scalability of a programme to reach the maximum number of beneficiaries. These practices aspire to sustainability by building the capacity of the state to be pro-poor, to take ownership, to repeat and to extend the upgrading while being responsible for ongoing operation and maintenance.

Other good practice slum upgrading engages at the individual community level. External actors such as NGOs work with the community to support the formation of community based organizations (CBOs) to represent and strengthen the voice of the poor with an aim to influence governments to take notice of their constituency. Such de-centralised, bottom-up approaches may initially be more small scale but if successful can have a powerful influence upon government policy. Such community based approaches may be more participatory, have strong local networks, understand the real needs of the poor and so can also result in a sustainable upgrading project. This conceptual framework has been graphically represented in Figure 18.

Figure 18 – Conceptual Framework; Top-down and Bottom-up approaches to slum upgrading



Research Objective – Investigating Impacts and Sustainability

There are various approaches to physical slum upgrading, each with their own merits and aspirations for sustainability. This research proposes to investigate the long term impact, outcome and sustainability of different approaches to slum upgrading through stakeholder perception. The research will contribute to more integrated thinking and consistency in the understanding and priorities among stakeholders on what constitutes sustainability in slum upgrading.

It is hoped that the analysis will result in lessons which are a contribution to knowledge of the practices of slum upgrading, an understanding of the various stakeholders’ needs and objectives,

and suggestions for a more sustainable model of implementation, which ultimately results in the delivery of adequate housing and which leads towards attaining the MDGs.

Analytical Themes

Themes for analysis were identified according to the researcher's experience and understanding building on the literature review. The main criteria that were evolved from a consideration of the sustainability of the slum upgrading seemed to fall into four broad areas. Therefore the following four themes have been selected to structure the data collection around.

Life Today

The status quo and situation of life now will be investigated. The impact of a completed slum upgrading project will be assessed by capturing stakeholder's perceptions. By investigating the quality of life currently for the recipients of slum upgrading interventions, the impact of the upgrading will emerge. The status of physical and social conditions will be captured to tell the story of the resident's sense of well-being; along with resident's perceived priorities of things needed for a good life, how they have changed over time and may change in the future.

Perception of Success

An assessment of success of the upgrading project will be conducted to capture what the different stakeholders regard as success and how successful the upgrading has been. Multi-sectoral and partnership approaches to slum upgrading build upon the strengths of the individual sectors but differing cultural backgrounds may hinder collaborative working. For example, the systems and practices of governments will differ from that of NGOs and the private sector. Such differences in thinking and working will inevitably result in differing perceptions of the success of a project. The 'key performance indicators', project objectives and perception of success of different actors, including the recipient slum dweller may differ, therefore, evaluations of sustainability will also differ. These perceptions will also change with time.

Development Direction

Stakeholders' aspirations for development will be gathered; both short-term immediate needs and long term goals. Micro and macro level sustainable development priorities and aspirations will differ between project stakeholders. Slum-dweller, CBO, NGO, local, national and multi-national policy may vary. The alignment and correlation of stakeholders' sustainable development priorities (and slum-dwellers' needs) on a particular slum upgrading project will be assessed.

Institutional Reform

External factors affecting the upgrading will be considered. The long term impact upon institutional frameworks and planning policy will be assessed. For example increased awareness of the problems of slums and the development of pro-active measures for preventing the formation of new slums, institutional arrangements for maintenance, taxation, finance and land rights. The term institution also covers organisations and relationships between people, therefore analysis will also cover the formation of community based organizations initiated to ensure participation with the planning and implementation of an upgrading project may change after project completion and over time. The evolution of such CBOs, priorities and community systems will be assessed.

Case Studies

Four case studies have been selected to investigate the sustainability of their slum upgrading approach, delivery model and impact. Two in Pune, India demonstrating slum housing resettlement; and two in Kibera, Kenya demonstrating in-situ water and sanitation infrastructure upgrading. The cases have been selected to demonstrate alternative approaches to slum upgrading, projects and programmes of different ages, in different cultures, implemented via different delivery models. See Table 1 and Figure 19.

Table 1 – Case studies

	Settlement	Context	Approach	Delivery model	Partnership	Age since completion
Case Studies	1 Silanga	Kibera, Kenya	In-situ infrastructure	Bottom-up	International NGO, International donor and CBO	1 year
	2 Soweto East	Kibera, Kenya	In-situ infrastructure	Top-down	Multi-lateral organisation and State government	1 year
	3 Hadapsar	Pune, India	Housing resettlement	Bottom-up	Local NGO and CBO	5 years
	4 Nanapeth	Pune, India	Housing resettlement	Top-down	Public Private Partnership	5 years

Silanga, Kibera, Kenya

Water and sanitation infrastructure has been implemented within the existing settlement via a bottom-up delivery model. Toilets, showers and water kiosks have been constructed within 8 building blocks located around the settlement. The development of the blocks were coordinated by the local Nairobi office of the international NGO, Practical Action. The donor was the international Rotary Club with funds coming from Denver, USA and advice from club members in Nairobi. The project implementers partnered with local CBOs in Silanga. The project had been completed for a year at the time of fieldwork, August-October 2009.

Soweto East, Kibera, Kenya

Water and sanitation infrastructure has been implemented within the existing settlement via a top-down delivery model. Toilets, showers and water kiosks have been constructed within 8 building blocks located around the settlement. The development of the blocks were coordinated and funded by the multi-lateral organisation UN-Habitat (The United Nations Human Settlements Programme) with the Nairobi state government under the national Kenyan Slum Upgrading Programme (KENSUP). The project had been completed for a year at the time of fieldwork, August-October 2009.

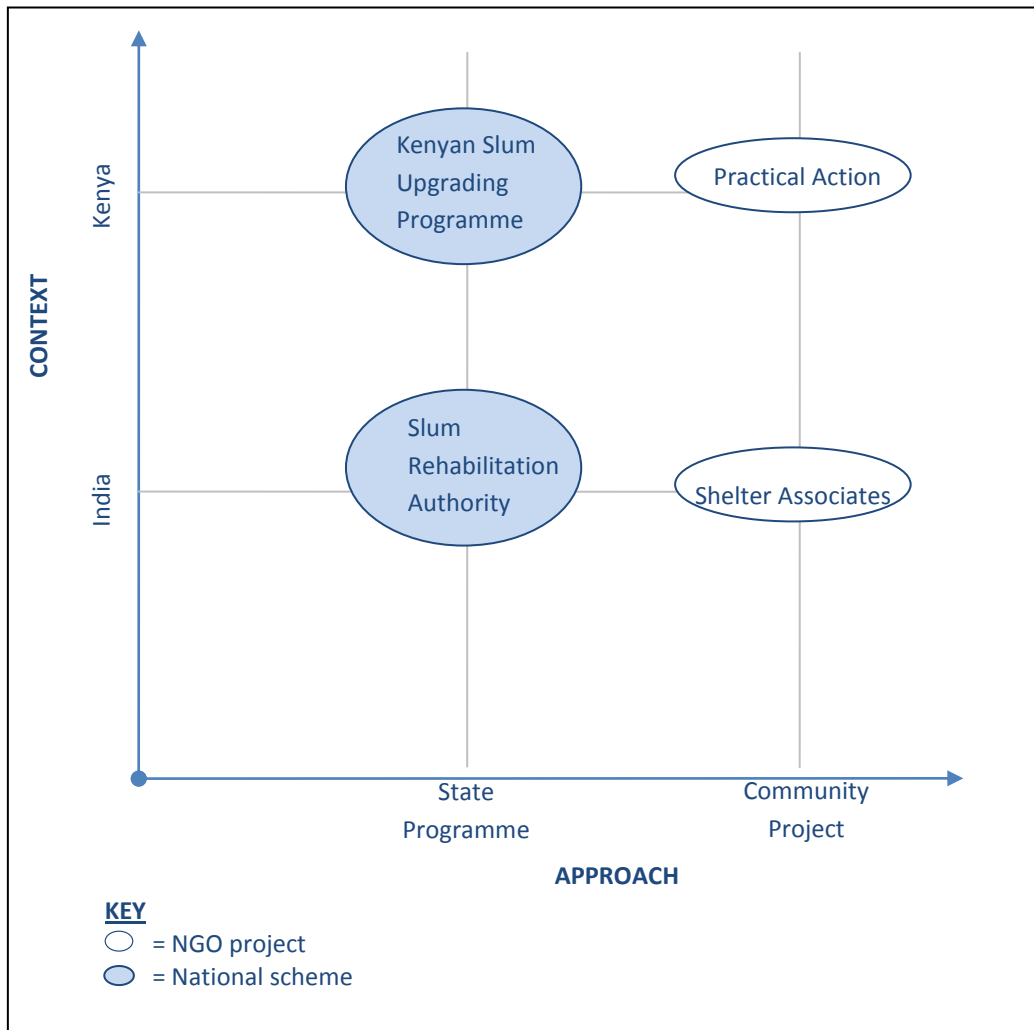
Hadapsar, Pune, India

Flood affected residents of Kamgar Putala slum have been resettled to a new location away from the river at Hadapsar. The construction of the new housing and resettlement project was coordinated by the local NGO, Shelter Associates with collaboration from the community. The project was funded by the residents themselves and a government grant. The project had been completed for five years at the time of fieldwork in April 2010.

Nanapeth, Pune, India

Illegal squatters residing on privately owned land were rehabilitated in a high rise building in-situ at Nanapeth. The project was implemented by the private property developers iParmar Group under the government's Slum Rehabilitation Authority (SRA) scheme. The project was funded by the developers who will recoup their costs via Transferable Development Rights. The project had been complete for five years at the time of fieldwork in April 2010.

Figure 19 – Case studies

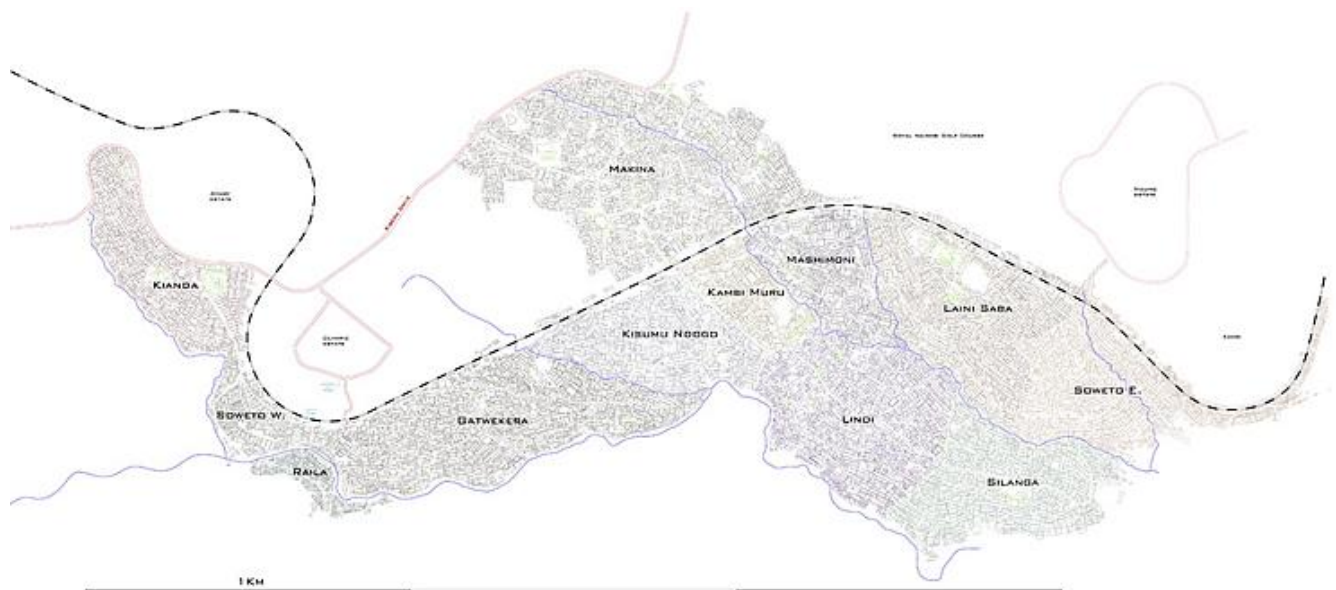


Kenya Case Studies

Kibera

Kibera in Nairobi is the largest informal settlement in Kenya, and the second largest in Africa. Kibera covers an area of 256 hectares and is home to approximately 800,000 people (Kaiganaine 2009), a quarter of Nairobi's population but covering less than 1% of Nairobi's total area. The overcrowded urban area has an estimated population density of 3000 people per hectare, roughly thirty times that of Manhattan (People of Kibera 2010). The people of Kibera are mostly tenants and the majority are young migrant workers who have been attracted to the city in search of work. Despite this, there is widespread unemployment, 80% among the youth (People of Kibera 2010). Housing shelters are of low quality temporary construction materials. Households commonly share a room of 3x3m. Water and sanitation infrastructure is extremely poor with open sewers and contaminated water pipes being the norm. There is no formal system for waste management. There is virtually no engineered road, pavement and transport infrastructure. Electricity connection to houses is rare, and what power connections do exist are often tapped into illegal connections. Volatile food prices due to drought, floods, famine and political unrest caused Kibera to be declared in a state of prolonged food crisis in June 2009 (ReliefWeb 2010). Kibera's land is officially government owned and the residents are squatters. Insecure tenure means tenants and structure owners (like land lords but not land-owning) are in a vulnerable situation. Tribal tensions and poor policing contribute to insecurity and sometimes tense community cohesion. There are high rates of drug and alcohol abuse. Child abuse is also not uncommon. Standards of health are low due to the high incidence of water borne and vectorial diseases, malaria and HIV/AIDS to name a few. It is estimated that there are more than 50,000 AIDS orphans living in Kibera. Access to health care, clean water and sanitation infrastructure, education, security and other public services is dire in Kibera.

Figure 20 – Map of Kibera showing villages and railway line



(Kibera.org.uk 2011)

Figure 21 – Overcrowding in Kibera



Despite the lack of basic needs and services, Kibera is often regarded as a beacon of hope for youngsters of rural places to earn a living, enabling them to send remittances back home to their villages. Kibera offers affordable accommodation in a location well-connected to the city centre. With that there is the opportunity of better access to education and more lucrative employment than back home in the village. There is a good sense of community and thriving informal economy, but the majority of residents are living in poverty with 60% of the population earning less than \$1 a day (People of Kibera 2010). However, there are also some relatively wealthy residents due to successful business and revenue from property rental. Although a significant proportion of Kibera's residents are content with what Kibera has to offer, they would of course welcome improved living conditions providing they remain affordable.

Water and Sanitation in Kibera

In Kibera, people live in small rooms which do not have separate kitchens and bathrooms. There is barely any infrastructure in place for sewers, water connections and waste management. Clean water is not easily accessible or affordable to the residents of Kibera. The settlement is located on a site under which water mains cross to deliver water to surrounding suburbs and estates. Illegal tapped in connections to these main water lines provide the main source of water to the settlement. However, these connections are often of poor construction, easily damaged and contaminated (Figure 22). This means that although there is access to water in Kibera, there is limited access to clean water. The water utility companies do not connect to Kibera's houses, so there is a thriving industry of individual private water vendors (Figure 23) who sell their water at prices which are many times higher than the cost of water in the more affluent suburbs of the city. Locked taps and 'water kiosks' are a common sight in Kibera.

Figure 22 – Burst and contaminated water pipe lines



Figure 23 – Kibera Water Vendor



As well as there being no water utility providers in Kibera, there is no formal sewer network either. Household toilets are exceptionally rare. The options available to residents are pay-per-use communal toilet and ablution facilities, pit latrine toilets or 'flying toilets'. Individual pit latrine

toilets are commonly owned by structure owners and unlocked for a fee. They are of very poor construction and expel waste into an adjacent open sewer which runs through the settlement (Figure 24). A 'flying toilet' is a method whereby one defecates into paper or a plastic bag which is then sealed and thrown away. As there is no waste management system in the settlement, disposing of the 'flying toilet' normally means throwing it through the air as far away from your residence as possible. Walking through Kibera one often sees these 'bags' sitting on roof tops, in piles of rubbish and the open sewers which are prevalent in the settlement. This (and overcrowding) has contributed to significant environmental degradation and the open trenches with stagnant polluted water have led to a high incidence of disease.

Figure 24 – Common pit latrine



Community toilet blocks are also available within Kibera. Some constructed by private land lords, some by NGOs and other organisations funded by charitable donations. Many are pit latrines, a handful are connected to sewers. The NGO blocks are often of a similar format and provide segregated toilet cubicles for men and women, shower facilities, water kiosks and sometimes space for laundry and waste recycling activities. These blocks are often managed by community based organizations (CBOs) and provide a source of income for those individuals working at the block (collecting fees, maintenance etc.) These blocks are highly valuable and prized within the communities where they are located, however, after dark many women and children prefer the security of their own home and resort to the 'flying toilet'. Many blocks are also closed by evening time as there are reports of muggings and rapes at insecure and poorly lit public facilities.

In recent years the Kenyan government Ministry of Environment has raised tax on the cost of the bags commonly used for 'flying toilets' in an attempt to crack down on the environmental degradation caused by the widespread disposal of the bags. A standard 'flying toilet' bag costs Ksh5

while the cost of using the public 'choo' latrine toilets is on average Ksh3. Despite this cost saving, it was found that many residents are forced to resort to the 'flying toilet' option for a variety of reasons including engrained cultural toilet practices, lack of security (lighting and 24hour management) and the poor ratio of toilets to people. However, many residents report a sense of shame in using the 'flying toilet' in preference to use the public toilet facilities. Due to the continued visibility of 'flying toilets' the public toilet facilities are failing when it comes to encouraging their widespread use in the settlement.

Open sewers and drains often get blocked with rubbish and so in some of the villages of Kibera there are highly motivated and organised youth groups who work for the community to collect rubbish and clear blockages (Figure 25). There is no easily visible government provision of basic services in Kibera but there is a feeling among the population that it is the government's responsibility to provide such facilities to its people. A lack of confidence in the government due to lack of transparency and wide spread corruption in municipal systems has caused many slum dwellers to resort to making do with their situation, some lacking the motivation and empowerment to object, others fearing the consequences of unaffordable fees if services are improved. There is however a growing empowered youth movement across Kibera who are now campaigning for their rights.

Figure 25 – Manual clearing of blocked open sewer



India Case Studies

Pune

The city of Pune in the state of Maharashtra, India is the eighth largest city in India and the second largest in Maharashtra after Mumbai. Pune is well known today for its educational institutions and is nicknamed the 'Oxford of the East'. It also has a growing number of information technology, software, business process outsourcing and automotive companies.

According to the 2001 census, Pune city's population is 3,157,000 (VirtualPune 2010). Over recent years the population has rapidly increased due to an influx of skilled labour migrating to the city owing to the significant investments in the software and automobile sectors. Real estate prices have soared. 'Pune has the highest per capita income in India, with the least disparity between the rich and poor' (PunePages 2010).

The city lies at the confluence of the Mula and Mutha rivers. Pune is located on the Deccan Plateau, about 100kms east of the Konkan coast and approximately 160kms from Mumbai which can be easily accessed by the Mumbai-Pune highway and by rail and air.

Approximately half the population of Pune inhabit around 500 informal settlements which vary in size from fewer than fifty to several thousand dwellings and are spread across the city (Hobson 2000). In Pune, as in many other Indian cities, informal settlements are particularly vulnerable due to their location, insecurity of tenure, poor housing construction and lack of basic infrastructure. The river side settlements are affected by annual flooding. Communities situated along railway tracks, pavements, *nallahs* and hill slopes are similarly vulnerable. Water and sanitation facilities are very basic and settlements are very overcrowded.

Various relocation, resettlement and in-situ redevelopment programmes have been carried out across in Pune in order to tackle the situation of urban slums. These housing projects and programmes have been delivered through a variety of mechanisms and partnerships under the city's slum policy by various actors including NGOs, private developers and government.

Figure 26 – Pune slum housing



History of slum policy in Pune

Policy for slum rehabilitation in Pune has to date mostly followed that of Mumbai, the largest city in Maharashtra. The progression of some policies in Mumbai can give us some insight into the development of slum policy in Pune today:

1950s - Eviction

Section 354A was introduced to the Bombay Municipal Authority Act in 1954 that allowed the clearance of slums. A Slum Clearance Plan was approved by the central government in 1956. Bombay was one of six pilot cities covered under the scheme which led to the forceful eviction of squatters in the city (Asha Seattle 2006).

1970s - Eviction to resettlement

The 1975 Maharashtra Vacant Lands Act (Prohibition of Unauthorised Structures and Summary Eviction), considered all land encroached by squatters to be vacant and permitted the removal of all slums covered by the act. Police were allowed to be mobilised for eviction and alternative accommodation had to be provided. The squatters were also required to pay compensation for unauthorised occupation of land. 'However the realisation dawned slowly that demolition and resettlement is not the answer. Resettlement in most cases proceeded erratically and was dependent on the whims and fancies of local municipal officials. The affected poor were completely excluded from any decision making'. In the 1970s the Slum Improvement Program sought to improve basic amenities like drinking water, drainage, roads, toilets etc. (Asha Seattle 2006). In 1972 slum improvements began under the Central Scheme of Environmental Improvement of Urban Slums. In 1974 the Maharashtra Slum Improvement Board was established by the state government to coordinate this work. In 1977 the Maharashtra Housing and Area Development Authority (MHADA) was set up to improve slums on government and private land.

1980s - Demolishment and human rights

The 1980s saw more demolitions in Mumbai – but during this decade the Supreme Court ruled that the eviction of petitioners (slum dwellers) would lead to the deprivation of their livelihood and consequently their life, therefore in violation of Article 21. The Slum Upgrading Programme (SUP) funded by the World Bank in 1985 had a dual approach of regularisation of squatter settlements and the supply of serviced land. The SUP covered only 22,000 households and was terminated in 1994 (Asha Seattle 2006).

1990s - Redevelopment schemes

The Slum Redevelopment Scheme of 1991 provided some new incentives for developers and builders to redevelop slums. Such incentives included the ability to transfer development rights to other areas of the city in order to cross-subsidise the slum dwellers' new tenements. 'However this was a big non-starter due to the existing scepticism of the slum-dwellers for builders and developers, given their history of forcible evictions in the past. Equally the builders themselves did not see this as a good enough business opportunity nor did they anticipate a good return on their investment' (Asha Seattle 2006). The Mumbai Slum Rehabilitation Scheme and its regulating body, the Slum Rehabilitation Authority (SRA) instated in 1995 was devised as an election promise to provide free tenements to four million slum dwellers, however only 19,000 were actually completed (Asha Seattle 2006; Shelter Associates 2007). The SRA model to create incentives for private developers to take on slum rehabilitation by granting Transferable Development Rights (TDR) originates from the Moghe and Awale Committee of the 1980s which allowed private developers to sell additional built-up space. In 1991 The Congress Party's Slum Redevelopment Scheme motivated developers to rehabilitate slum dwellers by allowing a maximum Floor Area Ratio (FAR) of 2.5 (Risbud 2003; Shelter Associates 2007) into 180 square feet (approximately 15m²) tenements; any space on the plot left over was free for the developers to sell in the open market to make a profit of up to 25% profit (Risbud 2003; Justice Josbet Suresh et al 2005; Shelter Associates 2007).

In 1995, Shiv Sena's (political party) Slum Rehabilitation Schemes increased the permitted carpet area of the new tenements to 225 square feet (approximately 20m²) which were given free of cost to the residents. Under the scheme slum dweller eligibility included only the dwellers named on the electoral role before 1995. Under the 1995 scheme, builders were given a 7.5 square feet free sale component for every 10 square feet of rehabilitated space. A commercial component of 5% was added. Within a maximum 2.5 FSI for each slum pocket: 'surplus of floor area, if any, could be transferred to another area under TDR' (Risbud 2003).

In 1998 a new agency, The Shivshahi Punarvasan Prakalp Ltd (SPPL) was established with the support of a loan from MHADA. The SPPL was constituted to provide resettlement opportunities for the poor but resulted in regulations being routinely violated and special favours granted. In 2001 the scheme was exposed by the S.S. Tinaikar Committee as 'a fraud designed to enrich Mumbai's powerful construction lobby by robbing both public assets and the urban poor' (Shelter Associates 2007).

2000s – National Slum Policies involving communities

In 2001 The Draft National Slum Policy was formulated by the government and developed a slum resettlement plan for 60,000 people. 'This initiated a newer level of understanding of the issue of urban slums; that slums are an integral part of urban areas and contribute significantly to their economy both through their labour market contributions and informal production activities. Over the years the policy in India has redefined slums to include all under serviced areas. It does not advocate slum clearance schemes except under strict resettlement and rehabilitation guidelines which are defined in respect of slums located on untenable sites (Asha Seattle 2006).

The Mumbai Urban Transport Project (MUTP) required the resettlement of approximately 60,000 people living close to train tracks, facilitated with popular participation and partnerships with NGOs and the National Slum Dwellers Federation (NSDF) were involved with the policy formulation. This project demonstrates the importance of partnerships between stakeholders, donors, state and local bodies, CBOs and NGOs (Risbud 2003).

In August 2001 the Prime Minister announced a major programme called Valmiki Ambedkar Malin Basti Awas Yojna (VAMBAY) for the provision of affordable housing and infrastructure. This programme receives 50% subsidies and 50% loan components with a grant of US\$200 million from the central government.

In December 2005 the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) programme was established with an emphasis on strengthening infrastructure and housing for the urban poor. Pune city was a recipient of funding under the JNNURM (BSUP) and identified 40,000 slums in need of relocation. This accounts for roughly 20% of the total slum households in the city. Pune city has been the largest beneficiary of NURM funding under the BSUP programme to relocate affected families. The plans already authorised in Pune total over Rs.640 crore (JNNURM 2007; Shelter Associates 2007).

'Public policy has seen a shift from the role of controller and provider of housing to facilitator of housing. Various policy decisions have influenced housing supply in the city, which has had a bearing on the growth of slums in the city' (Risbud 2003). Various slum improvement programmes overseen by MHADA include:

- Lok Awas Yojana
- Valmiki Ambedkar Awas Yojana
- Jawaharlal Nehru National Urban renewal mission
- Integrated Housing and slum development programme
- National Slum Development Programme
- Khandesh Vikas Package Programme

(MHADA 2010)

There are various governmental slum upgrading policies which apply to urban development in Pune. As well as the government and public/private/partnership schemes for slum rehabilitation and development, there are also a small number of active NGOs in the city who work alongside empowered communities to organise slum redevelopment with the use of government grants which fall under the MHADA programmes outlined above. These NGO led projects work very closely with communities and implement individual housing improvement projects.

SRA & Slum rehabilitation incentives in Pune

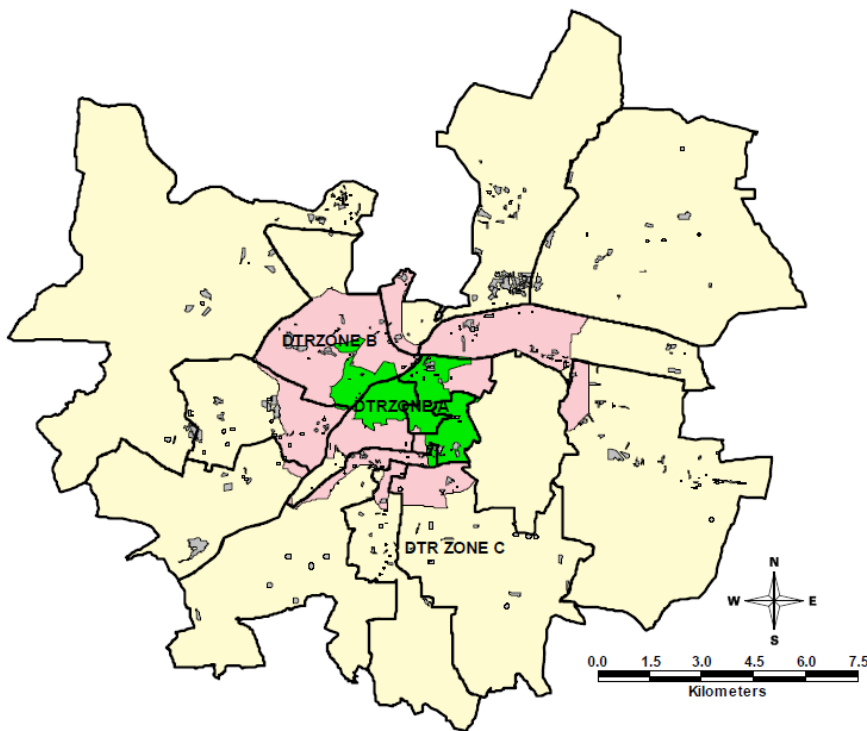
In 1995 The Slum Rehabilitation Authority (SRA) was created. For Pune this is a joint agency for the cities of Pune and Pimpri-Chinchwad. The autonomous organisation is under the housing department of the Government of Maharashtra, and is based on the same format as the Mumbai SRA. The Pune Municipal Corporation (PMC) adopted similar procedures to the Mumbai SRA when it appended its Development Control Regulations, Appendix T, in 1994. The current SRA's model creates incentives for private developers to take on slum rehabilitation by granting Transferable Development Rights (TDR). The idea of TDR dates back to the Moghe and Awale Committee of the 1980s which attracted private developers by allowing them to sell additional built-up space for profit.

The SRA brought about a new policy which recognises the rights of any slum and pavement dweller resident in the city since 1st January 1995 to 'avail of an alternate permanent accommodation' (Homeless International 2010). The aim of the SRA in Pune is to rehabilitate the slum-dwellers who can prove they have been residing in Pune and Pimpri-Chinchwad since 1995. Under the scheme the SRA provides 100% free housing to eligible families in the form of a tenement with a floor space of 269 square feet (approximately 25m²) (Kolte 2010). The policy incentivises private developers to rehabilitate slum-dwellers in new buildings in-situ, with the exception of slums located on non-buildable or dangerous zones of the city such as hill tops, slopes, in the vicinity of rivers and *nallahs*.

The new housing is provided by a development organisation (e.g. A slum landowner, a co-operative society of slum dwellers, an NGO or any real estate developer) willing to develop the new property and registered with the SRA, providing they have agreement with 75% of the eligible in-situ squatters and that the new housing is given free of cost to the squatters.

The developers are required to pay for the entire cost of the new housing development with no subsidy from the government. The developers are incentivised to develop the housing by receiving 'development rights'. The amount of development rights generated by a project is dependent on the building design and the location of the plot in the city according to zone (Homeless International 2010). For the purpose of slum redevelopment, the city has been classified in three zones, A, B and C, see Figure 27.

Figure 27 – Map showing the development zones and slum pockets in Pune city



(Shelter Associates 2007)

Under the SRA policy, developers are incentivised to rehabilitate slum dwellers by the allocation of Development Rights (DR) for the cross-subsidisation of their construction works. Any unused DR can be transferred in the form of Transferable Development Rights (TDR). Developers may use development rights in excess of those needed (to build the free housing units) – known as the Free Sale Component - to construct additional housing and/or commercial units for sale if space allows, and/or to sell the rights as Transferable Development Rights on the open market' (Homeless International 2010). The TDR is issued in the form of a certificate and can be regarded as a form of currency. The sale price of TDR varies from zone to zone but on average can be assumed to be Rs.2000 per sq.ft. or Rs.20,000 per sq.m (Kolte 2010). This makes the rehabilitation works highly profitable for private developers.

TDR is calculated in relation to the Floor Space Index (FSI), also known as Floor Area Ratio (FAR).

FSI is the ratio of the combined gross floor area of the building, to, the net area of the plot.

$$\text{FSI} = \frac{\text{Total building floor area}}{\text{Net plot area}}$$

FSI is used as a planning tool for regulating densities. In Pune, the maximum FSI allowed on slum sites is 2.5; this means a slum site can be developed up to 2.5 times the actual net plot area by developing multi-storey buildings. The SRA guidelines allow an FSI of 2.75 for the development of a slum with a density of 450-550 tenements per hectare. An FSI of 3 is allowed for the development of a slum with a density of over 550.

As the maximum permissible FSI in-situ is 2.5, under the SRA scheme, the remaining FSI is referred to as the Free Sale Component. This free sale component constitutes the compensation a developer

receives for re-housing slum-dwellers, and can be converted to TDR to then be sold in the open market for profit. The area allowed to be sold in the open market is proportional to the area of tenements constructed for slum rehabilitation. For every 10m² of rehab component, the free sale component is 20m² in Zone A, 25m² in Zone B and 30m² in Zone C (SRA 2010).

The TDR can then be used to develop non-slum sites in the city. TDR is akin to virtual land. The value of TDR fluctuates like a stock market. The sale of TDR certificates is currently extremely lucrative for private developers in Pune. The SRA concept treats the underlying land of slums as a valuable resource. Incentive FSI for constructing tenements for sale in the open market enables property developers to generate significant profits from the sale of these tenements for cross-subsidising the free houses for the slum-dwellers. The entire process is authorised and overseen by the SRA.

The developers holding TDR certificates can choose to use the rights to development on their own construction projects or choose to sell on the rights to another developer. The SRA has noted that it is most common for TDR to be sold on (Kolte 2010). For example the rights may be sold to someone wanting to develop property on the outskirts of the city but lacking the permission to construct there. That individual will be keen to purchase FSI (in the form of TDR) in order to complete their construction. This does not mean buying and selling land, but obtaining the permission to construct.

At the time of research 15 SRA schemes are currently under construction in Pune.

SRA Regulations

All construction plans and layouts for rehabilitation schemes are closely scrutinised by the SRA and must meet strict regulations. The current regulations were passed by the Department of Urban Development, Government of Maharashtra on 11th December 2008.

SRA schemes fall into two categories according to whether the land is government or privately owned. If the slum area is located on land belonging to any urban local body then the developer is required to pay 25% of the market price as premium to the land owning authority. If it is private land the developer must either approach the land owners to obtain development rights or purchase the land from the owner.

The tenement, which is provided to the protected slum dweller measures about 25 sq. metres of carpet area, approximately 269 sq. ft. Following SRA guidelines it must have provision for a kitchen, one living room and one bedroom and WC. Any slum-dweller who has a commercial occupation in the existing slum is entitled to a commercial tenement or shop in the new rehabilitation building. For schemes, which are more than 10,000 sq. metres in area, it is mandatory for the developer to provide an anganwadi (play group for children), a balwadi (Kindergarten), community centre and a society office (Kolte 2010).

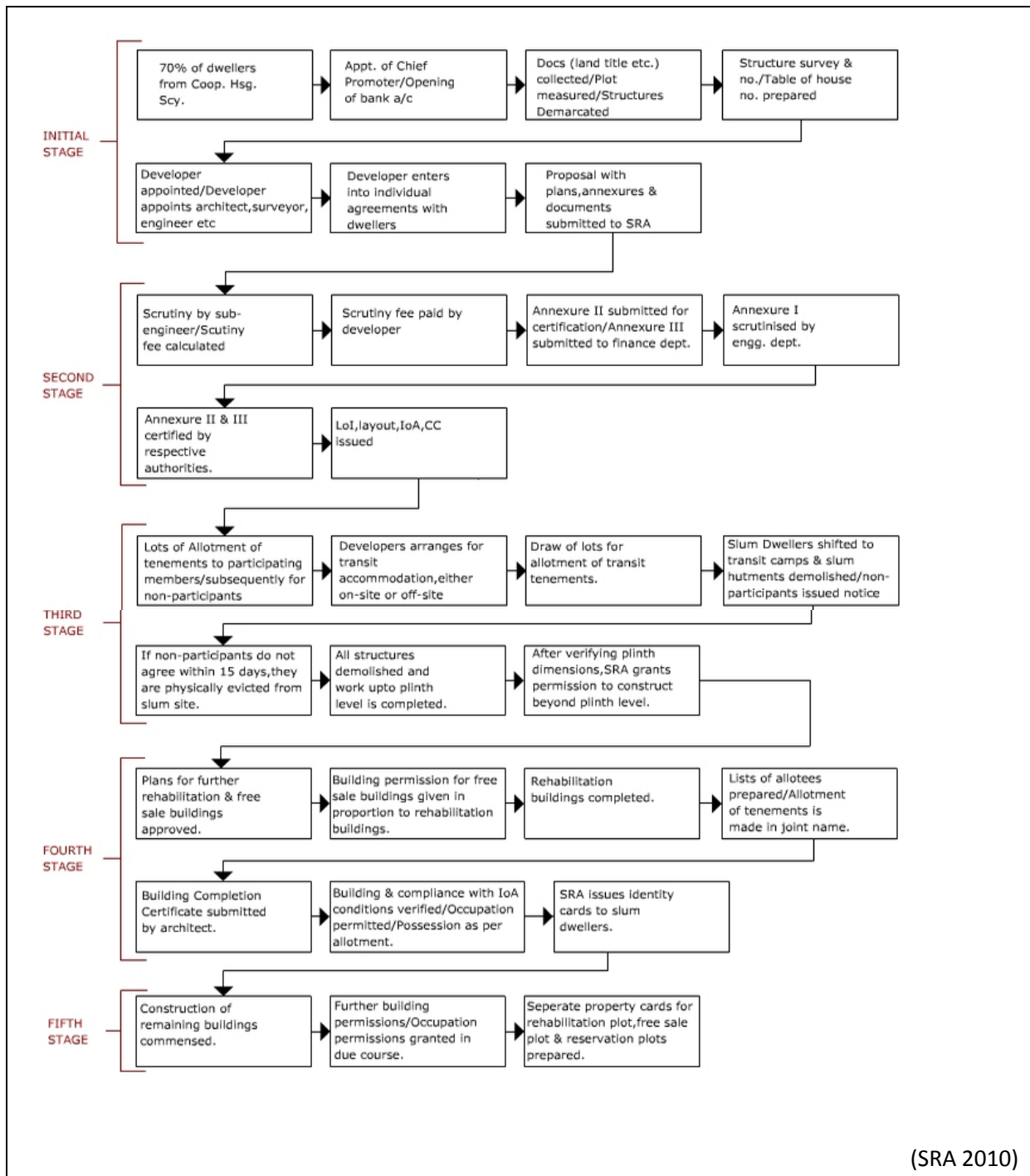
The SRA implements building control regulations. There is currently no restriction on the number of floors a building may have, although the maximum permissible building height in the city is 100 metres. A building having five or more floors has to have at least one lift. Provision of other facilities varies according to the number of tenements, for example if there are more than 40 flats, two lifts must be present.

The SRA also verifies the eligibility and consent of slum dwellers for the rehabilitation.

SRA Regulations

- 1.** Every slum structure existing prior to 01/01/1995 is treated as protected structure.
- 2.** Every slum dweller whose name appears in the electoral rolls as on 01/01/1995 and who continues to stay in the slum is eligible for rehabilitation.
- 3.** Every eligible residential slum structure is provided with an alternative tenement admeasuring 225.00 sq. ft. preferably at the same site, irrespective of the area of slum structure.
- 4.** Every eligible slum structure that is being used for commercial purposes is granted an alternative tenement having area equal to the structure subject to an upper limit of 225.00 sq. ft.
- 5.** A minimum of 70% of eligible slum dwellers in a slum pocket come together to form a co-operative housing society for implementation of Slum Rehabilitation Scheme. (SRS)
- 6.** The underlying land is used as a resource for the SRS.
- 7.** The slum dwellers appoint a developer for execution of SRS.
- 8.** The developer puts in resources in the form of money, men and material for construction of free houses for the slum dwellers.
- 9.** The developer is compensated for his efforts in the form of free sale component.
- 10.** The developers are allowed to construct tenements for sale in the open market. The area allowed for sale in the open market is equal to the area of tenements constructed for Rehabilitation of slum dwellers.
- 11.** Floor Space Index (known as FAR elsewhere) up to 2.5 is allowed for SRS.
- 12.** The developer is required to construct the rehabilitation tenements on the plot itself. The balance FSI left is allowed for construction of free sale tenements.
- 13.** The spill over entitlement to the developer is permissible for sale in the form of transferable development right in the open market. These transferable rights can be utilised on other non slum pockets subject to the provisions of D. C. Regulations.
- 14.** The plots which are reserved for public purposes and which are over run by slums can also be taken up for implementation of a Slum Rehabilitation Scheme.
- 15.** In case of plots reserved for unbuildable reservations, 33% of the reservation area is left free for the intended reservation.
- 16.** In case of plots reserved for buildable reservations, a certain predetermined proportion of the permissible built up area is to be constructed as per the requirement of user agency and handed over free of cost to the city administration as a part of SRS.
- 17.** Slum Rehabilitation Authority is designated as a local planning authority to provide all the requisite approvals for SRS under one roof. The authority is mandated to act as a facilitating agency for implementation of SRS.
- 18.** Along with the free rehabilitation tenements the developers also have to provide space for amenities like a crèche (Balwadi), society office, welfare centre.
- 19.** Facilitating measure in the form of additional 5% incentive commercial area is available to the projects

Figure 28 – Flowchart of stages for SRA schemes



It is hoped that the two case studies selected in Pune and two in Kibera will offer interesting examples of a range of upgrading measures, ages and contexts. They have been chosen as the researcher will be able to access all stakeholders who have shown their willingness to share results and their experiences. The research will be limited to the two contexts; African and Indian case studies, in four very particular communities and by the accessibility of the stakeholders.

Chapter 3 - Methodology

The research will follow a multiple case study approach following an inductive path. The research will use an interpretive qualitative epistemology. Data will be collected through participant observation, rapid ethnography, semi-structured interviews and focus group discussions. Content analysis will be conducted from which generalisations will be made.

Case studies have been selected according to completed (for more than a year) examples (of different ages, approaches and contexts) of what are deemed to be current best practice slum upgrading projects and which demonstrate alternative approaches covering in-situ infrastructure upgrading and housing rehabilitation. The selections demonstrate a spread of slum upgrading approaches that are very well established to relatively newly implemented, centralised and de-centralised projects and programmes in differing contexts.

The case studies of slum upgrading design and implementation will be evaluated according to sustainability criteria across four main analytical themes; Life Today, Perception of Success, Development Direction, Institutional Reform. To ensure both depth and breadth to the study more than one case will be studied. Via the themes, each case study will assess;

- Evolution of the slum - how the slum developed and came about, how it changes after intervention, how adapted
- Upgrading design - A comprehensive assessment of the sustainability of the design
- Upgrading delivery - A comprehensive assessment of the sustainability of the delivery/implementation
- Projected future - How it is anticipated the settlement is likely to evolve i.e. sustainability evaluation

The alternative models of design and delivery will be assessed according to sustainability criteria.

Research Design

Sustainable development research is pluralist; there is no right way that it should be conducted. There are a number of possible approaches for designing research of this nature.

Research can either follow an inductive or deductive path.

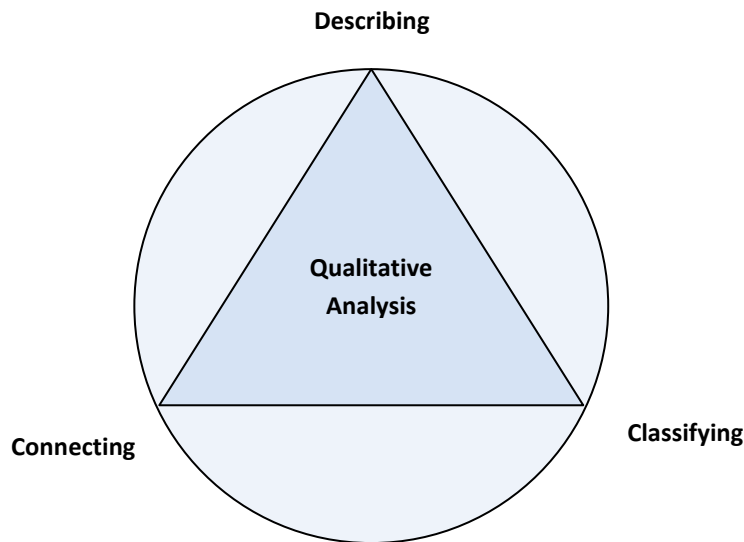
- Induction : movement from specific instance to general inferences
- Deduction : movement from general inferences to specific instances

(Runde 2008)

This research has sought to not set out with any pre-conceived notions. This research will explore the issues surrounding engineering contribution to slum upgrading projects and their related impact on sustainable development. Therefore, this research will use the induction method, to induce general inferences from the specific instances of international development. The theory will be generated from the data collected.

This research will be qualitative (sometimes known as constructivist). Qualitative research aims to provide an account that is intelligible, coherent and valid through an iterative process of describing, classifying and connecting the data gathered.

Figure 29 – The process of qualitative data analysis



(Dey 1993)

Epistemology

Qualitative research can have either positivist or interpretive epistemologies. Positivism holds that facts and values are distinct, and that scientific knowledge consists almost exclusively of (observable) facts (Runde, 2008). Epistemology is the study of the nature of knowledge and justification, their defining features, their substantive conditions and their limits (Runde, 2008).

Positivist research tends to have a law like generalisation (for example Yin's case study method and Van Maan's approach), whereas interpretive is often a more descriptive interpretation (for example Bogdan and Taylor's approach).

'Qualitative methodology refers in the broadest sense to research that produces descriptive data – people's own written or spoken words and observable behaviour' (Bogdan and Taylor 1998).

'An array of interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally-occurring phenomena in the social world' (Van Maanen 1979).

Positivist qualitative research tends to follow a more 'scientific' technique and is often seen as a precursor to more quantitative theory-testing. Qualitative case studies often rely on multiple sources of data, aiming to converge in a form of 'triangulation' and often start with the prior

development of theoretical propositions to guide the data collection and analysis. Some think that case studies that emulate the scientific method are 'likely to be of higher quality than those that do not' (Eisenhardt 1991; Yin 2003; Jones 2008).

As this study is not going to be setting out with any prior theoretical propositions, the investigation will be a piece of *interpretive qualitative* research. Interpretive qualitative research can vary from being '*weak interpretive*' – that seeks scientific rigour, reliability and replicability to '*strong interpretive*' – which is more of a social construction and conceptual generalisation (Johnson and Duberley 2000).

According to Bogdan and Taylor, qualitative research is concerned with the meanings that people attach to things in their lives; considers settings and people holistically; all perspectives are worthy of study; does not seek 'truth' but rather understanding, and that every subject viewed in a setting is considered equal. It is accepted that just as different people may interpret one thing differently, so too may something be interpreted differently at different times (Bogdan and Taylor 1998; Jones 2008).

Validity

It is important in qualitative research that the researcher remains objective, reflexive, and that data is gathered (i.e. data not affected by the collection process) rather than constructed (i.e. data created and shaped by the way they are collected) which could lead to data being a misrepresentation that should be treated with scepticism. Qualitative researchers must be aware of the distortions produced by their methods (their intervention in the lives of people under study). 'The researcher is necessarily involved in the lives of the subjects. There is, however, a real sense in which the researcher remains detached from his or her subjects and their perspectives' (Bogdan and Taylor 1998; Jones 2008).

Some critics of interpretive research may say that personal attitudes and the needs of the research process may be shaped by the researcher's beliefs.

'What we call data are really our own construction of other people's constructions of what they and their compatriots are up to' (Geertz 1973).

Others may suggest that all research is a form of intervention, therefore the researcher must use controlling methods to minimise the effects of the intervention. For example, take measures to avoid bias, use anonymisation, ask the same question in different ways, actively take part (over time, barriers may be dropped). All qualitative researchers should be reflexive, be aware of their own position and perspective, their effect on social actors, be aware of the construction of their account (extent to which bringing in own their interpretation), which may be explicit or implicit in accounts of research (Jones 2008).

Research on the topic of sustainable development means that contexts will not always be static or sufficiently similar and variables will be impossible to control. The interpretive approach accepts this and acknowledges that humans are knowledgeable, self-reflexive agents. Therefore, the validity of the positivist model of research would not hold true. The validation of positivist qualitative research may include measurement validity (the instrument measures the phenomenon), internal validity

(where causal relationships are isolated), external validity (that relationships hold true in other settings), reliability and replicability. In research on sustainable development it is not possible to say that the same results would occur with different researchers in other settings, and so the positivist model would not be an appropriate research method.

Interpretive research methods seek validation in different ways to positivist research;

- *Interpretive* inquiry seeks credibility, transferability (not replicability), dependability, confirmability and authenticity.
- *Positive (conventional)* research seeks, truth value (internal validity), applicability (external validity), consistency (reliability) and neutrality (objectivity) (Guba and Lincoln 1989).

For this interpretive qualitative research it is expected that much of the data will be collected through the process of ethnography; this is the extensive observation of social practices 'in the field'. The validity of accounts from the field could be presented as 'truth' or 'stories' (Jones 2008);

'An account is held valid or true if it represents accurately those features of the phenomenon that it is intended to describe, explain or theorise'
(Hammersley M 1990).

'The ethnographer is not committed to 'any old story', but wants to provide an account that communicates with the reader the truth about the setting and situation, as the ethnographer has come to understand it' (Altheide and Johnson 1994).

For interpretive research, validity is assumed to be a 'reasonable interpretation'. Blumer points out that 'a reasonable interpretation is largely dependent upon the ability of the person who makes the generalisation' and based upon the background of the reader's own experience.

'In instances of plausible interpretations all that one can say is that [it] makes the materials more significant than they were and makes the theoretical interpretation more understandable and familiar than it was previously. Perhaps that is all one can expect or should expect in the interpretive analysis of human documentary material' (Blumer 1969).

The researcher conducting this study will seek to be as objective and neutral as possible. Although, her personal, cultural and experiential background, race and class are fixed, she will attempt to not allow these to bias her interpretation.

The researcher will consider the following evaluation criteria for qualitative research;

- Theoretical candour
- Fieldwork evidence
- The ethnographer's path
- Extent of theory production
- Novelty
- Consistency with empirical evidence
- Credibility of account to reader/subject

- Adequate for competent performance
- Transferability of findings
- Reflexivity of account

(Hammersley M 1990; Lofland 1995; Jones 2008)

To ensure good quality in qualitative research it is very important that the researcher ensures process validity and empirical grounding (if positivist or weak interpretive), for which the following should be carefully considered; how the sample was selected, what categories emerged, what data led to these categories, how did the categories influence the sampling, how was disconfirming evidence handled, how was the core category selected and on what grounds, are concepts generated and are they systematically related, is variation built into the theory, are broader conditions accounted for, has process been taken into account, etc. (Strauss and Corbin 1990). It is also beneficial to seek member validation, i.e. ensure that the researcher's account reflects member's understandings, for which members judge the accuracy of the final research report (Seale 1999).

Data collection

This research will be case study based. Multiple cases have been selected to test both replication (similar slum upgrading) and sampling (variation of implementing organisation). The cases have been selected according to; exemplification, criticality, topicality, feasibility and access.

Depending on the actual cases selected for study and the willingness of a slum upgrading organisation to contribute, the research will be more or less observational. If given the opportunity the researcher may conduct participation observation. This is a type of research which 'involves intense social interaction between the researcher and the subjects, in the milieu of the latter' (Jones 2008). During the interaction the researcher will aim to collect data unobtrusively and systematically by recording accurate and detailed field-notes. The researcher will avoid any participation that interferes with the ability to collect data and the researcher will begin with the premise that words and symbols used in their world may have different meanings in the world of their subjects (Jones 2008).

'Participant observation gives us more information about the event under study than data gathered from any other sociological method. Participant observation can provide us with a yardstick against which to measure the completeness of data gathered in other ways, a model which can serve to let us know what orders of information escape us when we use other methods' (Becker and Geer 1957).

Participation observation has a number of advantages including getting rich data, understanding local meanings and personally experiencing the research context. But the negative consequences could include the effects of intervention, problems with access, confidentiality, performing a dual role, having a personal involvement and being required to report the observer's role (Jones 2008).

Semi-structured interviews

Semi-structured interviews have been the primary source of data collection. The semi-structured interview will have a list of topics to be covered but no specific questions. This is a compromise

between unstructured (with no set agenda) and structured (with pre-coded responses). The advantages of interviews for data collection is that they are relatively low-cost, can reach larger sample sizes and can be easy access. Limitations may be evident through misrepresentation and the understanding of local meanings. These may be significant for this particular research where interpretation and translation services were required and as the data is being collected in a different culture. Other limitations include the fact that an interview may be episodic and could actually collect data on a reconstruction of a past event. Surveys and questionnaire data collection methods have also been considered although it is expected that semi-structured interviews will be the most appropriate for this study.

The semi-structured interviews have been structured around the four main themes of Life today, Perception of success, Institutional reform and development direction. Loose questions were devised for each topic to use as conversation starters and prompts for the interviews. In order to ensure respondents were not shy or reluctant to divulge information to the foreign researcher, half of the interviews were conducted by a local research assistant alone. In other interviews, the researcher was present but in some cases, particularly in India, a research assistant was required as a translator. In Kenya, some of the interviews were conducted in English, some in Kiswahili and some in Sheng. In India, all of the interviews were conducted in either Marathi or Hindi. All stakeholder interviews (other than residents) were conducted by the researcher in English. Perceptions from a representative of all accessible stakeholders were sought to be captured. In this report, settlement based stakeholders are commonly referred to as residents, project implementing respondents are referred to as stakeholders.

Fieldwork was first conducted in Kenya when the format of the questions were tested. A few prompting questions and adaptations to the interview technique were changed, but the interview format stayed consistent. An example interview sheet for a resident and a stakeholder can be seen in the Appendix. In Kenya, the research assistant also compiled a data sheet on user statistics for each of the watsan blocks and marked on map the location of each interviewee's home, past and current watsan facility. These were not necessary for the India case studies. Interviews were taken at different times of the day and random locations within the settlements to ensure information was captured from a representative sample of the community covering both working and home-based men and women. People under the age of 18 were not interviewed.

All interviews were audio recorded using a digital dictaphone. The recordings were then used to transcribe the interviews precisely. For the Indian interviews transcription and translation services were outsourced to a Marathi and Hindi speaking professional transcription agency. For the Kenyan interviews, the transcription and translation was outsourced to post-graduate students undertaking internships with the United Nations. The format and rigour of the transcription was monitored by the researcher and strict guidelines were given to all transcribers. The original transcripts and audio recordings can be seen in the data disk accompanying this thesis.

Group discussion

To supplement the rich qualitative data collected from informal semi-structured interviews with the residents, data has also been collected from residents via group discussions and exercises following Participatory Rural Appraisal (PRA) / Rapid Rural Appraisal methods (RRA).

PRA and RRA appraisal describes a family of approaches and methods to enable local people to share, enhance and analyse their knowledge of life and conditions, to plan and to act (Chambers 1994). Methods include mapping and modelling, transect walks, matrix scoring, seasonal calendars, trend and change analysis, well-being and wealth ranking and grouping, and analytical diagramming.

For this investigation group discussions and exercises have been developed to capture the perceptions of the resident recipients of the slum upgrading interventions. The activities have been designed to rely on informal, oral communication methods, to put the respondents at ease, make the best use of visualisation techniques and diagrams in order to encourage maximum participation from all residents including the illiterate. The group discussions aim to draw further information from residents that might not be shared during a one-on-one interview.

The researcher sought to conduct the group discussions among relatively homogenous groups of people (e.g. a group of poor women, a group of Buddhists, a group of business owners), in most cases these were made up of individuals from already established CBOs, and with groups of no more than twelve people to aid conversation and encourage all individuals to participate. During the group meetings, the researcher was assisted by a local research assistant for help with translation and recording the data as well as to build rapport with the community. At the start of each discussion a record of attendance was taken along with some basic socio-economic data. Information was recorded by drawing on large flip-chart paper with the use of Post-it notes of different sizes and colours, and marker pens. Some parts of the conversations were audio and visually recorded and later transcribed or used in the making of short films. A clear distinction was maintained between the issues and terminology used by the people and that introduced by the facilitators. When selecting community groups to conduct the discussion with the researcher tried to gain access to different community groups, i.e. men, women, youth, disabled, separately to obtain separate gender disaggregated data. The facilitators sought to use simple language and prompting, probing and pausing techniques to encourage full responses during discussion and to cross-check and clarify responses. The following techniques were used to gather the resident's perceptions of the slum upgrading project they have been involved in;

- Group discussions
- Visual tools for analysis
- Cause – Impact diagrams
- Institution – Perception mapping
- Listing
- Scoring
- Ranking
- Trend analysis
- Representation

Individual exercises have been developed to gather information around the four key themes of research analysis;

Themes for discussion

- Perception of Success (Exploring well-being)
- Development Direction (Needs and Goals)

- Life Today (Priorities of the poor)
- Institutional Reform (Institutional analysis)

The group discussions resulted in various diagrams as well as recorded audio and video footage. Inspiration was taken from the methodology designed for Consultations with the Poor for the World Bank's World Development Report 2000/2001 (World Bank 1999).

Children and Youth

As the next generation, the researcher was keen to gather the perceptions of the children and youth residents of the case study communities. In Kenya, the researcher visited three schools and after a brief discussion on well-being and water and sanitation, the children have expressed their perceptions of how water and sanitation infrastructure affect their lives, and the things they need for a good quality of life via the medium of drawing. The Kenyan children ranged from the age of 8-17 (being taught within one class). The older children also wrote essays explaining their lives in Kibera, their hopes for the future and their opinions of how these hopes could be achieved in reality. The essays covered various topics e.g. water, sanitation, housing, roads, governance, drug abuse, corruption. Three teenagers in Kenya wrote a song about their life in Kibera and hopes for physical change in the future. A video of them performing this song is on the thesis' accompanying CD. In India, children residing in the rehabilitated housing and those left behind in the original slum drew pictures of their current house and their dream house. The children's drawings and essays are very revealing and a sample are included within this thesis.

The researcher also collected some of the Kenyan children's handmade toys from recycled waste materials which show their ingenuity and imagination. These toys, drawings and essays have been exhibited at the 'Small is... Festival' 2011, a collaboration between Practical Action and Engineers Without Borders UK at The Schumacher Centre for Technology and Development, near Rugby, UK. They are also planned to be exhibited by Architecture Sans Frontières – UK.

In India, the researcher gave some children from each of the two case studies and those remaining in the slum, a camera. They were asked to take photos of a typical day of their lives. The images depict a variety of activities and show family, meal-time, washing, pets, walking to school, playing, birthday celebrations, homework, sleeping, cleaning etc. and reveal life through the eyes of the children.

Videos and Papers

The researcher has published two papers based on the outcomes of this research; Proceedings of the Institution of Civil Engineers Urban Design and Planning Journal, and Environmental Hazards Special Shelter Edition, Earthscan, see accompanying CD, and presented her findings at various UK conferences and at The 16th International Sustainable Development Research Conference, The Kadoorie Institute, The University of Hong Kong. However, the researcher is aware that this thesis may not be read by many people who may be interested to learn more about the status of life for slum-dwellers and the approaches available to tackle urban slums. Therefore in order to create an alternative method of communication, videos have been made based on each case study featuring footage of the slum upgrading interventions and interviews with residents and other stakeholders. These short videos have been shared on the internet and screened at conferences to which they

have received a good reception. The videos are included on the thesis' accompanying CD and can also be viewed online;

The Voice of Kibera: <http://www.youtube.com/watch?v=MRI7nh6KjDQ>

Developer led slum upgrading - Nana Peth, Pune: <http://vimeo.com/14138318>

Community led slum upgrading - Hadapsar, Pune: <http://vimeo.com/14136786>

Analysis

Content analysis has been conducted to process the qualitative data captured. This is a research methodology that uses a set of procedures to make valid inferences from the data. Data can be collected as interview audio, text, and photographs etc from primary documents (eyewitness accounts), secondary documents (compiled from primary sources), personal documents (written for personal reasons e.g. diaries, personal notes), non-personal documents (minutes of meetings, company reports) and mass-media (newspapers, journals, books, websites etc). Content analysis can use triangulation to check and reinforce the data from other sources, can be longitudinal, low cost and reach large samples, but it can suffer if incomplete, sampling bias occurs and is dependent on coding (Jones 2008).

According to Dey, there are various elements of qualitative description;

- Context
 - Meanings are context dependent
 - Meaning are always negotiable between different observers
- Intentions
 - In social sciences we can ask subjects what they mean
 - Subjects' intentions are not always a reliable guide to interpretation
- Process
 - Process involves analysing changes over time
 - Change can be analysed through phases, key incidents to the complex interplay of factors
 - Material as well as social factors affect change

(Dey 1993; Jones 2008)

In order to perform content analysis, all interviews have been transcribed from audio recordings. The researcher attended a Cambridge Computing Service course to learn to use Atlas Ti software to organise and code the data in a systematic and rigorous manner. However, after investigating this technique, due to the number of interviews conducted for this researcher it was deemed that straight-forward spreadsheet software would be better suited to the task of coding the data collected.

Coding is used to sort the data into categories from which to generate meaning. All themes, typologies, concepts and propositions that emerge have been categorised. This classification of the data can establish logical connections between the categories. Patterns, clustering and themes are used to note relations between variables. As the coding process is undertaken the analysis has been gradually refined. There are differently types of theoretical coding;

- Open coding - aims to express phenomena in the form of concepts, may produce hundreds of codes, codes are grouped into categories and given a label (*in vivo*/constructed), may need to select passages and/or level of detail
- Axial coding – the process of relating subcategories to a category, selects most promising categories, relates to data and each other
- Selective coding – elaborates the core category around which the other developed categories can be grouped

(Glaser and Strauss 1968; Flick 2006; Jones 2008).

Thorough coding has been conducted by the researcher with the use of Microsoft Spreadsheet software. For each case study a separate spreadsheet file has been created with a tab for each of the four themes of analysis. All interviewees have been assigned a code. As the researcher systematically read through each transcript, a code was assigned to each topic of discussion and placed within the corresponding tabbed worksheet within the spreadsheet. As new topics of discussions were raised, new codes were assigned. Therefore all of the codes have emerged directly from the transcripts. The format of the spreadsheet allows simple sorting functions to enable the comparison of all topics assigned the same code, comparison of responses from particular individuals and all topics within a particular theme. The usability of the spreadsheet design has also enabled the counting of the frequency codes have emerged which have been manipulated and presented in graphs. As well as the four main tabs for each theme of discussion, another tab has been created to compile the basic personal data and household circumstances for each respondent. The spreadsheets for each case study can be seen in this thesis' accompanying data disc and appendix.

In the following chapters, the qualitative analysis of these spreadsheets along with the group discussion data and other stakeholder interviews is assimilated and represented verbally. These chapters are organized around the four main analytical themes and all information and observations have emerged directly from the data which has been triangulated and constructed from the various data sources.

Theory development and conclusions

From studying the selected cases, the interpretive research will seek to form generalisations that will be a contribution to knowledge. When making generalisations in qualitative research it should be noted that there are two types of generalisation; i) empirical/statistical (quantitative/positivist studies) and ii) theoretical/conceptual/moderatum (interpretive) (Jones 2008). For this research study, the following generalisations will be sought;

- Generation of concepts
- Generation of theory
- Drawing of specific implications
- Contribution of rich insights

(Walsham 1995; Jones 2008)

There are various techniques from different theories that may be considered in this study. It is anticipated that combining these different techniques will result in a richer insight and aid the interpretation of data to result in a deeper understanding;

- Ethnomethodology – focus on processes by which people make sense of their interactions and the institutions through which they live
- Semiotics – Focus on surface manifestations and the underlying structure that gives meaning to these manifestations
- Dramaturgical analysis – Focus on performances
- Deconstruction – Focus on multiple meanings implicit in a text, conversation or event

(Feldman 1995; Jones 2008)

As this is to be an interpretive study, theory will be inducted (from specific instances to general inferences). There are a number of ways that theory could be developed for qualitative research;

Analytic induction

A rough definition of the phenomenon to be explained is developed at the outset. A hypothesis is formulated to explain the phenomenon. A case is studied to see how it fits with the hypothesis. If the hypothesis does not explain the case, then reformulate the hypothesis or redefine the phenomenon.

e.g. for this research an initial hypothesis could be along the lines of; *'The way a slum upgrading implementing agency interacts with the local community is fundamental to the project's success'*

'The test is not whether a final state of perfect explanation has been achieved, but the distance that has been travelled over negative cases and through consequent qualifications from an initial state of knowledge. Analytic induction's quest for perfect explanation, or 'universals' should be understood as a strategy for research rather than as the ultimate measure of the method' (Katz 1983).

Sensitising Concepts

Initial constructs are developed to provide a starting point for thinking to provide an initial guide to the research. These initial concepts are usually provisional and may be discarded as more fitting concepts emerge during the research process. The preliminary concepts may 'give the researcher a general sense of reference and guidance in approaching empirical instances ...[and] merely suggest[s] lines along which to look' (Blumer 1969).

e.g. for this research, a possible initial construct could be; *'Development needs to be participatory and involve end users in the decision-making process'*.

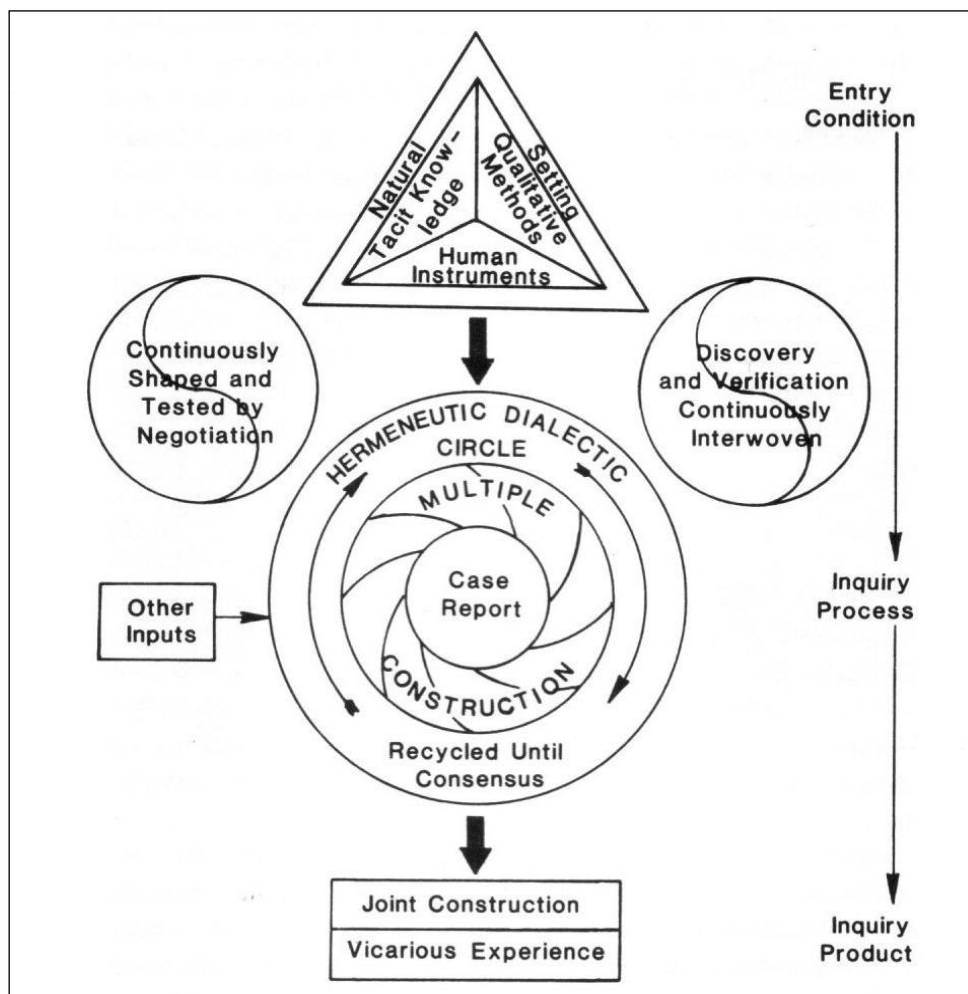
Grounded Theory

Developed by Glaser and Strauss, this theory is fully generated out of the research data with nothing pre-conceived. Analysis should be both systematic and creative. Coding procedures are commonly used in grounded theory to 'identify, develop and relate concepts in a standardised and rigorous way' (Strauss and Corbin 1990; Jones 2008).

This piece of research has not set out with any pre-conceived hypotheses. The approach will follow the grounded theory technique; however there are certain 'sensitising' concepts that should not be ignored. The history of development and past experience has shown that certain approaches to slum upgrading and international assistance do and do not work. Lessons have been learnt from the past and the guiding principles of slum upgrading approaches will be considered. However, the researcher has endeavoured to keep an open mind when considering alternative and radical approaches to encourage the sustainable development of urban slums. The researcher acknowledges that what is considered 'best practice' now, may be totally revolutionised in the future.

The research will follow an iterative and cyclical model, acknowledging the continuing debate to result in a 'consensus'. See Figure 30.

Figure 30 – The Methodology of Conventional Enquiry



(Guba and Lincoln 1989)

As the four case studies are in differing contexts and demonstrate alternative approaches to slum upgrading it would be inappropriate to draw direct comparisons across case studies across contexts. However, after the analysis of each case study, the researchers' observations and commentary on the sustainability evaluation of the cases and cross-case analysis for each context is presented. The thesis finishes with a reflection on the research, theory development and conclusions.

Ethics and Integrity

Qualitative research reports must consider ethics. Informed consent should be obtained before personal accounts are reported. The researcher should be aware of any harm or risk that reporting may incur, and could consider privacy, confidentiality and anonymity measures. Qualitative research can often result in intervention and advocacy, for example if guilty knowledge (e.g. corrupt practices) is discovered. The ownership of the data and any conclusions made should be considered, as should the use and misuse of results. Conflicts, dilemmas and trade-offs could all occur in research of this type (Miles and Huberman 1994; Jones 2008). These are issues that have been carefully thought about for this study. Consent will be obtained before recording all interviews and interviewees will be offered the option to remain anonymous. The researcher will ensure misrepresentation does not occur by ensuring that the message being delivered and heard is accurate. Wherever appropriate, respondents will be directly quoted and not taken out of context. Wherever feasible respondents will be asked for their feedback on the report, however there are likely to be limits as to how far this can be taken. Significant measures have been taken to ensure integrity and quality in the research design, review and conduct. As this is an academic piece of work, the research is independent. Research ethics codes have been followed (ESRC, British Sociological Association, EU code of Ethics for Socio Economic research).

A qualitative case study methodology has been designed which is the most appropriate for sustainability research of this nature. The strengths and weakness of the methodology and how it worked in practice are discussed in the reflective section within the concluding chapter. The thesis will now present the accounts and analysis of the data collected from the four case studies; Housing rehabilitation and resettlement in Pune, India and Water and Sanitation infrastructure in Kibera, Kenya.

Chapter 4 - Nanapeth Case Study

The Redevelopment of Nanapeth

The housing at Nanapeth constructed through a public private partnership with a private developer, has been selected as a case study for this research. The redevelopment of Nanapeth was the first SRA project to be built in Pune and demonstrates the most established SRA scheme in the city. As this was the first SRA project in Pune, the main land owner organised and formed the framework for the development of his land under government guidelines. This project contributed towards the formation of policy required for the rehabilitation and profitable development of private land in Pune. The redevelopment of Nanapeth has led the way for future profitable slum rehabilitation schemes in the city and offers a particularly interesting case to study.

The buildings and stakeholders involved in this housing project have been visited and interviewed five years after occupation, during a one month period in April 2010.

Key informants:

- Land Owner – Mr. Vikram Singh Raje Jadhavrao
Vikram Singh Raje Developers and Builders Pvt. Ltd
- Public Agency – Dr. Sanjay Kolte, Additional Chief Executive Officer
Slum Rehabilitation Authority
- Private Developer – Mr. Ishwar Parmar, Chairman and Managing Director
iParmar Group. Ishwar Constructions. Trade Centre Developers & Builders Pvt. Ltd.
- Architect – Mr. Sandeep Mahajan, Partner
Omkar Associates
- Chief Engineer – Mr. Raman Oswal
iParmar Group. Ishwar Constructions. Trade Centre Developers & Builders Pvt. Ltd.
- Residents – 13 individual interviews, 2 group discussions

- External stakeholders – Informal discussions with slum-dwellers refusing to relocate

Project inception

The plot at Nanapeth (also known as Patryachi Chawl) was owned by 30-40 different individuals with two different categories of land; private owner's and trust property (Parmar 2010). The Trust land, which constituted a significant portion, was the ancestral property of Mr. Vikram Singh Raje. Mr. Raje initiated the process of developing and recovering his land back in 1987.

Raje's main aim was;

"...to get ancestral property cleared. People who are staying on that plot they demanded to be rehabilitated. They had a demand for it. When I was in the process of doing that I got the support of the politicians and the slum project could be completed. The goal was to rehabilitate them in a good way and to get the remaining empty space cleared"(Raje 2010).

The slum which had encroached on Raje's land was originally not a declared or recognised slum in the city according to the municipality. Mr. Raje therefore organised for the laws and enactments necessary for approval by the Maharashtra government in order to have the squatter settlement on his plot of land officially declared as a slum. Raje had the advantage of being a personal friend of Mr Sharad Pawar, the current Minister of Agriculture of the Government of India, prominent political leader of the National Congress Party and previously chief minister of Maharashtra. Pawar advised Raje on his redevelopment plans and supported him through the political planning processes (Mahajan 2010; Raje 2010).

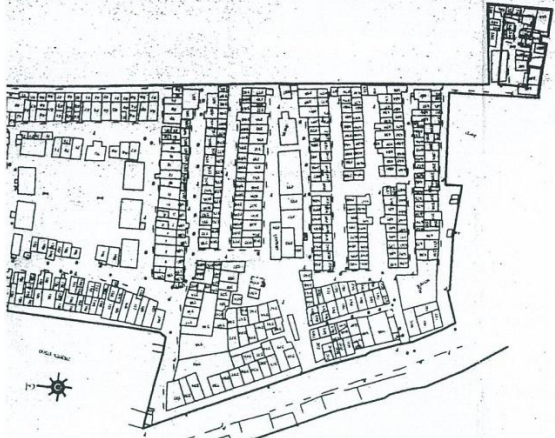
The original Nanapeth slum is formed from mostly one-storey dwellings which spread over a large area. Once the slum is cleared valuable land will become available. High-rise buildings have been designed to re-house the slum dwellers consuming the minimal foot-print. On the cleared area of the site Raje plans to build commercial units which will later be sold. These will constitute the saleable and profitable component of the development, also known as 'free sale component'. Raje plans for the commercial units to be 4-5 storeys. At the time of fieldwork this building work had not yet commenced as the building designs were still being finalised.

This project has a 2.5FSI Free Sale Component allotted to it. This means that for every 1 square foot that Raje constructs for the slum-dwellers' rehabilitation, he is allocated another 2.5 square feet in the form of Transfer Development Rights. The extra FSI square footage will be allocated on a different site. As this is a Zone A project developers are not permitted to use the remaining FSI in Zone A, therefore the remaining FSI will be transferrable to a Zone B site following SRA guidelines. The TDR is released in stages as the project progresses and the square footage of the rehabilitation buildings are constructed. Raje plans to sell his remaining FSI to another developer in the city who requires the development rights.

The construction for the rehabilitation buildings started in 2004 and the first inhabitants were moved over in 2005. The buildings took approximately 8-10 months to construct. As the construction site was occupied the building was done in stages which delayed the completion of some of the buildings. Temporary hutments were created for some of the slum dwellers during an interim period of approximately 6 months (Oswal 2010).

For the land upon which the 6 rehabilitation buildings are located, the ownership will eventually be transferred to the rehabilitated slum dwellers via the formation of a society. The society will have the possession of the deeds, which at the time of research (April 2010 - five years after occupation) remained to be drawn up.

"Within one or one and a half months we are going to make sale deeds...So everybody will be given their sale deed copies and a society will be formed. The whole project is at a very final stage" Raje.



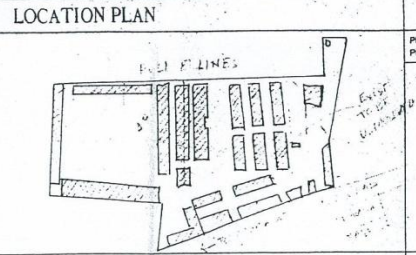
BUILDINGWISE AREA STATEMENT

	BUILDING	COVERAGE	F.S.I.	STAIRCASE	LIFT	LIFT MRM	PASSAGE	BALCONY	TENEMENTS
TOTAL PERMISSIBLE			51177.76				2344.50	3516.75	1173
REHABILITATION	'A' & 'B' BLDG.	1584.14	12773.81	253.98	6.68	10.00	2235.41	3576.14	588
TRUST	'C' BLDG.	178.06	566.69	83.00	3.24	7.90	NIL	76.47	12
SUBSIDISED SALE	'D' BLDG.		4133.16						
SRD+OWNER BLDG	'E' BLDG.		3924.07						
EXCESS BALCN.FSI			1654.07						
TOTAL PROPOSED		1742.20	27448.90	346.98	9.92	17.90	2235.9	3646.61	600

COMPOUND WALL SECTION

PARKING AREA STATEMENT

	CAR	SCOOTER	CYCLES
UP TO 40	588	0	588
40 TO 80 SQ.M.	12	6	24
COMMERCIAL	NIL	-	-
TOTAL	6 X 12.50	612 X 2.00	1200 X 1.40
	= 2979.00 Q.M.		



SanDEEP MAHAJAN'S COPY 07-05-2008

STAMP OF APPROVAL

PREVIOUS SANCTION VIDE OFFICE LETTER NO. DPO/4803 DATED 21.02.1998
PREVIOUS SANCTION VIDE OFFICE LETTER NO. DPO/4558/1/68 DATED 21.11.1998

TRUE COPY CERTIFICATE
I, SANDEEP MAHAJAN have examined Originals of sanctioned plans vide commencement Letter No. 2251/CS. dt. 22.02.2008 and certify that I have checked in person and found correct as per the plans finally approved.
Date: 21/05/07 SANDEEP MAHAJAN Architect: CA/93/16223

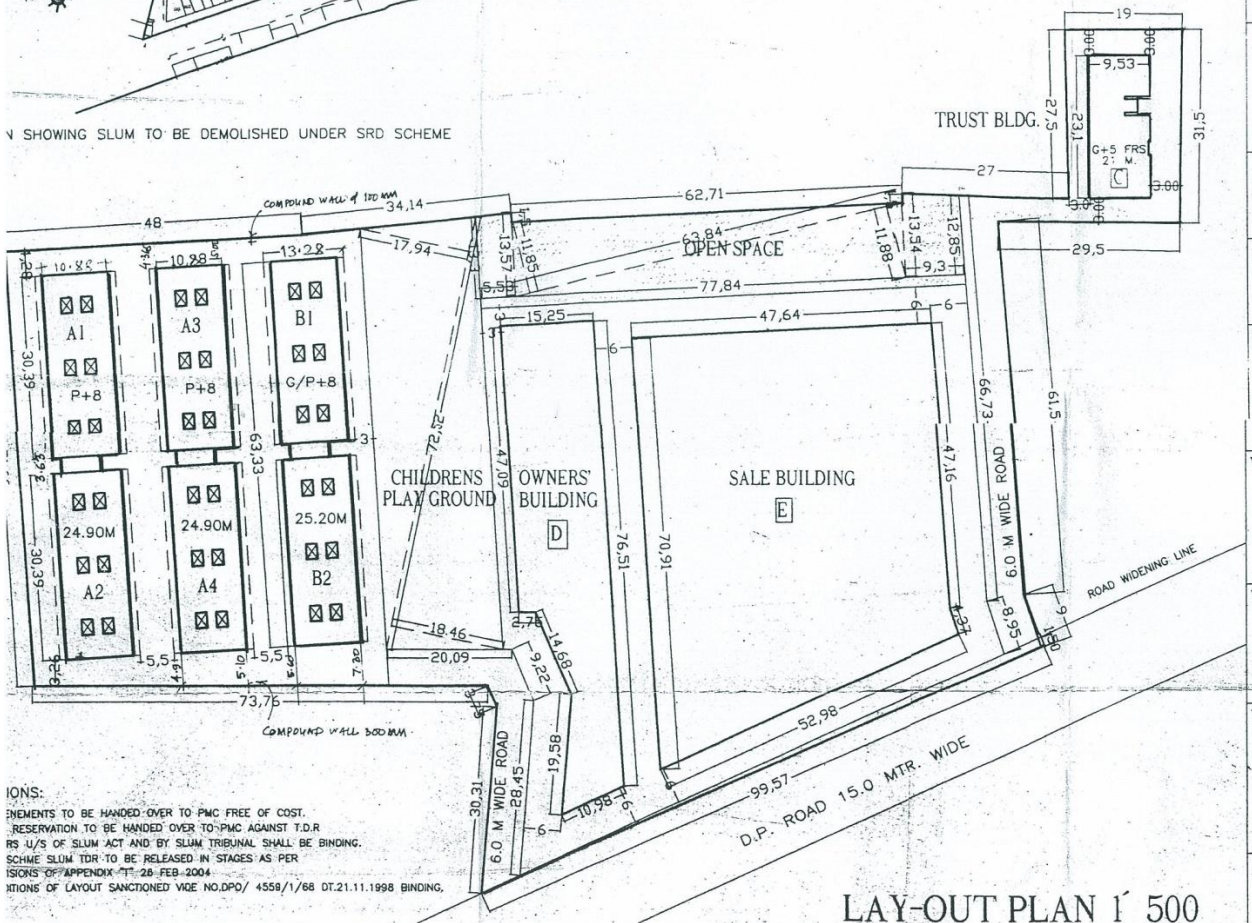
AREA CALCULATIONS AS PER APPENDIX 'T'

I A. TOTAL PLOT AREA = 14889.00 SQ.M.
B. DECLARED SLUM AREA = 14879.00 SQ.M.
C. C.P.G. RESERVATION AREA = 4000.00 SQ.M.
D. AREA UNDER D.P. ROAD = 10.00 SQ.M.
E. TRUST LAND = 4090.00 SQ.M.
F. NET PLOT AREA FOR SRD = $[A - (C + D + E)] \times 101.05 + C71.CPF$
= 8790.10 SQ.M.

AREA STATEMENT SQ.M

1 AREA OF THE PLOT	14889.00
2 DEDUCTIONS IN AREA (c + d)	
a LAND UNDER ROAD	10.00
b ANY RESERVATION (C.P.G. 4000 X 33%)	1320.00
3 NET AREA OF THE PLOT	
4 DEDUCTIONS FOR	
a OPEN SPACES	1087.90
b INTERNAL ROADS	6329.15
5 BALANCE AREA OF THE PLOT	12141.95
6 ADDITIONS FOR F.S.I.	20.00+329.15
7 TOTAL AREA OF THE PLOT	12491.95
8 RESIDENTIAL F.S.I.	2.50 (SLUM) 2.00 (R1)

V SHOWING SLUM TO BE DEMOLISHED UNDER SRD SCHEME



II REHAB COMPONENT 500 TINTS/HECTORE = 624.00
EXISTING SLUM UNITS = 608 NOS
PMC UNITS = 16 NOS.
TOTAL REHAB AREA = 624 X 27.87 = 17390.88 Q.M.
= 17390.88 X 2 = 34871.76 SQ.M.
TOTAL SRD SCHEME FSI = 52172.64 SQ.M.

RESIDENTIAL FLOOR SPACE

9 EXISTING RESIDENTIAL FLOOR SPACE	608 SLUMS
10 PROPOSED RESIDENTIAL FLOOR SPACE	14368.42
11 TOTAL RESIDENTIAL FLOOR SPACE	14368.42
12 COMMERCIAL F.S.I.	00.50
COMMERCIAL FLOOR SPACE	8856.58
13 EXISTING COMMERCIAL FLOOR SPACE	
14 PROPOSED COMMERCIAL FLOOR SPACE	8856.58
15 TOTAL COMMERCIAL FLOOR SPACE	8856.58
16 PERMISSIBLE COVERAGE	6225.55
17 PROPOSED COVERAGE	6225.55
18 PMC UNITS	16 NOS.
19 TOTAL T.D.R. (SLUM + D.P. ROAD + CPG)	36586.24 IN B ZONE

III D.P. ROAD FSI = 20.00 SQ.M. (10 SQ.M. X 2.00FSI)
AREA OF C.P.G. AS TDR = 2640.00 SQ.M. (1320 X 2)
TRUST FSI = 4090 X 0.90 X 2.50
= 9202.50 SQ.M.

IV MAX. FSI ON SITE (RES) = 8790.10 X 2.50
= 21975.25 SQ.M.
= 21975.25 SQ.M. (R-A)
TRUST PROPERTY FSI = 9202.50 SQ.M. (R-B)

V FSI PROPOSED ON SITE = 87448.90 SQ.M. < 21177.75 SQ.M. (R-C)
SRD SCHEME TDR GENERATED (R) = 24723.70 SQ.M.
SRD SCHEME TDR (TRUST) (R) = 9202.50 SQ.M.
C.P.G. TDR PERMISSIBLE = 1320 X 2 = 2640.00 SQ.M. (AFTER PROVISION)
D.P. ROAD TDR PERMISSIBLE = 20.00 SQ.M. (AFTER PROVISION)
TOTAL TDR IN B ZONE = 83967.40 SQ.M. (AS PER TDR, T-R-C44)
REVISED APPENDIX 'T' DT. 26.2.2006 AND DT. 14.07.2006

VI PLOT AREA CALCULATIONS

- AREA AS PER PROPERTY CARD = 14889.00 SQ.M.
- AREA AS PER SLUM DECLARED GAZETTE = 14879.00 SQ.M.
- ACTUAL AREA AS PER SURVEY = 14889.00 SQ.M.
- AREA AS PER DEMARKATION = 14889.00 SQ.M.

TOTAL PLOT AREA CONSIDERED = 14889.00 SQ.M.

VI TENEMENT STATEMENT

20 TENEMENTS PROPOSED	1173 NOS
21 TENEMENTS PERMISSIBLE	1173 NOS

PARKING STATEMENT

	CAR	SCOOTER	CYCLE
22 PARKING REQUIRED	349	1242	1242
23 PARKING PROVIDED	349	1242	1242

VII AREA CALCULATIONS FOR C.P.G.

AREA CALCULATIONS BY TRIANGULATION

- 0.50 X 72.52 X 17.94 = 650.50 SQ.M.
- 0.50 X 72.52 X 18.46 = 669.50 SQ.M.

TOTAL AREA OF C.P.G. = 1320.00 SQ.M.

LEGEND

PLOT BOUNDARY	THICK BLACK
PROPOSED WORK	RED
DRAINAGE LINE	DOTTED RED
WATER LINE	DOTTED BLACK
EXIS. TO BE DEMOLISHED	YELLOW
EXIS. TO BE RETAINED	BLUE

OWNER
VIKRAMSINHA L. JADHAVRAO & ISHWAR G. PALMAR (P&H)
RAGHAVENDRA VIHAR, 110 MAHESH SOCIETY, BIRWADI, PUNE.

VIII AREA CALCULATIONS FOR OPEN SPACE

AREA CALCULATIONS BY TRIANGULATION

- 0.50 (13.30 + 13.57) X 5.53 = 74.29 SQ.M.
- 0.50 X 11.85 X 7.25 = 44.56 SQ.M.
- 0.50 X 11.88 X 7.25 = 44.68 SQ.M.
- 0.50 (13.54 + 12.85) X 3.30 = 122.71 SQ.M.

TOTAL AREA OF OPEN SPACE = 1089.84 SQ.M.

PROPOSED SLUM REHABILITATION AND REDEVELOPMENT SCHEME
LAYOUT ON CTS NO. 1046 TO CTS NO. 1054 NANA PETH, PUNE.

NOTES:
1. TENEMENTS TO BE HANDED OVER TO PMC FREE OF COST.
2. RESERVATION TO BE HANDED OVER TO PMC AGAINST T.D.R.
3. 1/3 OF SLUM ACT AND BY SLUM TRIBUNAL SHALL BE BINDING.
4. SCHEME SLUM TDR TO BE RELEASED IN STAGES AS PER PROVISIONS OF APPENDIX 'T' - 26 FEB-2004.
5. NOTIONS OF LAYOUT SANCTIONED VIDE NO. DPO/ 4558/1/68 DT. 21.11.1998 BINDING.

LAY-OUT PLAN 1' 500

Figure 31 - Slum plan and Development plan

Figure 32 – Nanapeth buildings



Raje coordinated the entire project with the political support of Pawar, and put forward the scheme under the SRA guidelines;

“He [Pawar] guided in making the policy. In a country like India with democracy, there was no device or policy or instrument to implement such schemes, in early 90s. So somebody had to take it up. Somebody had to take the leadership.... He [Pawar] really supported that and that is why it was conceived. Of course, after that so many other political leaders, parties, government, bureaucrats took it up very well and now I think it is to very, very refined stage, I would say” (Mahajan 2010).

Following Pawar’s recommendation and political backing Raje sold the land and construction rights to Ishwar Parmar Builders and Developers Pvt. Parmar paid Raje Rs. 35,500,000 (£510,000) plus gave him the ownership of one of the new buildings (Parmar 2010).

Cadastral Survey

Once the plan was accepted under the SRA scheme, the Corporation conducted a cadastral survey of the slum in order to count the number of huts and record the population of the slum settlement needed to be rehabilitated. There were 624 hutments counted on the site at Nanapeth over an area of 149,000 square feet (See Figure 31 showing tenement plan).

The Development Plan

Raje has developed blocks of high-rise flats to which the slum households have been rehabilitated. There is parking space at the ground level, and a further 8 storeys of residential flats. The flats are organised across 6 blocks positioned in 3 pairs to share a central staircase and two lifts. Each block contains 96 flats. Therefore 192 flats share the one staircase and two lifts. In total there are 572 tenements completed so far of which 60-70% are occupied (Oswal 2010). As per the SRA rules, 16 of the tenements have been donated to the PMC. Each tenement covers an area of 300 square feet, approximately 27m². The developers are giving 30 square feet more than PMC regulations. Within this area there is a kitchen, toilet, shower and one main multi-purpose living space with a small balcony area. Each family holding a ration card is allocated one tenement, on average it is expected that the family size occupying this space is 5 people (Mahajan 2010).

On the ground floor some units have been created for commercial activities. The design also includes the construction of a Free Sale Building, the Raje family Trust Building the Owner’s Building (to be retained by Raje) and some open space. Following SRA guidelines, the rehabilitation designs include plans for a garden, community hall, temple, mosque, children’s’ library, a kindergarten and a children’s garden.

At the time of research some residents had been occupying the new housing for five years but these community facilities are yet to have even started construction. The original Nanapeth slum is partly demolished and some residents are refusing to relocate to the new housing and blocking any further development. Once the people have vacated the site, the remainder of the slum will be demolished and the final building works can be completed (Parmar 2010). When the land owner and project

coordinator were consulted on the predicted completion of these elements Raje said it is expected that the construction for these will be completed 'in two years'.

"They are not allowing us to complete. They say, we do not want it here...we have to construct those three rooms for meetings, for Balwadi [children's play group], one room for SHG [self help groups], and one community room we are to construct. Three rooms we are to construct as per law. We have already started. It is half way and I think it will be completed in another 15 days. The walls were constructed and they made us stop. Otherwise this would have completed two years back"(Parmar 2010).

Profits

SRA projects are profitable for the land owner and private developer involved. For Nanapeth, Parmar paid Rs. 35,500,000 (£510,000) plus the ownership of one building to Raje for the ownership of the plot of land. The cost of constructing the six buildings for slum rehabilitation was about Rs. 18,000,000 (£260,000). The construction of one commercial building is yet to be started. Parmar has been gaining the development rights in stages as the project has progressed. Eventually he expects the total profit to be about Rs. 20,000,000 (£287,000) (Parmar 2010). Parmar admits the process of slum rehabilitation is very profitable to the private developer because currently there is a shortage of TDR certificates in the market. Within another two years the influx of certificates caused by more SRA projects will result in decreasing the price.

Parmar states that long term the process can continue and remain profitable;

"Maybe the margin will reduce but still there will be a margin...Even if it comes down, still it will be profitable. Only thing is there is lot of hassle in this. Many people do not come in this business... it is risky also. The more hassle, the more risky it is"(Parmar 2010).

This view is supported by other property developers active in the city,

"All we want is that permissions should be speedy and allow no room for vested interests to play mischief and derail the project, else people will lose trust in the system"(Gandhi 2006).

Although the process can be profitable for developers, they are also taking on a lot of risk and a long term commitment of work. The ground work required to establish an SRA scheme can be very complicated to gain consent from all the slum dwellers involved and communication is not straightforward. Gaining development rights from land owners can be particularly difficult as it is common for many different and widely dispersed individuals to have ownership of the land. The SRA process is elaborate and complicated work for which developers expect to gain profitable returns (Kolte 2010).

The SRA is a self supporting authority and not supported financially by central government. The SRA sustains by collecting fees and charges from the developer at various stages of an SRA project;

“We collect scrutiny fees. Any SRA proposal, when it is submitted we collect scrutiny fee from the developer, say Rs. 1000 per sq. metre. Then we also collect land development charge, building development charges for the free sale part. We don’t charge for the rehabilitation part but free sale part we recover the land development charge, the building development charge. From the infrastructure improvement charges 90% goes to the urban local body and 10% goes to SRA. The developers who register with us, we prescribe fees for them; like Rs. 100000, 700000, 100000 for registration as per the slab. So these are our earnings. We deposit this amount in fixed deposits and from the interest we pay our staff. The government is not paying us anything. Although we are government officers but we derive our salaries from SRA funds only” (Kolte 2010).

Life Today

This section assimilates and triangulates all the data gathered from interviews and group discussions with the stakeholders. The emergent key findings within each theme of analysis have been constructed from the data and are presented herewith.

The group discussion at Nanapeth was conducted with a group of 8 Buddhist ladies on a Friday afternoon inside a high-rise apartment within the oldest building at Nanapeth. Various children listened in and a man listened from the doorway. Sandhya and Shashi, the research assistants were both present, but the discussion was led by Sandhya. After the discussion Rs200 was given to the participants to buy snacks for an upcoming festival by way of thanks for their participation.

Figure 33 – Group discussions at Nanapeth



The residents were asked to list and then rank in order of priority, the problems they are currently facing in their day to day lives. They were then asked to write a list of the problems they encountered in the past – 10 years previously, before they relocated to Hadapsar. These were also ranked in order of priority then. Finally the residents were asked what problems they thought they would face in the future. The residents were optimistic about the future and said that if they manage to secure a good education for themselves and future generations that this in turn would enable employment opportunities which would raise their general quality of live to improve overall. The results the residents gave have been sorted and are presented in Table 2.

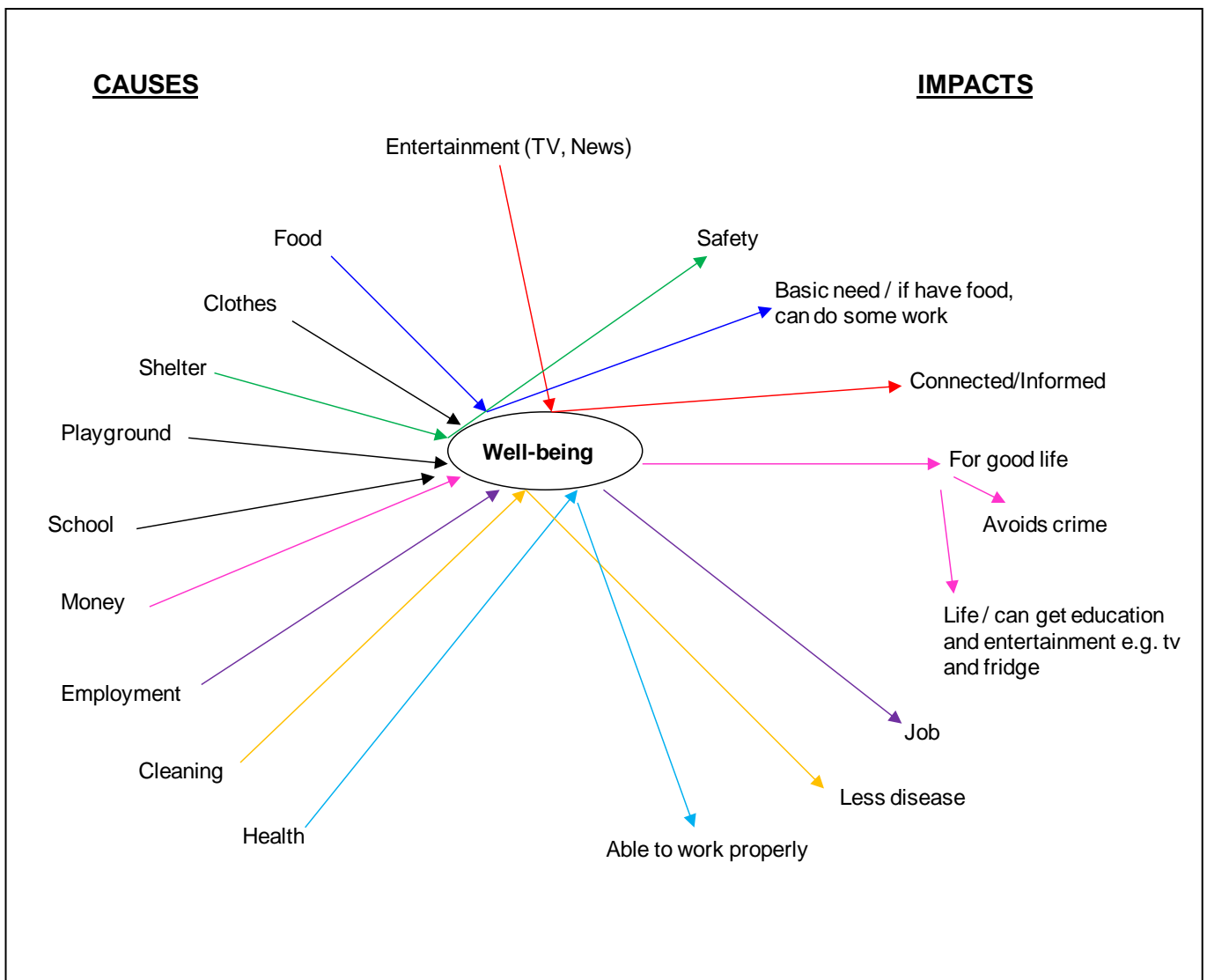
Table 2 – Nanapeth Priorities

Problems Now	Ranking Now	Problems Past	Ranking Past	Future
Water	1	Toilet	1	No change after 4 years so not expecting any change
Staircase	2	Gutters/drainage	2	
No drying space	3	Mice	3	
Small house	4	Mosquitoes	4	
Light	5	Tin shed construction	5	
No playground for children	6	Sewerage leak	6	
No gallery (balcony)	7	Roof leaks in rains	7	
One bin only	8	Unclean	8	
		Electric cables get damaged in rains	9	
		No parking space	10	

The main problems that residents revealed they are facing today are water supply, circulation within the building and the flat designs. The problems that residents faced in the past were entirely different and stem from the poorly constructed housing within the slum, sanitation and impact upon cleanliness. This indicates that the actual housing situation for the residents has greatly improved since resettlement and problems have changed in nature to become less consequential of poorly constructed shelter. One new problem which has arisen since rehabilitation and is a basic human need is water supply. Water supply was never an issue for the residents when in the Nanapeth slum. Communal stand-posts provided water 24 hours a day. But now the buildings are supplied with water for a short time in the morning and evening during which residents fill containers to provide them with the water they need for the rest of the day.

The following cause-impact diagram was drawn by the residents to indicate the things they felt they needed for a good life / well being, and what impacts these in turn generated. Any links between the cause and impacts are indicated with matching coloured lines.

Figure 34 – Nanapeth Well-being Cause-Impact Diagram



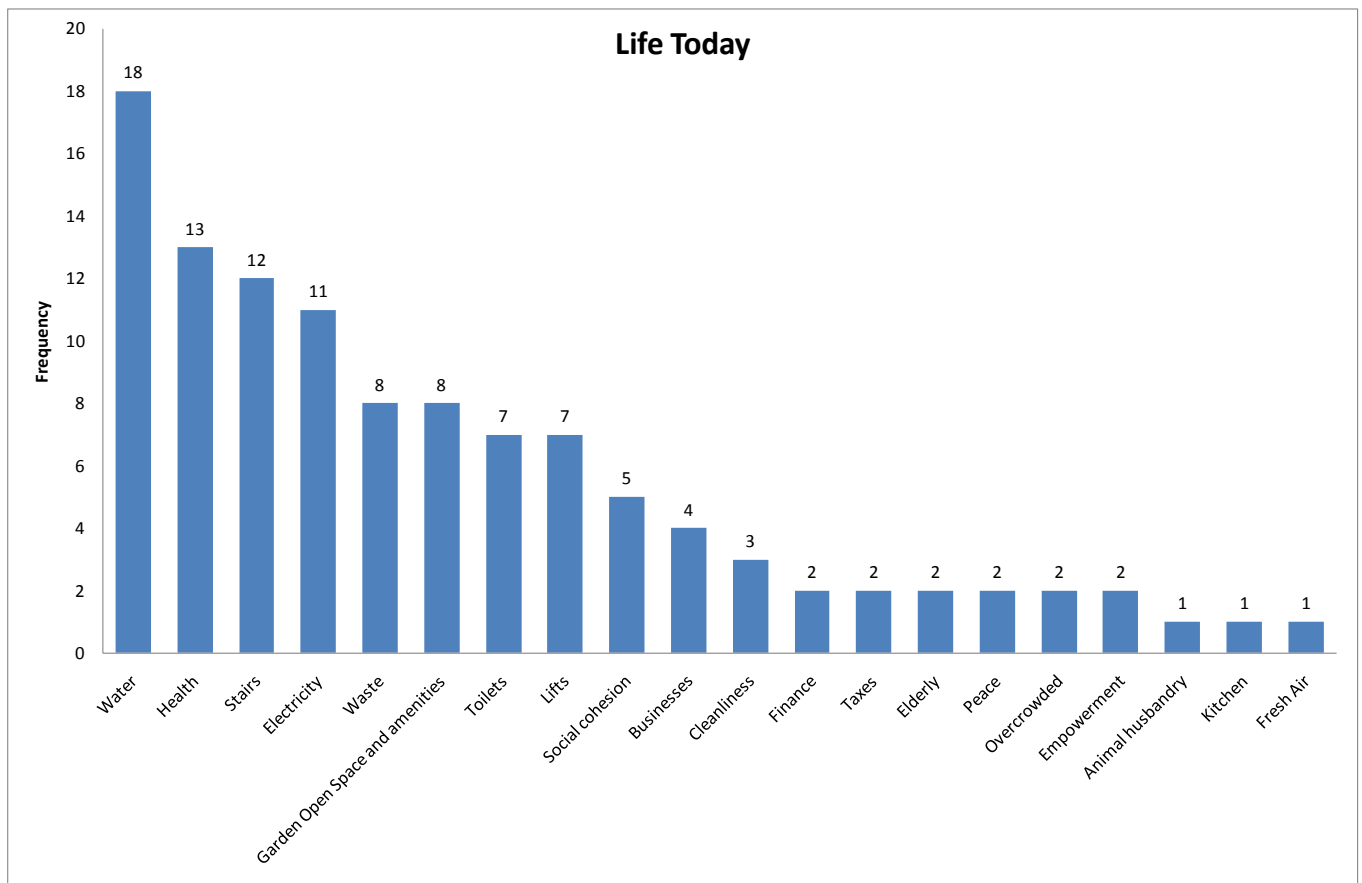
The Nanapeth residents indicated a range of things they felt they needed for a good life and matched most items with a related impact. The residents considered shelter enables safety and entertainment in the form of TV/radio enables residents to be better informed, and cleanliness prevents disease. They repeatedly linked their needs to job opportunities and stressed the need of money for a good life. Health and Food were specified as requisite in order to be fit to work. The constant ties back to the topic of employment and money indicate the priority of this basic need.

This section now brings together the stakeholder’s views on how life currently is for the residents of the new housing at Nanapeth, which for the majority is five years of habitation. The issues raised have been identified through the analytical coding of interviews. The issues are presented here structured around three themes; Physical issues, Social/Human issues and Livelihood issues.

Table 3 – Life Today: Coded themes emergent from data

Physical	Social/Human	Livelihood
Waste	Health	Finance
Water	Elderly	Taxes
Electricity	Social communication	Animal husbandry
Lifts	Peace	Businesses
Stairs	Empowerment	
Toilets	Overcrowded	
Kitchen		
Open Space and amenities		
Fresh Air		
Cleanliness		

Figure 35 – Frequency of topics mentioned during interviews discussing Life Today



It can be seen that a large number of different issues were raised by residents concerning the state of their current living situation. The top six issues raised were; water, health, stairs, electricity, waste and open space.

Electricity could be eliminated as a negative issue. The reason it was mentioned in interviews 11 times was because of a specific question regarding the quantity of the bill, not due to resident’s complaints. However, there were complaints regarding the provision of night time lighting which

were related to the electricity supply. Other than health concerns, the remainder of the top 5 issues raised were all physical problems connected to the built environment;

- Water
- Health
- Stairs
- (Electricity)
- Waste
- Open space

These issues closely match those revealed during the group discussions as the main priorities the residents are currently facing; 1st – Water, 2nd – Stairs, 3rd – No drying space, 4th – Small house, 5th – Light, 6th – Playground, 7th – No Gallery, 8th – Waste, see Table 2. This analysis shows how the residents' priorities have changed with time and highlights the new problems that have occurred since rehabilitation. Before being re-housed the main problems raised during the group discussions were; 1st – Toilets, 2nd – Drainage, 3rd – Mice, 4th – Mosquitoes, 5th – Poor construction. None of these past problems apply to the residents today since they have been re-housed in concrete construction buildings with proper drainage and sanitation facilities. After rehabilitation the basic need of water supply has now become a serious problem, when previously there was no problem with the supply.

Key Points

- Water supply - Water supply at Nanapeth is poor, does not meet the residents' expectations and is worse since rehabilitation.
- Stairs - Emergency escape routes and safe circulation throughout the high-rise building is a serious problem.
- Space - Size of rooms, areas for household functions and outside space for children do not meet the residents' expectations.
- Waste - Waste management and the un-cleanliness and disease caused by overflowing bins are a problem to residents now.
- Health - Residents are concerned about the related impacts that the new buildings and environment are having upon their health.

Physical Issues

Waste

Waste management and disposal in the slum was not dissimilar to the situation now (Surekha Suresh Jadhav 2010). There was a time previously when waste was collected from families for a fee of Rs10 per month but many residents did not pay so the service was stopped (Khan 2010). Most families put their waste in a skip on site which is not emptied regularly and often overflows (Asha Jadhav 2010; Kharat 2010). The waste container is situated at the entrance of the building, which causes access issues when the waste overflows. This is compounded as many residents have found it less arduous to drop their waste down from their floor which is easier than making the journey via the stairs or lifts to the container (Sheikh 2010).

[laughing] "Simple, just drop it down. We are supposed to dispose it in a garbage container on the ground floor. Very few women go to the container but most of the people simply throw it down from their floors because the lift is usually not working. Even if a woman comes down easily from the 8th floor how will she go back? It is difficult to go up and down stairs just to dump the rubbish in the container" (Jekate 2010).

Figure 36 – Nanapeth waste container and local rag-picker



Waste disposal and management

- A waste chute could be incorporated into the building design as is common in many high-rise residential buildings for the middle-classes. Waste managers would need to be hired to collect and dispose of the waste from the chute.
- Although the waste containers are not emptied regularly, there is a local rag-picker who is making an effective business out of recycling some waste.
- The PMC needs to better organise a regular collection and safe disposal of the remaining un-recyclable waste.
- Safer storage containers are required to enclose the waste and separate containers could be provided for waste segregation.
- Residents would need to be trained to sort their rubbish and understand the consequences of spread of diseases and environmental pollution of poorly managed waste.

Electricity and Lighting

The electricity supply to the new buildings is good and reliable. Load shedding occurs every Thursday as is the norm throughout the city (Sheikh 2010; Sumit Jadhav 2010). Many families run a number of electrical appliances in their new homes, most commonly; televisions, fans and lights. Each tenement now has an electricity meter to accurately measure their power consumption for the calculation of their bills. Some residents have found their bills are no different to in the slum (Asha Jadhav 2010), others have reported significant increases (Khan 2010; Sheikh 2010; Sonewane 2010; Surekha Suresh Jadhav 2010) possibly due to the instalment of more electrical appliances, particularly fans. There were no complaints from the residents regarding electricity. However, there were reports that the corridor lighting was not sufficient and the darkness made people feel unsafe (Nanapeth Slum Residents 2010). Three lights are provided per corridor (Oswal 2010). Residents complained that these communal lights are switched on too late in the night which results in the corridors and stairwells being extremely poorly lit in the early evenings which can cause safety implications.

Figure 37 – Nanapeth’s dark corridors



Electricity and Lighting

- Communal lighting in dark corridors and outside the buildings is needed to be switched on earlier by building managers for both safety and security reasons. *Otherwise the power situation is very good.*

Water

Residents at Nanapeth are not charged for water, however all residents interviewed are not satisfied with their water supply. In the slum they were used to having 24hr water supply from common stand-posts. Now, water is available for approximately 30mins twice a day, in the morning and evening and is piped to taps in their tenement's toilet, bathroom and kitchen (Khan 2010). Despite now having private water connections residents are unhappy as they do not find the availability and quantity of water enough for their lives. Water quality is not a problem. Residents attempt to deal with the situation by filling containers which they then use for the rest of the day (Dilshad Murad Khan 2010). One resident reported they could fill 5 buckets of water per day which was not enough for one man to bathe (Asha Jadhav 2010). Women are unable to carry out their household chores within the 1.5hours of water availability time. Many ladies now carry their laundry back down to the partly demolished slum's remaining stand-posts to do their washing (Sheikh 2010).

"When we were in slum, the main asset was we had 24-hour water supply. Now we get water only for half an hour in the morning and half an hour to 45 minutes in the evening. Families are big and that short-time water supply is not sufficient. That time is not enough for all members to make use of the toilet. I hope you understand what I mean. Water is a basic need...Now the reality is we are never going to have 24-hour water supply but we want at least two hours water supply in the morning and evening" (Jekate 2010).

The developer's chief engineer reported that there were problems with the residents' management and use of water supplies. The engineers are providing 135litres of water per person, following the Indian regulations and have provided water storage tanks with a capacity of 68,000 litres (more than the minimum required by the regulations) for each building. However, engineers are unable to keep the tanks constantly full because the water supplied from the corporation is limited. The engineers have found that the residents are not utilising the water properly and not turning the taps off (Oswal 2010). Therefore they are attempting to manage the issue by delivering the available water at two times per day. In the past they have tried giving the residents more control of the water supplies but found that all water is emptied immediately resulting in no water left for the following day.

“The mentality of these people is not that... We have studied for more than last six months, how to solve this problem, but it is very difficult. We have tried to supply water for more time, say four hours. The next day they did not get water. That is the problem...Now we start giving water to the tenements at 6:30 in the morning. The entire tank gets empty within two hours. Either they keep filling their containers or they don't close the taps. Within two hours the entire water is finished. Later again in the afternoon we close the taps and we fill it with water. In the evening also we are giving at least one hour water to them. We are filling at least 50% of water, i.e. around 35,000 litres in the evening. So we are providing water 1.5 times as per the building norms. This is the truth...The water supply we are getting from the corporation is limited. Whatever water collects in the tanks below is delivered to the overhead tanks. Suppose we continue to give water to them, in the evening all the tanks will be empty by night, and there will be no water in the morning” (Oswal 2010).

Water management and supply

- Residents do not understand the value of water as they are not charged for their consumption; this affects their behaviour and use of the commodity.
- If individual water meters were installed and residents charged for their water consumption this might change their behaviour and management of the water. The building could have been designed to incorporate individual meters for charging.
- The education of residents in the management of water supply might be beneficial.

Circulation & Escape routes - Lifts and Stairs

There were numerous reports from residents concerned about emergency escape routes and circulation through the buildings. Each building which holds 192 tenements (approximately 980 residents assuming average resident family size per tenement is five) has only one staircase and two lifts, of which one is commonly out of service at any one time. For the eight-storey building this results in significant congestion on the stairs and has been the cause of serious accidents in the past. Many residents have reported particular difficulties for the elderly and children as well as numerous injuries incurred due to panic evacuations, stampedes and crushes. Residents have suggested that conditions would be better if fewer floors were constructed, more staircases and wider corridors (Asha Jadhav 2010; Jekate 2010; Khan 2010).

“There was an incident some time back, on the fifth floor, when the owner was not in the house. All the windows were closed. An incense stick was left burning in the flat, which probably fell on the mattress below. So the flat was full of smoke. Actually there was no fire but due to the smoke people felt that gas cylinder had leaked and there was a lot of panic. All started running and there was a stampede since there is only one staircase...Someone called him [the owner] up, but meanwhile someone broke open the lock and found there was only smoke inside. The mattress had burnt” (Surekha Suresh Jadhav 2010).

Figure 38 – Stairwells and lifts



The development team have installed fire alarms and hoses for use in the event of fire, and are confident that circulation within the building is sufficient;

“That is his mistake because he had left a burning incense stick inside. But there is sufficient, 5-foot side passage over here... We have even provided fire fighting equipment, lines. Fire alarm is also there...”(Oswal 2010).

The SRA reports the multi-storey living with a combination of lifts and staircases is a common model used widely in developments in the city;

“In our slum schemes also, multi-storied buildings we have two lifts and two staircases. It is a common model, which we observe. We have our own which have more than 50 tenements. Normally schemes are 80, 96 flats, 104 flats. These are the building sizes here and these are accommodated in eight floors, nine floors, etc. and they have two lifts, two staircases” (Kolté 2010).

Regarding the staircase, the engineer said the design with one staircase was specified by the architect, but he also admitted that *“It was also our first project. So we were not aware of the things”*, implying that they have since moved on in developing their rehabilitation building designs. The project architect admitted that another staircase would have been better but that the design was confined by space as well as cost implications;

“Now we think that there should have been two staircases, definitely. As I said, with these instructions at the initial stage we were tempted to compress it in such a kind of thing. Yes, honestly I do agree that we could have provided two staircases... It was only to save the cost; again I have to accept” (Mahajan 2010).

The decision to incorporate two lifts was calculated precisely following occupancy load guidelines from the fire department (Mahajan 2010), however at any one time normally only one lift is operating, therefore most of the time, the occupancy load is not catered for. Residents on the upper floors who rely even more on the lifts complain of frequent faults and poor maintenance;

“The lift is from a local manufacturer, of a bad quality, has frequent breakdowns. There is a 15-year maintenance fund and they cut the money from that fund for the lift maintenance. For how long this will go on? There is only one staircase for so many houses. We need one more in case of emergency, like fire, cylinder burst, short circuit, how can so many people escape with just one staircase? There will a stampede resulting in people losing their lives. There is never one staircase for 200 houses. The lift is also not reliable, of inferior quality. The use is heavy with so many people on 8 floors using it every day. In case of medical emergency, what can you do if the lift is out of order” (Sonewane 2010).

“We needed two staircases. One boy returned home drunk, told the parents to sit outside for some time and set himself on fire. The door was closed from inside. Our children broke open the house and brought him out and took him to the hospital. No one was coming forward to help. My four children got him out. No one was ready to even hold him. No rickshaw driver or tempo driver was available. My children managed somehow to take him to the hospital... If anything happens, cylinder bursts how can we escape? Elderly people can somehow manage to escape but there are many small children. What can they do? How can they escape? They will get trampled” (Sheikh 2010).

As is common for high rise buildings, an emergency external staircase could be added to the building to create an additional fire escape. There were rumours in the community of the addition of an external fire escape staircase, however nothing has been constructed. Residents have raised their concerns and request for an additional staircase to committee members but nothing has come from it (Sheikh 2010). Regarding the option to add a staircase the architect responded;

“Yes, that could be done. In fact the discussions were going on with the developer and the society people. The developer is willing. He said whatever the society says, if we sit together and any consensus comes about then he will be ready to amend (Kolte 2010).

When the developer was questioned on the staircase issue he reiterated the point that all SRA regulations and building guidelines were adhered to and that the building design made the most of the site constraints, available space and topography of the site. He also noted that Nanapeth was the first SRA project ever constructed, and so building regulations may have since been superseded. The engineer explained that the plan was designed in 1996, new projects nowadays are providing two staircases. The plan was certified in 2001 but the process started in 1996 and therefore many regulations are now out of date (Oswal 2010). The developer is aware of the slum-dwellers desire for a second staircase, that it was discussed with the PMC, but it was deemed that there was no

space available for the addition (Oswal 2010; Parmar 2010). The rehabilitation buildings were designed to use the minimum foot print possible in order to maximise the space available for the saleable component of the development, thereby to make it more profitable to the development team.

“The staircase, we feel are not less. Two lifts are there, so even one is stuck there is another one. These people have a habit of breaking lifts daily because they have not seen it. They don’t know how to live in those buildings, so we have to train them, how to use water, etc.....Now some of the slum dwellers are saying that we want second staircase, etc. We asked even the PMC that where do we construct when there is no place where you can construct. We have kept the passages. What we have done is within the law. Slum people have a habit of demanding more, more, more, whatever you give. That is their habit” (Parmar 2010).

Residents have admitted that damage is inflicted on the lifts by residents; *“drunkards handle the lift very badly; small children play with it, so many times out of two only one lift is in working condition”*(Sheikh 2010).

Despite the staircase and fire escapes being of absolute importance to the residents, it could be interpreted that it is not a priority issue for the development team or SRA as no improvements were installed to remedy the situation. The researcher noted that during the month of fieldwork of regular visits to Nanapeth, the only noticeable change to the building was a newly painted sign on the building’s wall featuring the developer’s logo.

The developer did express his opinion that things could be improved and that the SRA should change the rules to allow larger tenement sizes and wider corridors. However, for the Nanapeth development the developer was restricted by SRA rules and regulations. See discussion on space in the section ‘perception of project success’;

“ Improvement could be instead of 27 sq. meters they should sanction 30 sq. meters”.....They are big families and the passage in between is 5 feet....The passage in the corridor should be 6 feet instead of 5 feet. I have demanded for it and it will be sanctioned...There are the rules for slum developers. By these rules the structure of the slum buildings from Bombay to Pune is the same. So we have to stick with the rules and regulations and cannot make changes on our own” (Raje 2010).

Stairs and Lifts

- The present circulation within the building is both dangerous and uncomfortable for residents. High rise buildings of this nature should have more exit routes.
- The current buildings could be easily adapted by adding an external staircase as external space is available.
- Residents have a lack of respect for the lift facilities. Respect could be instilled if a fee is charged for building maintenance costs and building management training is offered to residents.
- The importance of fire escapes should be noted by the SRA who should legislate for their provision. In the case of Nanapeth, the SRA should make the addition of an external escape route compulsory and a condition for the release of TDR to the developers.

Facilities - Toilet and Kitchen

Many residents are happy with their new private toilet facilities within their tenement (Kharat 2010; Sonewane 2010) and feel that it has satisfied a need for privacy (Sumit Jadhav 2010). However residents have not criticised their former communal toilet blocks in the slum, saying they were well lit at night, safe and secure for women and children (Salve 2010). Some residents indicated their positivity towards the old toilets because there were no water shortages and there was a reliable cleaning arrangement in place. One resident also expressed dislike to now having to clean their own toilets (Dilshad Murad Khan 2010). Another resident appreciated their private toilet but would give it up if given the opportunity to move back to their former slum house (Sheikh 2010).

One resident remarked on preferring their former larger kitchen which they made themselves (Dilshad Murad Khan 2010). The lack of other comments regarding the kitchen could be interpreted to indicate satisfaction with the facility.

Environmental – Fresh Air, Cleanliness,

One resident remarked on the fresh air at their previous home where there was more open space, sunlight and air which also made the drying of clothes easier. The current houses with 'no proper gallery or balcony' has caused difficulties, a feeling of being 'suffocated', as well as a perception of being adverse to health (Sonewane 2010).

Each tenement has windows provided to encourage cross-ventilation and a fresh air supply. There are also vertical shafts to house cabling which are unsealed and also encourage the circulation of air throughout the building (Oswal 2010).

Residents did not report a lack of cleanliness at their former slum home, but in fact commented that people were well-informed and thus kept their environment clean (Jekate 2010). It was reported that the new housing used to be cleaner and better maintained than it is today, due to a lack of maintenance, poor waste disposal and residents spitting tobacco (Sheikh 2010). Residents refusing to move from the old slum report that there is dirt everywhere within the new buildings (Nanapeth Slum Residents 2010). This may also be due to the increasing age of the buildings, although they are only five years old, and is only affecting communal areas. The researcher also noted graffiti in communal areas, but, that many residents take great pride in maintaining the interiors of their tenements.

(It might be worth noting that the incidences of graffiti unfortunately dramatically increased after the researcher gave a group of children some drawing equipment).

Figure 39 – Dirty communal areas



Environmental pollution

- Communal areas could be better maintained and preserved by residents but would require a behavioural change.
- If residents were charged a fee for the maintenance of communal areas this might encourage a behavioural change to not damage communal areas.
- As many residents are dissatisfied with their accommodation they are not respecting it and therefore less inclined to protect it.
- If the residents had a better sense of ownership of the development they would probably be more inclined to protect the buildings. A better sense of ownership and pride could have been inbuilt if the residents were included, consulted and participated in the development of the housing. This should have been encouraged by SRA in order to promote sustainability of the scheme.
- When a formal housing society is established and the residents are handed their title deeds and if given the opportunity to participate in maintenance and committee activities, a better level of pride and thus protection for the buildings could be established.

Social/Human Issues

Health & Elderly

Some residents reported no change in their health since relocating homes (Khan 2010; Salve 2010; Sheikh 2010). Elderly and middle-aged residents have reported leg pains from climbing stairs and noted that they have become thinner and weaker (Dilshad Murad Khan 2010; Salve 2010) however this may not necessarily be directly attributable to the new housing and rather an increasing age. The elderly do clearly have a problem with circulation, and have reported a tendency to stay within their tenement which has impacts on their social interaction (Sheikh 2010).

Residents are aware of un-cleanliness of the building leading to poor health; *“There is so much dirt, lot of mosquitoes. Dengue mosquitoes can lead to serious diseases. People throw rubbish from the upper floors”* (Sheikh 2010). Others are adamant that the building has directly detrimentally affected their health and well-being (Dilshad Murad Khan 2010; Nanapeth Slum Residents 2010; Sonewane 2010) and perceive that *“more people die after coming in this building”* (Asha Jadhav 2010).

The new buildings are perceived by the community to be un-healthy; the buildings have even been nicknamed after a local state hospital;

“The building that they have built here is criticized by everyone; everyone calls this building ‘Sassoon Hospital’. People put all their clothes, bed sheets, etc. outside to dry. It does not look good also. If they have given the houses, they should have made some good arrangements for such things”(Nanapeth Slum Residents 2010).

When interviewed, the developer was of the opinion that people’s health must have improved now that they have private toilets. The link between private sanitation facilities and improved health is commonly acknowledged but has not emerged via resident’s perceptions in this particular case study. The developer could not understand why some residents have expressed a desire to move back to the slum when they have been given free homes of what he considers very good quality (Parmar 2010). This shows that there is a lack of understanding of resident’s needs, and priorities between the stakeholders, which perhaps is not surprising considering the lack of contact the different parties have had during the development.

Social cohesion, Peace & Overcrowding

Residents have disliked the impact that the tenement layout has had on social cohesion and community interaction. During festivals and functions the community spirit was shared much more in the slum, an environment that people miss (Sheikh 2010).

“[in the slum] People were friendly, and close to each other. They had communication between them. Here in the flat system, everyone is separate, remains in his house” (Kharat 2010).

“Here every one’s door is closed so each one is confined to his own house. No one goes to other’s house and mix with each other easily” (Sumit Jadhav 2010).

Other residents find the environment in the new housing overly congested and less peaceful due to the number of people living in close proximity with reports of people coming to reside from outside areas which have added to the overcrowding and caused divides among the community (Jekate 2010). One resident reported sleep disturbances (Sumit Jadhav 2010).

However one teenage student commented that the new atmosphere is more conducive to study, with fewer distractions;

“The best thing is we don’t get interfere in others. We don’t talk, we only sit in the house. That is more good for us, because downstairs we cannot study because of the havoc” (Sonewane 2010).

There were no reports of religious angst within the community as the majority of residents are Baudha and Matanga in the area (New Nanapeth Group Discussion 2010). Some Muslims have come to the community on rent. Some residents complained about outsiders coming into the community and being allocated tenements which they were not entitled to, leaving other larger families without the number of tenements they feel they require. This has caused some tensions within the community.

Social cohesion, peace and overcrowding

- The layout of high rise buildings with long corridors discourages resident interaction. But due to the nature of the SRA schemes, high-rise buildings which occupy minimal floor space are required.
- One of the most positive features of informal settlements in India is the unique sense of community residents feel. The spatial consequences result in families living in close proximity, indeed joint families and many generations cohabiting together. The economical and environmental consequences of scarce resources and vulnerable situations encourage families to share and support each other. These features of communal living are lost when people live in high-rise buildings of small tenement size which cannot accommodate larger joint families and in which tenements are arranged in a line formation with no external spaces where previously families would have spent considerable time living and socialising in the spaces in-front of their homes in the open-air.

Empowerment

Residents have reported that they feel they were excluded from contributing and voicing their opinions during the surveying process at the early stages of the project;

“At the time of survey municipal corporation as well as our committee was under their control so no one can challenge them no matter what you do. I hope you understand what I am saying. All the decisions are in their favour. People are uneducated. At the time of survey no one of us was told about it and no one was suggested to stay at home. If people were told about it they would have taken leave from their jobs and stayed at home for their houses. The uneducated people were thus deprived of the benefits. Some people who were not residents of the slum were also given flats. People in favour of the promoter, people from our slum committee, etc. were given flats even after completing the scheme” (Jekate 2010).

The same resident reported that the uneducated and less empowered people were unable to represent themselves and protect themselves from being exploited;

"I got electricity connection in my name for my house as well as shop. Though our father is less educated he is well aware of legal matters so we were not cheated but being uneducated and ignorant of legal formalities many have been cheated. Some people do not have a single educated person in their house. It is not that one has to be well educated to have the knowledge of legal matters. Sometimes even an absolutely uneducated person is also very wise. Some valid owners are not given their due houses and some who were in good books of builder or in good books of committee people were given the houses though they were not valid owners. Initially we were told that we would be allotted the houses by the lottery system but they did not do it the way they have told us, they did it the way they wanted to do it" (Jekate 2010).

Empowerment

- A lack of education, awareness of one's rights and confidence to speak up is contributing to a lack of empowerment of many residents who are being taken advantage of as they are unable to voice objections and concerns.
- Communities need to be more mobilised, and committees formed which fairly represent the majority of residents, not just the influential few.
- Improved education from future generations will help but current residents might benefit from the influence of an external organisation, such as NGO, to help mobilise the community.
- SRA regulations should encourage, support and initiate the mobilisation of strong community based networks which would help with the sustainability of their rehabilitation projects.

Livelihood issues

Finance and Taxes

The interviews did not seek to gather information on the change in resident's finances after resettlement, but it did emerge that the most costly household expenditure for families in the new housing is food and education (Dilshad Murad Khan 2010; Kharat 2010).

Residents pay bills for their electricity usage but are not charged for water. Some residents reported paying corporation taxes (Sheikh 2010), others claimed they were exempt (Surekha Suresh Jadhav 2010). Residents are aware that after their first 15 years of inhabiting the new homes that they will be required to pay maintenance charges.

Animal husbandry and Businesses

Due to the nature of high rise living not enabling garden or open space near individual tenements, residents reported their disappointment at having to give up keeping animals after moving (Dilshad Murad Khan 2010). This would have had financial consequences for the people involved after losing a source of income and food source.

Residents who formerly ran businesses and shops in the slum should have been identified in the survey and allocated a replacement work unit in the new buildings. Some residents have received the replacement, others have not. One businesses person has substituted their shop with a portable vegetable cart but they are resentful that they no longer have their larger shop (Jekate 2010). Some residents who have expressed an interest in establishing a new business have approached the developer/owner for a shop unit but have been refused (Dilshad Murad Khan 2010). One business owner has reported a lack of revenue from their new shop due to increased competition from other vendors (Asha Jadhav 2010).

Figure 40 – Permanent and temporary shops



Animal husbandry and business

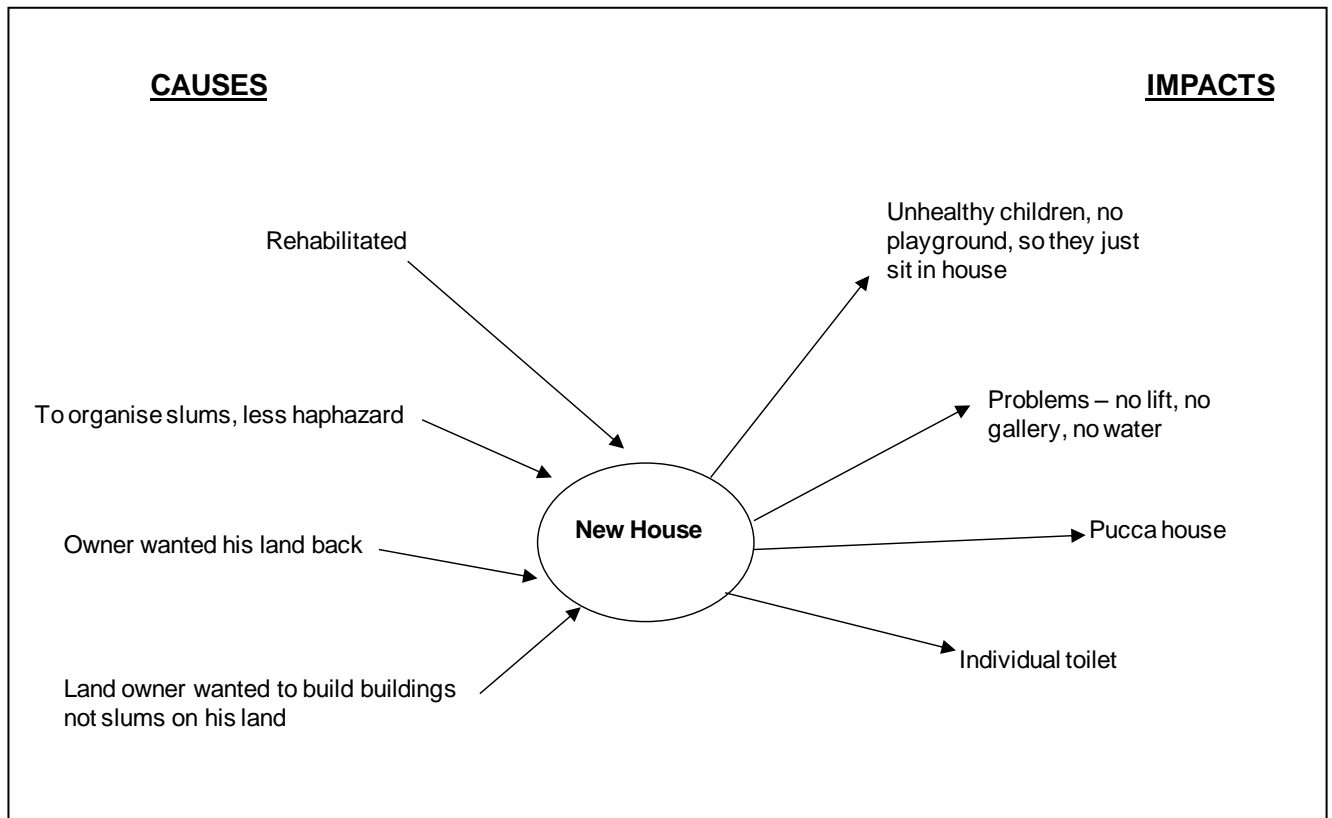
- It appears that small businesses and workshops are opportunities not available to all aspiring entrepreneurial residents. There have been reports that the more influential residents have received business units thereby dissolving the business prospects for less influential but equally aspiring residents.
- The plot could provide open spaces and designated areas for keeping animals. However the distance between the animals and owner’s homes might prove difficult to protect the livestock against thieves and shelter as formerly animals may have shared housing with residents.
- There needs to be a more transparent process for the allocation of commercial units to residents in order to make it fairer and encourage the economy.

Perception of upgrading success

This section brings together the stakeholder's perceptions of the success of the housing rehabilitation project.

During the group discussion the residents were then asked to draw a cause-impact diagram of the reasons why and impacts from the construction of the new housing at Nanapeth. The following diagram was generated;

Figure 41 – Cause-Impact of new housing at Nanapeth



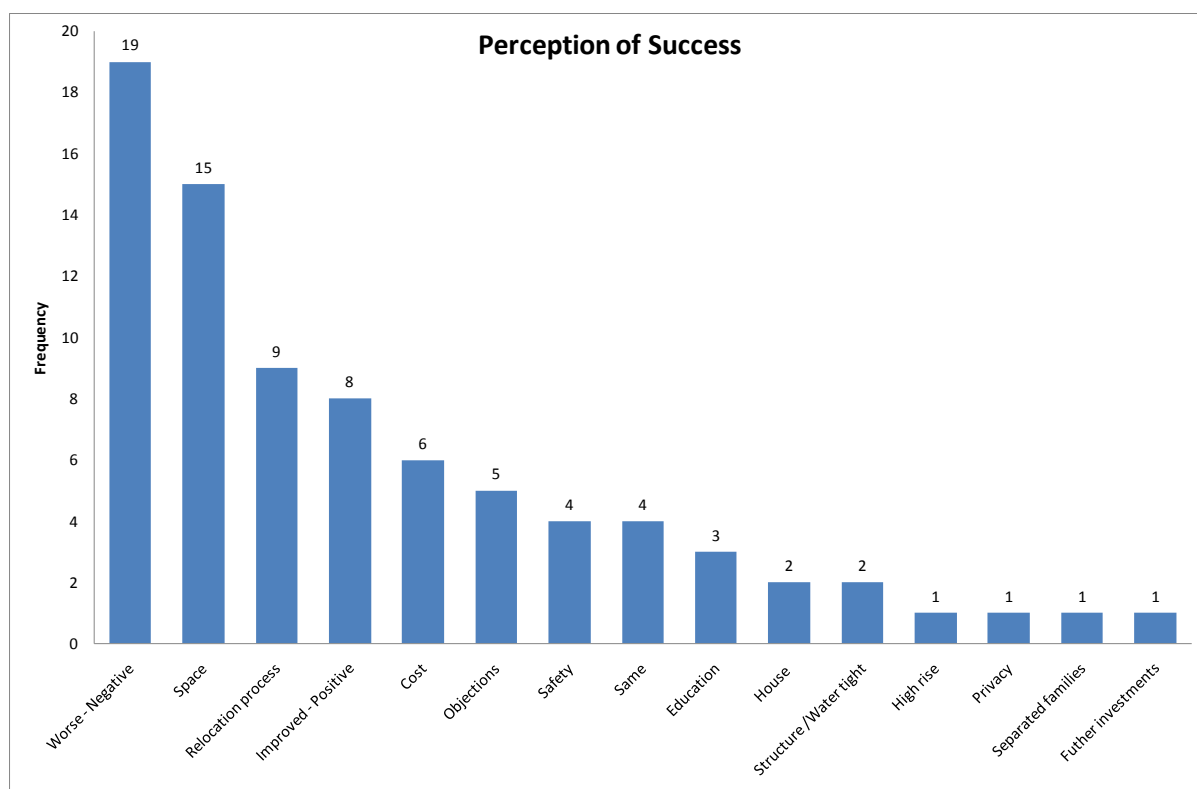
The diagram shows the reasons why the residents felt the new housing at Nanapeth was created. They indicate an understanding of the land owner's desire to retain the ownership over his land and represents the residents' consciousness of their previous illegal squatting situation. They also realise the desire to develop slum sites in a more planned fashion and the requirement to rehabilitate the slum dwellers. The residents have listed just four impacts of the new housing, two negative and two positive. The positives being a well-constructed house with individual toilet, the negative impacts group problems into one main impact (citing no lift, no gallery, no water) and also the negative impact the high-rise building design which lacks open space has had on children. Coming from a group of female house-wife respondents it is not surprising that the priorities raised primarily concern domestic and family issues. Despite plenty of prompting and time to give fuller answers, the residents' responses to this task were rather limited and stress the problems and negative consequences of the housing rather than the positives.

Themes emergent from the interviews have been grouped below to describe the resident's satisfaction of their new housing and its delivery.

Table 4 – Perception of success: Coded themes emergent from data

Status of living situation	Physical	Social/Human	Process
Improved – Positive	Space and Allocation	Safety	Cost
Same – No change	House	Privacy	Relocation
Worse – Negative	High rise	Education	Further investment
	Structure	Separated families	Objections

Figure 42 – Frequency of topics discussing Perception of Success



A very high incidence of responses reported the resident’s poor perception of the success of the project, deeming their current situation to be worse than before rehabilitation. However, a minority of residents did report feeling that their situation was improved. The main problem residents raised was the amount of space within the flats compared to their old houses and living areas within the old slum.

Residents did not report a problem with high-rise living. But they reported failures in associated characteristics that can come with high-rise building design, such as, community cohesion and circulation within the building.

Key Points

- Status of Situation - Most residents reported a worse living situation since rehabilitation.
- Space - Residents’ biggest issue raised which affected their perception of success of the new buildings is the amount of space allocated to each family.

Status of living situation

Some residents reported satisfaction in their new homes (Surekha Suresh Jadhav 2010) with a particular improvement due to the provision of a private toilet (Jekate 2010; Kharat 2010). Although residents expressed satisfaction some of these informants commented that their quality of life has not changed since moving house (Kharat 2010; Sumit Jadhav 2010), and some still felt that issues needed to be addressed (Salve 2010). Numerous more residents made complaints regarding the housing stating that their life has worsened since moving to the new houses. Residents reported feeling 'restricted', 'unhappy', 'weaker', 'uncomfortable', 'suffocated', 'crowded', 'unlucky'. The most common complaints concerned the water supply, space and access & circulation issues. These are explained in more detail in the 'Life Today' theme of analysis.

Physical

Space

Residents indicated a preference of their old house being better in the slum, with space, dimensions of tenements and allocation of number of tenements being a major problem to many families.

The houses in the slum varied in size. As a consequence there were reports from residents complaining that their new home is significantly smaller than their previous house and that space has been compromised (Asha Jadhav 2010; Dilshad Murad Khan 2010; Sheikh 2010). Equally, others reported their new house was bigger and so were happy (Salve 2010). Another resident liked the fact that they previously shared their house with another family and their in-laws, but that they have now each been given a separate house which has made life better (Surekha Suresh Jadhav 2010). Residents have explained that the compromised space inside and outside has affected social gatherings such as festivals, keeping animals, play space for children, fresh air and drying clothes. These are discussed in other sections.

Many residents have reported that there were errors in the survey and people occupying more than one tenement or unit were not always allocated the same in the rehabilitation buildings. As is common in India joint families and multi-generations tend to share a larger property. There were repeated reports of the larger slum properties being counted in the survey as one tenement, therefore neglecting the dimensions and occupancy of the residents. There were also reports from widow-headed households who are supported by other male family members who have been excluded from having their home replaced as they were counted under the guise of their male relative (Kamble 2010). Some residents were promised a certain number of houses but did not receive what they were expecting (Dilshad Murad Khan 2010; Sheikh 2010). It was also reported that some people were allocated numerous more houses than they were owed. *"Some people were the rough type and so they were given 2-3 houses to shut their mouth"* (Khan 2010). Others reported that they gave money in exchange for an extra tenement (Kharat 2010).

In order to be included in the SRA resettlement plans the residents were required to prove their status of having lived in the slum since 1994 via formal documents such as ration cards and ID cards. Anyone not holding the required documentation was evicted from the site and not included in the re-housing plans, unless through the court system they were eligible to defend their rights and history of residing on the site.

Residents refusing to move from the slum into the new housing reported that they will not move until allocated the correct number of flats that they require. One family of 25 people is currently occupying a very large house in the slum but have only been allocated one flat in the new scheme because the family are only in possession of one ration card. This issue of correct documentation for the slum dwellers is a significant problem (Nanapeth Slum Residents 2010).

Residents seemed well aware of their legal rights to appeal any decisions regarding allocation of tenements within the courts. However, of the residents spoken to who had taken their case to court, no one was found to have been successful.

“Vikram Raje told us [about the rehabilitation]. He has threatened us. I had two houses downstairs and he gave us only one in return. I have presented the petition against him in corporation...we were shown [the plans], but we did not approve them. They have compelled us to move from our old house. Actually, initially he gave two houses but afterwards he forcefully made us vacate one house and hand it over back to him...Actually I had received a letter from corporation office that I am allotted another house. Mr. Raje had taken that letter from me. He threatens me that I should not ask for another house, so I have asked him for a small shop so that I can start some small business there and can earn something for my livelihood, but he is not ready for that also” (Dilshad Murad Khan 2010).

The landowners and developers adhered to SRA guidelines rigidly throughout the development, this included the size of tenements and procedure for the allocation of tenements. The project team do however acknowledge that this was the first building that was passed under the SRA rules in Pune, since then, SRA projects and designs have moved forwards. At every stage of the project the developers have followed SRA rules.

The building design for Nanapeth was compromised by a number of factors; the topography of the land, provision of open spaces and common amenities (required by SRA regulations), existing commercial occupants and a 50% garden reservation (Mahajan 2010; Parmar 2010). This meant that the government had previously earmarked 50% of the site to become a park area and children’s playground, meaning that any construction on that portion of the site was banned. The architect was also required to retain the trust property site for its historical value and significance to the Raje family. These factors significantly decreased the size of the plot the architect was permitted to design for.

The building developers are particularly restricted by the amount of space they give to slum-dwellers in the rehabilitation tenements, because they will only be compensated following the SRA rules for FSI and TDR. Even if the developer wanted to give more space to the residents, they would not be compensated for their extra expense due to the SRA rules. The developers have given the residents a tenement with a floor area of 300 square feet, approximately 27 m², which is 30 square feet more than PMC regulations. The developers will not be compensated in the form of TDR for the extra square feet, but the residents are better off;

“Which is in their benefit, there is no objection to that but the extra benefits we will not be able to give them. If he has added something more on his own, but in terms of FSI or TDR, which is to be sanctioned we cannot exceed the norm. He may on his own he may do one or two favours extra, but the benefits which he will get from our side will not exceed government norms”(Kolte 2010).

Space / Tenement size and allocation

- Tenement sizes could be varied so that not all tenements are identical.
- Residents could be given the option to purchase larger or multiple tenements.
- The SRA could allocate new housing replacing each square metre of residential/commercial space, or according to occupancy/family size, rather than one house per household in possession of a ration card.
- The SRA could change their rules to enable residents to have larger living spaces so that their quality of life is better. The developers would need to be compensated accordingly and the SRA would need to regulate the amount of TDR and FSI development permitted in other zones of the city in line with the city development plan.
 - The SRA could release a set amount of TDR according to tenements completed, rather than FSI/floor area.
 - The SRA could introduce a *range* of FSI released.

House

Residents are aware that there are better slum rehabilitation schemes in the city, mentioning Kaserwadi SRA scheme and Manjulabai Chawl (Nanapeth Slum Residents 2010; New Nanapeth Group Discussion 2010) and express their disappointment that the new housing at Nanapeth does not compare. Repeatedly residents express their preference of their slum houses (Khan 2010).

“For example look at the Manjulabai Chawl. Tin sheds (huts) were there too. The houses built there are better than the ones built here. There it is only 6 story building and you can see that while passing by that road. It has everything like gallery, etc. as one would expect. Rehabilitation was done there too. They have amenities like bedroom, hall, kitchen, with toilet” (New Nanapeth Group Discussion 2010).

High-rise house structure

Residents reported their approval of now living in a permanent concrete house which is water tight (Salve 2010), a stark contrast to their impermanent shelter in the slum which was often prone to leaks during rainy season.

There were no complaints from residents regarding living at altitude. The key complaint was that residents were misled regarding the number of stories as they were presented with plans for 4 story buildings to which residents gave their approval. When the buildings ended up being 8 storeys residents were upset for having been misled (Surekha Suresh Jadhav 2010). This issue is discussed in the community consultation section of the theme of analysis ‘Institutional Reform’.

The related issues that come with high-rise building designs at compromised budget and space were highlighted. Number of lifts, staircases, balcony and positioning of tenements for social interaction were all mentioned. However, the actual situation of living above the ground was not presented as a problem by any resident interviewed.

High rise designs have been criticised in the past as an option for housing poorer communities. The appropriateness of high rise living for rehabilitated slum dwellers was put to the SRA. Kolte explained that high rise rehabilitation buildings are the norm under SRA rules and commonly constructed for various uses throughout the city. Kolte also presented his observation that cleanliness improves with high-rise lifestyles where the occupants are more responsible for their individual tenement than previously when residing on the ground floor;

“We don’t see any problem in that [high-rise living]. We have provided the lift and staircases. The facilities are there. In fact the awareness of sanitation increases in high-rise or multi-storied buildings. We observed that in the slums where they live they reside on the ground floor, the awareness about the area that they are occupying is not there and the cleanliness is not there. While in a small tenement he is responsible for maintaining his own tenement, although it is small. So that is going to benefit” (Kolte 2010).

When it was posed to the developer that past experiences have shown that high rise buildings are not appropriate for poor people and that they do not know how to live in them – the developer explained the situation that as ground space is limited, buildings have to increase in height;

“In cities there is no other way to go. If you don’t construct high rise the slums will never be developed. Now when they move anywhere in Pune, in public buildings they can go in high rises, then why cannot they live in the high rise? They have to accept the reality” (Parmar 2010).

Indeed residents from the slum agreed with this point and demonstrated their understanding of the need for buildings occupying a minimum footprint. One resident indicated that multi-storey buildings could be suitable for housing the poor if the correct facilities are included;

“We will have to build multi-storied buildings because we have scarcity of place. Though they will be multi-storied, we can provide good facilities. Instead of this eight-storied building we can build 10-storied but we can provide four staircases instead of one staircase, we can provide good broad passage, the lift should in working condition always and have the capacity of 700 kg instead of 420 kg. I would provide those type of facilities” (Jekate 2010).

This research has found that the residents were not inherently bothered by living at altitude. It is the management and provision of shared facilities of a high-rise building that present the problem.

High-rise living

- No resident complained about living at altitude, but the SRA should stipulate better provision and management of shared facilities and consider the social impact of their building design layouts.

Social/Human

Safety and Security

Residents expressed serious concerns for their safety within the buildings, due to the lack of emergency escape and circulation routes. When there have been incidents of fire and everyone attempts to leave the building together people injuries have occurred on the stairs (Khan 2010; Surekha Suresh Jadhav 2010).

“There is only one staircase. In case of any mishap like fire, etc. how are we to escape? People will simply die in the stampede. Sometimes women try to commit suicide by setting themselves on fire on a whim, how can people escape safely through this one staircase? Lift is also not working. People damage the lift in anger. How can one go on eighth floor without lift? We stay on third floor but it is difficult for us to climb even three floors every now and then, then how difficult would it be to go on eighth floor without lift?” (Asha Jadhav 2010).

Residents remaining in the slum who are refusing to shift commented that the lack of lighting in the building corridors makes them feel unsafe, another safety concern raised by slum residents is the presence of community outsiders who now occupy the new buildings, including drunken loiterers who they perceive are bad (Nanapeth Slum Residents 2010).

Privacy and Education

The term privacy was mentioned by one resident in the context that the new houses are more private than the slum, which it was reported has had a positive effect on the informant’s daughter’s study and standard of living (Surekha Suresh Jadhav 2010). Another resident reinforced this point by reporting that people are less interfering and less distractions aid study;

“The best thing is we don’t get interfere in others. We don’t talk, we only sit in the house. That is more good for us, because downstairs we cannot study because of the havoc”(Sonewane 2010).

Separated families

Some families have become split since the rehabilitation. Families that were joint and living together in one large house in the slum, have in some cases been separated to fit in different tenements. One resident reported his disappointment in the separation of his family (Dilshad Murad Khan 2010).

Process

Cost & further investment

Under SRA rules the rehabilitation housing units should be given free of cost to the affected residents. In most cases the residents have benefitted greatly from this and not had any cost implications to worry about. However, one family expressed their feeling of being cheated as they

have been asked to give Rs.10,000 to the corporation in exchange for the 'agreement'; presumably the ownership papers for the house (Jekate 2010), other families have been asked to pay Rs.40,000 for a house agreement which some residents reported was beyond their means (Kamble 2010; Nanapeth Slum Residents 2010). Another family who were not originally eligible for relocation reported that they had given some money was given to Raje in exchange for a house;

"He [Raje] told us they are going to demolish the house and we will not be getting a house. Only the ones whose names are in the list will be given a house. If we want we should purchase a house. So we finally purchased this. We did not get this because of the old house. He said we will get the house sometime later. So far we have not been given. Every now and then we are just told that we will be given a house, but none so far"(Kharat 2010).

Since occupying the new tenements the researcher observed that residents have made significant investments had been made in decorating and fitting out the new housing. Painted walls, fitting electrical equipment (such as fans and lighting) and large pieces of furniture have been installed which would not have been possible to fit into slum housing. One resident informed that she had spent Rs.100,000 on changes including painting to her new home (Kharat 2010). These actions indicate that residents feel a strong sense of ownership of their new tenement, a sense of permanency and pride in their new home.

Relocation

Families moved belongings themselves from their old to new houses. A number of families were temporarily housed on site in make-shift housing while the buildings were finished being constructed. Families moved themselves as they felt forced into it, powerless with their views uncounted. They were aware they had no other choice as their old homes were being demolished and they needed basic shelter (Sheikh 2010; Sonewane 2010).

"We cannot say it was forcibly done, but when all the houses were going to be demolished naturally individual views don't count. We had to move to these houses which were provided to us instead; after all we need a shelter"(Sumit Jadhav 2010).

"I will tell you the fact. We were sort of compelled to move here. For example, if someone opposed, at the time of monsoon when water did not get drained resulting in mosquitoes, dengue fever, etc. the corporation would neglect the matter. They did not look after the problems, and the people used to suffer a lot. So finally to get rid of such problems they had no other option than to move here" (Jekate 2010).

Objections

Many residents have objected to the rehabilitation plans as they did not want to move from their old homes in the slum. Residents have taken their cases to court but not one resident interviewed was successful with their case as the land they had inhabited was not owned by them, they had been illegal squatters. Some residents expressed their concerns that the institutions involved are corrupt;

“Actually we have fought up to Supreme Court regarding this matter. High court has told us that we are beneficiaries, the recipients, so we cannot place any demands. The court said it is not your land and we cannot demand anything. I think the court was corrupt” (Jekate 2010).

Residents explained that they felt the initial survey process was unfairly conducted, that decisions were made in the favour of the institutions and that the objections of the residents went unheard (Jekate 2010). Some residents tried to physically intervene at the time of construction but were placated with bribes and the building works went ahead (Asha Jadhav 2010).

“My husband tried to intervene at the time of construction of this building. He was not allowing them to build. But still they went ahead with the construction. We sell vegetables here. They were not ready to let us do the needful construction for that purpose. They stopped us for two days...We did complain. They took bribe and allowed the construction to proceed” (Asha Jadhav 2010).

There are still a considerable number of residents inhabiting the partly demolished slum who are refusing to move to the new buildings. Their reason is mainly due to allocation of tenements due to missing ration-cards and photo documents. Residents are also unhappy with the new building designs and miscommunication they have received regarding the rehabilitation. The residents at Nanapeth are illegal squatters with no legal right to the land, however, as they have been resident on the site for generations the people feel that they now have rights to the ownership of the houses they have built on the site.

“We have 15-16 people in our family. If they want to give us, we should be given two houses to accommodate our family and we have a right for that. They have even threatened that they will cut our water supply if we do not move. But come what may, we are not going to shift or leave this place”(Nanapeth Slum Residents 2010).

At the time of research a significant portion of the slum was demolished, but that which remained was still occupied and residents were refusing to move to the new housing. Raje’s son admitted that;

“10%’ of the residents are currently refusing to shift from their homes...because they are not interested... but I can ‘reach’ them” Raje.

Some of the tenements are not yet occupied as around 40% of the intended residents are still staying in the adjacent slum (Oswal 2010).

“They are not shifting because they have some other problems. For example, after the survey maybe, there are two brothers who are in need of two houses. As per the list we are giving only one house so they are not shifting. Will you just have to force them out? With PMC force and police force we will vacate them and shift them into these buildings and then the entire plot will be vacated. That will be started within a month. It is under process. We are giving notices to the people” (Oswal 2010).

However, Raje’s son demonstrates their awareness that the new housing has been received differently by different sections of society,

“Young people definitively because they have their own ideas, like his house is to be like this and we are building the houses as per SRA rules, so there has to be some conflict between their ideas and the houses which we are developing.”

Figure 43 – Partly demolished adjacent slum



The landowner, Vikram Raje is very proud of the rehabilitation scheme he has organised, against the political obstacles, which he considers a resounding success. Raje has successfully implemented a scheme which has established the protocol for future SRA schemes in the city. The project has been financially rewarding, but of crucial importance to Raje was the reclaiming of his family’s ancestral land for generations to come;

“I have given to my family members not plots only but the developed houses. They were asking for the open plots but I have given them a constructed building” (Raje 2010).

According to the land owner, another key indicator of success of this project is the recognition that it has earned. Mr Raje, the land owner and coordinator of the rehabilitation scheme has achieved a good level of public notoriety after successfully clearing the slum from his land in a profitable scheme. This has given him a valuable reputation as a ‘pioneer in slum rehabilitation’ which is highly valued in his society. Raje is now consulted by developers and affluent land owners in the city for his valuable knowledge of organising for the rehabilitation of slums (Raje colleague 2010).

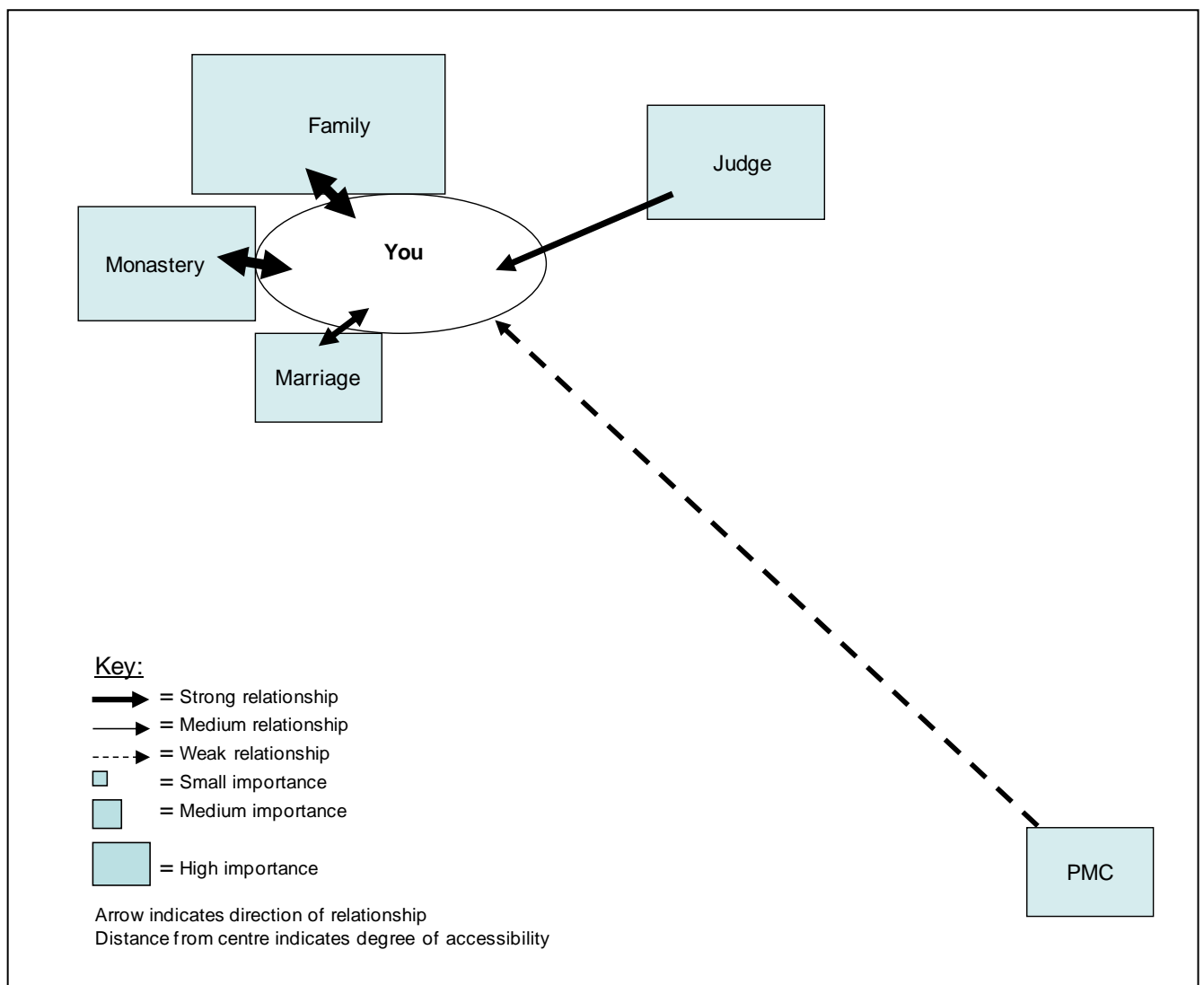
Institutional Reform

During a group discussion the residents were asked to list all the institutions they are involved with, see Table 5 and then to map them indicating their perception of importance, strength and direction of relationship with the institution, and accessibility of the institution. See Figure 44.

Table 5 – Nanapeth Institutions

Institution	Comment (in resident's own words)
PMC	
Monastery	School teaching
Family	Joint family
Marriage	
Judge/Court/Police	

Figure 44 – Nanapeth Institutional Mapping



The institutional mapping exercise carried out during the group discussions was a useful tool to capture the residents' perceptions of the institutions around them. The institution-perception map

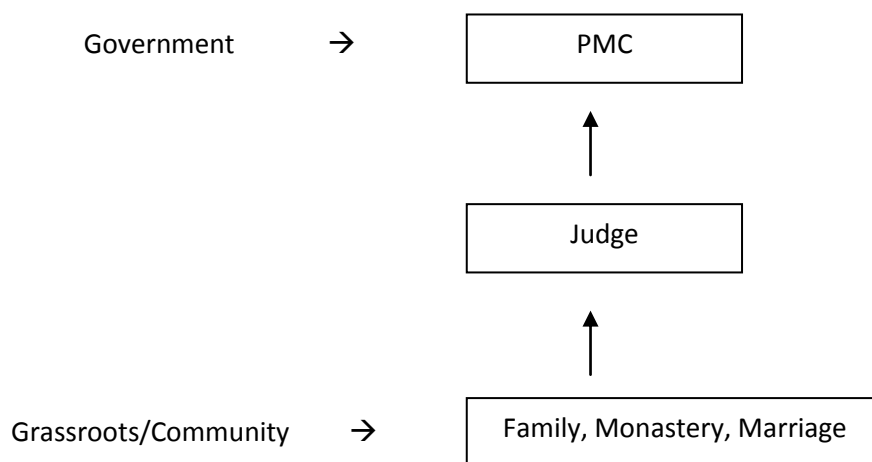
shows that the institutions can be broadly organised into three groups in order of priority to the residents;

Group 1 – Family, Monastery, Marriage

Group 2 – Judge

Group 3 – PMC

The key institutions which are relevant to the community and involved in the resettlement are;

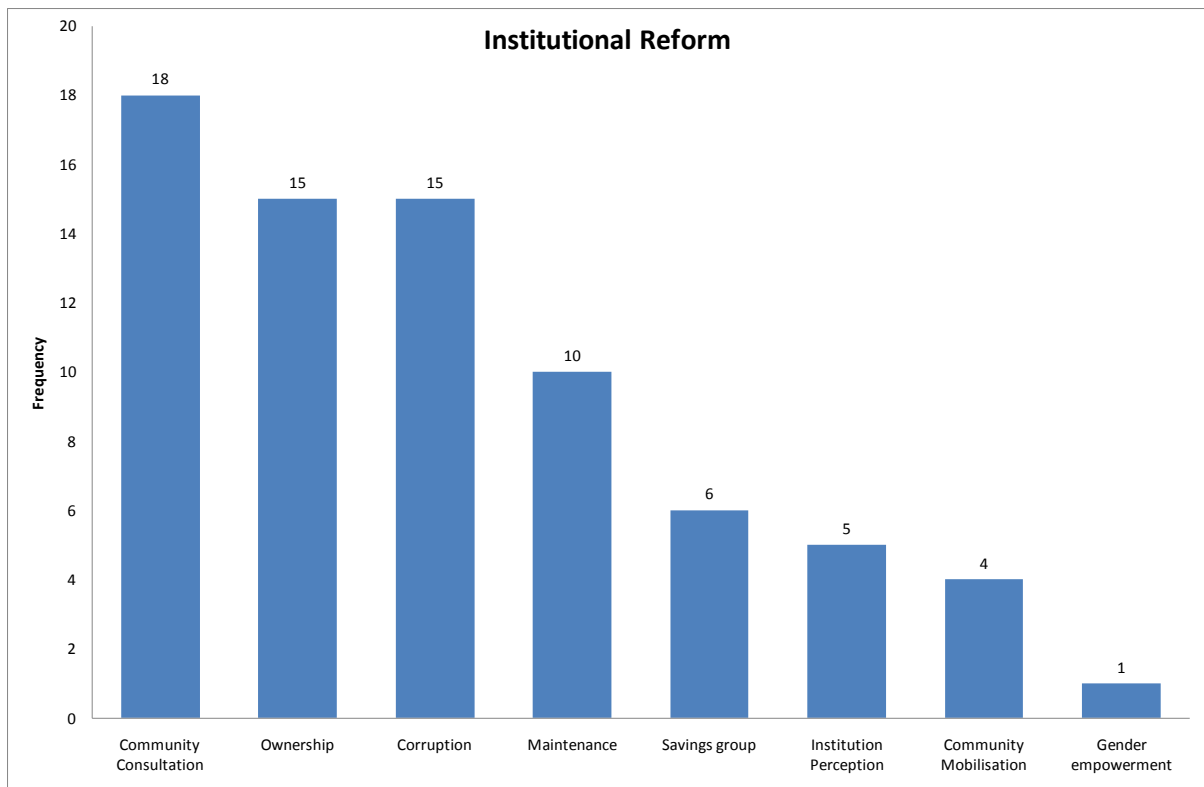


As would be expected, the organisations with less presence in the community such as government organisations, Group 2 and 3, Judge and PMC, have the weakest relationship and are considered the least important and least accessible to the community.

Core community institutions such as those in Group 1, Family, are considered the most important, most accessible to the community and with the strongest relationship to the community. The monastery was indicated to be of medium importance with a strong two-way relationship with the residents and highly accessible. The Judge was also considered to be of medium importance but less accessible to the community although more accessible than the PMC.

It can be seen that the relatively recently rehabilitated residents did not mention any institutions that were involved in organising their rehabilitation such as the land owner or building developer. It was also seen that no NGO or CBO organisation reinforces the community and represents them to the larger institutions.

Figure 45 – Frequency of topics discussing Institutional Reform at Nanapeth



From this chart we can see that the issues of community consultation, ownership, corruption and maintenance were regularly mentioned by residents during interviews. From the data it emerged that residents were disappointed with the level of consultation they received during the development and planning of the new housing and many felt that they were misled by the developers. The topic of ownership frequently arose because of a directed question on the topic which revealed that many residents are confused about their status of tenure and are still awaiting documentation from the authorities. The issue of corruption was raised frequently by the residents and discussions revealed significant mistrust between the hierarchy in the community as well as between the community and the developers/land owners. Residents are concerned about the futurity of maintenance planning for the building and are currently unhappy with the state of maintenance at present.

Key Points

Institution Perception

- The interviews revealed that residents feel unable to access and communicate with the higher government institutions. This may be from a lack of knowledge of one's rights, lack of empowerment, possibly the root of which is a low level of education of residents.
- Residents are not supported by any CBO or NGO

Community Consultation

- Community consultation between the community and project developers is poor. The community are not mobilised or working together.

Ownership

- Residents do not feel a strong sense of pride or ownership of the new houses. They have not contributed financially or otherwise to any stage of the development process.

Maintenance

- Residents are concerned about the current maintenance arrangements being poor and the futurity of the building maintenance.

This theme of analysis brings together the information gathered from stakeholders regarding the institutional frameworks and reformation brought about by the process of the rehabilitation scheme. The analysis indicates the longevity and futurity of the scheme as well as impacts upon community groups and institutional frameworks.

Table 6 – Institutional Reform: Coded themes emergent from interviews

Governance	Social/Human	Futurity
Institution perception	Community Consultation	Maintenance
Corruption	Community Mobilisation	Training & Handover
	Savings groups	Ownership
	Gender empowerment	Monitoring & Evaluation
		Institutional Framework

Governance

Institution perception & Corruption

The residents' general perception of the government authorities is negative. Residents have complained that the needs of the poor are not taken seriously, and expressed their disappointment and feeling that the government is not using funds for rehabilitation fairly (Sonewane 2010). Other residents feel that the government does not care and has done nothing for the slum dwellers. One resident gives the examples of the provision of loans and assistance to establish businesses as something that the government should help support but presently does not (Dilshad Murad Khan 2010). Residents have also complained about the local committee not fairly representing the whole community and unfairly receiving benefits they are not entitled to.

"After the demolition the committee members sold out the scrap. Everything like the tin sheets, wood, etc, was sold by them, and they are now benefitting. Where will we poor people go? After working for the whole day, we should have some place to stay"(Kamble 2010).

"We forever grumble about the authorities. They have not considered us humans but just like animals (dogs or cats) while building these houses. The slum was better. They did not want slum areas and therefore they wanted to demolish slum areas, so they have given us these houses but these houses are not up to the mark and at par with people's needs. We feel that slums were better than these houses. We really were happy over there. We had all the facilities over there. After relocating here people are at loss. Government just wants to show that we can also develop like other developed countries, but it is useless. Government has spent Rs. 200,000 for each house but the committee members are all corrupt and the money given by government was misused" (Sonewane 2010).

Repeatedly stakeholders at all levels have mentioned the issue of corruption. Residents have given examples of money changing hands in exchange for the tenements, as bribery to allow construction, and to pacify opposition. Residents have also expressed their mistrust in the court system and feel that the interests of the corporation and more powerful institutions, including the committee, are favoured over the individual slum-dwellers rights.

"Yes [there was corruption in this scheme], on a large scale. Everyone is corrupt including builder, Mr. Raje, our committee. They must have got something. Some people have received houses or shops when though they were never there previously in the slum or actual beneficiaries....Builder and our committee have settled the things in their own favour" (Jekate 2010).

It has emerged from the research that there was corruption at all levels including within the community, with reports from residents accepting money during meetings with the committee in exchange for their signatures and consent for the scheme to go ahead (New Nanapeth Group Discussion 2010).

Residents expressed their annoyance that the allocation of houses was not always conducted on a fair basis because of corruption and bribery. Some committee members and more influential members of the society were allocated more tenements and commercial units than they should have been under SRA rules. Reports were made that the flats on the 7th and 8th floors of one entire building are occupied by committee members and even their relatives from outside Pune (New Nanapeth Group Discussion 2010). The residents who have complained claim they have gained nothing from the process and therefore feel their voices are ignored and they are powerless.

“We did [complain], but no one is bothered. Other people don’t complain. The mediators got 2-3 flats. They get what they want and are not bothered about any issues. A lady here had only 1 house, but being a committee member got 4 houses, and got shops too. There is lot of corruption here... Committee members were bribed and then the committee members told us there is no point in doing anything, that they had lost the legal case. So they instructed us to vacate and give them the possession. They convinced the people who were complaining that there was no hope...Presently we are suffering a lot since we don’t have sufficient space. Nothing happens when you are the only one to complain. There is no other voice to raise the issue” (Sheikh 2010).

It is important to note that it is not only the residents who have suffered due to corrupt practices during the housing development. The project developers had to overcome many planning obstacles. The main hurdles Raje admitted to encountering in this project were government rules and regulations. Raje’s acknowledges that his personal connections with Indian Government Politicians certainly helped him to understand the legislation involved in the implementation of an SRA project. Raje also stressed the importance of retaining a good working relationship with the Corporation and that overcoming the hurdle of corruption was an issue, as it can also be in development projects in many other countries.

“They accept bribes before making rules, at the time of sanctioning rules, etc...See everywhere not only in India it is there, but it is less in India compared to others. ...[The size of bribe given] ...Depends on the project, depends on the person, and depends on his hunger”(Raje 2010).

Raje revealed that more than one person asks for ‘back-handers’ at various stages of the project’s progression, the value of these amounts also varies according to the individual and the stage required to be passed;

“We cannot come to the exact figure... See my work is getting completed and whoever is the authority the figures are going to change as per his position, as per his approach, as per his power. The figure will get changed definitively. If he is having great power in his hand, he would definitely ask more. If he is not having that much of power, I ask but not that much... [Funds are transferred in stages]... as per their requirement. If this work is to be completed at this moment then at that moment he would need to pay depending on the nature of the work, depending upon the importance of that....the Officials are asking for so much” (Raje 2010).

Vikram Raje's son, and next generation to be heading the family company, is committed to change this working culture and to encourage transparency in future development projects. He is aiming to be a modern leader in slum rehabilitation developments;

"I am trying to prepare and pass the rules for the slum act of Pune so they do not ask more money from me"(Raje Jnr 2010).

Institution Perception & Corruption

- It is a fact in India that if things need doing efficiently in a government office, bribes can speed up the process and more than 75% of people in Indian government have first-hand experience of corruption (Transparency International 2005).
- Such corrupt activities are common in many countries. In India many government individuals take the extra income for granted, with Indian government ranked one of the most corrupt governments in South Asia (Transparency International 2005).
- For Nanapeth, being a new SRA scheme which required the formulation of policy and creation of new political frameworks, corrupt activities are not surprising. Stakeholders at all levels of the project had to manage and accept corrupt activities in order for the project to be completed.
- The attitude of Raje Jnr and the land owners is commendable. Their goal of more transparency and honesty in future development projects is creditable and gives hope to the creation of a fairer and more transparent society for the future development of India.

Social/Human

Community consultation

According to SRA rules the development planning should be done in consultation with the community and the residents consent should be sought;

"He [the developer] has to do everything in consultation with them [the community]. In fact this consent cum agreement includes all these conditions, that they will get the flat of so many sq. feet, it will have so many amenities, this will be the modus operandi, etc. So that they give consent to that and in fact throughout the scheme he has to do it by taking them into confidence"(Kolte 2010).

According to the SRA official at Nanapeth, the developers engaged with the community via the presence of a staffed office in the slum. From this point, documents were collected and guidance offered to the community including the display of occupant lists at the office (Kolte 2010). The developers confirmed that they displayed the building plans on notice-boards within the slum (Parmar 2010). However, according to the residents interviewed, there were no reports of the presence of an office or notice-boards on site. One resident reported having seen a photograph of

the proposed buildings displayed for a short time in the temple (Sheikh 2010). There may well have been an office for the construction site engineers where plans were available, however there were no reports of residents having accessed the office or absorbed information from plan drawings. This could have been because of the nature of technical drawings being unreadable to slum-dwellers, the site office appearing inaccessible, and the inappropriate method of communication to the community.

In order to develop his land under SRA regulations, Raje, the land owner was required to formally gain at least 70% of the residents' approval for the scheme. Raje sought this by personally visiting each slum household to formally introduce and explain his plans for the rehabilitation. When asked why he didn't hire an assistant or social worker to do this job for him, Raje and his colleagues explained the value of the faith that the residents have with the landowner himself;

"These people are very reluctant. They do not listen to you simply. If you go to their places and knock on their door, they will not listen to you. They want some people who can....and he is the land owner that is why they respect him. Mr. Vikram Singh Raje acts in the role of an organization. He organizes whole projects.....They have a lot of trust and faith in me. These things happen totally on the basis of trust. I am a politician and I know how to contact these people, develop trust with people that he will do this for them".

It is evident that these personal visits were done effectively because Raje's name is well known throughout Nanapeth and residents frequently referred to his direct communication. Despite the SRA rules and strategies for community consultation, significant misinformation reached the slum-dwellers regarding the building designs which has caused considerable disapproval of the scheme and in some cases dissuaded the slum-dwellers from occupying their new homes. When asked if any residents objected to the plans, Raje said,

"No, not a single case, not a single case. That is not their own property, they are just tenants, so they have no choice. We are getting them a clean house, why would you stay there in an old house. These are actually reinforced concrete buildings and those are made out of bamboos and metals, etc. They are very small. So they are getting a good house in a clean environment".

Although Raje personally received no objections to the plans, a large number of the original slum-dwellers have not occupied the new high-rise buildings. This could be due to a number of factors. Residents may have felt intimidated by Raje and not confident enough to object to his face. Some residents have since gone on to raise their complaints with the courts, as discussed in the analytical theme 'Perception of Success'.

Interviews with residents revealed that the plans for rehabilitation were not effectively communicated to the slum-dwellers during the refinement stages of the planning. Many people were aware of the scheme going ahead due to Raje's personal communications, but the details such as designs, photographs and plans were not revealed (Jekate 2010). Residents claim they were not invited to contribute their thoughts on the design of the buildings but they would have liked the

opportunity (Sonewane 2010; Sumit Jadhav 2010). Some residents reporting being included in community meetings during which they were given more information about the buildings, but they were under the impression that it would be a 4 storey development with a gallery and they were unhappy when the buildings resulted in 8 storeys feeling misinformed (Nanapeth Slum Residents 2010; Salve 2010; Sheikh 2010; Surekha Suresh Jadhav 2010). This confusion could have been because slum-dwellers were presented the first building design originally proposed by the architect, but were not informed of the later changes to the plans due to a lack of communication routes. Although one resident reported having seen a photograph of the proposed buildings in the temple, there was no mechanism in place for the community to feedback or raise questions (Sheikh 2010).

The final constructed rehabilitation buildings are the second version that was designed. Initially designs for a 4 storey building were proposed, these buildings covered a wider ground coverage, however this first design was rejected by the developer as the space available for the saleable component was compromised making the project less profitable. The architect was instructed to change the plans to use a smaller footprint, therefore making them high-rise (Mahajan 2010). However, these changes to the plan were not communicated to the slum-dwellers.

When the SRA were asked if they could do something to prevent occurrences such as this by promoting better communication with slum-dwellers, Kolte said that in future they will ensure that joint meetings are conducted between the developer and slum-dwellers with an SRA officer in attendance (Kolte 2010).

Residents also complained about the initial survey process to enumerate the community population and the collecting of signatures from 70% of the residents in order for the scheme to be passed under SRA rules. Residents reported being unaware of when the survey was conducted and said if they had been informed of the date of the survey process they would have stayed at home so that they could contribute (Jekate 2010). This has resulted in false and incorrect counting and measuring of the residents and their homes, and some residents not being allocated the housing they are entitled to (Asha Jadhav 2010; Jekate 2010). According to interviewees, the survey was conducted by the community committee who did not communicate the plans to the rest of the residents and who manipulated the survey in their favour;

“Actually the committee members of the slum residents had obtained our signatures. The committee has made the settlement out of court. Neither did they win nor did they lose. The committee had the required 70% signatures necessary to win. In spite of that the committee made the settlement out of court. The people who were involved in this were the ones like corporators, etc. Especially, the landowner Mr. Vikram Singh Jadhavrao did not have the 70% signatures that were required. In spite of that our committee has done the resettlement. Initially we were told that it would be a four-storied building but they have built eight stories. We were not involved in any of the procedures. We were cheated by the builder...We wanted to be involved in the procedure. After the settlement the list of beneficiaries decided by the municipal corporation should have been put up on the notice board. We never knew anything about the beneficiaries. This was the first mistake on their part. They should have put up the plans of the buildings for us to review at least when the construction began. That has not been done till date”(Jekate 2010).

Reports from the residents conflict with that of Raje, the land owner, who said he was approached by the squatters on his land asking for rehabilitation. He was met by residents who had travelled a great distance to speak with him and lodge their request for help with secure tenure and housing. He constructed free housing which is more than the open plots residents were asking for, he therefore feels that his rehabilitation project has more than satisfied the people's needs;

"People who are staying on that plot they demanded to be rehabilitated. They had a demand for it...I live in Baramati and people approached me over there. Baramati is 100 km. away from Pune, where people visited me for the project... They were asking for the open plots but I have given them a constructed building...that is a satisfaction for me"(Raje 2010).

Due to the structural framework of SRA scheme authorisation stages, in the case of Nanapeth, the developer did not join the team until after the initial plans had been authorised. Therefore, it was not until the developer came on board that the design was amended to minimise the building footprint to make the project more profitable. At this point, the SRA scheme authorisation should have been cancelled and resubmitted for the new 8 storey designs; and slum-dweller approval should have been sought for the actual building design.

Community Mobilisation

When the entire construction on site at Nanapeth is completed, an official Housing Society will be formally registered and tenure documents will be transferred to the residents, but this is a few years away. Currently, the transcripts indicate the presence of a community committee which the project developers engaged with to conduct the survey and communicate the plans with the residents. Unfortunately during the researcher's time in the field she was informed that no such community based group existed and so was unable to organise an interview with a committee member. The transcripts clearly show that the majority of residents are not well connected to the committee and are unable to communicate their views regarding the housing with the members. Residents reported feeling powerless, voiceless and not taken notice of by the committee or any other institutions; *"Committee members don't even come here or take notice of any of our problems"* (Asha Jadhav 2010).

There appeared to be significant mistrust of the committee among other residents and the feeling that the committee are out for themselves. Various reports indicated that committee members have been in an advantageous position and been allocated numerous tenements and shop units while other residents have gone without the tenements they believe they are owed (Khan 2010);

"At the time of survey, the municipal corporation as well as our committee was under their control so no one can challenge them no matter what you do. I hope you understand what I am saying. All the decisions are in their favour. People are uneducated. At the time of survey not one of us was told about it and no one was suggested to stay at home. If people were told about it they would have taken leave from their jobs and stayed at home for their houses. The uneducated people were thus deprived of the benefits. Some people who were not residents of the slum were also given flats. People in favour of the promoter, people from our slum committee, etc. were given flats even after completing the scheme"(Jekate 2010).

When asked if any community groups have formed since the development of the new housing residents were generally unaware but under the impression that a society would be formed once the remainder of the flats were occupied and the construction complete. Another resident thought that a society would be formed after 15 years to manage maintenance once the developer's maintenance contract has ended (Surekha Suresh Jadhav 2010), and was also aware of the charity World Vision visiting the settlement;

"There is an association called World Vision, but their activities are limited. They never tell us [what they do]. They just conduct meetings downstairs and leave. We never attend and we don't know [what the meetings are for]. We only know that an organization is there" (Surekha Suresh Jadhav 2010).

Among the residents interviewed there appeared to be a general lack of awareness of the power of a collective community and a general mistrust of the already established committee.

Savings groups

Residents reported the existence of savings groups in the community. Household savings revealed during interviews ranged from Rs.100 - 500 per month (Khan 2010; Surekha Suresh Jadhav 2010). The savings group was reported to be a newly created group which has been organised by the corporation (Sheikh 2010; Surekha Suresh Jadhav 2010). A girl comes to collect the money (Khan 2010). One resident confirmed it was a women's savings group (Sumit Jadhav 2010). Not all families have signed up for membership (Jekate 2010). Another resident sought a loan from the savings group was declined and so no longer contributes to the community savings (Sheikh 2010).

Gender Empowerment

Very little information could be gathered on the nature of the committee and savings group organisations, but one resident interviewed remarked that there is not one woman on the committee, which has resulted in a lack of understanding of household needs for housing design (Sonewane 2010). However, the savings group was revealed to be all women, a common formation in low-income settlements and a positive sign that women are heading households and planning for the future of their families. Another instance where gender issues arose is the undertaking of household duties by women, such as laundry, which have been made more difficult in the new buildings due to a lack of water supply and drying area. Residents also reported having to carry their laundry downstairs to the old slum to utilise the water and drying areas.

Community Consultation, Mobilisation and Gender

- The SRA should monitor and enforce the honest communication of the development plans to the residents and should not rely on a land owner or developer to liaise with communities as it is outside their area of expertise.
- The SRA should monitor and approve the plans under development at various stages and ensure that the 70% slum dweller approval is gathered for the final design, not an earlier version.
- A social worker with skills for working with communities should be engaged to mobilise communities and ensure proper communication. The SRA could enforce this by collaborating with NGOs.
- Communication methods should be appropriate to the audience of slum-dwellers and delivered via a medium they can clearly understand. (i.e. not technical drawings)
- The strengthening of local networks and formation of communities will help support and empower the citizens (Mitlin and Satterthwaite 2004) which will in turn improve the sustainability of the rehabilitation scheme.
- Community committee should represent the community and be democratically elected to fairly represent all genders, religions etc. and sections of society.
- In the case of this SRA project, the residents' views and contribution towards the design and development of the housing was not considered valuable, as the SRA had already formulated the design rules. However, if the SRA did consult with communities they would have a better understanding of appropriate housing design for the poor which could result in a housing development which is better accepted by communities, therefore more valued, better maintained and ultimately more sustainable.

Futurity

Maintenance

Under SRA regulations the developers are responsible for maintenance repairs of the building for the first 15 years. Raje has organised a lump sum to cover such eventualities including the water tanks, pumps and lifts. Upon construction completion a Housing Society will be formally registered. After the first 15 years, maintenance will then become the Society's responsibility. The developer is required to deposit Rs.20,000 per tenement into the Society's maintenance fund. This is mandatory and the final TDR will not be released until this maintenance fund is organised. Monthly bills, taxes and maintenance are expected to come from the interest accrued on this account. Therefore the SRA has enabled a perpetual provision for maintenance (Kolte 2010).

During interviews it emerged that residents are vaguely aware of the arrangements in place for the first 15 years of maintenance, and that after that period residents will be required to contribute financially towards maintenance funds (Dilshad Murad Khan 2010; Khan 2010; Surekha Suresh Jadhav 2010). These arrangements, as with all other communications revealed have been given verbally (Asha Jadhav 2010). There is some confusion among residents of the amount they are required to contribute to maintenance funds after the 15 years, with quantities ranging from Rs.200-300 per month (Khan 2010) to a lump sum of Rs.10,000 per household (Surekha Suresh Jadhav 2010).

Residents reported that presently when things break, such as the lift, the builders fix it (Salve 2010) but that the time for the problem to be resolved can vary (Kharat 2010; Sonewane 2010). Raje reported that he usually receives notification of maintenance issues when residents visit his offices in person, after which it takes a day or two for the problem to be resolved (Raje 2010).

After 5 years of age the building was observed by the researcher to be looking rather tired already. Dirt and poor maintenance was evident. Residents revealed that they were disappointed with how degraded the building had already become despite the builders who are responsible for maintenance being present on site (Sheikh 2010).

Training and Handover

When Raje was asked about the competence of the residents to organise for their own maintenance when the 15 years is up, he said *“They have but their attitude is different, their tendency is not for that”*(Raje 2010). When asked if any training or handover process will be offered to the residents Raje explained;

“If they are willing to [accept training] we will [offer it]. They are not eager. These slum dwellers' mentality is not like us. What happens is that they get given a house, they rent the house, and they again live in slum. So what sort of training we are expecting and what sort of training they will get? This is the common scenario in India. It is of no use actually because the attitude of the slum dwellers is always different than a common man”(Raje 2010).

The generalised impression Raje has of slum-dwellers might be realistic but does not address the reasons why slum-dwellers prefer their slum homes. At the time of research no official housing society had yet been established despite it being 5 years post occupancy, therefore much community mobilisation is needed in order for the residents to prepare for the 15 year deadline when they will be required to take over the maintenance and operation of the buildings.

The project architect and developer both expressed their hopes that in future formal provision will be made for the training of building operation and maintenance to the residents, perhaps with the involvement of an NGO or social workers (Mahajan 2010; Parmar 2010). The developer admitted that the residents do not know how to live in the high-rise buildings and that they need training, particularly on how to manage the water supplies. At present the only representatives on site with the knowledge are the construction engineers who may be able to train informally but there are no training programmes in place to guide the engineers (Parmar 2010).

The chief project engineer has witnessed problems with the residents' water consumption and the improper use of the lifts, for this reason he said that watchmen have been kept on site to operate the lifts and the engineers have been trying to communicate the proper use of water taps to the residents (Oswal 2010). The work of the watchmen was not witnessed by the researcher who did not spend time on site past 8pm for security reasons.

When asked why no training was offered, the Chief Engineer's opinion matched those of the land owner;

“They don't come forward for the training...they are not interested because they feel that the total responsibility will come to them. In due course it will be accepted by some common leaders over here”(Oswal 2010).

Although the developer has expressed his approval of NGOs and social workers helping the communities to develop, there are no plans in place for such activities. The responsibility of this hand-over is not of real concern to the land owners and developers who are ultimately motivated by profits, reclaiming land which is lawfully theirs, and gaining TDR.

In discussion with the SRA, Kolte commended community mobilisation by NGOs such as Shelter Associates and MASHAL for other central government housing schemes in the city and confirmed that the SRA at present does not have any formal schemes for such NGO aided community mobilisation. Kolte did however reveal that the SRA is now formulating guidelines for such activities which emphasise the need for NGO involvement for community mobilisation and that the SRA will seek to officially appoint NGOs for this purpose in the future (Kolte 2010).

At present, SRA officers examine the construction of buildings under their schemes upon completion; ensure that provisions are in place for maintenance by a housing society and that ownership deeds are transferred. These must be in place before the remaining TDR is released to the developer.

“We insist that the developer, with his initiative, ensures that a cooperative housing society of all the slum dwellers who have been given the possession, is formed and he executes that conveyance deed through the society to these slum dwellers. It is registered document that gives ownership rights to them for that tenement. That is done collectively through the society with the developer. So unless that is done, and contract for the maintenance of the lift and water pump etc, 15 years maintenance contract. These are the requirements which we ensure before releasing the final TDR for it. Final 40% TDR we release only after completion of these formalities”(Kolte 2010).

Ownership

The newly constructed housing at Nanapeth has been given to the slum dwelling families 100% free of cost. This SRA policy to give free housing differs from other housing and slum upgrading policy in the city. When the SRA were asked about their decision to give the houses to the slum-dwellers for free he explained that the government sees it as a ‘welfare decision’ to care for those living in impoverished circumstances;

“The government has observed that these are really downtrodden people who are underemployed or unemployed. The number of family members is more, level of education is low. Social background is very poor. They have been suffering through the years. So it is a welfare decision on the part of government that we should provide free tenements to them” (Kolte 2010).

During investigations it was found that the resident’s sense of ownership of the housing was particularly low and many expressed a desire to sell or rent out their tenement so that they can move back to a slum – a lifestyle they prefer. The SRA’s response to that;

“The rules don’t permit that. For 10 years the tenement is non-transferable and even after 10 years he has to do it with the permission of SRA. He cannot rent it also by any mode”(Kolte 2010).

There were however reports from residents that there are people occupying the flats as tenants, particularly a Muslim section of society (New Nanapeth Group Discussion 2010).

The developer is required to form a cooperative housing society through which residents are given the ownership deeds to their tenement. This process is monitored by the SRA who will not release the final TDR to the developer until these formalities are complete (Kolte 2010). The SRA reports that it should take up to 3 years after construction is complete for this final stage to be achieved. At Nanapeth, many communal facilities are unfinished including the children's nursery, community centre and society offices. Although many residents have been living in their new houses at Nanapeth for 5 years, these community facilities remain to be constructed and no CBO or housing society has been established.

When the developer was asked when the slum-dwellers will receive their paperwork indicating their ownership, Parmar said;

"By another 2-3 months everything will be over. Now because some people are not shifting we are not able to register their community. Once we register their community then each one will get their ownership papers"(Parmar 2010).

The developer's estimation is likely to be an optimistic one seeing as a significant amount of construction as well as community mobilisation is required before this stage can be reached. The developers are currently prevented from starting the final construction buildings because some slum-dwellers are refusing to move from what remains of the slum. The remaining slum-dwellers refusing to move into their new homes will be evicted within the next month by police force;

"Still we have to construct children's garden for them. They are not vacating and coming on this side, some of them. Once they vacate there will be an open space where we will construct...The houses are ready. Almost 150 people are not shifting there so now municipality will forcefully shift them" (Parmar 2010).

Of the residents who have occupied the new housing, people report that all documents are in Raje's name, including the electricity bills (Khan 2010).

"The electricity bill is still in the name of Raje Jadhavrao...majority of people are getting all the bills in the name of the land owner, Raje Jadhavrao. This is wrong and he is not transferring the ownership in our name"(Kamble 2010).

Residents have differing expectations of when they will receive ownership documents, after 10 years (Surekha Suresh Jadhav 2010), 15 years (Khan 2010), some residents understand that the paperwork is being delayed because the building works are yet to be completed due to squatters refusing to move from the slum (Asha Jadhav 2010; Jekate 2010).

Ownership

- Residents' sense of ownership, pride and motivation to maintain and value their new homes could be improved if residents were required to financially contribute to the cost of their new home.

Monitoring & Evaluation

The SRA implements regular monitoring checks during the development of their schemes. SRA schemes progress in three main stages. i) plinth, ii) RCC and brick work and iii) final building. The SRA inspectors check and measure the area of construction at each stage. The release of TDR is released in three stages in line with these checks (Kolte 2010).

The developers admit that they have not previously conducted monitoring and evaluations so far but they have plans to do so with assistance from an NGO in the future with a focus on social impact, educational impact and health improvements (Parmar 2010).

When the land owners/project coordinators were asked if any monitoring and evaluation or environmental impact assessments have been conducted, Raje's colleague said *"While doing this SRA project the pollution gets eradicated. That is the main impact."* This interpretation of the posed question indicates that the slum itself is considered 'pollution' and environmentally degrading. By eliminating the slum, the environmental pollution is also demolished.

When probed further, Raje's son confirmed that EIA and evaluation reports do not exist for this project. He does however say;

"Actually the living standard will automatically improve. They get good married life, good educational life. Their children get a decent lifestyle" (Raje Jnr 2010).

From these accounts, it can be deduced that no formal monitoring, evaluation and impact assessments of the development have been conducted.

Institutional Framework

The Nanapeth project is the first SRA scheme in Pune. However, it did not initially start as an SRA scheme because it was conceptualised before the SRA existed. The Nanapeth scheme was originally sanctioned and construction authorised under an older government scheme, known as SRD (Slum Redevelopment Scheme). The regulations to provide a Rs.20,000 maintenance fund per tenement and to construct community amenities such as a playgroup and society office did not exist in the old SRD rules (Mahajan 2010).

"The major part of it is already constructed. So the policy was that where major part has been already completed, constructed, those will remain with the SRD and the municipal corporation. The fresh ones that were started recently were handed over to us. The SRD scheme started in 1997. The SRA started in 2005" (Mahajan 2010).

The project architect clearly felt that SRA processes have developed and learned from the experiences of older SRD schemes and the Nanapeth project particularly as it eventually became classed as the first SRA project in Pune.

“From the slum-dwellers point of view the maintenance after obtaining possession of the tenement, the society role, 15 years maintenance contract of the lift, etc. These things were introduced later. So these were learnt from the problems, which were faced in the earlier SRD schemes”(Mahajan 2010).

Mahajan demonstrated a strong concern to continuously improve his slum rehabilitation projects and better cater for slum-dwellers’ needs in future projects. He clearly indicates that the experiences of Nanapeth have been valuable and have been considered a learning experience.

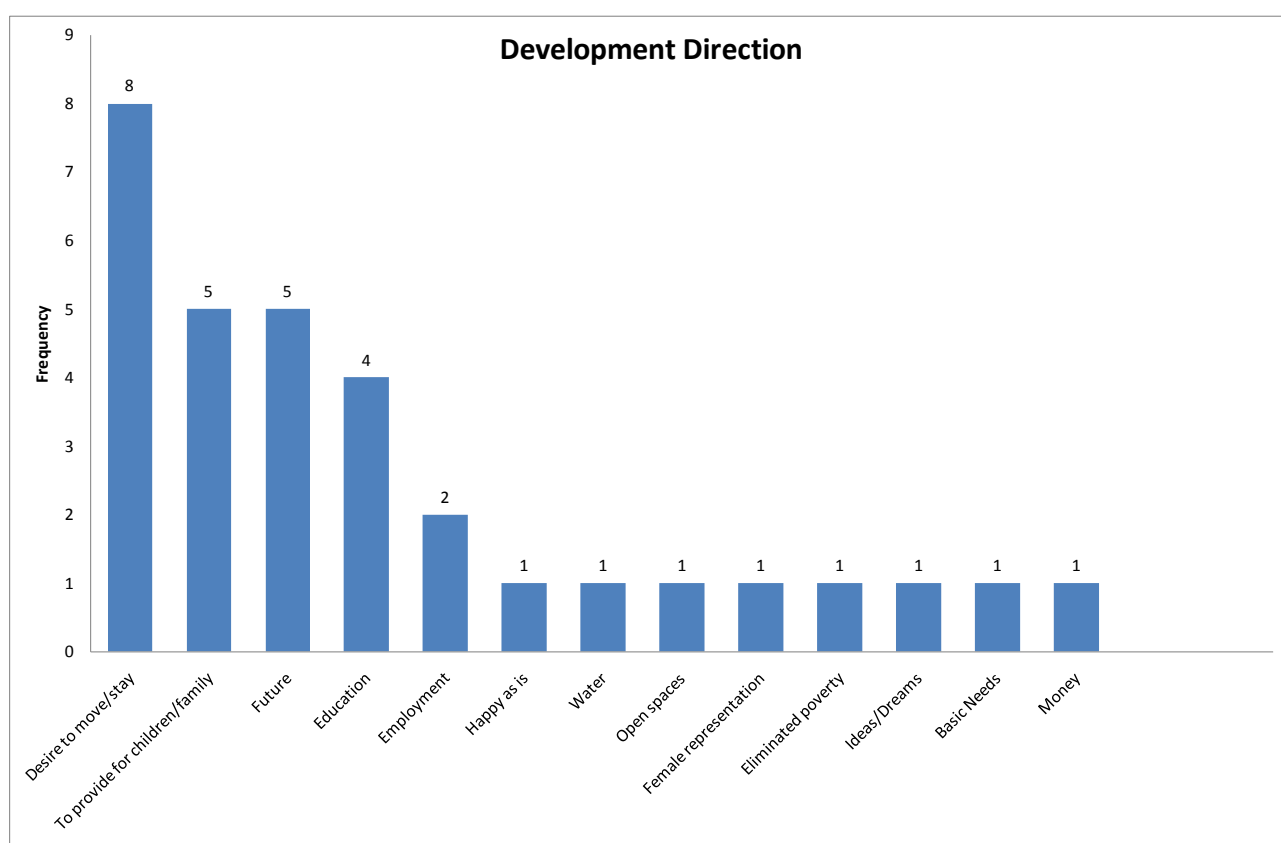
Development Direction

This theme of analysis brings together the stakeholders priorities and aspirations for the future. The information gives an indication of the development direction that stakeholders are aiming towards.

Table 7 – Development Direction: Coded themes emergent from interviews

Priorities – Short term needs	Aspirations – Long term goals	
Content	Desire to move/stay	Eliminate poverty
Water	Provide for family	Employment
Stairs	Adequate housing	Education
	Open spaces	Basic Needs
	Female representation	Ideas/Dreams
	Money	Future

Figure 46 – Frequency of topics discussing Development Direction



The high count of 'desire to move' indicates a majority opinion that most residents have a desire to leave their new home. Some residents however, usually the elderly, felt powerless and had no aspirations to change their living situation now that their old house has been demolished as they feel they have nowhere to go.

When residents were questioned about their immediate needs and aspirational goals in life there was a significantly high incidence of the desire to provide for children and family. This indicates the aspirations of the community to better their situation for future generations. The need for a decent education was frequently mentioned and shows the resident's awareness of the advantage of

education. The only short term need mentioned by residents was the need for an improved water supply, but most residents chose to interpret the questions giving their aspirations and dreams for a better future.

This theme was discussed verbally during group discussions. The main issues that emerged were;

Water supply – Residents are struggling to cope with the limited amounts of water available to them, particularly in comparison to water supply previously in the slum.

Lifts and Stairs – Residents are finding the access issues posed by the crowded and often broken lifts and stairs both dangerous and disruptive.

Flat design and open space – Residents are missing the open spaces and galleries they had within the slum areas which are having a detrimental impact upon lifestyles particularly for children missing space to play within and women needing drying space.

Key Points

Priorities – Short term needs

- Improved water supply and management

Aspirations – Long term goals

- To provide for future generations
- To gain an education to facilitate bettering oneself.

Desire to Move

- Many residents are not content with their current situation and plan to sell their house once they receive the paper work.

Priorities – Short term needs

One resident said he was content and happy with his current situation although accepts that one could always do with more money (Salve 2010).

The main complaint and short term need that residents would like immediately fixing is the availability of water. One resident thinks they are realistic in their hopes that for their situation they could not expect a 24hr water supply, but would like at least two hours morning and night (Jekate 2010).

As is evident in the data emergent within the other themes of analysis, stairs which represent emergency escape routes and circulation within the building is another priority for residents.

Aspirations – Long term goals

Desire to move/stay

The desire to retain ownership of their new tenement and let it out to generate an income, appeared a common future plan among residents (Dilshad Murad Khan 2010; Sheikh 2010). Many residents were also clear that they would prefer their old house and given a choice would return to the slums (Dilshad Murad Khan 2010). One family expressed their desire and plan to sell their house and move to a ‘proper building’ in the future (Sonewane 2010). Although residents would like to go, they feel tied to the location of Nanapeth due to employment (Sheikh 2010) and are not confident they could find a buyer (Sheikh 2010).

One elderly resident reported liking his situation and said he would spend the rest of his life in the house. Perhaps his age and stage of life influenced his opinion of accepting the current housing situation (Salve 2010). Another resident plans to stay in her house for at least five years while her children are being educated by which time the family will have expanded and they will start to seek a larger house (Kharat 2010).

Although the residents would like to sell their houses, they will not be able to do this until their legal ownership documentation is complete which will take some time. Renting out their homes is a viable option for the future but as the housing is under such scrutiny from the developers and corporation at the moment, they would struggle to get away with it.

Provide for family & Money

Many residents explained that their aspirations for the future lie in supporting their family, children and hope for future generations to better themselves. Some residents assigned decision making for the future to their children (Salve 2010). Education and fostering a positive future of employment and financial stability for children was enforced (Sheikh 2010; Sonewane 2010).

Open spaces

Residents repeatedly mentioned their need for more space, larger interiors as well as external space. One resident aspires to parks for children, low-rise buildings without staircases, house dimensions which consider family size, employment and education;

“We would build good big houses for them. The buildings would be good with good balconies, big staircases. We will consider the family size and need while providing a house for them. We will provide employment source for poor people. Actually the happiness, the facilities that we cannot get, I will provide them....We cannot take our children to the distant parks; they can make such parks for us. They should build good schools so that poor people can also get good education. If I become prime minister I will try to provide all such things...We would build row houses. If there is an old person it will be very difficult for him to climb the staircase and it would be more convenient for him if it is on the ground floor”(Sheikh 2010).

Employment & Education

Residents understand the valuable link between education, employment and bettering the prospects of future generations, so residents frequently mentioned organising and paying for their children's education and the availability of jobs were of utter importance (Kharat 2010; Sheikh 2010; Sonewane 2010; Sumit Jadhav 2010).

"All the children who are going to school, their results have improved by about 20%... We talked to several children. There was one teacher who was keeping in touch with all of them. All our engineers are in touch with all of them. Children have improved their results and they are happy. Now they are being trained how to stay hygienically" (Parmar 2010)

Ideas/Dreams, Basic needs & Future

When the question was posed to the interviewees that if they were prime minister, what would they do? People regularly mentioned the fulfilment of basic needs quoting water, shelter, food, power, education, employment and security (Asha Jadhav 2010; Jekate 2010).

When residents were asked what they feel the future has in store for them the people were generally not very optimistic and have concerns that their children will be disappointed with the upbringing they have had in the new housing (Sheikh 2010; Sonewane 2010).

"[Life] it is all disturbed since I came to stay upstairs. I don't think much positive about the future after coming to this house. All my family has split" (Dilshad Murad Khan 2010).

Female representation & Eliminate poverty

One resident indicated their desire for better female representation on the committee (Sonewane 2010) and that given the power she would do what it takes to eliminate poverty.

Priority Needs

- Water supply and emergency escape routes are a priority for the residents of Nanapeth. They are also basic human rights.
- The SRA should organise a strategy for training residents on the correct management of water resources and do what they can to increase supply. External staircases should be constructed as a matter of urgency. The researcher observed that there is plenty of space between buildings therefore space constraints are no excuse for not including such an addition.

Children’s perceptions at Nanapeth

In order to capture the perceptions of the children, they were first asked to think about the things that they needed for a good life, what makes them happy and what makes a good place to live.

After a brief discussion the group of children indicated the things they felt that they need for a good life, they also collectively voted and ranked the priorities;

Table 8 – Children’s’ ranked priorities

Children’s needs for a good life	Ranking in order of priority
Shelter	1
Food	2
Clothes	3
Money	4
Education	5
Health	6
Employment	7
Electricity	8
Entertainment (TV)	9
Transport	10
Environment	11
Toilet	12
Roads	13

After this discussion, the children were then given the task of drawing their current house at Nanapeth, and their ‘dream house’ for the future.

Figure 47 – Nanapeth children being explained the drawing task



Pranali .S. Sonawane
~~House No - 11~~
Building No - A4
Flat No 424
New Nana Peth Milind
Nagar Pune 2
Age : 11 yrs

→ Now I Live
That House



Deram House

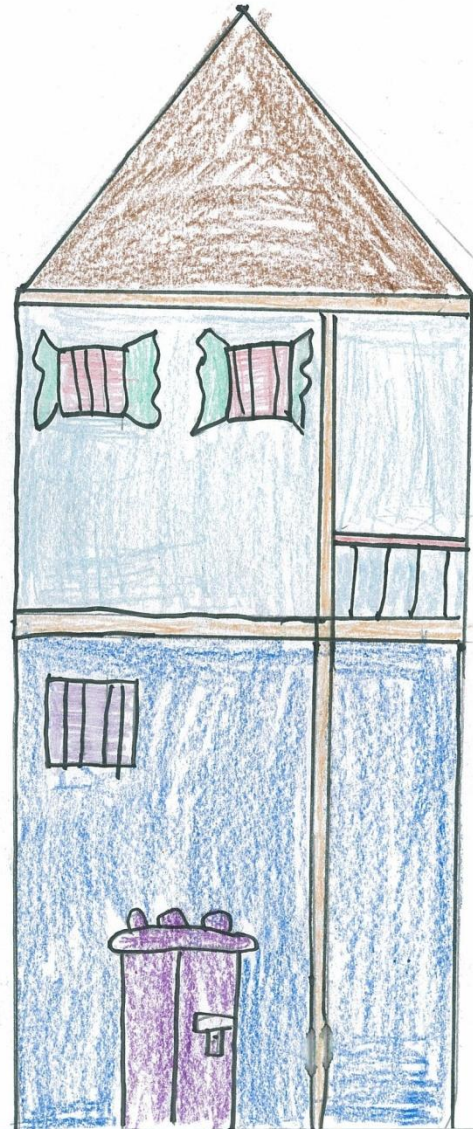
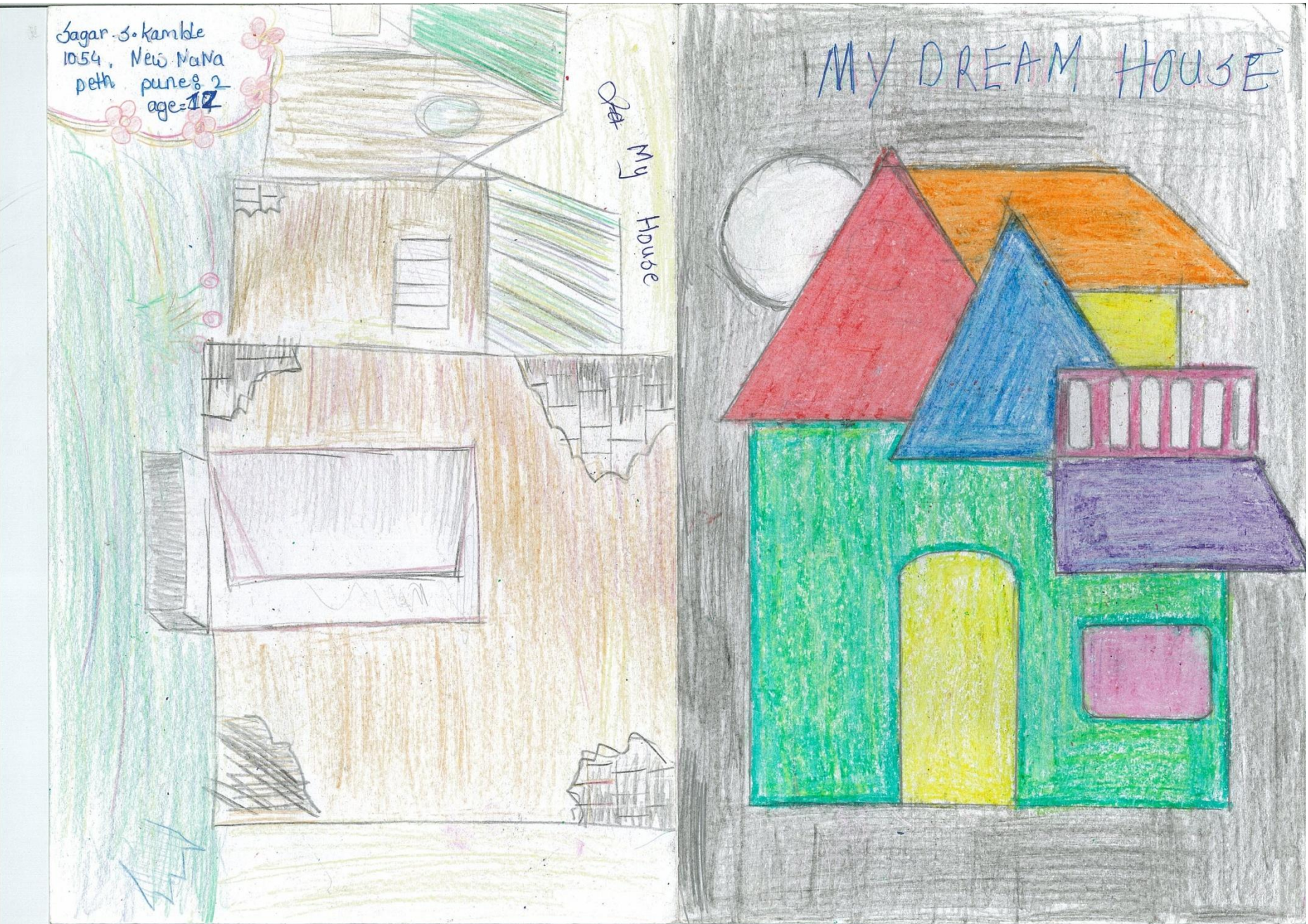


Figure 48 – Nanapeth child's drawing showing highrise living and dream house
The highrise buildings with parking levels underneath and street lighting have been depicted. The child's dream house contrasts by showing a two-storey house with larger windows and a balcony which give more access to outside space.

Figure 49 – Nanapeth child's drawing showing current poor construction and dream house

Crumbling brickwork and compromised construction are depicted in the child's drawing of their current house. Their dream house is much brighter, larger, detached and again features a large balcony and windows.



Summary

Nanapeth is the first SRA scheme in Pune and now five years old offers a very good example to study the sustainability of SRA housing schemes. The SRA scheme is financially sustainable as all funding is from local property developers and land owners. SRA schemes are locally sustainable, in the respect that no international expertise is required. The SRA was conceived and is run entirely with the support of the Indian central government and no international assistance is required. All professional expertise has been sourced locally; Pune city is not lacking in capable architects, engineers and developers. However, a better understanding of the needs of the building end-user, building management and maintenance systems, training and operation manuals, environmental impact assessment methods and the incentive to care about the bigger picture of development and growth for the city is needed.

At Nanapeth, the project team stakeholders have demonstrated that the development has taught them much about housing schemes of this nature and have applied the lessons learned to future housing schemes. The architect and developer in particular expressed an increased concern for sustainability ideals, appropriate design and although driven by profits demonstrated a concern for the welfare of the slum-dwellers.

The residents at Nanapeth are largely dissatisfied with their new housing and voiced many complaints. After inhabiting the new buildings for five years, the residents are becoming less content and many say they preferred their previous living conditions in the former slum.

The residents were however illegal squatters residing on land privately owned. Under the government's SRA rules, the people who were able to prove their residency on the land since 1994 were eligible to be re-housed for free, on the same site. Therefore these residents have benefitted from being given a structurally sound house with improved sanitation facilities in-situ, without requiring any form of financial contribution and without being separated from their existing livelihoods.

The community consultation and participation during the organisation and implementation of the rehabilitation project was poor. The lack of honest communication between the land owners/developers has contributed to the resident's level of mistrust and lack of a sense of ownership of the new housing. If residents had been asked to contribute and were more involved in the process they may have developed a sense of pride in the new housing and therefore more likely to better maintain and appreciate it.

The land owner and developer team adhered to all SRA guidelines when organising the development and had no support from an NGO or social workers to engage in community consultation work which is not their area of expertise. If the SRA stipulated a certain level of community engagement with the aid of an NGO or social worker the development team would have followed the guidelines and the project could have resulted in being more socially sustainable and accepted by the community.

The present situation of 100% free charity housing reinforces the problems of slum-dwellers expecting handouts from the government, enforcing a culture of handouts and not encouraging the community to better themselves. Finance is available to slum-dwellers who have the capacity to contribute towards the cost or rent of the tenements; 'collectively, the world's billions of poor

people have immense untapped buying power' (Prahalad 2004). Studies have shown that it is possible for families in Pune to contribute Rs.500-1000 per month and it has been suggested that the urban local body could become guarantors for loans to slum dwellers (Shelter Associates 2007).

The architect does not feel that this is, nor should be, a sustainable rehabilitation project. Rather than being a permanent home for the previous slum-dwellers, Mahajan feels this should be a step up and a transitional stage towards an even better standard of living and that each generation should aspire to better their situation.

"That is why I will not call it sustainable, in that term. I would say that it is a hand holding to this generation. I mean to carry him along, helping. He is poor, so we in the society and the government trying to do better for them, helping them, and take them in a good environment and to make them aware of the horizon ahead. That they should also do some work, do some good, and go into a better place, with their own earned money. Because basically what ever has been done in terms of free cost housing is somebody else's cost. It is my tax, it is my office boy's tax, it is my driver's tax. They are honest people. They don't want to stay in slums. They don't want to do bad things. They want to do legal things and they are earning hard. Their hard earned money, one part, is going for the people who are dishonest or who are incapable. I am not kind of slanging them. Being poor is not a crime but most of them have this tendency. When you are poor you don't have to specifically encroach on somebody's property and stay in shacks" (Mahajan 2010).

The perception of slum-dwellers as having a tendency to depend and expect charitable assistance is shared by the project developer, but he does not believe them to be a poor community;

"No, I don't think so. I will tell you. We call them poor. Poor is a relative term. You tell them to spend Rs. 100 to go and see the movie they will see but for government they are poor. At night they will go and spend Rs. 100 on drinking but still they will say that they are poor. Government has given them lot of facilities. The only thing is they don't have a habit of staying in a better place" (Parmar 2010).

This opinion is common with many of the middle-class residents of Pune and has developed some resentment towards slum-dwellers. This attitude has many parallels with many UK residents' perception of the gypsy traveller community.

The residents have voiced many complaints and are asking for more than they've already been given for free. This could be considered a common trait of human nature no matter the section of society. The slum dwellers have been given 100% free housing on a site that they have been illegally squatting upon for decades. The slum-dwellers are complaining and want changes. Some however are not necessarily asking for 'more', and given the choice would return to their old home back in the slum. Perhaps if Raje the land owner had charged rent, he would see slum-tenanting as a profitable option, because the poor are employed and do have access to money through informal

markets, however, such rental revenues are unlikely to be as lucrative for the landowner and developer as TDR credit.

The research has shown that the residents have benefitted greatly from the physical changes in their built environment brought about by the rehabilitation. They are however struggling with the safety of the stairs and circulation within the high-rise building, and also now have a worse water supply. After assimilating the data gathered during stakeholder interviews and group discussions the key issues that repeatedly arise are the effect the rehabilitation has had on resident's water supply, open space, tenement size and health and safety concerns particularly due to the staircase. During data collection it emerged that many residents are not content with the current situation and many have expressed a desire to move in order to gain these basic needs which they felt more content with in their former slum home.

Access to water is a basic human need which residents were not expecting to have to sacrifice. The developer's engineers have however been implementing water management tactics to try and encourage the residents to better use the water available, but it seems the ultimate responsibility of water supply lies with the PMC. This is an area where training the residents on water management with the assistance of an NGO could be particularly beneficial.

The lack of basic literacy, education and levels of empowerment of the community has undoubtedly affected the residents' capability and mentality to operate and maintain the building as the building designers would have expected. It also emerged from the data that many residents feel powerless to raise their voice to higher powers and are lacking the support of a mobilised and strengthened community. Many residents indicated a desire to improve their standards of education and skills which they feel are holding them back from bettering themselves. Perhaps the route of the slum-dwellers' problems, aspirations and accepted living standards is their poor education level. However, the respondents indicated an awareness of the need for education for their children to better themselves, so perhaps with each future generation, the slum-dwelling communities will incrementally improve their living situation and aspire to reside in places other than slums.

Due to the organisation and structure of the slum at Nanapeth, the houses were a variety of sizes and some had two stories. Now that all residents have been allocated a single flat of a set dimension following SRA rules, there are many families who are now forced to reside in a smaller space which has caused fractions within some families. If the SRA schemes provided a variety of sized tenements and/or the option to wealthier families to purchase further floor area, many families would be more content. However, if tenement sizes increase, then the amount of TDR released will also substantially increase which would add to the problems of a saturated TDR market. SRA regulations need to be adapted to control the release of TDR while allowing residents to purchase additional floor space.

As is common in Pune's informal settlements, the formation and layout of the former slum at Nanapeth allowed open space within and between houses and lanes. These open spaces are valuable assets to the community and are used as open-air living spaces, clothes drying areas, socialising spaces and play areas for children. Such open air space is as valuable to the residents as the interior spaces within their homes. Now that the residents have been re-housed in high-rise buildings without balconies or open courtyard spaces, many residents are finding the adjustment in lifestyle particularly difficult and have noticed a detrimental impact on social cohesion. Another key

concern of residents is the safety of the single staircase shared by many flats over 8 stories which has in the past caused injuries. From the data it emerged that space is a priority to the relocated slum dwellers, not necessarily water and sanitation facilities, private toilets and structurally sound buildings which are commonly regarded by development practitioners to be the most important criteria to address the problems of slums.

The high-rise building design at Nanapeth does not enable the communities to interact and function as they used to due to the lack of open spaces and circulation routes. Residents do not have a problem with living at altitude per se, but they object to the restrictions in outside space and public areas they are accustomed to living with. Therefore, if the building designers could re-design the high-rise buildings of future SRA schemes to retain these features of slum-ground living, the residents would be much better able to adapt to rehabilitated living and are more likely to be content. During interviews with the project architect and the SRA it was encouraging to see that more modern SRA schemes have developed and learned from the early experiences such as Nanapeth. The architecture is becoming more socially conscious of the residents' needs and SRA regulations are adapting in favour of the residents to allow larger floor areas and now enforce the provision of more staircases for improved safety.

All of the project team stakeholders have been clear that the Nanapeth housing was the first SRA project in Pune and that SRA developments have since moved on and designs have improved and adapted to be more appropriate to the residents' lifestyles. The Nanapeth project is five years old now and the architect and developer have since worked on newer SRA schemes for which changes have been made. The SRA rules have also evolved and developed. Building designs and arrangements of tenements have changed. Due to limited ground area high-rise design will always be necessary for slum rehabilitation and slum dwellers also acknowledge and accept this (Mahajan 2010). Designs have been considered with different corridor and courtyard arrangements. Corridor widths have been increased to 1.8m to aid circulation and ventilation. Proper balconies and terraces have been provided in new schemes. Better ventilation within the kitchens, bathrooms and living areas is now provided. Tenement entrances and porches have been designed to encourage privacy and a place for women's social activities during the day. More staircases and lifts have been provided. These new design principles suit the inhabitants better and are now included as standard in the newer SRA schemes in the city such as Janata Vasahat and Rajendra Nagar. The Nanapeth architect, who now specialises in SRA and social housing design, admits that there is a constant learning process.

The SRA, the architect and developer all mention that SRA regulations have moved on since this Nanapeth project and all parties refer to lessons having being learned from these first experiences. It is encouraging to see that the SRA are developing and improving their standards as they gain more experience of rehabilitating slum-dwellers. The SRA scheme is operating well in Pune currently and there are many developers keen to get involved with the lucrative opportunities the schemes offer. However, if the current release of TDR remains as it is, this could result in negative consequences in the future upon the development of the city and the impact of TDR on long term city planning may need to be reassessed to prevent an over-densification of the city with stretched infrastructure services.

Chapter 5 – Hadapsar Case Study

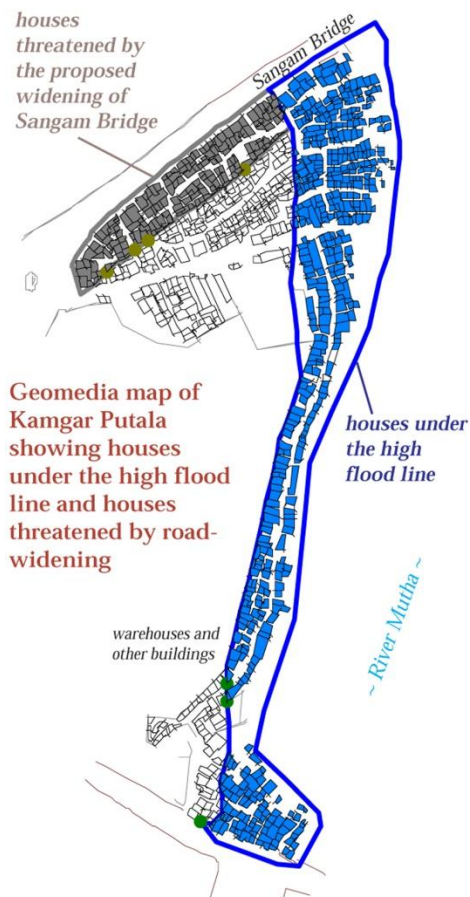
The Resettlement of Kamgar Putala to Hadapsar

The settlement of Kamgar Putala is located along the banks of the river Mutha at Shivaji Nagar and is vulnerable due to the threat of road widening and flooding. Every year the monsoon rains cause this stretch of the river to flood the settlement. In August 1997 the rains were particularly devastating, resulting in one third of the entire settlement being submerged (Shelter Associates 2001) as well as significant damage to other slum pockets situated on the river edge. Coupled with municipality plans to widen the adjacent Sangam Bridge it was not sustainable for the residents of Kamgar Putala to remain living at Shivaji Nagar.

After the severe 1997 flood-water had subsided, a comprehensive survey of the six main affected areas along the river was conducted in 1998, as requested by the Pune Municipal Corporation. The PMC specified a survey of all the settlements situated along the river Mutha between Kamgar Putla and Mhatre bridge with the aim to assess how many houses were affected by the floods. This survey was undertaken by collectives of Pune slum dwellers Mahila Milan, together with the National Slum Dwellers Federation of Mumbai, and the NGOs Shelter Associates and SPARC. The community federations used this opportunity to initiate the process of bringing communities together to negotiate with the city authorities for the development of a resettlement strategy (SPARC & Shelter Associates 1998).

Shelter Associates is an NGO comprising architects and social workers who work with community federations. The main focus of their work is facilitating housing and basic infrastructure for the poor. The guiding philosophy of their work is that 'poor people have the best solutions to their problems and are quite capable of not only devising strategies which work best for them, but also implementing them' (SPARC & Shelter Associates 1998). It was in this context that the NGOs supported the community federations to initiate their own relocation strategy to move away from the dangers of living by the river and to be involved in the development of their own new housing society at a new site in Hadapsar.

Figure 50 – The devastating floods at Kamgar Putala



(Shelter Associates 2001)

Throughout the survey process Shelter Associates and Mahila Milan held meetings with the residents and motivated them to join federation activities. Residents were encouraged to begin crisis savings groups for future use when the inevitable resettlement came. Some resistance did come from some people who were scared to move to a new location and also some traditional and political leaders. Research conducted by Shelter Associates found that many residents were so accustomed to battling against the floods each year that it had become a way of life, from which many people were resistant to change. However, eventually people began to realise that there was a viable alternative to their situation. The enthused residents began housing saving schemes and became actively involved in land searches while participating in the Mahila Milan federation activities. Negotiations to acquire a relocation site began and the mobilisation of the community had begun. The newly formed federations started to develop strategies for resettlement and to take control of their own future (SPARC & Shelter Associates 1998).

In 1999, Shelter Associates and SPARC decided to go separate ways and the Mahila Milan from Kamgar Putala decided to align with Shelter Associates under the umbrella of 'Baandhani' federation. Shelter Associates worked hard negotiating with the municipality to convince the administration to prioritise their resettlement plans. Eventually, with the PMC's support a 2.4 hectare plot of flat land reserved for the economically weaker section (EWS) at Hadapsar was identified as a location for the residents of Kamgar Putala to resettle to; a safe plot far away from the water. There was however some disagreement among local politicians who campaigned for the community to be re-housed in the same place, in-situ, with plans to construct a 5 crore rupees retaining wall to keep the water out. Their justification for this was that the majority of residents were rag-pickers and scrap vendors who relied on this income which was easily accessible by train from the Kamgar Putala site. The politicians did not feel that the residents would want to move away from their livelihoods (Shelter Associates 2004). However, Baandhani and Shelter Associates disagreed with this, so they set about proving their point. After Shelter Associates' household surveys which included employment patterns of the residents, they demonstrated that the majority of workers were in fact unskilled construction labourers who did not actually require a specific site for their place of work. The residents claimed that even if it were an issue, they would be willing to make this sacrifice to move to more secure homes away from the threat of floods (Shelter Associates 2004). Shelter Associates' research also found that the majority of female workers were domestic maids and the organisation was confident that the Hadapsar site was centrally positioned enough to provide employment locally.

Various changes of administrative heads and uncoordinated government development planning for the city of Pune, SA's plans and designs for the resettlement scheme needed much iteration and numerous proposal submissions to the PMC (Shelter Associates 2004). Then VAMBAY, Valmiki Ambedkar Malin Basti Awas Yojna was introduced by the government in Maharashtra. This programme receives Rs.50000 grant per family from the central government. With the introduction of this scheme, the Pune Municipal Corporation was now more encouraged to implement slum upgrading projects. The PMC installed the infrastructure on the site needed for roads, drainage and water connections and eventually in 2003 engaged Shelter Associates to submit house designs that suited the aspirations of the community while fitting in with the existing Hadapsar site infrastructure. The Buildings Department of the PMC cooperated with SA and supported them to comply with Floor Space Index and other rules and regulations.

The 176 house tenements implemented by SA were organised in clusters of 8 tenements around small courtyards. SA had demonstrated that low-rise, high-density solutions work well for the poor, as often their homes double up as workshops and businesses for income generation.

Figure 51 – Tenement layout



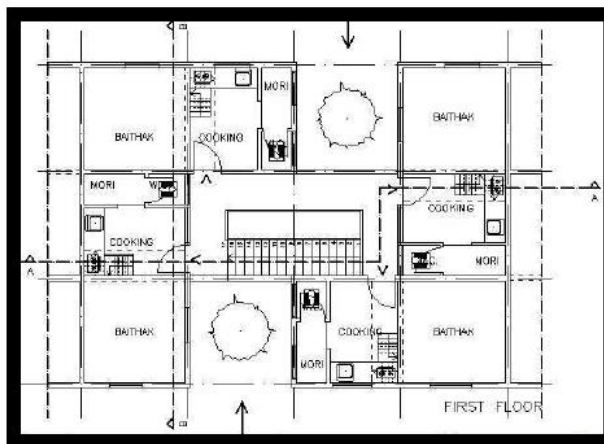
The layout of 176 tenements showing clusters of eight tenements around small courtyards.

(Shelter Associates 2004)

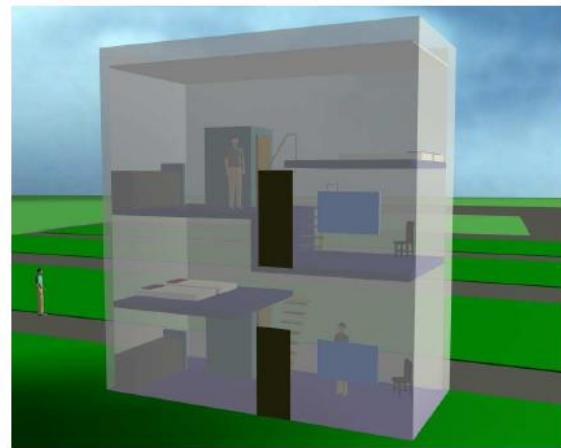
SA's architects designed the new housing at Hadapsar in low rise (2 storey) modules of 8 tenements, 4 on the ground floor, and 4 on the first floor. The tenements are clustered around a central courtyard with one flight of stairs leading to the first floor. The central courtyard is flanked asymmetrically by two small courtyards which provide access to the individual tenements on the ground floor as well as to the staircase leading to the first floor. This design allows plenty of sunlight and ventilation into each tenement. The placement of people's entrance doors were spaced to avoid disrupting circulation in the courtyards and corridors. The design process was done very much in consultation with the residents whose considerations were prioritised and balanced with design constraints. The community chose to have one large window and five concrete *jalis* (trellised openings). The community also took a vote on the option of communal toilets to maximise space in their houses or for the option of individual private toilets. The majority preferred to have a private toilet and so this was incorporated into the design. The internal floor area of each tenement is 200sq.ft. made up of two 10x10ft bays positioned linearly. The tenement designs include a toilet, a *mori* with a kitchen area and a multipurpose living/dining/sleeping area in the 'front' room/bay.

A very clever aspect of the house tenement designs was a raised ceiling height to 14ft in one of the bays. This allowed for the construction of a mezzanine floor of approximately 100sq.ft. which could be added as and when the family felt they needed the extra space. This effectively gave each household a tenement of 300sq.ft.

Figure 52 – Tenement layout



Basic floor plan of the cluster – 4 on GFL and 4 on FFL



Typical section to show the increase in height in one bay

(Shelter Associates 2004)

Early on in the relocation planning SA had contacted the Housing and Urban Development Corporation Limited (HUDCO), Mumbai, to begin negotiations for housing loans. The Maharashtra Housing and Area Development Agency (MHADA) was also contacted to utilise the government’s VAMBAY scheme. This scheme provides a subsidy from central government, routed via HUDCO to MHADA to slum-dwellers in need of housing rehabilitation. VAMBAY is a subsidised scheme with 50% funding from central (Indian) government and 50% from the state (Maharashtrian) government. Along with the scheme the central government set targets to individual Indian states to encourage the utilisation of the funds and benefits reaching the poor. The community successfully obtained a subsidy of Rs.50,000 to be allocated for each household from VAMBAY, however this amount later decreased to Rs.47,619 after various taxes and fees.

The residents of KP’s saving efforts since joining the Baandhani federation resulted in each family depositing Rs.5,000 in a common account opened with the support of SA for housing. The cost of each tenement was initially calculated by SA to be approximately Rs.80,000. Each family had already saved Rs.5,000. Along with taxes and materials cost rises, an additional Rs.30,000 needed to be raised. SA set about meeting with banks to organise loans, however SA found that banks were reluctant to lend to the poor despite the favourable position of the KP households and the proposed relocation;

- The land was sanctioned by the PMC
- The drawings had been approved by the PMC
- There was a subsidy of Rs.50,000 from VAMBAY
- The families had saved up Rs.5,000 each
- The people were willing to mortgage their tenements
- The remaining amount needed was less than 40% of the total cost

(Shelter Associates 2004)

SA and Baandhani met with several nationalised banks who shared the same concerns of lending to the poor. Some requested that SA become guarantors for the loan, but this was not feasible for SA. Another of the bank's concerns was if VAMBAY funds were not disbursed. Eventually, the United Western Bank agreed to lend to families with members who were employed within the formal sector. This resulted in 11 of the households obtaining loans. Later, a successful meeting and further meetings and presentations with the manager of The Bank of Maharashtra, Shivajinagar branch eventually resulted in another 69 loans being sanctioned. The strategy was for there to be modules of 3 families, where each family became a guarantor for the other two. This enabled the families to mortgage their tenements to the bank and receive loans at 8.5% interest, repayable over seven years with repayments of Rs.486 per month which was agreeable to the households. The residents had already discussed the amount they would be able to repay without excluding the less well off. Usually, most families had to spend Rs.3,000 per year to maintain, replace tin sheets and repair their houses after the monsoon rains; an amount they would now be able to save. Even those families who were tenants at KP were able to save money as they no longer needed to pay the high rents at KP's city centre location.

Construction of the houses commenced on site in September 2003 coordinated by Shelter Associates who acted as a building contractor. Families started to move to their new homes at Hadapsar in June 2004. The community decided to allocate houses by randomly drawing lots. When families knew which tenement was theirs they became even more actively involved in finalising the construction. Many people spent their spare time on the site supervising the work to ensure good quality craftsmanship. The committee also decided to assign the task of fabricating the doors and windows to one of the community members who had a small fabrication unit. This helped to ensure the quality of the work. When the basic shells of the tenements were complete, many families started to further fit out and install flooring, kitchen sinks, work surfaces and tiling into their new homes. The security of tenure gave them the confidence to make further investments in their homes. A 'stand up kitchen' was one of the most popular installations the households fitted. 'Their middle-class aspirations were being expressed in the use of space and finishes that they chose' (Shelter Associates 2004).

In August 2004 the floods hit Kamgar Putla badly. Much of the original slum went under water again and many families had to be shifted to local schools. However, by this stage nearly 100 tenements were complete and many of the flood-affected families were able to move directly into their new homes.

"The change that was taking place was tangible. There was a sense of pride amongst those who had shifted to the new site. Now they were staying in a society and not a slum. If anyone misbehaved, they would be immediately admonished as a certain code of conduct was expected"
(Shelter Associates 2004).

There were obstacles in planning the resettlement of the residents of Kamgar Putla to new homes on safer land in Hadapsar. The process was long but resulted in 152 families to be relocated to safer homes in 2004. The upgrading project was very much driven by a collaborative NGO and CBO partnership which enabled the beneficiaries to be in control of their housing situation.

This housing project has been re-visited in April 2010, nearly 6 years after the residents moved in, in order to assess the present situation and sustainability of the resettlement upgrading programme. Interviews have been conducted with key stakeholders in order to gather their perceptions of the project now.

Key informants:

- NGO - Pratima Joshi, Director
Shelter Associates
- NGO - Sandhya Kamble, Social Worker
Shelter Associates
- Donor - Nitin Kulkarni, Civil Engineer, Deputy District Housing Officer
Maharashtra Housing and Development Agency
- Government - Prasanna Joshi, Assistant Engineer, Slum Control Department
Pune Municipal Corporation
- Residents - 11 individual interviews, 3 group discussions
- External stakeholders - Residents still residing at Kamgar Putala

The following sections present the analysis, assimilation and triangulation of all the data gathered from interviews and group discussions with the residents and stakeholders. The emergent key findings within each theme of analysis have been constructed from the data and are presented herewith.

Life Today

This section brings together the stakeholders' views on how life currently is for the residents of the new housing at Hadapsar. Most residents have inhabited the new houses for 5 years and chose to relocate due to the threat of flooding or road widening. A few however, have moved to gain a larger house.

The group discussion at Hadapsar was conducted with a group ladies who are prominent Baandhani members along with Banobi Patel, the community leader. Sandhya Kamble, a social worker familiar with the community led the facilitation in Marathi with the support of the researcher. The discussion was held over two days during the afternoons. On the first day, mid week, seated on the floor in one of the courtyard areas between the houses, all was discussed apart from the institutional analysis which was completed on the Saturday in Banobi Patel's house. After the discussions snacks were given to the ladies. It was observed that all ladies contributed willingly and their answers appeared to be honest and open although Banobi Patel did speak the most fully as she generally holds the role of community spokesperson. During the discussions children and others sat and listened in.

Figure 53 – Group discussions at Hadapsar



In order to capture the resident’s perception of Life Today and their current priorities, the residents were asked to list and then rank in order of priority, the problems they are currently facing in their day to day lives. They were then asked to write a list of the problems they encountered in the past – 10 years previously, before they relocated to Hadapsar. These were also ranked in order of priority then. Finally the residents were asked what problems they thought they would face in the future. The residents were optimistic about the future and said that if they manage to secure a good education for themselves and future generations that this in turn would enable employment

opportunities which would raise their general quality of live to improve overall. The results the residents gave have been sorted and are presented in Table 9.

Table 9 – Hadapsar Priorities of the poor

Problems Now	Ranking Now	Problems Past	Ranking Past	Future
Crime	1	House	1	If get good education then good employment so all will improve
Transport	2	Small space	2	
Unemployment	3	Toilet	3	
Water supply	4	Gutters/drains	4	
Police	5	River	5	
Garbage	6	Road (nearby hazard)	6	
School	7	Garbage	7	
Hospital	8	No children’s playground	8	
Roads (connectivity)	9			
Market	10			

The main problems that residents are facing today are security issues, transport/connectivity to the site due to distance from amenities (School, Hospital, Roads, Market), unemployment and water supply.

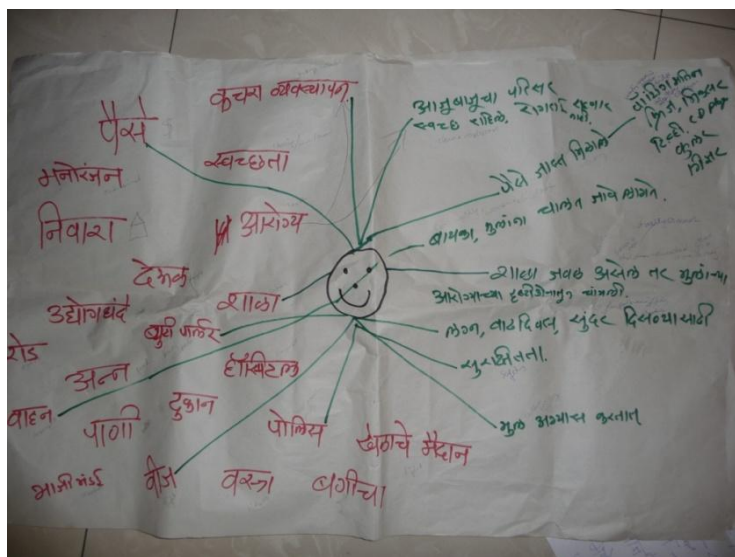
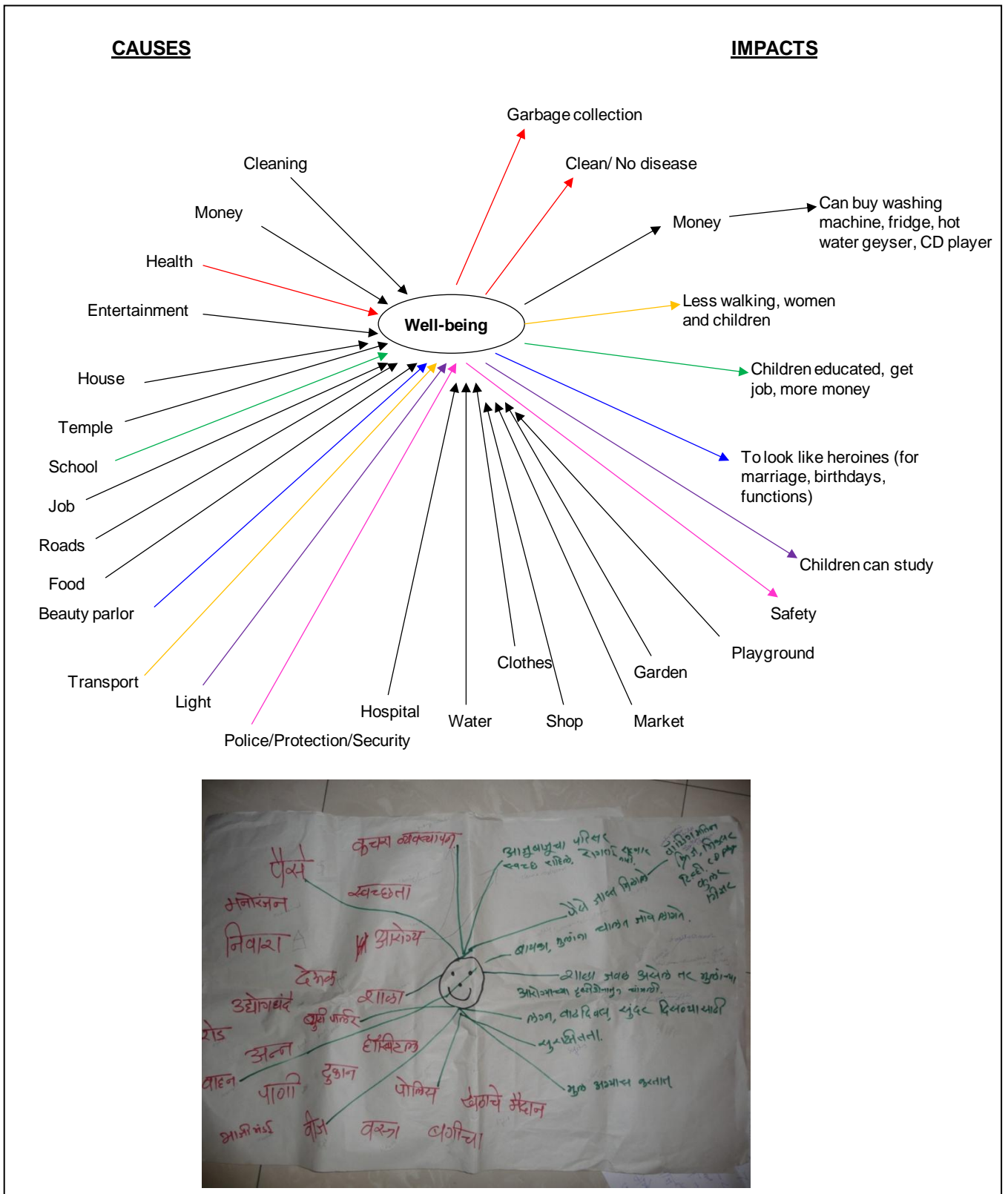
None of the issues encountered today are the same as those previously encountered which compounds the results from the interviews that employment opportunities, access to livelihoods and amenities due to transport, and water supply have worsened since relocating.

Before relocating issues with the size and construction of the house, sanitation and cleanliness in the slum (garbage) and environment for the children were the biggest issues. These have since all been addressed.

It is unfortunate that in addressing these issues major new problems have now arisen which are detrimentally affecting the quality of people’s lives. Security, Connectivity to livelihoods, Employment and Water were all mentioned as basic needs required for a good life/well-being in the first activity with the residents. Now that these issues are arising as problems, this indicates a disappointing result of the resettlement project. However, there are also reports that families are now upwardly mobile, economically and overall, quality of life has been greatly improved (Patel 2011).

The following cause-impact diagram was drawn by the residents to indicate the things they felt they needed for a good life/well being, and what impacts these in turn generated. Any links between the cause and impacts are indicated with coloured lines. The original drawing on chart paper is also shown below in Figure 54.

Figure 54 – Hadapsar Well-being Cause-Impact Diagram



The residents at Hadapsar listed a large number of things that they felt they need for a good quality of life. The items listed were mostly basic human needs, infrastructure and common public

amenities. As it was a group of women house-wife respondents, it is perhaps not surprising that children’s priorities and education were highlighted. Household items such as hot-water geyser and washing machine and fridge were specifically mentioned as things money could provide. This again enforces the domestic priorities of the respondents. Another female priority of the beauty salon was also mentioned but was the only non-essential/ basic needs item that was mentioned apart from entertainment. The residents also linked the following issues which particularly demonstrate their understanding of the issues and the impact they have on their lives;

- School → Better education = job = more money
- Health ← Less disease = Cleanliness + Garbage collection
- Transport → Less walking for women and children
- Beauty parlour → To look like heroines, for special occasions
- Light → Children can study
- Police/Protection/Security → Safety

All resident interviews have been analysed and coded. The emergent issues and discussion is presented here structured around three themes; Physical issues, Social/Human issues and Livelihood issues.

Table 10 – Life Today: Coded themes emergent from data

Physical	Social/Human	Livelihood
Waste	Health	Finance
Water	Social cohesion	Taxes
Electricity & Lighting	Peace	Conveyance
Toilets	Security	
Drainage		
Open Space		
Fresh Air		
Cleanliness		

Figure 55 – Frequency of topics mentioned during interviews discussing Life Today

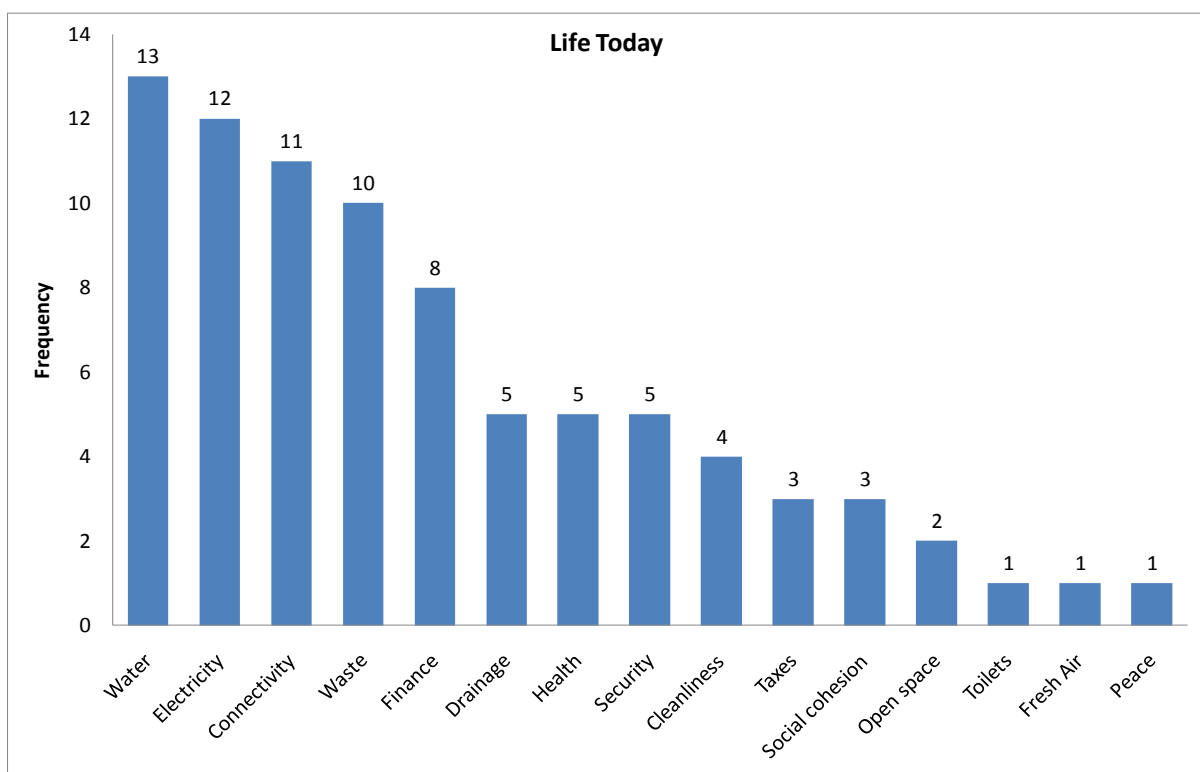


Figure 55 shows the frequency of responses regarding particular topics of discussion. Water, Electricity, Connectivity, Waste and Finance were the top five most frequent topics arising during interviews when discussing current conditions and the status of life today after resettling. These are mainly all physical issues. The more social issues were less frequently mentioned. Residents mentioned the issues they have problems with, rather than are content with, apart from the mention of electricity which arose because residents were asked specific questions about their supply and cost. The responses show that the electricity supply at Hadapsar is good and there were no complaints apart from a lack of provision of street lighting at night which was not mentioned highly frequently. However, since the research was conducted, street lights have now been installed and door-to-door waste collection services have commenced (Joshi 2011).

Therefore, the main concerns residents have with their current living conditions at Hadapsar are;

- Water
- Connectivity/Transport
- Waste
- Finance

These issues match those revealed during the group discussions as the main priorities the residents are currently facing; 1st Crime, 2nd Transport, 3rd Unemployment, 4th Water supply, see Table 9. Only the issue of Crime which was highlighted during the group discussion did not appear frequently during interviews. This analysis also shows how the residents' priorities have changed with time and highlights the new problems that have occurred since resettling. Before resettlement the main priorities raised during the group discussion were; 1st – House, 2nd – Small space, 3rd - Toilet, 4th – Gutters/Drainage. As these are no longer frequently mentioned as problems one can assume that these issues have been addressed. However one issue that was previously ranked low at 7th – Garbage, has now risen to be a prominent problem. At Kamgar Putala there was a well-functioning rag-picking service where as at Hadapsar there are no such waste management practices in place.

Physical Issues

Waste

On the Hadapsar site there are two garbage containers (skips) for approximately 800 houses and the containers are emptied weekly or fortnightly by the local civic body (Patel 2010). Residents report that this is not frequent enough, which results in a lot of rubbish lying around and that they are disappointed with the waste management at the site (Bapu 2010; Daware 2010; Kishor 2010). If residents make a complaint, the container is sometimes emptied weekly (Patel 2010). Other residents reported that the containers are sometimes not even emptied monthly which causes various environmental and health problems (Bapu 2010; Pathan 2010) and results in households having to burn their waste to get rid of it which contributes towards a poor air quality (Balasaheb Kamble 2010).

“Oh! Sometimes it is not emptied even for a month. The container overflows and so there is a severe problem of mosquitoes. Due to that there was a problem of Swine flu, etc. There is a farm nearby so there is a problem of snakes. Snakes coming in is very common” (Pathan 2010).

“While they lived in the river bed [previously at Kamgar Putala], there was no garbage disposal in place as the trucks could not make it there. People were forced to dump their garbage in the river and this caused severe pollution” (Joshi 2011).

The waste disposal system at their previous home in Kamgar Putala slum was a similar container system to that at Hadapsar (Mane 2010; Patel 2010). Other residents used to dispose of their rubbish on the river banks (Jabbar-Sheikh 2010).

Figure 56 – Burning waste and waste clearance from overflowing container



Waste disposal and management

- The PMC needs to either provide more containers or organise a more frequent collection and a method for the safe disposal of the remaining un-recyclable waste.
- Safer storage containers are required to enclose the waste and separate containers could be provided for waste segregation.
- Residents would need to be trained to sort their rubbish and understand the consequences of spread of diseases and environmental pollution of poorly managed waste.

Electricity and Lighting

Residents seemed satisfied with their electricity connections and indicated the supply is quite regular and uninterrupted (Patel 2010). Electricity bills were reported to range from Rs.250-700 per month (Jabbar-Sheikh 2010; Patel 2010; Pathan 2010). People have generally experienced an increase in bill since relocating from the slum (Balasaheb Kamble 2010; Daware 2010). At Hadapsar most houses used their electricity for lighting, fans, food processors and some houses have TV sets. One family reporting using a fridge (Jabbar-Sheikh 2010). In Kamgar Putala the electricity board did not take accurate meter readings and so electricity was cheaper in the slum (Patel 2010).

Residents reported poor lighting conditions on the road and outside spaces around the houses and feel that the government is not bothered by their problems and are not optimistic about conditions improving (Jabbar-Sheikh 2010).

For the first three years of the residents' time living at Hadapsar they had no electricity due to the PMC failing to provide the proper installation, but residents continued to stay there despite the electrical situation being better at Kamgar Putala. The electricity situation today is considerably better than at the start of the resettlement thanks to Shelter Associates appealing to the electricity board on the residents' behalf (Joshi 2010).

Electricity and Lighting

- External street lighting is needed outside the buildings and within the courtyards for both safety and security reasons.
- Otherwise, the power supply is currently very good.

Water

The local government covered all infrastructure costs on the site and have installed a common water stand post in front of every block building, from which residents are expected to collect their water. Eight houses share two taps (Hadapsar Group Discussion 1 2010). Water lines have been laid so that it is possible to install a pipe to connect water into their houses in the future. This option is available to all residents at their own expense (Joshi 2010).

Figure 57 – Communal external stand-posts



Water is not continually supplied in Hadapsar as was the case in Kamgar Putala slum where water was available 24hrs a day (Balasaheb Kamble 2010; Bapu 2010; Jabbar-Sheikh 2010) and where some families had private taps in their homes (Bapu 2010). At Hadapsar water is supplied for 6 hours each day (Pathan 2010) until 10am and then again in the evening from 4-8pm (Patel 2010).

The shared taps were installed two years ago, prior to that water was collected from a ditch where the pipeline ran within a pit (Jabbar-Sheikh 2010).

Some residents have heard rumours about the possibility of future water connections into their houses but for the time being they collect water from outside for use in their home, the toilet, washing and cooking and store it in containers within the home (Balasaheb Kamble 2010; Pathan 2010). One resident expressed their disappointment that individual water taps were not installed within the houses, as the government had agreed would be, which has meant the family has invested their own funds to fit out their house (Jabbar-Sheikh 2010). Another resident believed that the NGO Shelter Associates had promised to fit individual tap connections within homes but nothing has yet been installed (Kishor 2010).

Residents were previously charged for their water consumption in the slum, but at present there is no water tax and residents reported that they are exempt from the water tax for the next 20 years (Daware 2010; Patel 2010).

A group of ladies voiced their concerns with the poor water supply and have repeatedly complained at the local government offices but to no avail (Hadpsar Group Discussion 1 2010).

Water supply

- Errors in communication between the project implementers and some of the residents have resulted in misunderstandings of what would be included with the new housing. Some residents were under the impression that they would be provided with individual water connections in their homes and are disappointed that this has not been delivered.
- Residents' expectations of water supply are high because in their previous slum home water was available 24hrs and many had private taps. Shelter Associates surveys at Kamgar Putala found that 41% had individual water connection while the others used community stand-posts.
- Although water supply is less in Hadapsar, it is untaxed for the first 20 years so there are pros and cons.
- Although the project implementers worked in partnership with the community, not all of the residents received a clear message of what would be included within the new house structure, therefore community consultation and communication could have been improved.

Toilet and Drainage

One resident remarked on the impact of a private toilet on the quality of her life now she has resettled (Pathan 2010).

Some concerns were raised by residents regarding the building's guttering and drainage. At times the drains have become choked and residents registered their complaints with the regional government office. Commonly no help is given by the government and so the community raise funds by contributions and organise for the drains to be cleared themselves (Patel 2010).

Numerous complaints came from residents regarding poorly installed guttering which has resulted in leaks within the houses (Hadpsar Group Discussion 1 2010). It was reported that not all community members are willing to contribute financially to the cost of these repairs and that the community leader (Banobi Patel aka Bhabi) personally spent Rs.500 to get drainage fixed in the past. Some residents believe these issues are the responsibility of the corporation, but there is some confusion as to who is really responsible for such maintenance.

One resident admitted that a major cause of the blocked drains is because people are throwing their waste in the drains rather than the waste container which is blocking the pipelines (Hadpsar Group Discussion 1 2010).

“Drainage pipes are also not fixed properly. The pipe is very small, insufficient for the amount of rain water. Due to the pressure the pipes have given way and water leakage is there. Water leaks from top floor into the rooms on the lower floor through the ceiling. The previous house was better, it had tin sheets which did not leak” (Hadpsar Group Discussion 1 2010) .

At Kamgar Putala blocked drains were a common occurrence which led to mosquito problems. Residents regularly fixed the issue themselves and never had help from the local government (Jabbar-Sheikh 2010).

Drainage and Maintenance

- The drainage systems at Hadapsar may have been incorrectly specified and are unable to cope with the quantity of rainwater the site experiences. Budget constraints may have resulted in drainage infrastructure being compromised.
- Drainage and the maintenance there of is causing problems for the community. The local government should be responsible for this maintenance now that Shelter Associates has handed over all responsibility, but as the community is getting no response from the government they should formally organise a building maintenance fund and strategy. The NGO Shelter Associates could advise and assist such community mobilisation.
- Residents need to be made aware of proper waste disposal practices to prevent drains getting clogged. This training could be offered by Shelter Associates, the NGO who originally organised the housing. Shelter Associates had previously worked with the community at Kamgar Putala to promote composting activities, but now do not have the resources to continue with such activities at Hadapsar.

Open Space, Fresh Air & Cleanliness

Residents realise the advantages of relocating to a larger site at Hadapsar and children are benefitting from outside open spaces as well as larger houses which have improved lifestyles (Pathan 2010). Larger internal rooms have also provided more space for children to study more effectively as well as play (Balasaheb Kamble 2010). Residents feel that their situation is now better that they have ‘no noise, no pollution, fresh air and open space’(Pathan 2010).

The community regularly suffered from the annual flooding in Kamgar Putala which brought with it many problems of un-cleanliness (mosquitoes, snakes) which residents no longer suffer from at their new homes at Hadapsar (Patel 2010). However, due to the waste management issues on the site and infrequent emptying of the waste containers, snakes have been attracted from a nearby farm along with cases of swine flu (Pathan 2010). Other residents report that their situation at Hadapsar is better and less polluted (Pathan 2010), and clean with no health problems due to dirt (Balasaheb Kamble 2010).

Open space, fresh air and cleanliness

- Residents are generally very pleased with the environmental benefits of relocating to Hadapsar.
- The issue of waste management is one aspect that needs improving.
- With the NGOs help the community could be mobilised to store waste more safely and to sort it for financial benefit as was widely practiced previously in Kamgar Putala.

Social/Human

Health, Social Cohesion, Peace and Security

One resident has noticed the link between improved cleanliness at Hadapsar and the absence of health problems arising due to dirt (Balasaheb Kamble 2010). Another resident does not feel their standard of health has changed since relocating (Mane 2010). However, the significant problems of poor waste management and infrequent container emptying has caused a severe problem of mosquitoes as well as breeding swine flu and commonly attracts snakes to the houses at Hadapsar (Pathan 2010). Generally residents appreciate the differences in cleanliness, less pollution and open spaces compared to their former homes in the slum (Patel 2010; Pathan 2010).

One resident has reported that they prefer the peace and calm at Hadapsar compared to their slum in the city centre and that social cohesion has improved as the place is less crowded and there are no daily quarrels or fights (Pathan 2010). Although happy with their new houses, some residents are not happy with their new neighbours or the new atmosphere caused by the new people and given the opportunity would choose to move (Daware 2010).

Shelter Associates put a lot of thought into the impact the house design would have upon social cohesion and the community spirit which is commonly very strong in informal settlements. When living in close proximity in the slum residents would regularly meet as they literally pass each other's houses. This concept was sought to be retained at Hadapsar with a courtyard and clustered housing design, so that residents do not feel cut off from the rest of society and to retain the good aspects of communal living that the residents are so familiar and comfortable with (Joshi 2010).

Overall residents feel secure at Hadapsar but have raised concerns regarding the lack of street lighting in the dark evenings (Jabbar-Sheikh 2010; Mane 2010; Patel 2010). The possible intrudence of snakes, thieves and hooligans were also raised (Patel 2010), particularly while walking home from the bus stop in the dark evenings which is quite a distance away from the houses and results in feeling afraid when returning home at night (Mane 2010). Due to the distance between Hadapsar

and the city centre it takes time for police to reach the scene by which time culprits have fled (Pathan 2010).

Since the fieldwork has been conducted the situation has been updated; *“Due to the forthcoming elections early next year, the councillor has ensured that for the last couple of months the garbage container is cleared every week. I hope this lasts even after the elections. The community roads are now paved with new interlocking blocks and a compound wall has been constructed between the green zone and the project. And now the entire project including SPARC’s has been contained by a compound wall. So there has been an overall facelift. So the fear of snakes has receded”* (Joshi 2011; Patel 2011).

Figure 58 – Courtyard spaces aid social cohesion



Health

- Although most residents' health is benefitting from the new environment at Hadapsar, diseases are being spread unnecessarily due to the poor waste management at the site which needs to be dealt with.

Social Cohesion

- As with any resettlement project, the community make up and neighbours are vulnerable to change. At Hadapsar some residents have reported being unhappy with the new people that they now live in close proximity to. The integration and community structure has had to adapt with the resettlement and could benefit from greater community mobilisation and the formation of community based organisations or societies. An NGO with social-working skills could assist with this. And the development of a community meeting hall would be valuable.

Security

- Residents would feel safer and crime levels could reduce if street lighting was provided at Hadapsar.
- As the closest bus stop is far away from the site, the walk from the stop to the house increases the opportunity for mugging. If local transport links to the community were improved this would increase feelings of security.

Livelihood

Finance, Taxes

Many people reported that their most costly expenditure is 'conveyance' or transportation. Due to the situation of Hadapsar being far away from work places, schools, colleges, markets, the residents are forced to pay out for higher transport costs compared to when they lived in close proximity to all amenities when in the slum (Patel 2010; Pathan 2010). Education, health costs and electricity were the other most significant expenditures mentioned (Jabbar-Sheikh 2010; Patel 2010; Pathan 2010).

In order to raise the money to buy the houses, some residents saved money over time with the help of savings groups, others took out loans from money lenders (Anon 2010; Bapu 2010). Now that residents are in *pucca* concrete houses they no longer have the cost burden of the regular repairs they had to undertake to their homes in the slum after the damaging rains. This should result in significant cost savings. Usually, most families had to spend Rs.3000 per year to maintain, replace tin sheets and repair their houses after the monsoon rains; an amount they would now be able to save (Shelter Associates 2004). Other residents reported that they had to spend Rs5000-6000 to fix their homes (Balasaheb Kamble 2010). Even those families who were tenants at Kamgar Putala are now able to save money as they no longer need to pay the high rents at KP's city centre location (Cronin and Guthrie 2011).

Residents stressed that they have personally invested a lot of funds into finishing the interiors of their homes for features such as flooring, plastering, mezzanine levels and have indicated that they were under the impression the government and/or Shelter Associates would provide many things that they have not done, for example water connections within the house. These costs have been significant to the residents and in one case resulted in significant disappointment (Anon 2010; Jabbar-Sheikh 2010; Patel 2010).

“We were better in the previous house than this house. This place is very far from our workplace. Every day we have to spend Rs. 30 for conveyance. The houses are in such bad condition. [We don’t know] whether to spend on our daily needs or spend on improving housing condition. If we knew that we were going to get this kind of house we would have at least talked something at that line. We even said at that time, you [SA] take Rs.5000 from us but do the plastering. I even told X at that time that I was ready to give Rs. 5000 in two instalments for plastering of the house. At that time it was possible with Rs. 5000. You know what my financial condition is; I have taken a loan. So I told X that I will give Rs. 5000 in 2 week’s time. They only promised, said yes, but did not do anything” (Anon 2010).

“It was very clear from the very beginning what the Rs. 80000 would cover as an itemized breakup was given to the committee. No finishes were included and it was the community’s decision entirely to trade for a loft with no finishes than have a well finished house without a loft” (Joshi 2011).

Regarding taxes, residents reported that they are currently not required to pay (Mane 2010) and some believe that they are exempt for 20 years (Daware 2010). Previously in Kamgar Putala residents were required to pay Rs 175 per annum as a local municipal tax (Patel 2010). Therefore this money is now a saving. But perhaps once the community is formally registered as a society this situation will change.

Finance and Taxes

- Residents are finding the high costs of transport from Hadapsar prohibitive, along with the funds they need to complete fitting out their new homes.
- Not all residents received or accepted the message from the NGO regarding the amount of money they would need to spend themselves on finishing their homes. Perhaps communication from the NGO and within the community could have been improved. Resident’s level of education may have affected their comprehension.
- Residents now have better electricity connections and a secure site which has resulted in higher utility bills and transportation costs. But there is now no risk of flooding and the residents are able to save the previous cost of regular house repairs.

Conveyance

Many residents complained about the connectivity of the site at Hadapsar and poor local transport networks to vital daily amenities. One resident reports that conveyance was initially a problem as the site was very isolated, but that this has now been eased with the establishment of a new bus

stop and new amenities and another noted how life has improved with a good school and road nearby (Balasaheb Kamble 2010; Patel 2010);

“Initially that has happened (distance from work). This place was very isolated and like a jungle. There was no transport facility to go far for the work so people suffered a lot since they had to go far for work. There was only one school nearby so even children were affected a bit. Now there are new schools established here, transport facilities are available, so those problems are now solved” (Patel 2010).

However most residents are still finding conveyance their biggest problem after resettlement and that they need schools, workplaces, police, markets nearby (Pathan 2010). One resident reported having to walk 2-3km to reach to transport links (Bapu 2010). Children particularly face difficulties travelling to school and now feel it was a mistake to relocate (Mane 2010). One resident earns Rs.100 a day but has to spend Rs50 on conveyance alone. When they were in Kamgar Putala there were work opportunities close to the slum (Mane 2010). Another resident reported that their occupation has been positively affected after relocation, it is only their conveyance expenses that have suffered (Balasaheb Kamble 2010).

“It is very inconvenient for us. No conveyance facilities, no school nearby; no police station nearby in case of emergency. Even if we go to the police, it takes time for them to reach this place and when they arrive they do not find anybody here” (Pathan 2010).

“There [Kamgar Putala] the neighbourhood was good. Some source of employment was available. It was easy to earn at least Rs. 50-100 by the end of each day. Here, first of all we need Rs. 50 in your pocket to go out in order to find work” (Mane 2010).

“It was obviously better at my previous place since everything was nearby. Now I have to go to Pune City for purchases, travelling has increased” (Bapu 2010).

“It is little inconvenient from the job point of view. Going for work is not easy from here.... Work opportunities are not easy here. The kind of work that I do is not available here. We need to go far, in the city to get work” (Kishor 2010).

When organising for the resettlement project, the NGO Shelter Associates investigated the impact of a new site in great detail. Local politicians campaigned for the community to be re-housed in-situ, with plans to construct a 5 crore rupees retaining wall to keep the water out. Their justification for this was that the majority of residents were rag-pickers and scrap vendors who relied on this income which was easily accessible by train from the Kamgar Putala site. The politicians did not feel that the residents would want to move away from their livelihoods (Shelter Associates 2004). However, Baandhani and Shelter Associates disagreed with this and demonstrated through household surveys the employment patterns of the residents that most did not actually require a specific site for their place of work. The residents claimed at the time that even if it were an issue they would be willing

to make this sacrifice to move to more secure homes away from the threat of floods (Shelter Associates 2004; Cronin and Guthrie 2011).

However, now the resettlement is a reality, it appears that the residents are finding the distance from amenities harder than they expected and some have expressed their desire to move. The government has now constructed the retaining wall, so the remaining residents at Kamgar Putala are no longer affected by floods. The KP residents are however now expecting to become included in a future in-situ rehabilitation project and expressed their approval of the scheme with the proviso that they are in the vicinity of KP and close to their jobs and livelihoods. See Sunil Shinde's account of living in Kamgar Putala in the 'Status of Living situation' section in the analytical theme 'Perception of Success'.

Conveyance

- Residents' expectations of proximity to amenities and facilities are high because they were previously living in a desirable city centre location where everything was within easy reach. They are therefore finding the change of conveyance situation difficult to accept, as would be expected with any resettlement project.
- The community were consulted by the NGO and the government gave the KP residents a choice of site to relocate to. Despite the distance of 8km, the residents collectively chose the Hadapsar site and accepted the security the situation offered away from dangerous flood waters. The residents made the decision that a site away from the waters would outweigh the negatives aspects of increased distance to the city centre.
- Although the government gave the residents a choice of site, it is likely that they were all away from city centre locations and well separated from amenities.
- More and more development is happening at Hadapsar, and with it, the amenities and transport facilities are gradually improving, so the future looks more optimistic for conveyance to and from Hadapsar.
- It appears that the government's concerns of separating the residents from their existing livelihoods were correct and that in-situ resettlement would have been a more sustainable option for this community.

Key points

Water supply - Worse since resettling

- Water supply at Hadapsar is poor and does not meet the residents' expectations although water scarcity during the time of fieldwork may have had a detrimental effect.

Conveyance/Connectivity – Worse since resettling

- Connectivity and transport from the site at Hadapsar is poor which has had a detrimental effect on residents' access to livelihoods.

Waste disposal and management - Worse since resettling

- The community find it harder to manage their waste within Hadapsar compared to at Kamgar Putala where much waste was disposed of in the river which was worse for environmental pollution, however residents report suffering from the environmental and health impacts of poor waste management at the site.

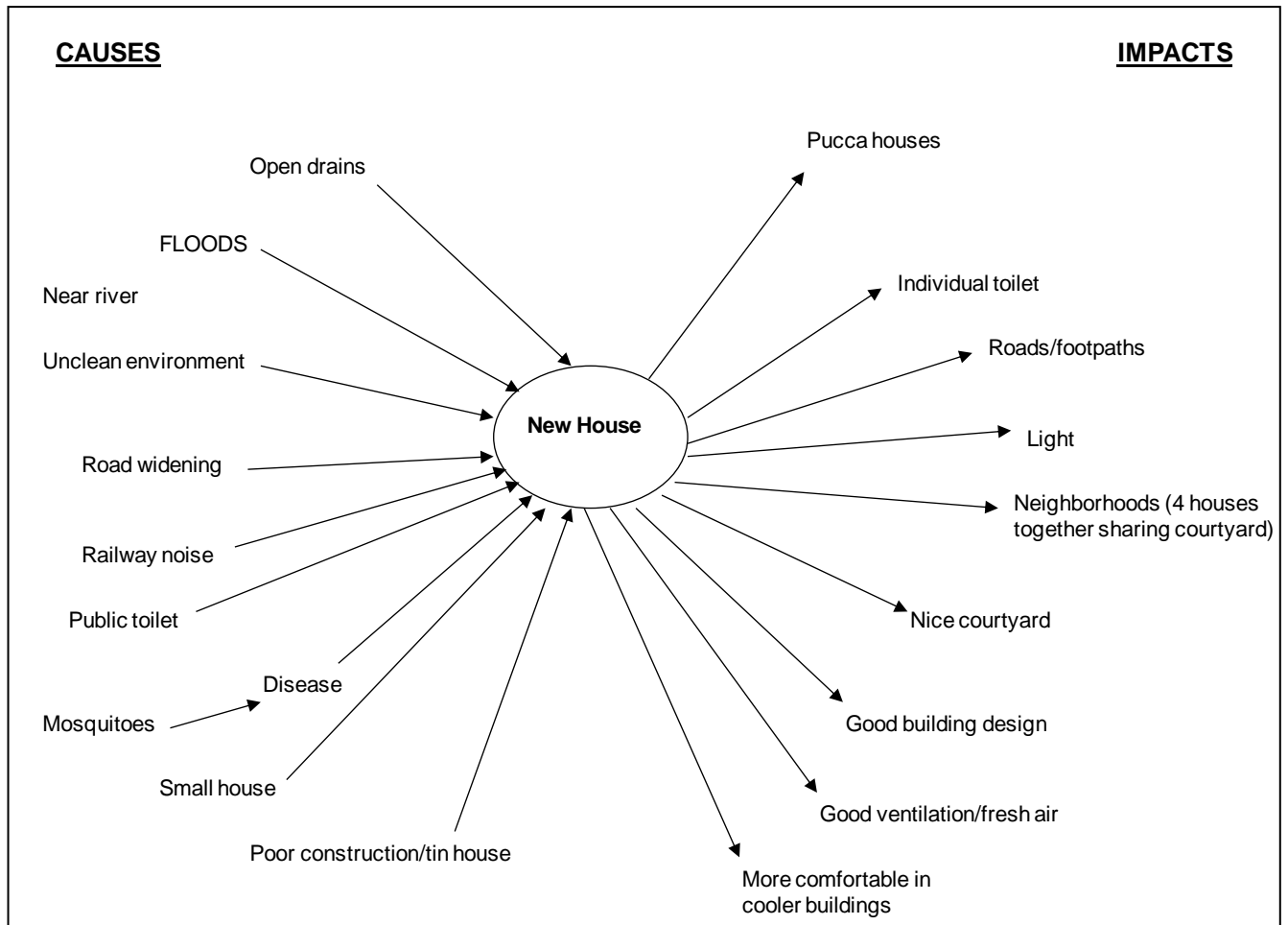
Finance and Taxes - Worse since resettling

- Residents are struggling financially to cover the increased cost of transport to access livelihoods and to pay for the construction of their home despite now saving the costs of flood repairs.

Perception of Success

During group discussions the residents were asked to draw a cause-impact diagram of the reasons why and impacts from the construction of the new housing at Hadapsar. The following diagram was generated and indicates the residents' perception of success of the project.

Figure 59 – Cause-impact of new housing at Hadapsar



The diagram shows the reasons why the residents felt the new housing was needed, with flooding being the key problem as well as a small house, poorly constructed in an environment polluted by disease and noise. The residents then went on to list the positive impacts of the new housing. The residents chose to interpret this task in a purely physical way and did not mention social aspects.

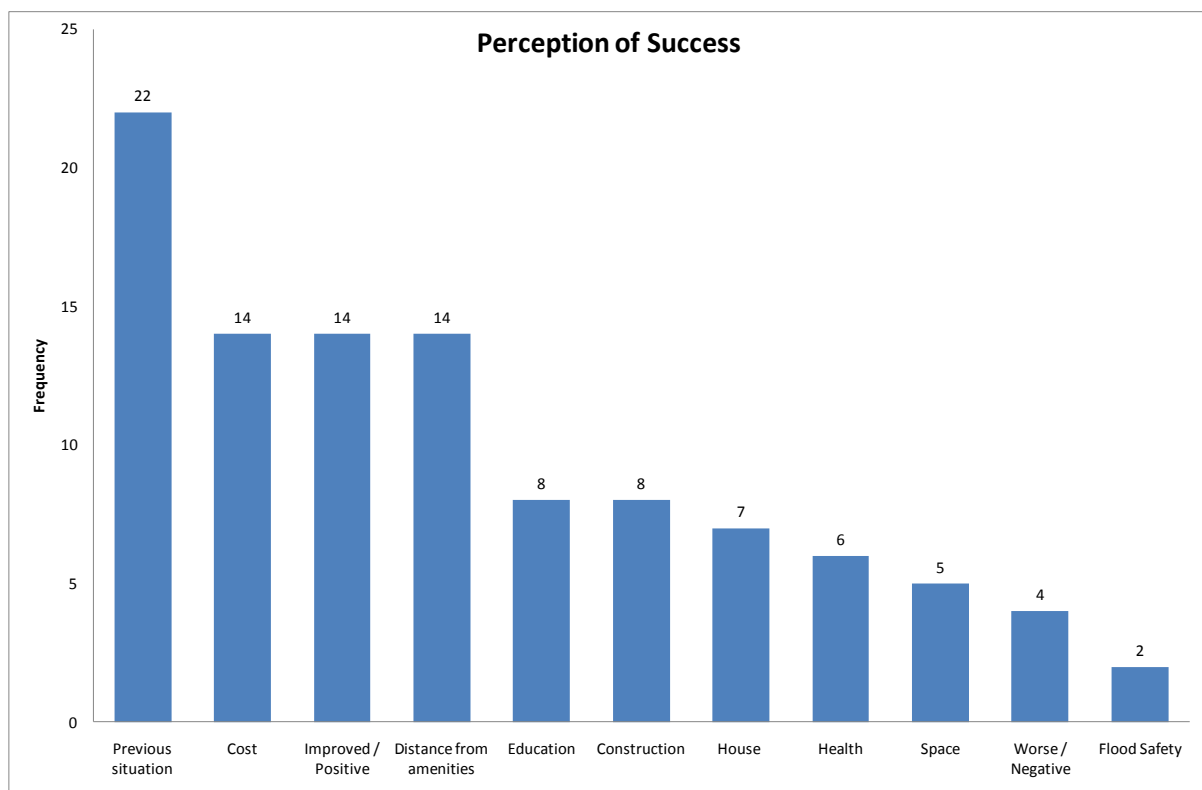
Interestingly not all of the problems normally associated with slums and which commonly define them, were mentioned as reasons why the new housing was needed. Out of the key characteristics defining slums, only inadequate housing was mentioned. Poorly serviced /access to sanitation and infrastructure, Overcrowding, Security of Tenure and Inadequate access to safe water were not mentioned as being of concern to residents.

Poor structural quality of housing, vulnerability of flood-prone location and environmental were the key reasons residents identified as the cause of the resettlement.

When analysed together with the interview responses and Table 9 indicating priorities in the Life Today section, it can be seen that after resettlement, the residents are now affected by inadequate access to safe water and to infrastructure. Overall structural quality of housing is better at Hadapsar, residential status is similar as the residents are still awaiting paperwork, houses are more spaced out so not crowded, but overcrowding was never identified as a problem by the residents.

Therefore, it could be assumed that as residents at Hadapsar are now experiencing more of these characteristics that they are in a worse off position. However, it is a toss-up between the value of the security away from floods and better housing structure vs. poor water resources, infrastructure and access to livelihoods. The worth and value of what has been gained versus what has been sacrificed can only be judged by the residents and has emerged from the interviews.

Figure 60 – Frequency of topics discussing Perception of Success



The high incidence of mentions of the Previous Situation should be eliminated from this analysis as the residents were merely responding to a direct question to describe the conditions in the slum.

The chart in Figure 60 clearly shows the difference in the incidence of people saying the project has positively improved conditions (14 counts), and the incidence of people saying the project has negatively worsened conditions (4 counts). Therefore it can be seen that the majority of people feel the project has overall been a success.

Two topics stand out as being most frequently mentioned during discussions on the residents' perception of success of the resettlement project. These are Cost and Distance from Amenities. In the discussions these were raised as critical aspects affecting the success of the project. These

correlate with the issues that arose during the group discussion as priority problems affecting the residents today, and also in the analysis of 'Life Today'.

Toilets were not mentioned by residents in the context of the success of the resettlement. This contradicts some of the leading project stakeholders' (PMC and NGO) feelings that the provision of a private toilet was a significant indicator of success which improves quality of life for the residents. The residents' lack of mention could indicate that residents have no complaints to raise regarding toilets, but if the provision of a private toilet was a significant contributor to the success of the project, it is likely that the benefits would have been high-lighted by the residents as was done for other issues. This omission suggests that the provision of a private toilet does not consciously benefit the residents as greatly as the project stakeholder's would have expected. It also suggests that residents were content with appropriately managed and maintained communal toilets as were present in Kamgar Putala. It could be interpreted that the provision of a private toilet is not considered by the residents at Hadapsar to greatly impact upon their quality of life. Some would say this is because the residents do not see the link between improved sanitation and health improvement which has an impact on expenses due to saved health costs and general quality of life. However, in this case, the evidence given by the residents at Hadapsar, and those remaining in Kamgar Putala, indicates that the toilet and sanitation situation at Kamgar Putala is not of priority to residents. Although not of utter importance to residents, it is commonly considered an issue for the greater public health as children remain to openly defecate in the lanes between the houses at Kamgar Putala, see Figure 61.

Figure 61 – Open defecation at Kamgar Putala



Themes emergent from the interviews have been grouped below to describe the resident's satisfaction of their new housing and its delivery.

Table 11 – Perception of success Coded themes emergent from data

Status of living situation	Physical	Social/Human	Process
Previous situation	Space	Flood Safety	Cost
Improved – Positive	House	Health	Distance from amenities
Worse – Negative	Construction	Education	

Status of living situation

Previous situation, improved, worsened

This section draws from residents' responses in interviews when specifically asked if and how their situation has changed for the better or worse; and does not include further information given about specific issues which are covered more fully in other sections;

Water

Residents gave accounts of their previous situation when inhabiting the slum at Kamgar Putala. There was a particularly good water supply in the slum which was available 24 hours a day (Patel 2010). By comparison, the water supply in Hadapsar is poorer with supply for just a few hours a day and is discussed in the 'Life Today' section.

Toilets, drainage and space

At KP communal toilets were available but people still used to defecate on the open ground. The toilet and water drains would regularly get blocked which caused a lot of mosquitoes and many drains were open (Daware 2010; Kishor 2010; Patel 2010). A prime need identified by the residents before they moved was better toilet facilities (Pathan 2010). The environment was not good, the place was congested and the lanes between the houses were narrow (Balasaheb Kamble 2010). The comparisons with the previous toilet situation infer that residents are happier with their private toilet situation. Toilets are discussed more fully in the 'Life Today' section. Interestingly the project stakeholders involved in developing the resettlement project considered the provision of private toilet to be the most significant indicator of success of the project (Kulkarni 2010). However, even though private toilets have now been provided, residents did not highlight them as a key indicator of success of the project.

Social cohesion and security

It was reported that at the slum people used to quarrel and fight regularly (Balasaheb Kamble 2010). The residents who still live in Kamgar Putala also reported a high incidence of crime and thefts but remarked that interpersonal relations within the community are okay (Kendale 2010). Another resident said they would prefer to move somewhere else as he doesn't like the atmosphere and his new neighbours (Daware 2010).

House and Tenure

Residents commonly agreed that a secure house was their biggest priority while in the slum, and many had bad reports of the devastation annual floods had caused upon their huts which were made of temporary materials such as twigs and leaves from coconut trees (Bapu 2010; Daware 2010; Jabbar-Sheikh 2010; Kamble 2010; Patel 2010). The floods caused a lot of loss to livelihoods as people were unable to work and had to seek refuge temporarily in a nearby school. With the floods came dirt that harboured diseases which frequently affected young children.

Other households were vulnerable due to their situation in an area of the slum ear-marked for road-widening. This meant that they could have their houses demolished and they also had to live with the hazards of the road and traffic on their doorstep (Pathan 2010);

“There [in Kamgar Putala] the road was just outside our door. We stepped out of our house directly on the road and beyond that was the railway track. So our children had no open space. We could neither sleep at night nor day due to the noise of traffic and the railway. There was lot of pollution. Adding to it was the river. There was more pollution due to the river water bringing in all sort of rubbish leading to problem of mosquitoes and sleepless nights. The river was very near so we were worried about our children. Old people were also afraid of traffic when they were out of the house.... After coming here our lives have changed. Children have a space to play, we also have more open space to use, the house is big, the toilets are inside the house. The lifestyle has improved after coming here” (Pathan 2010).

Now that residents have relocated many are happy with their new house as they are free from the recurring problems of floods and associated health, environmental, livelihood and cost impacts (Patel 2010). People report that they are benefiting from a bigger house, less congested, airy, quiet, peaceful and general lifestyle improvements (Pathan 2010). Residents also commented that they prefer the permanence of their new concrete house (Balasaheb Kamble 2010; Jabbar-Sheikh 2010).

Quality of life, Finance and Expectations

Although some residents said their lifestyles have improved since relocating, others expected that peoples’ standard of living would have improved more considerably and, although satisfied with the house, they have been disappointed that this has not happened (Daware 2010). Another resident is comfortable living at KP but has not received many facilities that they believed they had been promised (Balasaheb Kamble 2010).

The reports of unfinished works were echoed by other residents who were disappointed with the standard of finish within the house such as plastering, mezzanine level, electrical fittings, water connection, locking doors and windows. The residents were given a shell of a building by the NGO which was the most they felt they could provide with the budget, however it appears that many residents were expecting a higher level of finish which has required significant extra investments they were not expecting, and thus are now struggling to finish the fitting out of their homes (Balasaheb Kamble 2010).

“Many things like loft, plaster, electricity fittings, water connection, nothing was done. We ourselves have done the plastering. There was no locking arrangement for the doors and windows. We had to spend for all that” (Balasaheb Kamble 2010).

However, residents previously had to regularly pay out to fix their homes after the annual floods at KP and are now able to save that money (Balasaheb Kamble 2010).

Connectivity

A common and significant problem cited as making the residents' situation worse now than it was before is the cost, security and inconvenience of the site for local transport links and connectivity to places of work and education.

Some residents were adamant that their situation was better previously in the slum and were keen to express their views that many of the residents of Hadapsar are facing significant difficulties after resettling due to the distance from KP and the impact this has had on their livelihoods, as well as the financial and emotional cost incurred of finishing fitting out the houses while inhabiting them;

“Every day we have to spend a lot for conveyance. When we lived in city transport expense was very less. There was no danger coming home late at night. Here if we return late, we have to get down from the bus, walk all the way from there. There is a fear of thieves, hooligans. So we feel afraid of coming home late at night” (Mane 2010).

“I will tell you why I felt that house in the slum better. There was water supply, electricity supply, and everything was available nearby. Here there are no lights on the road. Water supply is now okay. Children facing difficulty with school, so we feel that previous house in city was better. There were schools in the city. We had paid donation money to the school for admission for 3 girls, Rs. 3000 each. We bore the loss of Rs. 10,000 and came here. After coming here, three girls had to be sent to different schools, and so it is quite inconvenient. That is why I feel the previous house in the city was better” (Mane 2010).

“Everything with respect to this house is to be done by us. Our house has remained like this because of our present situation. What does Madame [Shelter Associates] do? She shows only the houses that are nice. When people come for interviews she shows only those houses which have been built nicely. That is why I am saying she should show the houses that they have built as they were, not those which have been remodelled by the inhabitants” (Anon 2010).

Relocation

Most households moved to Kamgar Putala as they wanted to get away from the risk of flooding. However other families moved due to different circumstances; some whose homes were at risk of demolition for road widening, and others purely because they wanted more space (Mane 2010).

Positives

Residents said that the best thing about living at Kamgar Putala was the good neighbourhood, local amenities, good transport links, within easy reach of education and employment opportunities (Balasaheb Kamble 2010; Daware 2010).

"[The] old house had a lot of impact on our lives. Health problems were there. My parents, children used to be sick all the time due to the open drainages and the dirty surroundings. I used to feel ashamed of staying there. If any friend of mine wanted to come to my house, I just did not feel like taking him to my house....Not only me but for all my family, our prime need was a house because we always had to face lots of problems regarding the house as our house was situated on the bank of river or very much near the road. We had to face the problems of floods, pollution, etc" (Daware 2010).

"We used to stay in tin shade. Now it is a concrete house. Children have a good school nearby. Good road is nearby. Everything has become easier... Our life has improved here. The house is big enough to accommodate all of us. Children can study well. We are living comfortably and have no tension regarding this house"(Balasaheb Kamble 2010).

"The house is good. Better than the previous in all respects. No problem of water or other problems. Floods were a yearly problem. We had to find temporary shelter...The first important need was a house. There were problems like flood, availability of enough space around, etc., so our most important need was that of the house. They [the family] all like the house. The only thing is my source of living, which is hampered after coming here. The life is going on the same way as it was before" (Kishor 2010).

Status of situation

- Water – The situation is *worse* at Hadapsar. Water is not tapped into homes or available 24 hours a day.
- Toilets – The situation is *better* at Hadapsar now that residents have private individual toilets inside their homes.
- Social cohesion – The situation is *similar* at Hadapsar to the previous situation, with mixed reports from residents.
- House – The situation is *better* at Hadapsar and residents are pleased with the permanency of their new homes.
- Finance – The situation is *similar* at Hadapsar to the previous situation. Some residents are saving the money they would normally spend on repairing flood damage; others are struggling to pay to finish the interiors of their new houses.
- Quality of life – The situation is *similar* at Hadapsar to the previous situation. Some residents expected their lifestyles to improve more after the move.
- Connectivity – The situation is *worse* at Hadapsar. The site is less well connected to local transport and amenities.

Accounts of conditions in the slum

Kamgar Putala Slum resident's account – Seema Kendale

Some of the residents who remained living in Kamgar Putala were interviewed. One family who had lived there for 40-50 years explained that they are happy with their living situation and that the area is no longer affected by the floods since the construction of a water retaining wall by the government around a year ago. However, they feel confined by space with a growing family and would like to move somewhere larger (Kendale 2010).

“We used to [face flood water] before, but not after the wall was built. Every time there were floods we had to gather as many belongings and run to a nearby school for shelter... We left the house as it is and stay in the school till the flood water subsides, [for] around 4-5 days, till the water started receding.. Government provides the food, etc... They [our belongings] do get damaged. We have to remove water from our house with buckets. It is very troublesome... The drainages get blocked and the waste water gets into the house... It used to be very dirty, muddy. [We check to] see if anything is intact, wooden bars, planks, etc. Otherwise every year there would be a new beginning... It also disturbs our daily routine like work and income... Many people get sick. There is foul odour everywhere due to the blocked drainages, lot of insects come out that cause diseases” (Kendale 2010).

Seema Kendale who lives at Kamgar Putala is aware of the group of people who shifted to Hadapsar but says her family would not want to be in their situation as they see the struggle Hadapsar residents have with finding work opportunities and have seen the people return to KP in search of work. Although they see that they received good houses, there are not enough work opportunities (Kendale 2010).

Seema expressed her desire to move somewhere better than Hadapsar that has more space. She lives in a house to which the family added a second storey 18 months ago. They have their own private water connection with a 24hr supply at the front of the house for which they pay an annual tax of Rs1000 to the PMC. They have a borrowed (this is likely to be an unofficial and illegal connection provided by a third party within the settlement who is selling electricity fed off a supply in their name. The power is usually sold at a profitable rate but enables households to have power in areas where power companies will not service. This is a common occurrence in Indian slums) electricity connection upon which they run light bulbs and a TV, they pay Rs150 to the owner of the connection. The household use a common toilet for which they pay Rs20 per month and which is clean and managed daily by a caretaker. As the toilet is only one minute away from the house and is well lit they feel safe and secure using the facility at night. Waste disposal is not an issue for this household as their son is a rag-picker (a rag-picker sorts waste to sell on items that can be recycled). Most of the families' daily expenses go towards food. They are a member of a savings group to which they deposit Rs250 per week.

They have heard that the government has plans to clear KP slum and Seema feels helpless if the government wants to demolish the slum, she says they will have to cooperate, but they feel secure in the fact that the government will provide them with a new house to live in (Kendale 2010).

Figure 62 – Seema Kendale (left), Sunil Shinde (right)



Kamgar Putala Slum resident's account – Sunil Shinde

Sunil has been living with his family in two slum houses by the road in Kamgar Putala since 1995. He is comfortable living here because he has good working opportunities. He has heard from local leaders that a new society (a society refers to a new colony or residential building development which will later become registered as an official housing society) is going to be constructed for the residents of KP. Politicians came a year ago and collected resident's documents and informed the residents that they will demolish the whole slum and build a fly bridge on the site and a new building on the other side. Sunil feels it will be good when a new society is formed and is looking forward to the day when they can live in a newly constructed house with better living conditions. He is fed up of living in a slum and wants more space for him and his family. When the politicians came they did not show plans to the residents but were informed that they will be given two rooms of 10x10ft with a kitchen platform, toilet and bathroom and the residents will be asked to contribute Rs60-70,000 or Rs100,000. Rs5000 will be paid up front as a deposit and the rest will be paid in monthly instalments of Rs2000-3000. They have been told that during the demolition and while new buildings are being constructed, they will be given temporary accommodation in tin sheds. The residents including Sunil want to stay living on the site at KP but not in slum shacks, so people are happy about the proposed rehabilitation and are awaiting further news.

Sunil complained about the high incidence of crime currently in KP and he feels this will improve after the new settlement is formed, and he thinks life will generally improve once a new society is established.

Sunil reports that while he has been living in KP slum there have been six fires. Peoples' gas cylinders (commonly used for cooking) are dangerous, particularly with the construction materials in the slum and proximity of houses which cause fire to spread fast. Sunil wants the shacks to be demolished and believes that once they move from here life will be better.

Sunil's family saves money and holds a life insurance policy of six lakhs. They pay a premium of Rs8000 per year. With the money he saves he plans to build a good business of his own, a scrap business.

Although Sunil is happy to resettle, he is adamant that he wants to stay in the vicinity of KP, the main city, because his work is there (Shinde 2010).

Physical

Space, House & Construction

Shelter Associates' team of architects had to design the houses to fit around the infrastructure already present on the site that had been previously installed by the PMC. SA and the community worked together to formulate an agreeable design. Despite the considerable design constraints due to the existing site infrastructure, SA managed to successfully come up with a design that the community were happy with and which SA consider a great success (Joshi 2010). SA started their design process by conducting a socio-economic survey to ensure they fully understood the needs of the residents. The residents were particularly clear that they wanted a private toilet and were prepared to sacrifice space inside the house and pay more to have this facility. Residents were also adamant that they did not want a high-rise building and also wanted the flexibility to extend their living space if they so desired in line with their middle-class aspirations of a more private dwelling. SA took this brief and proposed a number of options to the community based around a group of 4 clustered houses around a private courtyard, on two levels with private toilets (Joshi 2010).

Residents have commented that the new houses at Hadapsar are more spacious which has had an advantageous effect on lifestyle and children's' play (Bapu 2010; Mane 2010; Pathan 2010) and provides enough space for the whole family with separate areas for children to study (Balasaheb Kamble 2010). Residents are pleased with the design of their new homes and mentioned the single storey building is best and most suitable for residents of all ages, particularly the elderly who struggle with stairs (Patel 2010). Some residents compared the benefits of their new concrete house to their old huts in the slum (Jabbar-Sheikh 2010).

The PMC's slum control department engineers have noticed that residents prefer to have low-rise buildings and that some of the 10-11 story buildings they are constructing for other projects are being rejected by the people, but due to limited land availability high-rise buildings are the only option for most slum development schemes (Joshi 2010).

At Hadapsar some residents have praised the permanency of their new concrete house, but other residents complained about various faults in the construction particularly plaster work and issues with water-tightness. The residents feel abandoned by Shelter Associates and the Corporation as neither of them respond to requests for help. One resident explained that he felt the poor standards of construction were due to a lack of supervision by those in authority (Shelter Associates) during the construction phase.

"The water proofing done is not good. The entire ceiling leaks in the monsoon. The plaster from the outside, was supposed to last 99 years as we were told, is already fallen off. What can we do? The people from Shelter Associates don't come here. Even if they do, they are busy with their own work. Corporation just does not bother to look into it. They only promise us that they would come the next month and so on, but they do not turn up at all. No one comes here to see the problem" (Pathan 2010).

"At the time of construction our people should have supervised personally. How things are going on, whether it is getting sufficient water or not. But people did not take care so many people have leakage in their house. This includes my house too. I feel that Shelter Associates should have paid a little more attention to such things" (Daware 2010).

Figure 63 – Failing plaster and down-pipes



Another resident is clear that they prefer their old slum house to the new house as they have been unable to afford and organise for the completion works themselves (Anon 2010). The house was handed over by the NGO to the residents without various items that the residents were expected to be completed. These included the loft, electrical wiring, water connection, plastering or even basic security locks on doors and windows plastering and fitting out of the new house (Balasaheb Kamble 2010).

There are unfinished houses on the site at Hadapsar and some residents said the development was done late and some work is still pending, 5 years after the occupants moved in (Bapu 2010). These include the plastering/concrete of the staircase which is not complete and so is leaking, the steps are not even and the flooring is unfinished (Kishor 2010). Eight houses have not had the glass fitted in their windows (Hadpsar Group Discussion 1 2010). Other residents exclaimed that the construction materials were of poor quality and much of the supposed plaster and concrete work is just soil, and although only 5 years old, is in a poor state (Hadpsar Group Discussion 1 2010).

Figure 64 – Unfinished buildings



Out of the 176 families Shelter Associates worked for the relocation of, only 144 were able to move into their complete houses. Another 32 houses are unfinished due to problems with the release of bank loans. Of these 32 families, 13 have made the decision to pay themselves for the remaining construction costs, and 3 families have built temporary tin huts on the site at Hadapsar (Kamble 2010). The 32 unfinished houses on the site, according to the PMC's Slum Control Department is the responsibility of Shelter Associates (Joshi 2010). Shelter Associates disagrees with this claiming that funds have been delayed preventing the completion of construction. The funds have been delayed because the PMC have not completed 'the agreement' to allow the release of funds. So far the Rs.50,000 (reduced to Rs 47,619 after tax) has been released as a grant from VAMBAY which has provided the slab work and RCC (Kamble 2010). A remaining Rs30,000 is required to be raised by residents of which Rs. 5000 was a down-payment to complete the works (Joshi 2010). The residents have arranged bank loans for these funds but the banks are refusing to release the funds until they have seen an agreement from the PMC (Kamble 2010). The first batch of residents who successfully secured loans from the Bank of Maharashtra had the backing and assistance of the bank's staff. Since then, the staff have changed, and the latest batch of loan applications have been stalled. Shelter Associates have been campaigning on behalf of these families and have submitted files for the 32 households (Kamble 2010).

According to MHADA the unfinished houses are due to funding problems and the banks not paying out loans. These houses have had their main structure built, but 50% of residents have managed to complete the construction on their own. 'Out of 32, 14 families have managed construction on their own and have shifted now' (Kulkarni 2010).

"Now the cost is increased. At that time we constructed houses at a very low cost so the amenities are less there. Infrastructure development was not as good...We have made a provision in the budget and got the infrastructure done...We have constructed a community hall there, road, drainage, water supply and we are upgrading all that. At that time it was very poorly done. Now it is developing" (Joshi 2010).

"Even to date, the PMC is yet to make over the land to the cooperative society on a 99 years lease basis- this is the situation after 8 years! The HDFC housing which was ready to make the loans to 32 families just required the lease document in order to give these. But the apathy of the PMC resulted in 32 families being deprived of it" (Joshi 2011).

The engineers of the PMC's Slum Control Department admit that the houses were constructed at a very low cost which has resulted in less finishes and compromised infrastructure development. The PMC now says they have made a provision in the budget to complete unfinished infrastructure which has enabled them to construct a community hall, finish and upgrade the road, drainage and water supply which were previously done to a low standard. However, during the period of research the researcher did not find the existence of a community hall.

The design of the houses was such that the residents could invest themselves to add the loft level, and due to budget constraints, various aspects of the houses were expected to be completed by residents. The Director of the NGO Shelter Associates does however admit that there were issues with the construction of the houses due to the severely tight budget and the NGOs lack of

experience of building contracting. This is an issue they have learnt from and in future will avoid getting involved in the management of construction projects (Cronin 2010; Joshi 2010).

“We had built Dattawadi in 96-97 which was a much more difficult project and was built by the people themselves with training from us. The core issue is whether NGO’s should be implementing projects or concentrating on community mobilization. Also one of the questions that needs to be asked as NGO’s are always flogged for their shortcomings- where is the money to support NGO efforts in such projects? The money was so insufficient to construct that SA had to completely subsidize their contribution, which actually panned almost 7 years of our effort. Even today we are fighting with the government that with such projects, there should be funds set aside to support the NGO. There are a world of expectations from NGO’s who are supposed to magically fulfil them without any funding support!” (Joshi 2011).

“Yes, it [the project] has been a success in terms of achieving what we completely believe in, you know the poor being central to the process right throughout. Personally, I am not very happy about NGOs being the implementers in terms of the actual construction but it was a good learning curve for us because we realized that this is precisely what we should not be doing you know getting engaged in the actual construction. But what happened with the Hadapsar project was because the funds were so limited the communities just could not have afforded to hire a contractor for anything other than the RCC work. Because then the cost of each house was going up to almost 1 lakh of rupees. And they did not have the capacities to put out another 20,000. But departmentally we managed to build the entire project in 80,000. But Shelter had to play a huge role in doing this which we were not clearly very equipped to do because that is not our core strength, construction is not our core strength. Designing, planning, mobilizing community, these are our core strengths. But so as far as the quality of construction is concerned, it could have been better. But we did not have that option because we did not have the money to hire people who were professionally competent to build. But even then I would say you know considering that we have a severe funding crunch in this project, I still feel that it has turned out fairly well” (Joshi 2010).

“SA had invited the community to take on the contract departmentally as only RCC work could be contracted out and we all were very clear that the foundation and structure of the houses couldn’t be compromised. One can change doors and windows or even re-plaster but you cannot do the structure again. But the community members were unwilling to execute it as they soon realized that it was such a tight budget. Had the budget been reasonable SA could have easily accomplished it. But within Shelter there has been a growing awareness that an NGO’s major role is to facilitate the process by bringing all stakeholders together and providing a holistic approach to redeveloping slums” (Joshi 2011).

Space, House and Construction

- Residents are benefiting greatly from the extra space within and around the new houses and consider this aspect a significant success. The space has had a positive impact on social cohesion, privacy, comfort and children's education.
- The provision of toilets as a key indicator of success were not stressed by the community.
- Although residents are pleased with their new houses there are many complaints regarding the standard of construction and level of finishing which has detrimentally affected their perception of the success of the project. Residents are disappointed that they have not received the level of finish they were expecting which has had cost implications and detrimentally affected their trust of the NGO and project deliverers.
- The Hadapsar residents realise they are lucky to have received low rise buildings with courtyard layouts and are in a fortunate position compared to most other rehabilitated slum dwellers who are housed in high-rise buildings with less open space.
- The NGO has learned for future projects to avoid construction as that is not where their skills lie.

Social / Human

Flood safety, Health and Education

The main criterion for many residents' perception of success of the resettlement project is the increased protection from flooding. Now that they have relocated to a site far away from the water the residents are free from the recurring problems associated with the flooding, therefore this is a clear indicator of success (Patel 2010). Less residents, particularly children are now becoming ill as they are away from dirt, open drains and mosquitoes (Jabbar-Sheikh 2010).

Residents are also very aware of the increased sanitation of the new housing and lower incidences of water-borne diseases that were prevalent in the slum (Patel 2010). The fresher air and lower pollution levels are also perceived by residents to improve health (Pathan 2010). Now the house has a bathroom residents are able to keep themselves cleaner and general cleanliness levels have improved (Bapu 2010; Daware 2010). One resident claimed that his life has not changed since relocation but that he now has more health problems (Kishor 2010).

"Our health has improved a lot here. At our previous place there were frequent problems of fever, colds, diarrhoea, etc. There was not much open space available outside so that we can go out for some fresh air. We had to have a bath outside the house as there was no bathroom inside the house"(Daware 2010).

"Today a lot of women tell me that their children are able to study quietly, especially when they go to the loft and when the doors are shut it is quiet, they are not disturbed. Even within the house when people come to their homes, they have this place like the loft where the children can still go and do what they want and do not have to necessarily be a part of everything that happens. It allows them to function as a family for the first time. I think that's a very big step up" (Joshi 2010).

Some residents feel that education has been affected positively since relocating (Jabbar-Sheikh 2010; Pathan 2010), now there is more space for children to study inside the larger houses (Balasaheb Kamble 2010). One young teenager interviewed no longer attends school since relocating (Bapu 2010). Free education was available for children within the slum, but now residents have to pay fees (Kishor 2010) which has had negative consequences for both cost and attendance reasons.

However, various residents explained the difficulties they now have with getting their children to school due to the poor transport links from Hadapsar to good schools. The cost of bus and travel fares is also significant (Mane 2010).

“I will tell you why I felt that house in the slum better. There was water supply, electricity supply, and everything was available nearby. Here there are no lights on the road. Water supply is now okay. Children facing difficulty with school, so we feel that previous house in city was better. There were schools in the city. We had paid donation money to the school for admission for 3 girls, Rs. 3000 each. We bore the loss of Rs. 10,000 and came here. After coming here, three girls had to be sent to different schools, and so it is quite inconvenient. That is why I feel the previous house in the city was better....More money is spent on everything, education and transport. We pay Rs. 40 every day for bus fare for the children to go to school. There is no proper education facility here so we have sent one girl out of Pune and have to pay a lot for her education. If we were in city we would not have to pay that much money for these things. Two years for Std. X and XI and now for the XIIth” (Mane 2010).

Flood safety, Health and Education

- The houses are not vulnerable to flood damage and so residents perceive this as a successful criteria in the resettlement project.
- Residents have noticed a beneficial impact in their standards of health since relocation and attribute this to more sanitary homes and environment.
- Residents’ perception of impacts upon education are mixed. Some students are benefitting from the increased space within the home which is conducive to study, but other residents are finding travel and availability of local schools and free education more troublesome.

Process

Cost and Distance from amenities

Some residents feel that the cost of their new house was fair and in fact now save money as they do not have to incur the annual cost of repairs to their regularly flood-damaged house in the slum (Patel 2010). Another resident feels that they got a good deal, but were disappointed that they had to

build the mezzanine level which they believed had been in the original agreement, at their own cost (Jabbar-Sheikh 2010).

Other residents feel that they did not get a good deal for the house and that the expenditure was too much and they did not receive the internal finishes that they had been promised by Shelter Associates. They were also not informed of the reasons why some of the grant money was not allocated (due to tax) and have found the extra expense of finishing the house themselves to be too costly which has resulted in large debts; some feel that purchasing a newly constructed flat would have been more economical (Pathan 2010).

“When we joined the Shelter Association we paid Rs. 5000 as a deposit. Then we deposited cash, Rs. 30,000. We were sanctioned Rs. 50,000 grant from Valmiki but we have actually received Rs. 47,000 out of that. We don’t know why. They [Shelter Associates] told us how that money was used. Used for foundation, columns, and slab. Actually, in a way, I think it was a costly deal. We did not personally receive the grant of Rs. 47,000. It was used by Shelter Association in the construction of slab, walls, and plastering from outside. No amenities inside the house that they had promised us, like lofts, kitchen table, etc. Only toilet and four walls. They [Shelter Associates] had promised not only kitchen table, lofts, flooring, but also plastering from inside and outside, everything. I don’t know. Don’t know why Madame [Shelter Associates] did not provide all that. Plastering was done only from the outside. The plastering from the inside was done by us at our own cost. We had to spend more than Rs. 100,000 and still the work is incomplete. We still have to do the kitchen table, the inner walls, the flooring. Too much money was spent; we feel a new flat would have been a better choice. I don’t know the prevailing cost of a flat. But we certainly spent a lot for this house. Day by day the cost of materials like cement, sand, etc. is increasing” (Pathan 2010).

“The breakup of payments that were made by MHADA to Shelter was kept in a file with the KP residents so that they knew exactly how much material was used and against what work the payment had been made. But people were not even interested in taking a look at this despite several attempts. They would say we trust you – why should we see the record? The grant by the government Rs. 47000 barely covered the RCC cost i.e. foundations, beams, columns and slabs. The ones who got a bank loan of Rs. 30000 got brickwork, doors, windows, jalis, both their external and internal plaster. Those who could not secure the loan and could muster only Rs. 25000 we left out the internal plaster. There was no question of any other kind of finishes as Rs. 30000 was a very small amount to cover so many items. There were also escalations in cost of material over the year and half that construction took place and we would regularly communicate this to the members” (Joshi 2011).

“We did tell the residents who complained a lot that they could give us in writing that they wished to move back to Kamgar Putala and we would forward the letter to the PMC and explore the possibility of making over their house to other beneficiaries who could pay them back the amount they had invested. Not a single family responded to this!” (Joshi 2011).

Another couple commented that despite running their own shop from home and having an auto-rickshaw business, that they are struggling financially after having had to spend a significant amount of money to complete the finishing of the house, almost as much as they house originally cost. Many things which they were expecting to have been provided, such as the water connection has been ignored and now the government is ignoring their requests for help (Jabbar-Sheikh 2010).

Another significant cost issue for residents is the cost of conveyance and travel fares to and from places of work, education, markets and general amenities. One resident struggles with knowing whether to spend what money they have on their daily needs or on improving the housing condition. The plastering and internal finishes have had to be of secondary importance verses meals Repeatedly they have gone to Shelter Associates for help but have been told it is not of their concern now (Anon 2010).

Most residents reported taking loans to cover the costs of their new house from moneylenders and banks (Bapu 2010; Daware 2010; Kishor 2010), one used cash they had saved (Balasaheb Kamble 2010).

Distance from amenities

Many residents have complained about the distance of Hadapsar from amenities and transport links; this issue has affects residents' perception of the success of the project.

The issue of removing residents from their place of work was a point of discussion during the project development because according to the government many of the residents were rag pickers who had established a living in the area (Kulkarni 2010).

However, most residents made the decision to sacrifice the location in exchange for a water safe area;

“ We did feel this place a bit far away at that time but instead of staying in that dirty place we preferred to come here” (Jabbar-Sheikh 2010).

Residents have reported the impacts of the poor conveyance from the site detrimentally affecting household expenditure, education, employment, availability of emergency services and access to general livelihood opportunities and amenities. These negative impacts have in some cases resulted in residents considering the resettlement project a failure and have expressed their preference of their former slum house with a desire to relocate (Anon 2010; Mane 2010).

MHADA say that no one was forced to relocate against their will as the residents were convinced it was their best option;

“The success of this scheme depends as to how you convince them about this scheme. The way in which the scheme came to them was I think in a right manner so that they themselves were convinced and they shifted here....May be these people who were moved away by the opinions they hear every now and then and they start thinking in some different manners. So may be their way of looking at the scheme initially was different. We had hurdles in overcoming their misinterpretation of the scheme. Later on they were rather convinced. They joined the mainstream and then the scheme was through” (Kulkarni 2010).

When Shelter Associates were organising the resettlement project they helped the residents choose from a list of sites reserved for the Economically Weaker Section, on offer from the PMC. Along with SA, the community leaders visited the various sites on offer and chose Hadapsar as it was not at all close to river bodies and they felt the site was suitable for their needs;

“Hadapsar was about 8 kms from where they stayed, but in spite of that they chose Hadapsar because they felt that it was relatively well connected to the rest of the city. They might have to walk a little bit to get to the nearest bus station but the market was not so far and they felt that there was a job opportunity for them to get jobs because there were a lot of housing societies even then that had come up around the proposed site. So this was a very conscious decision which the people took when they decided that they would shift to Hadapsar” (Joshi 2010).

“They had been shown a site which was much closer to Kamgar Putala off the Mumbai-Pune highway but just because it was close to the river they refused to consider relocating there. The land belonged to the PMC and it was way beyond the riverbed” (Joshi 2011).

Cost and Distance from Amenities

- Some residents feel their new house was a fair deal financially, others strongly disagree and feel they would have been better off buying a new flat from a developer.
- Despite measures by the NGO to be transparent, there appears to be a lack of communication of the spending allocated to this project which has developed a sense of mistrust from the community towards the project implementers (the PMC and Shelter Associates).
- The separation of the site from the original slum at Kamgar Putala has resulted in residents having a particularly negative perception of the success of the project due to the detrimental affect increased distance has had upon livelihoods.
- Although resettlement was an informed decision for the residents, in-situ slum rehabilitation would have been preferable to the KP residents rather than being displaced from their established livelihoods.

Key Points

Status of Situation

- Most residents reported a greatly improved living situation since resettlement.

Cost

- Many residents consider the cost of the new housing was too much and are disappointed with the lack of transparency of project spending and unforeseen costs.

Distance from Amenities

- Most residents have a particularly negative perception of the success of the project due to the detrimental affect increased distance has had upon livelihoods. In-situ rehabilitation would have avoided this.

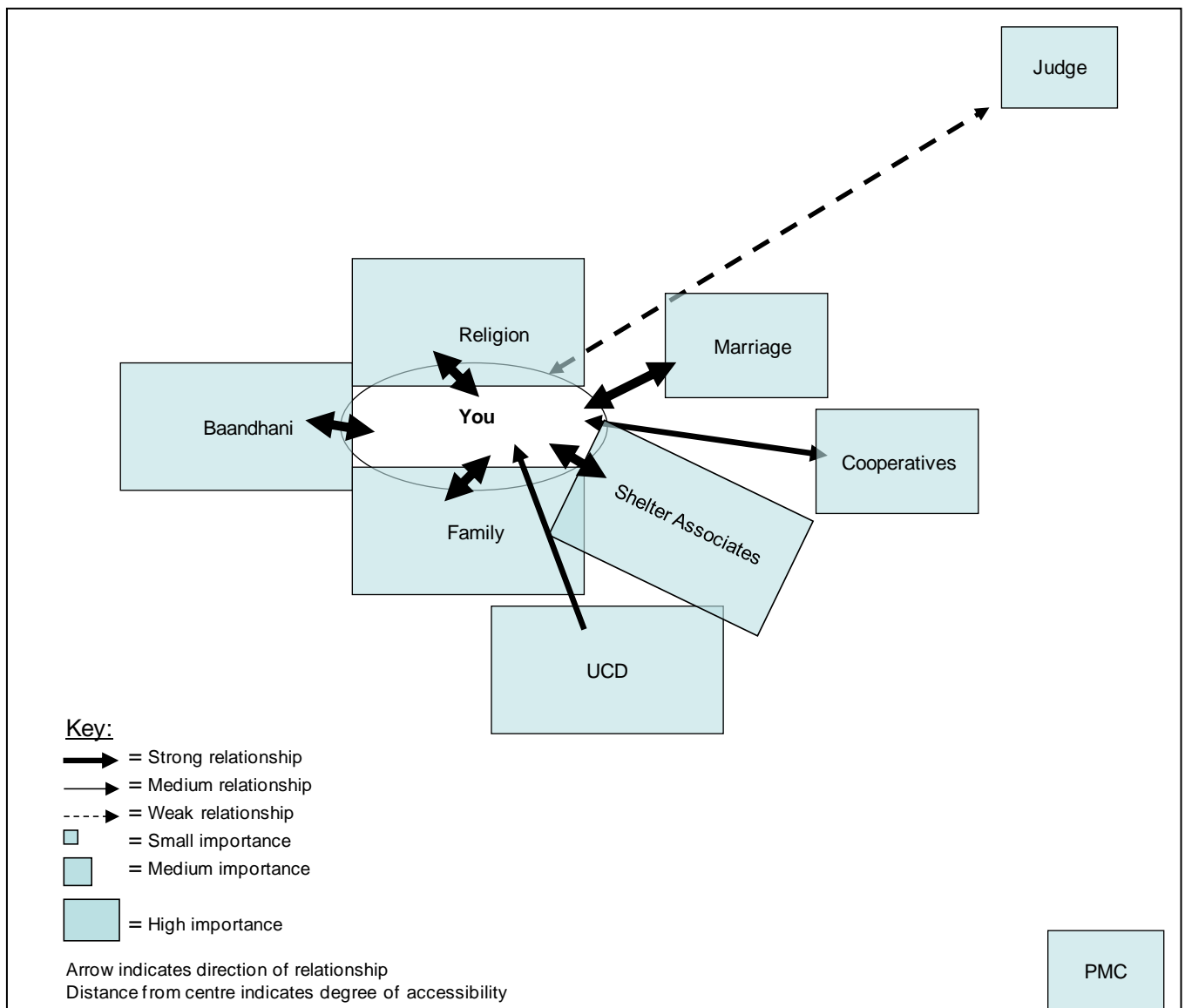
Institutional Reform

During a group discussion the residents were asked to list all the institutions they are involved with, see Table 12 and then to map them indicating their perception of importance, strength and direction of relationship with the institution, and accessibility of the institution. See Figure 65.

Table 12 – Hadapsar Institutions

Institution	Comment (in residents' own words)
Family	
Religion	
Shelter Associates	
Baandhani	Savings group, meetings, come together if experience problem
UCD - Urban Community Development	Savings groups (PMC department) – A good chance for loans, grants. People go to them with business proposals... you can get a full subsidy
Marriage	
Cooperative society	collect money as a shareholder, daily collection, give loans
PMC	
Judge	

Figure 65 – Hadapsar Institutional Mapping



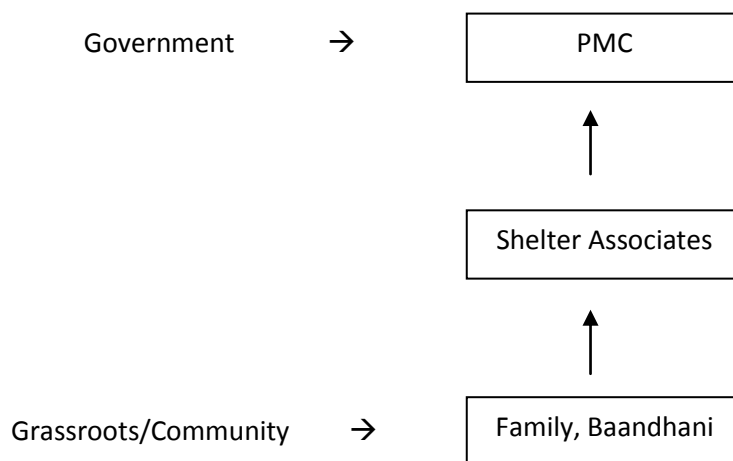
The results of the institutional mapping exercise broadly groups the institutions into three groups in order of priority to the residents;

Group 1 – Family, Religion, Baandhani

Group 2 – Shelter Associates, UDC, Cooperatives, Marriage

Group 3 – PMC, Judge

The key institutions which are relevant to the community and involved in the resettlement are;



As would be expected, the organisations with less presence in the community such as government organisations (Group 3 – PMC and Judge) have the weakest relationship and are considered the least important and least accessible to the community.

Core community institutions such as those in Group 1 - family, Baandhani the community based group and religion, are considered the most important, most accessible to the community and with the strongest relationship to the community.

Group 2, which consists mainly of various organisations that work with communities and between communities and governments were represented as both high and medium importance. The NGO Shelter Associates was indicated to have a strong relationship with the community but with a medium level of accessibility. It was however indicated as being a two-way relationship which shows that the residents feel they are able to communicate and work well with the organisation. The other similar institutions such as UCD and cooperative savings groups were indicated as having a weaker medium strength of relationship, and not all were two-way directions of relationship. This perception map indicates what would be expected of a healthy relationship between an NGO and a community. Shelter Associates are well-regarded by the community and also well-connected. They did after all work well together to plan, coordinate and implement the resettlement project. The results of the interviews indicated some recent tensions between the community and NGO but this map shows a good level of respect on the part of the community towards the NGO.

Due to the nature of the conversation in interviews on the topic of institutional reform, counting the frequency that topics were mentioned is not a useful exercise because many of the questions posed were directed to cover all specific topics. The one topic that is worth mentioning is the issue of corruption. This was only mentioned once in interviews as having not been noticed by residents during the course of the project, the lack of any other mention indicates that residents were not aware of any corrupt activities occurring during the project delivery.

The Institutional Reform theme of analysis brings together the information gathered from stakeholders regarding the institutional frameworks and reformation brought about by the process of the resettlement scheme. The analysis indicates the longevity and futurity of the scheme as well as impacts upon community groups and institutional frameworks.

Table 13 – Institutional Reform coded themes emergent from data

Governance	Social/Human	Futurity
Institution perception	Community Consultation	Maintenance
Corruption	Community Mobilisation	Ownership
	Savings groups	
	Funding	

Governance

Institution perception

The main institutions involved in the organisation of the Hadapsar resettlement project were Shelter Associates, MHADA, the community, the banks and the PMC. There was a good relationship between the NGO Shelter Associates and the community based organisation Baandhani at the conception and implementation of the project and the community trusted the words and vision of the NGO Director, Pratima Joshi (Patel 2010). The residents would often go to the SA office for meetings and the SA staff would regularly visit Hadapsar. However these links now appear to have been weakened according to the residents, and there are “some misunderstandings so now people do not go to them” (Patel 2010). Residents are becoming aware of other slum rehabilitation schemes in the city where residents are given well-constructed houses for free. They are therefore cross with Shelter Associates that they were unable to be included in such a free scheme which has detrimentally affected their relationship with the NGO;

“Actually, initially when we were working with the community, we had good support from them but when they came to know that there are lots of projects where free housing is provided for slum dwellers then they started asking us, why don’t we give them free. We do all the work nicely but they keep asking things like pipe is not well, plaster is not good, roof is leaking in rainy season, etc.(Kamble 2010).

Residents are now encountering problems due to faults in the construction of the new houses. When they ask the PMC or Shelter Associates for assistance they say they feel abandoned;

“The people from the association don’t come here. Even if they do, they are busy with their own work. Corporation just does not bother to look into it. They only promise us that they would come the next month and so on, but they do not turn up at all. No one comes here to see the problem” (Pathan 2010).

Various residents have major concerns about the integrity of their new house now that plaster is falling off the walls and roofs are leaking, and do not know how to obtain help. Now that the main houses have finished construction phase and are occupied, there is a lack of physical presence of SA representatives on the site which has made many residents feel they have no one to talk to apart from Bhabi, the community leader, who is powerless and is recommending residents contact Shelter Associates. The community do not receive any visits from the PMC staff and feel they have received a lack of guidance on ways to improve standards of living (Patel 2010). The PMC staff have been and taken photos in the past, but nothing has come of it and residents are still facing the same problems (Mane 2010). Residents report feeling ignored by the authorities.

Residents are experiencing problems with blocked drains, but some say they have not reported it to the PMC because “they never bother to come and see” (Jabbar-Sheikh 2010). This indicates that the PMC are not accessible to this section of society when guidance is required and also a lack of resident empowerment and awareness of one’s rights. One individual resident at Hadapsar has reported the drainage problem to the PMC but no one has attended to the complaint which resulted in residents being forced residents to pay for the repairs themselves (Jabbar-Sheikh 2010).

Residents feel that the government and SA have provided the minimum help necessary which is not enough (Jabbar-Sheikh 2010). Residents feel that promises have not been honoured and particular items and facilities which were agreed to be included within the house were not done, for example the water connection (Balasaheb Kamble 2010; Jabbar-Sheikh 2010).

Residents are not optimistic that the authorities will listen to the requests of the residents and that the situation will be improved as they have already been living there 5 years and seen no improvements. One resident only feels that things could change if the political representation regarded the needs of their community as a serious priority (Jabbar-Sheikh 2010);

“I feel that if the right person is elected (Corporator – a local representative in the local government body) and if he takes it seriously these conditions will improve...We go and meet the elected representative frequently, but he is not bothered about our problems. Yes, we don’t have a guarantee [that conditions will improve]...We really cannot say for sure that these conditions will improve. We are staying here for five years but there is absolutely no positive change in these years except the construction of this road” (Jabbar-Sheikh 2010).

“We registered 4 cooperative societies in 2002 even before the construction work started. This was to help PMC make over the land on 99 years lease basis to the cooperatives. The committees of these societies were to be responsible for collective maintenance of the project. We also arranged for training in book keeping for cooperative societies by inviting a lawyer to spend some time with the committees. But communities were not willing to take any responsibility for any kind of book keeping. Moreover, they were not interested in taking any collective maintenance issues forward after getting their houses. It is not always lack of efforts of the NGO’s but when communities don’t respond it is best to withdraw instead of force the issue. Also their involvement was very high until they got their houses. After that it petered away when it came to taking responsibility for their built environment” (Joshi 2011).

There were no reports of corruption within the resettlement project from interviewees, although there was an indication of the residents' feeling a lack of transparency from the institutions. Residents are aware that when visitors come to see the development of Hadapsar they are only shown the successfully completed houses, so are not normally shown an accurate picture of the development or shown houses where residents have been unable to complete the interior finishing. They also report not being open about how funds were allocated on the construction and that residents now feel ignored by the Shelter Associates staff (Anon 2010).

The residents also reported a lack of control and checks on the part of Shelter Associates and the PMC during construction (Patel 2010). Another resident feels that Shelter Associates demonstrated a lack of care and attention to residents now, and also during the construction phase of the project and should have better managed and supervised the works which could have avoided the high incidences of leakages (Daware 2010). According to Shelter Associates, the quality control was to be a joint effort by SA and the communities (Joshi 2011).

The responsibility of maintenance was posed to shelter associates staff who say that now the houses have been handed over to the community it is the residents who should manage the maintenance of their houses. Shelter Associates regard Hadapsar as a complete project since it was handed over over 5 years ago and so claim no responsibility now (Joshi 2010). The Shelter Associates staff who visit the field feel powerless to help the situation as nothing is under their control, they are under the instruction of the NGO Director (Kamble 2010). However, many residents want the CBO or NGO to pay for any works which they consider the responsibility of the building contractors. SA currently refers residents to the PMC and is not accepting any responsibility for what they consider to be a completed project. SA received a satisfactory completion certificate from the PMC two years after the project was completed (Joshi 2011). SA instructs residents to discuss matters with the authorities, but the residents report that the PMC do not listen to the poor and are not bothered with their situation.

"They had been to PMC (ward office) but they are not listening. We had been there for a water storage tank, also for the garbage problem. They are just not bothered. I have the copies of all the applications. PMC is not taking any responsibility" (Hadapsar Group Discussion 1 2010).

"The major lacunae in the project has been the total apathy of the PMC in keeping their end of the promise by providing the essential services after the families moved in" (Joshi 2011).

The slum residents who have been left behind in Kamgar Putala did not express any negative opinions of the government authorities, although expressed that they feel powerless if the government decide to demolish the slum there is nothing they can do (Kendale 2010). Another resident at the slum however is confident that the government will provide alternative housing for them and is content with that situation (Shinde 2010).

YASHADA, a government training institute which helps to train administrative officers, has recognised a lot of merit in the Hadapsar project. They have highlighted it as a best practice project by making a documentary film to communicate the effective partnership approach to delivering housing for the poor. This film is now being used to train government officers in such collaborative working techniques (Joshi 2010).

Since the delivery of the Hadapsar project, Shelter Associates have now moved away from individual slum projects as they see more merit in adopting a city wide approach while dealing with poverty. SA believes that the PMC should have a well laid out city wide plan before implementing projects and that their approach needs to drastically change (Joshi 2010).

Institution Perception

- Residents feel powerless to ask for help from the PMC and NGO who were responsible for the construction and handover of the new housing. This may be from a lack of knowledge of one's rights, poor accessibility to the larger institutions, lack of empowerment, possibly the root of which is a low level of education of residents.
- There should have been a formal handover of the buildings to the community by the NGO/PMC. Measures should have been put in place to specify the responsibility of various aspects of the building maintenance and operation instructions. The NGO could have mobilised the community to form a management committee and a sustainable method of collecting revenue via contributions from the residents.
- Numerous construction problems have arisen which residents believe were due to the neglect and lack of construction supervision during the building phase. Residents consider these issues the responsibility of the NGO or PMC. However both the NGO and the PMC are either ignoring requests for help or claiming they are not liable.
- There is a good opportunity now for the NGO to campaign on behalf of the slum dwellers, and strengthen their representation for requests for help from the PMC who are ultimately responsible for the resettlement project and who installed the site infrastructure.
- There is also a good opportunity for the NGO to help to mobilise, strengthen and train the community to better manage the maintenance and operation of their new homes.
- The project implementers, the PMC and NGO, should take this responsibility seriously. Proper handover and ongoing management of the resettlement is vital for its long term sustainability. It would be irresponsible of the PMC and NGO to now walk away from the situation and consider the project complete.
- The NGO feels that city-wide slum upgrading strategies should be implemented alongside poverty reduction activities rather than a piece meal approach.

Social/Human Issues

Community consultation and mobilisation

“The guiding principle is that the communities have to be... the people who benefit from these projects have to be very central to the process. And everything else is geared around that. Community participation is really the key issue that needs to be addressed and so our entire model of delivery is based on that. So the poor are involved right from day one whether it be you know even making choice about whether housing is priority, the kind of housing they would like you know their inputs and the designs. They are present for all the key makings with the bureaucracy or any other stakeholders who might be part of the entire process and you know this spirit right until and after they are actually move into their houses. So by the time they have moved into their houses they are pretty equipped to look after not only their tenements but even collectively take responsibility for the upkeep” (Joshi 2010).

The resettlement of KP to Hadapsar organised by SA was in fact initiated by the community themselves. After SA had raised their profile in the community during their initial survey, the residents of the community approached SA for help. From the beginning this was already a well mobilised community (Balasaheb Kamble 2010; Kishor 2010).

Shelter Associates were very effective at consulting and mobilising the community throughout the project implementation. The community were well informed of the plans for the resettlement and actively asked their opinion and invited to contribute to design and implementation decisions.

A ‘model house’ was built to communicate the design of the new house to the community members (Patel 2010). This house included the mezzanine floor which could be why some residents misunderstood that this was included as standard within the design. In fact, it was a design addition that residents were encouraged to add at a later stage at their own expense. The physical model which was built to scale was a very effective way to communicate the design to the residents who would have had difficulties interpreting design drawings;

Figure 66 – Model house exhibition



(Shelter Associates 2011)

During the project development there were regular meetings between the community and shelter associates, and community members would regularly visit the SA offices. During these visits residents were assisted to make account books for the establishment of savings groups. At meetings residents would collect and record the daily savings, often in quantities of Rs5, Rs2 and Rs1 (Pathan 2010). One resident said she used to go to the community meetings quite often but could not remember the name of the association who organised them (Jabbar-Sheikh 2010).

During the implementation stages, the community had good faith in SA and were pleased to be encouraged to participate in the project development. SA and the community talked through everything in detail and discussed the plans at various stages of iteration for approval by the residents (Balasaheb Kamble 2010; Bapu 2010; Daware 2010; Pathan 2010).

One interviewed resident of Hadapsar moved to the site after the scheme was completed and so was not involved in any of the community consultation. It appears that this resident was not one of the slum affected community at Hadapsar and was included in the resettlement scheme due to personal contacts, which meant they had missed out on the consultation phases of the project (Mane 2010).

Unfortunately, nowadays the initially good communication channels are faltering and residents do not visit the offices. This means that when problems arise matters are not discussed properly and residents do not receive the support they did at the implementation stage of the project (Patel 2010).

Some residents have reported not being fully informed of the extent of interior finishing and plastering that they would be required to do themselves and are disappointed that aspects such as the kitchen table, loft and flooring were not delivered as they had thought was promised (Pathan 2010). Some residents have also complained about not knowing where and how the funds have all been spent and are of the opinion that the house was a costly deal (Pathan 2010). Various residents have complained about the integrity of the plasterwork of the buildings and are now struggling to communicate with the project partners to gain help with the situation (Mane 2010).

Banobi Patel, affectionately known as Bhabi, the community leader played a large role in communicating between the NGO and the CBO. Her individual respect and power within the community played a large part in the success of community consultation and aided educating the other residents that there were better housing opportunities available for the residents (Jabbar-Sheikh 2010).

“She is a very crucial resource person from the community who did a lot of work while the project was in process right from community mobilization to a lot of paperwork that she handled. She became a natural leader because she had those leadership qualities and all people in her community also respected her so she was a natural choice also” (Joshi 2010).

Community Consultation

- During the project development and implementation the consultation process between the project partners and levels of participation by the community was exemplary.
- Residents would have benefitted if the NGO had been more transparent regarding the allocation of funds, and what precisely was to be included within the new house. There have been misunderstandings within the community as to what would be provided which has damaged the relationship between the community and NGO.
- Now that the project has been handed over to the community the NGO and PMC are not communicating effectively with the community and are not taking responsibility for any problems arising.

Community mobilisation

The community were already close knit after battling through life in a flood affected slum together. The community came together under the umbrella of CBO Baandhani, a women led organisation. They approached SA for assistance and strengthened representation to the government in order to arrange for resettlement (Kishor 2010; Patel 2010).

“There was a survey. There was flood in 1997. After that a survey was conducted. We approached the corporation office. Corporation suggested the name of Shelter Association. We met Shelter people twice. We liked what they have told us and we have decided to go with them. Shelter has built the houses for us. Some things were not done by Shelter. Some work is still pending” (Kishor 2010).

Once Shelter Associates became involved they started federation activities with the community such as saving schemes, ‘using the different tools that Shelter normally use to get communities organized and slowly and surely we started our negotiations with the government’ (Joshi 2010).

Since resettling the community have now mobilised even further and formally established a registered housing society (Daware 2010; Hadpsar Group Discussion 1 2010; Patel 2010).

Some residents are unaware of the name of the NGO that assisted them but are more familiar with Baandhani, the CBO organisation that led the community.

Bhabi, the community leader was responsible for much of the community mobilisation (Balasaheb Kamble 2010; Jabbar-Sheikh 2010) and encouraged her neighbours to actively participate and involve themselves in the plans (Bapu 2010).

MHADA reported that both they and the PMC are particularly satisfied with their ‘accomplishments of inculcating the idea of government on the ground’ (Kulkarni 2010). The PMC’s Slum Control Department admit that they have learned lessons from the Hadapsar project and would do some things differently in future projects.

Community Mobilisation

- The community was already well mobilised and close knit, particularly due to a powerful and well respected local leader, Bhabi (Banobi Patel). Bhabi was vital to the successful communication between the CBO and NGO and was able to motivate the community to participate in the resettlement planning process.

Saving Groups and Funding

The residents raised much of the money required for the resettlement via community savings groups. The establishment of these groups was aided by SA who encouraged book-keeping and regular contributions of Rs50-100 per month which was stored in a bank account. Thanks to which, many households were able to gather the money for the deposit they needed for a new home (Patel 2010);

“We raised money by saving. We had one savings account for the housing purpose...We used to save Rs. 50-100 per month. We had another savings account as a daily savings account. It used to be useful for us when we had difficult times. We used to save Rs. 1-2 daily from our daily income. We had a passbook for that daily savings account. Through this medium of saving we have gathered Rs. 5000 each for the housing purpose as a down payment. On that basis we approached the bank for housing loan. We got loan of Rs. 30,000 each. Thus we could get the house at Hadapsar for Rs. 35,000”(Patel 2010).

On average most households now report saving Rs50 per month via the lady of the house, as the savings groups are women-led and much of the household finances are controlled by the women, the savings group is headed by Bhabi, the community leader (Bapu 2010; Daware 2010; Kishor 2010; Pathan 2010).

Residents are aware of the funding mechanisms in place for their resettlement project, mainly via a Rs50,000 grant from the government’s VAMBAY scheme. Residents are also aware that they only received Rs. 47619 (Patel 2010) each but some are unaware as to why there is a discrepancy. All households gave a deposit of Rs5000 and the remainder was commonly raised via bank loans and moneylenders (Daware 2010; Kishor 2010). One resident has calculated that the entire house has cost him 1.5lakhs with two loans from a moneylender and the Bank of Maharashtra (Bapu 2010). Another resident reported that they have spent Rs92,000 for their house (Bapu 2010).

The arrangement of loans for the residents was tricky and Shelter Associates did much of the organisational leg-work for this. Residents who were employed in the formal sector found it easier to get loans (Joshi 2010). Some residents are still trying to finalise loans to complete the fitting out of their houses, the issue of unfinished construction due to funding is discussed in 'Perception of Project Success – Construction';

"It was extremely difficult because there was no bank which was willing to come forward and make loans. And to give an example even Bank of Maharashtra gave these 70 families a loan because the bank manager at that time really believed that you know banks should be doing this, should be exploring in the informal sector. And unfortunately for us he was transferred out because he had anyway completed his tenure and the next man who came in refused to make out any further loans. So it was very much like the situation that normally exists in Municipal Corporation, sometimes you have municipal commissioner who is very proactive and who is very sensitive, and if he is replaced by another municipal commissioner who has a different agenda altogether, then there is nothing within the system which makes it mandatory for them to carry on what has been started by the predecessor. It could just completely get pushed on to the back burner and nothing can happen later. So this is the experience we had also with the banking sector because the manager the moment he moved out and was replaced by the new one he just refused to make out any further loans" (Joshi 2010).

Many residents are aware that in the VAMBAY government scheme they received a Rs50,000 grant and that there are now other schemes available where households have received 2-3lakhs such as the Jawaharlal Nehru scheme. This has resulted in many residents feeling they should have been given more and that the current system is unfair. SA have explained to residents that different government schemes exist and that as the rules are sanctioned from Delhi there is nothing they can do now (Hadpsar Group Discussion 1 2010). The community residents have seen better slum rehabilitation houses with bigger budgets than the ones at Hadapsar which has caused tensions and probably contributed to the reasons why some residents feel they did not receive a good financial deal at Hadapsar, see discussion of cost under the analysis of 'Perception of Success'.

Funding and Savings

- There are very effective strategies for saving money via community based savings groups, women-headed, which have been functioning very well throughout the project conception, implementation and continues today.
- Residents have raised money through various means and taken significant loans with banks and moneylenders.
- Due to the existence of different government funding schemes for slum upgrading, residents at Hadapsar have received smaller grants than other slum dwellers which has caused tensions and a lack of appreciation of the new housing. The government should have a more consistent system that does not financially reward some slum dwellers more than others.

Futurity

Maintenance and Ownership

There have been significant problems already at Hadapsar regarding the responsibility of maintenance, as well as major construction issues requiring attention, despite the houses only being 5 years old.

Severe construction problems are evident, particularly the drainage and external plasterwork which is already failing and affecting the water tightness of the buildings (Mane 2010). Some residents report that the concrete was inferior and much of the building structure is actually made of 'soil' which is not resistant enough (Hadapsar Group Discussion 1 2010). SA say they engaged a very good contractor for the RCC works and all work has been checked by the PMC and MHADA engineers regularly (Joshi 2011).

There are currently no formal arrangements in place for maintenance of the buildings (Patel 2010). Since the major drainage and plaster problems have arisen residents have raised the problems with both the NGO SA and the PMC whom they believe to be responsible as it was them that organised the inferior construction of the housing. Bhabi, the community leader is referring residents to SA. SA is claiming no responsibility and referring residents to the PMC. The PMC has been out and taken photos but nothing has come of it, so the residents are having to just live with these problems (Jabbar-Sheikh 2010)

Even though there is a well functioning CBO, the residents do not feel that they should have to pay for inferior construction repairs themselves. There are also no plans in place for future maintenance issues (Hadapsar Group Discussion 1 2010).

According to MHADA the ultimate responsibility for maintenance lies with the urban local body, the PMC but the local community should have measures for maintenance;

"They are supposed to form a society and they will be charged as per the prevailing rules by the local ULB, urban local body, and in consultation with that, keeping a rapport with them, which is in the capacity so far as the repairs are concerned, society should maintain that. If it is beyond their capacity or it is a general thing then ULB should look into that" (Kulkarni 2010).

MHADA claim that it is not necessary to train the residents how to operate and maintain the buildings as the community members are trades people, carpenters and masons and so this knowledge is already inherent (Kulkarni 2010).

The PMC's Slum Control Department engineers also admit that if problems arise with the infrastructure, drainage etc. that it is their responsibility as the Corporation to fix it. Although in the future the PMC is required to ensure a society is formed at Hadapsar which will take on any repair works, but until that time comes the responsibility is with the Municipal Corporation. The PMC expect this to be in about one year's time (Joshi 2010).

“The spaces were designed in such a way that people would automatically maintain them. So when you go there I am told that the common spaces are pretty clean. There is not any littering or abuse of those spaces even today ...I do not think they have really worked out a very clear division of responsibility [for maintenance]. The common areas like the roads and cleaning of the garbage and all that will be done by the ward office but the courtyards are directly the responsibility of the people and if they want any more changes within their building then it is a matter of those people coming together and making the choice” (Joshi 2010).

Shelter Associates did not envisage general maintenance problems due to the way in which the whole building was designed and without the inclusion of high maintenance components such as lifts. It is true that individual courtyards are well maintained, and kept clean and tidy. It is the building structure itself that is posing problems. There are not yet any community savings groups in place for maintenance, but there are crisis savings groups in operation. SA consider that all their responsibility for the project is completely finished since 2004 (Joshi 2010).

Ownership

The land at Hadapsar is still owned by the government but had been reserved for the economically weaker section (EWS), before which the land was agricultural (Joshi 2010). Although residents have inhabited the houses for over five years, there were mixed responses from the community regarding the ownership of the houses. Despite significant personal investment, the residents are still awaiting the paperwork and for the final ownership agreement to be signed. The documentation is still awaiting registration at the PMC and residents do not know when to expect it (Balasaheb Kamble 2010; Bapu 2010; Kishor 2010). Representatives at MHADA said that this would come ‘within due course of time’ (Kulkarni 2010). One household is under the impression that they have a 99year lease for the land but they are concerned whether the house will still be standing at that time as it is already starting to crumble after 5 years (Mane 2010). The delays in the PMC organising the paperwork could be due to regular changes in city administration (Joshi 2010; Kamble 2010).

Residents do have paperwork which shows the flat and block number that has been allocated to them, but residents are awaiting individual lease agreements. Cooperative societies were registered at Kamgar Putala before the residents moved which ensures there is common paperwork existing between the community, but the residents are awaiting the formalisation of the 99year lease agreement. Shelter Associates have been repeatedly requesting this from the PMC but there have been many delays and changes to the administration officers which has caused the problem of lack of continuity and priority (Joshi 2010).

“We will first repay the bank loan. The completion of the documents of the house to have a clear Title. Thus we can make the future safe for our children. If the documents are not clear the corporation will ask about the proof of our ownership for this house. If the bank loan is cleared the documents will be cleared and the property will be with a clear title, so we have to take care of this matter” (Jabbar-Sheikh 2010).

During an interview it emerged that some people at Hadapsar have started arranging to sell the houses and are finding interested buyers; the PMC are looking into this and trying to block any sales as officially the residents do not have the ownership rights yet, or permissions to transfer rights (Joshi 2010; Kamble 2010). According to SA none of the houses here have been sold to date, but five families have rented them out (Joshi 2011).

Maintenance and Ownership

- The NGO and PMC should work together to resolve the problem of inferior construction, which ultimately they are responsible for.
- The NGO could also effectively apply their knowledge of working with communities to assist the CBO to establish a strategy for organising and funding future maintenance problems. Such a mechanism should have been in place before the houses were handed over to the community and the NGO should take this responsibility seriously. Equally, the PMC should support this endeavour and financially cover the NGO's resources and time donated, as well as put right the mistakes made during initial construction.
- Inefficiencies in Pune's governance has caused significant delays to the formal registration of the housing and release of ownership documentation to residents. This is not out of the ordinary in India, but such inefficiencies should be improved.
- Some residents reported trying to sell their house at Hadapsar.

Key Points

Institution Perception

- The interviews revealed that residents feel unable to access and communicate with the higher government institutions. This may be from a lack of knowledge of one's rights, lack of empowerment, possibly the root of which is a low level of education of residents.
- Residents feel let down by the NGO/PMC partnership regarding the inferior standard of construction and are disappointed their requests for assistance are being ignored.
- The NGO feels the PMC is letting down the community by not completing paperwork for loans, maintenance repairs and their general attitude to urban planning.
- There has been poor management of the handover of the operation and maintenance to the community with a lack of care and responsibility from the NGO/PMC who now consider the project to be none of their concern. Before handover, a clear strategy for maintenance should have been in place and the community could have been supported in the creation of this.

Community Consultation & Mobilisation

- Community consultation between the community and NGO was very good particularly due to an efficient and well respected local leader already being in place.
- NGO was not transparent regarding allocation and spending of funds resulting in misunderstandings and mistrust which has damaged the residents' perception of the NGO.

Funding and Savings

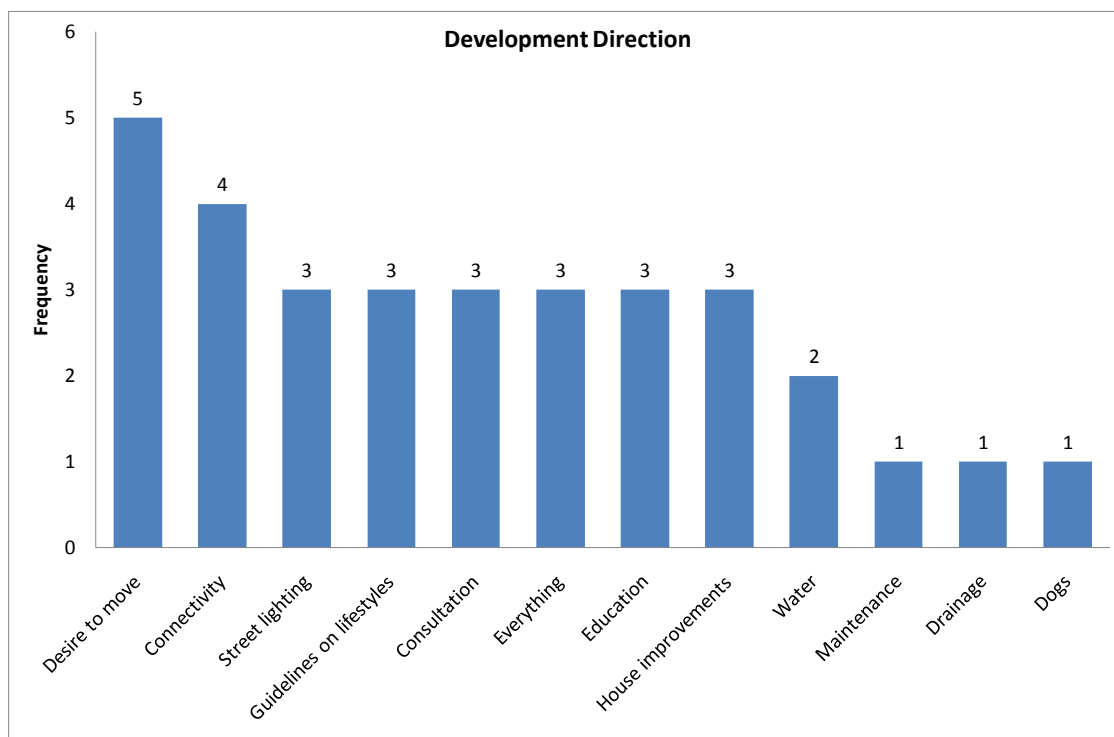
- The community has well run and effective savings groups thanks to CBOs and Baandhani established with the support of the NGO.

Maintenance and Ownership

- The NGO and PMC should work together to resolve the problem of inferior construction, which ultimately they are responsible for.
- Inefficiencies in Pune's governance has caused significant delays to the formal registration of the housing and release of ownership documentation to residents. This is not out of the ordinary in India, but such inefficiencies should be improved.
- Some residents reported trying to sell their house at Hadapsar.

Development Direction

Figure 67 – Frequency of topics discussing Development Direction



The high count of ‘desire to move’ does not indicate a majority opinion either way, but that most residents expressed their desire to move or stay during the interview.

When residents were questioned about their immediate needs and aspiration goals in life there was not a significantly high incidence of any particular issue mentioned. However, the immediate needs highlighted correlate with the previous findings during interviews and group discussions of the residents’ priorities. Poor water supply and access to livelihoods are the two key issues that repeatedly arise and are detrimentally affecting residents’ quality of life since relocating. This matched the responses of residents during group discussions on residents’ needs and goals. Again the main issues arising were water supply and distance to livelihoods and amenities.

This theme of analysis brings together the stakeholders priorities and aspirations for the future. The information gives an indication of the development direction that stakeholders are aiming towards.

Table 14 – Development Direction: Coded themes emergent from data

Priorities – Short term needs	Aspirations – Long term goals
Water	Guidance on lifestyles
Street lighting	Consultation
Connectivity	Desire to move
Maintenance	Education
Drainage	House improvements
Dogs	

Priorities – Short term needs

Water

Residents have had to adjust to a more limited water supply and less tap connections at Hadapsar, compared to the better water supply they benefited from at Kamgar Putala. Due to this, residents complained about their water service and regard this as their current prime need (Patel 2010).

Street lighting

Poorly lit streets adversely affect security at night within and around the houses and residents regard these as a priority need (Jabbar-Sheikh 2010; Patel 2010).

Connectivity

Poor road and transport links to the site at Hadapsar are causing detrimental affects to residents' financial, security and livelihoods situation. Many residents regard this as a serious problem that needs rectifying (Jabbar-Sheikh 2010; Mane 2010; Pathan 2010).

Maintenance

Residents have been repeatedly contacting the PMC and SA for assistance to maintain their houses, specifically the inferior construction which is gradually worsening. Residents need urgent assistance to control the situation and to establish mechanism for future maintenance problems (Hadpsar Group Discussion 1 2010; Mane 2010).

Drainage

Drains are regularly getting blocked and residents would like assistance to manage this problem (Jabbar-Sheikh 2010).

Dogs

Residents reported a severe problem of stray dogs that need controlling and residents would like to be attended by the ward office (Jabbar-Sheikh 2010).

Other stakeholders' perception of community needs

When MHADA were asked what they consider to be the residents' greatest need now, they considered it to be 'revenue generation for them or should I call it earning their daily bread and butter, in the vicinity' (Kulkarni 2010).

The PMC considered that the residents at Hadapsar most importantly need employment opportunities and then infrastructure services including water, electricity, drainage and roads (Joshi 2010).

Priorities – Short term needs

- Residents' priorities vary from vital basic human needs such as water supply, connectivity - access to livelihoods and street-lighting for security, to maintenance issues and public health problems caused by drainage and stray dogs.
- Water is the most crucial. It seems that some vital infrastructure services at Hadapsar are worse than the previous situation in the slum. This is a significant issue that should be addressed.

Aspirations – Long term goals

Guidance on lifestyles

Residents have expressed a desire to improve their lifestyles more, and that they were expecting better improvements in their standard of living than they have already experienced (Daware 2010). They would have liked to receive more guidance on improving their lifestyles (Mane 2010; Patel 2010).

The NGO Director felt that the reason life styles have not improved much is that the project did not incorporate social amenities such as a community hall, medical facilities, and a playground for children. These facilities are really lacking and should have been incorporated (Joshi 2010).

Consultation

Residents reported that if they had the power of an authoritative leader they would start by improving consultation with the poorer members of society to better understand their needs (Patel 2010; Pathan 2010). Residents would like the government politicians to better represent the poor sections of society and raise the priority of their needs (Jabbar-Sheikh 2010).

Desire to move

Some residents expressed a desire to move from Hadapsar. One resident is not happy with his neighbours and so given the chance would relocate (Daware 2010). Most residents do not consider it possible to move back to the slum as their old house may have been demolished and they will lose the investments they have put into the new house (Hadpsar Group Discussion 1 2010).

Other residents are content where they are (Kishor 2010), and will accept the current conditions to avoid the upheaval of moving again some are not able to move even if they wanted to (Balasaheb Kamble 2010).

A conversation between residents and social workers during a group discussion revealed that residents have been enquiring about arranging for the sale of their houses (Joshi 2010) and relocating back to the slum (Hadpsar Group Discussion 1 2010);

Lata: It is still not too late. You can still shift to your previous house. Those have not been sealed yet.

Lady 2: They have been demolished. Not by you, but some people there have now occupied 10 or more houses by force.

Lata: You can go to the corporation office and tell them about your problem and tell them to take charge of the new house and give back the charge of your old house. The other day Mr. Kate has told you, those who do not want this new house can give us a written application about it and they can get back their old house.

Lady 2: But what about the lakh of rupees we have spent on these houses now.

Lata: They will give that money to you.

Lady 2: But now corporation has demolished our old houses with the bulldozer.

Lata: You can tell the PMC office that you want your old house back and it is their responsibility to return your old houses. You can also ask them about the money that you have spent on these new houses. Ask Bhabhi what Mr. Kate said the other day. Bhabhi told him people have started selling their old house. They are staying in the new house and have kept the old house too.

Lady: They must have told the people staying in the old houses, to take charge of the new house and vacate the old house.

Lata: We spoke to the officials. They said, in general, those who have not liked the new house, they can vacate and move back into the old house.

Lady 2: Who will not like the new house if it was good? Why did people leave their old houses? They left their old house for good one.

(Hadpsar Group Discussion 1 2010)

During an interview with the PMC it emerged that some people at Hadapsar have started arranging to sell the houses and are finding interested buyers; the PMC are looking into this and trying to block any sales as officially the residents do not have the ownership rights yet, or permissions to transfer rights (Joshi 2010; Kamble 2010). If residents are trying to sell on their houses this indicates a poor level of community ownership and therefore sustainability.

Education

Residents have aspirations for improved education and consider it a citizen's right (Bapu 2010; Daware 2010; Kishor 2010).

House improvements

Residents expressed a desire to generally improve their houses particularly interior fitting and furniture such as windows, doors, flooring, tiling, loft installation and a kitchen table (Patel 2010). Residents also reported that they would like the plastering, water connections, loft installation and flooring to be completed, all things that they expected to be delivered when the house was handed over from the NGO/PMC (Jabbar-Sheikh 2010; Pathan 2010). Residents' aspirations are generally increasing since relocating and coming up with new ideas to improve their homes further. Previously residents did not invest such time and thought into improving their slum house;

"Now they do not want staircase in front of the house but at one side... They don't want. Once we have built all that now they have lots of ideas. You saw the lady who built water tanks outside, windows, etc. When they lived in slums they don't have any ideas, they are just busy with their routines. After coming here they get more ideas, like furnishing the house, decorating the house, reconstruction, etc."(Kamble 2010).

Aspirations - Long term goals

- Residents' aspirations are generally increasing since relocating, residents are wanting more and becoming more demanding – which perhaps is human nature.
- Residents' aspirations vary and include a better basic education for citizens and governance that is more inclusive and will improve standards of living, to, finishing and fitting out their homes.
- The project failed to include the social amenities required to foster a sense of community and improve lifestyles such as a community hall, children's' playground, and business units.
- Some residents expressed a desire to move as they are not content with their new house. Although they have been informed of the procedure to organise relocation, most residents feel this would be too much upheaval and that they have already invested too much in the new house.
- Some residents are enquiring into selling their houses. Because they are still awaiting ownership documentation sales are not possible at the moment, but it appears that some residents already have a desire to move.
- Residents' desire to move indicates a struggling sense of community ownership and a failing in sustainability of the resettlement project.

Key Points

Priorities – Short term needs

- Connectivity/access to livelihoods and water supply arose as the most frequently mentioned immediate community needs.

Aspirations – Long term goals

- Residents' aspirations are generally increasing since resettling and goals include better community amenities and a raised standard of living.

Desire to Move

- Some residents are not content with their current situation and plan to sell their house once they receive the paper work.

Children’s perceptions at Hadapsar and Kamgar Putala

In order to capture the perceptions of the children, they were first asked to think about the things that they needed for a good life, what makes them happy and what makes a good place to live.

After a brief discussion the group of children indicated the things they felt that they need for a good life, they also collectively voted and ranked the priorities:

Table 15 – Children's ranking of 'things for a good life'

Children’s needs for a good life	Ranking in order of priority
Food, water, clothes, shelter (basic needs)	1
Toilet	2
Education	3
Good habits	4
Health	5
Exercise and play	6

The items considered as basic needs were grouped together. The children also felt the facility of a toilet was of particular importance.

After this discussion, the children were then given the task of drawing their current house at Hadapsar, and their ‘dream house’ for the future.

Figure 68 – Hadapsar children with their drawings



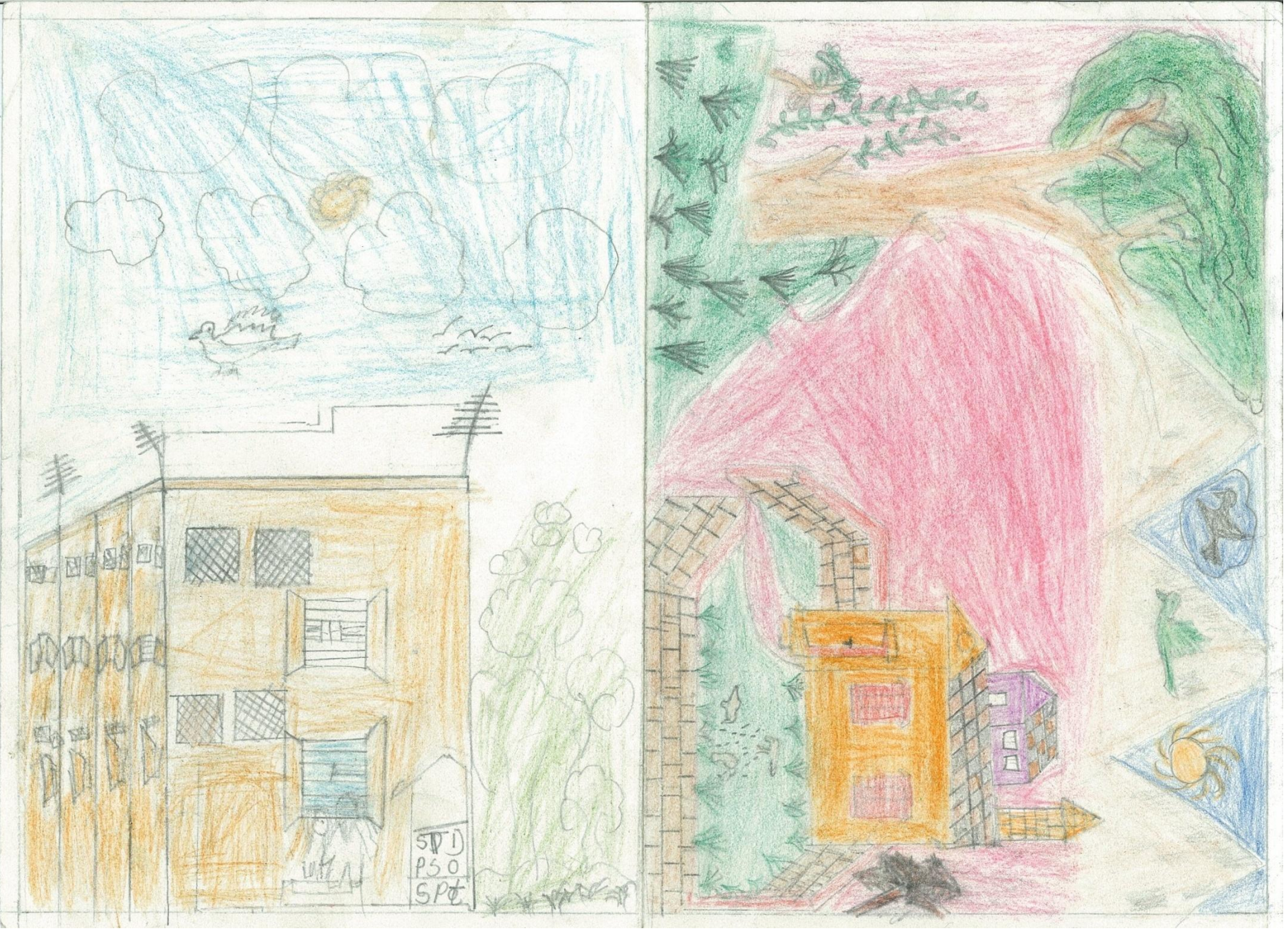


Figure 69 – Child's drawing showing current house (left), dream house (right)

The dream house is detached with a spacious garden, wildlife and greenery which are limited at Hadapsar.



Figure 70 – Child's drawing showing aspirations for high-rise living

Current house (left), dream house (right).

The dream house is a high rise block with business units on the ground floor. This shows the child's perception that high-rise living is better. High-rise living is common among the middle classes and modern slum rehabilitation schemes use high-rise building designs.



Figure 71 – Child's drawing showing unfinished construction

Current house (left), dream house (right).

The current house is depicted as a shack because there remain to be some families who have relocated to Hadapsar in temporary housing while they await the completion of their new homes. The dream house shows large balconies and glazed areas connecting with outside spaces.

राधा शोभा देडेक
इयल ४थी
वय:- 10 वर्षे



Figure 72 – Child's drawing showing play equipment, gardens and high-rise living
Current house (right), dream house (left).

The current house is shown as a two storey construction with an outside communal water tap and balconies used for drying clothes. The dream house again depicts high-rise living and also play equipment, plants and gardens which are lacking at Hadapsar.

The children's drawings are very revealing and show the standard of the housing that they are now inhabiting in Hadapsar. Some drawings show the finished and complete new houses with the mezzanine levels and drawing attention to the open courtyard spaces with plants growing attractively which indicate the children's sense of pride in the new housing. Other drawings show that some children are still living in incomplete houses and shacks on the site at Hadapsar.

The children's ideas for a dream house often depicted multi-story living, which shows their middle-class aspirations of what is deemed to be middle class accommodation. The inclusion of green trees, plants and open spaces were also commonly featured – something which is lacking in the dry environment at Hadapsar. Children also drew outside play equipment and swimming pools.

The children that remain residing at Kamgar Putala slum, who weren't included in the relocation plans to Hadapsar, were also asked to draw their dream house. Again highrise living was depicted along with large outside spaces for play and gardens and wildlife. Some drawings also included electrical equipment and material possessions the child would desire in their dream house.



Figure 73 – Child's drawing of dream house

Showing high-rise living and playing in outside spaces.

Figure 74 – Child's drawing of dream house and possessions

This child's dream depicts a detached house and various electrical equipment and furniture for inside the house. An electric fan, and TV aerial are depicted as desirable.





Figure 75 – Child's drawing of dream house and services
 Showing a car and water supply as desirable.

Summary

The residents of Hadapsar are well aware of the other slum upgrading programmes in Pune city which provide larger tenements for free to slum dwellers that are rehabilitated from settlements on more valuable land. Due to the hazardous nature of the flood-affected site upon which Kamgar Putala was located, the residents mobilised with the assistance of Shelter Associates utilised the government schemes they were eligible for help under, and achieved their goal of safe housing away from the hazards of the water. As well as moving away from the threat of floods, the residents were able to use the opportunity to 'build back better' and have created permanent housing considerably better than their previous slum home.

Resettlement schemes can often fail due to the distance created from a community's place of origin. It could be interpreted that the clearest indication of the success of Hadapsar is that no residents were found to have sold up and moved out, even nearly six years after habitation. However, some residents have expressed a desire to move. The success of the scheme can be attributed to the housing delivery model using a community partnership which embedded sustainability principles throughout the conception, organisation and implementation of the scheme. As the recipient end-users were fully included in every step, an unshakeable sense of ownership and connection of the community to the new development has been created.

The residents at Hadapsar are no longer threatened by the annual devastation of floods and most stakeholders would say the resettlement project has been a great success. After inhabiting the new houses for five years, many residents are now used to their new situation and have increased expectations for their future quality of life.

The community consultation and participation organised by the NGO has been exemplary following the guidelines that many slum upgrading agencies advocate. The small Indian NGO worked well with communities with the use of a small team of social workers who were well regarded by the community and therefore able to form a strong partnership for implementing the resettlement project.

The success of this resettlement project has positively affected an entire community and the lessons learned have been promoted both nationally and internationally within best practice documentation for slum upgrading which has had a beneficial impact on strategies for slum upgrading in India.

Residents have invested significantly in decorating and fitting out their new homes, some have installed piped water connections into their houses, some have planted gardens and decorated their interiors; these all indicate a sense of pride of their home. One resident has established a shop within her home. See following figures;

Figure 77 – Decorated and well-equipped houses



Figure 78 – Self-made water connections and gardens



Figure 79 – Home based businesses



After assimilating the data gathered during stakeholder interviews and group discussions the key issues that repeatedly arise are the detrimental effect that the resettlement has had on residents' water supply and access to livelihoods. The residents are now no longer affected by the threat of floods, but are now worse off since resettling in these respects. Access to water and livelihoods are basic human needs which residents were not aware that they would have to sacrifice in exchange for a less vulnerable house structure. Residents are not content with the current situation and many have expressed a desire to move in order to gain these basic needs.

Due to the limitations of MHADA grant funding, the construction standard of the houses was highly compromised, requiring significant investment from residents which has made the move not cost effective for many residents, particularly now that their livelihoods are at detriment since resettling. Infrastructure deficiencies are the responsibility of the PMC and are particularly affecting the residents' perception of success of the project.

The resettlement project lacked the creation of employment generation activities. No business units were provided or community facilities such as meeting halls, children's playgrounds etc. These are all vital components of a community which are significantly lacking at Hadapsar. The failure to include these has had major consequences on the residents' livelihoods. However, in 2010 Shelter Associates have started to work with residents to promote livelihoods generation activities through sari recycling.

Since this resettlement project was designed under the MHADA grant, policies for slum upgrading have moved on and the stipulated conditions that developers are required to provide to rehabilitated slum-dwellers are of a higher standard. The residents at Hadapsar are no longer a priority to the NGO and PMC who now consider this project complete, however the residents are experiencing problems which are the responsibility of the PMC to fix. However, the NGO social

workers do receive communication from the residents and have at times supported residents by accompanying them to local government offices when lobbying the PMC for action. The stakeholder's ignorance of the community is poor and shows that the long-term welfare of this section of society is not of priority. Handing over and walking away is inappropriate, irresponsible and against sustainability principles, not ensuring a plan for the future management and maintenance and future scenarios for the development.

Due to the vulnerable site conditions at Kamgar Putala residents on the banks of the river needed to be relocated, but the effect of the distance of separation from the site at Kamgar Putala has had serious consequences on the residents' quality of life due to the impact on livelihoods. Since the community have moved to Hadapsar, the PMC have now constructed a flood-retaining wall which now protects the rest of the residents who stayed at Kamgar Putala. These residents are now safe and *could* have better prospects than those who relocated to Hadapsar because they are now going to be included in a new government Slum Rehabilitation Authority (SRA) slum upgrading scheme. This means they will be the recipients of a new house, for free, with a private toilet, bathroom and bedroom, within high-rise buildings on the same site at Kamgar Putala. Therefore these residents will not be required to move from their city centre location within easy reach of their existing livelihoods, they will not be required to contribute financially to the cost of a new house, and the new house will provide more space, better facilities and construction. However, many residents included within SRA schemes have complained about inappropriate building designs and poorer quality of life after rehabilitation. Also, SRA projects are notoriously slow to take off, this means that while the residents at Kamgar Putala are still residing in slum conditions, their old neighbours at Hadapsar are benefitting from a healthier living environment.

However, the residents at Hadapsar are benefitting greatly from the low-rise courtyard building design with plenty of open space around which they would not have had if they remained at Kamgar Putala. This effective building design has been particularly successful as it made use of the NGO's architects who are experienced in the impact of building design on social cohesion and living styles of the urban poor. The buildings were also designed in consultation with the residents and have a very good impact on residents' lives. Considering the circumstances the NGO did the best they could with the resources available for the residents. The PMC could learn greatly from the participatory techniques and community relationships effectively fostered by the NGO during the development of this project.

In-situ resettlement would have been ideal for the flood affected residents at Kamgar Putala. Water supply is a basic human need that should have been prioritised along with other infrastructure by the PMC. If comprehensive planning strategies were in place for the city of Pune, the residents of Kamgar Putala who were relocated could have been spared the upheaval of moving and instead included in the in-situ SRA scheme after the construction of the flood-retaining wall. However, the time scales involved would have meant a poorer quality of life for the residents in the medium-term, therefore for most residents at Hadapsar, relocation was the best option and has spared the upset of devastating floods for the past five years.

Now that many residents are indicating a desire to move once they receive their ownership papers, this may indicate a struggling sense of community ownership and a failing in sustainability of the resettlement project. However as residents have had secure tenure for over five years, upward

economic mobility might be the reason that people are aspiring for bigger and better homes, particularly in Pune, where poverty can be partly attributable to a lack of access to secure tenure. The residents have now been living at Hadapsar for over five years during which time their expectations have raised and, as is human nature, their desire to improve themselves further is ever present. The community's resettlement to Hadapsar has been a successful step-up for the community, which has encouraged the residents to want to better themselves and hold higher aspirations for their future generations.

Chapter 6 - Cross-case analysis of Pune

The top down approach delivered at Nanapeth has resulted in a financially sustainable scheme which has also enabled urban regeneration in a previous slum area. Residents have been given structurally sound and well serviced flats for free, however many residents are unhappy with the design of the buildings and the affect this has on their lifestyles. The community have benefitted from being re-housed in situ without any separation from their places of work, amenities and livelihoods. However, the residents' sense of ownership and pride is limited due to a lack of participation, financial contribution and communication between the development team and residents.

The bottom up approach delivered through an NGO – CBO partnership at Hadapsar has addressed the immediate threat of devastating floods by resettling the community to a less vulnerable site. The community have been re-housed in well designed houses appropriate to their living styles and which retain the community cohesion residents enjoyed in the slum. The community were positively involved and contributed at all stages of the implementation, as well as financially, which has created a strong sense of ownership and social sustainability of the project. However the separation of the community from their previous work opportunities and livelihoods has had significant detrimental effects on residents' quality of life.

The top down SRA scheme is a government scheme which is being implemented widely across Pune as well as other Indian cities, and offers a financially sustainable solution to housing the urban poor, without the upset of removing communities from their geographical roots and livelihoods. The bottom up NGO partnership is a one off resettlement project which has helped an individual community but cannot be repeated or scaled up across the city without government cooperation. The NGO scheme has effectively worked with communities to promote social sustainability.

Comprehensive housing strategies are needed for the city, rather than a piece-meal approach with one-off demonstration housing projects. In that respect SRA is offering a city wide scheme but other housing mechanisms are still available in the city, for example JNNURM which confuse matters as they differ in the rules and contradict SRA guidelines. (JNNURM schemes require financial contribution from the slum-dweller, where as SRA schemes are 100% free.)

The SRA could learn from the NGO's working methods and could adapt their regulations to enforce and monitor participation and communication with communities. The provision of basic services and health and safety standards should also be enforced and improved. The case studies have shown that participation is a key factor affecting the sustainability of a slum upgrading project. If residents are engaged and consulted throughout the development inception and implementation a better sense of ownership and satisfaction is created among the community. The SRA could learn from the bottom-up method by enforcing the engagement of the community and monitor communication with residents by encouraging the use of CBO and NGOs with the social skills to assist developers. Education and literacy are needed for slum dwellers to empower themselves to have the confidence and capability to speak up for their rights and participate actively in SRA project development. Therefore education and training delivered through community consultation would

also assist residents to better operate and live successfully in high rise, serviced buildings under SRA schemes.

Opinions of the long term impact of the SRA developer led schemes and market of TDR certificates varies across urban development professionals and residents in Pune. Research conducted by the NGO Shelter Associates strongly disagrees with the calculation of TDR and FSI allocated, and show in their study that the current zoning and related ratios fail to address the variation in cost of land and tenement densities present in slum areas across the SRA's classified zones. 'To make the projects viable for all, it would be desirable to tie every project to local parameters like tenement density and cost prevalent on that site. The FSI/TDR could be collated accordingly by ensuring that profit margins are kept within reasonable limits' (Shelter Associates 2007). They also comment on the lack of transparency of SRA schemes and suggest that local citizens should have more of a say in the go-ahead of such schemes rather than complete control by the SRA alone. Shelter Associates present their data to support comprehensive rehabilitation strategies for the urban poor in Pune city, rather than one-off projects and varying policies for re-housing the poor. They disagree with the release of TDR for development on government owned land which could be developed under JNNURM rather than SRA guidelines. They also disagree with the presence of JNNURM schemes and SRA schemes which enforce and exclude beneficiaries from contributing respectively.

Now that there is a market for buying and selling Transferable Development Rights which multiply FSI rights for development, construction is booming in the city and it is growing rapidly. Some people feel this development is too rapid and forward planning to include infrastructure and impacts on city-dwellers' quality of life have not been properly considered.

Citizen activists of Pune have complained about unplanned haphazard constructions that have ruined the character of the previously beautiful garden city. Residents have expressed concerns that the city's infrastructure is unable to cope with the growing demand affecting water and power supply, parking and traffic problems. Concerns have been expressed on the speed and concentration of construction that has been poorly planned having a negative effect on the city's identity, heritage buildings, pollution, rivers, hill slopes, water supply and overcrowding. The impact on the environment and lack of public open spaces are also raised as being unhealthy to residents particularly children. In the past the city has suffered from 'land grabbing' and illegal construction and these campaigning residents 'are on a mission to fight the politicians and builders' (NDTV 2007).

The Nanapeth project team clearly feel the SRA schemes are positive for the development of Pune and will offer a solution to the lack of affordable housing for the growing population of the city;

"In fact, it will be towards the positive side only. I see that it will be an addition to the development of the city in the outer parts. The development from the congested part will be spread to the outer and non-congested areas of the city. Construction housing potential will be distributed and ultimately more housing stock will be created. This TDR goes for more construction. So ultimately there will be more construction in the non-congested area. The housing stock is generated, the prices of housing will come down. When more and more TDR is generated, it goes to the outskirts of the city, more and more houses will be constructed and the prices will come down"(Kolte 2010).

SRA policy emphasises the importance of the generation of housing stock in the city, but it also simultaneously encourages commercial developments which constitute the saleable component of SRA schemes. As the city is developing buildings for multiple usages, this will require the infrastructure of the city to cater for the growing demands of an expanding city.

When the SRA were questioned about the pressure on city infrastructure and ability of current resources to cope, Kolte responded;

“Today there may be some pressure but they have to pick up in near future. When the development is spreading towards the non-congested areas the infrastructure also has to improve in parallel with these TDR generations, etc.” (Kolte 2010).

Infrastructure planning is the responsibility of the municipal corporation. Infrastructure improvement charges are recovered for the PMC from each SRA scheme. The developer is required to pay approximately Rs.560 is per square metre of the built up area, to the PMC for the improvement of infrastructure which the municipal corporation combine with other resources such as taxes to cover the costs of infrastructure development (Kolte 2010).

However, infrastructure services in the densely populated city are already stretched. Along with a growing population, rapid property development and construction ongoing throughout the city, the current infrastructure planning is struggling to cope. The city of Pune has a ‘City Development Plan’ devised by the PMC in 2006 which lays out development plans for the next 6 years of the city in the form of a zoned map. The time frame planned for is rather short and perhaps does not accurately predict the future needs of the city’s population.

Comprehensive rehabilitation strategies are needed to tackle housing for the urban poor in Pune, and the SRA scheme effectively offers this. If the SRA scheme could take on the participatory learning characteristics of the NGO partnership the SRA schemes could be easily adapted to be more socially sustainable. In order for the effective implementation of SRA schemes to be widely rolled out across the city there needs to be a supportive government environment and institutional framework to support the sustainability of the development approach by properly planning and providing for the future infrastructure needs of the city and to monitor, assess and continuously iterate the SRA model in order to deliver sustainable developments in the future.

The problem of social housing is very complex and hence cities need to work out strategies- both long and short term based on sound information systems which could explore a combination of government and public private partnership models keeping in mind that scarce resources like land should be optimally used.

Chapter 7 - Silanga Case Study

Within this chapter the terms; toilet facilities, block and watsan facilities have been used interchangeably to indicate the upgrading project.

Kibera Community Water and Sanitation Project

The Kibera Community Water and Sanitation Project is a partnership between the international NGO Practical Action and the Rotary Club, (an international organisation of members who volunteer their time, talents, professional skills and energy to improving the lives of people in their local communities and others around the world (Rotary International 2010)), in close collaboration with the Nairobi Water and Sewerage Company, Athi Water Services Board, and the World Bank Water and Sanitation Programme (WSP). The project planning was led from the bottom up by the NGO with funding and expertise from the Rotary Clubs of Langata (Nairobi, Kenya) and Denver (USA). The implementation was coordinated with the utility companies and the World Bank WSP was engaged to conduct a sustainability evaluation upon completion (at the time of investigations, this was yet to be conducted).

The Kibera Community Water and Sanitation Project involved the construction of blocks providing water vending, toilet, shower and laundry facilities in Silanga, all managed by local CBOs. The toilets are connected to the main sewer network. Silanga is a Kibera village home to approximately 145,000 people over an area of 52 hectares with 44,449 housing structures, which is a density of 856 tenements per hectare. Before the implementation of the project one pit latrine served 272 people or 12 households (Practical Action 2006), well above the World Health Organisation's recommendation of 40 persons per toilet (Practical Action 2008). Each toilet block is separated into a male and female half providing toilet, shower and sink facilities. Low level and accessible cubicles have also been provided for children and the disabled.

Figure 80 – Silanga facilities



Figure 81 – Silanga facility signage and attendant



The project started in 2006 and culminated when the blocks had been operational for a year, in 2009 (Muriuki 2009). Eight blocks were planned; all of the buildings are constructed and handed over to the community in March 2009 but three are still awaiting connection to the sewers so these toilets were not opened as of September 2009 during the time of fieldwork investigations (Muriuki 2009).

Practical Action (PA) is an international NGO with an approach which concentrates on the use of technology to empower people through community driven solutions. PA partnered with The Rotary Club as a donor and identified that Silanga village in Kibera was in particular need of improved water and sanitation services. Silanga was selected as it is located on the edge of Kibera and was least accessed by other organisations, there was also an existing well mobilised community which were starting to form the Silanga Development Committee (SDC). PA decided to support the formation of the SDC which has now become an umbrella organisation for the other CBOs active within the village. PA have since strengthened the SDC in order to build the social capital of the community to better address the issues they are facing by encouraging the individual CBOs to come together under the one, more powerful, umbrella group. The funding for the project was around USD330,000 (Klingbiel 2009; Kuria 2009) and donated by the Rotary Club of Denver (USA) who partnered with the Rotary Club of Langata (Nairobi) (Chege 2009). Together with PA they devised the proposal for the watsan upgrading project and set about creating partnerships with the Athi Water Service Board, Nairobi Water and Sewerage Company and the Water and Sanitation Programme of the World Bank.

The overall objectives of the project are very similar to the other Kenyan case study in Soweto East, with the aim to contribute to the welfare of residents by promoting improvements in environmental health through better clean water supply, access to water and sanitation facilities in the village, and to reduce the incidence of water borne diseases. Added components of the Silanga project which were not highlighted in the Soweto East project include the promotion of better health among residents through the introduction of health and hygiene education. Another key objective was to 'develop capacity for self reliance among the residents of Silanga by catalysing the formation of community based institutions capable of ensuring proper operation and maintenance of water and sanitation facilities; judicious use and safe handling of water by users; setting of household tariffs and the involvement of the community through sweat equity' (Practical Action 2008). The Rotary Club hopes that by concentrating on one community in Silanga they can measure the health impacts of the project with an aim to repeat and scale up the model in future (Kuria 2009).

The watsan facilities and stakeholders involved in this infrastructure project have been visited and interviewed approximately one year after operation commenced, during a three month period from August – October 2009.

Key informants:

- NGO - Paul Chege, Area Coordinator
Practical Action
- NGO - Isaack Onega, Team Leader Infrastructure Services Eastern Africa
Practical Action
- NGO - Gerald Muriuki, Project Officer Water and Sanitation
Practical Action
- Independent - Sadique Bilal

Research Assistant

- Donor - David Kuria, Club member and Director of Ecotact NGO
Langata Rotary Club, Nairobi, Kenya
- Donor - Mike Klingbiel, Club member and IT professional
Denver Rotary Club, Colorado, USA
- Utility provider - Celestine Caseve, Sociologist Coordinator, Informal Settlement Department
Nairobi Water and Sewerage Company (NWSC)
- Utility provider - Kennedy Owuocha, Senior Economist
Athi Water Service Board
- Multi-lateral organisation - Japeth Mbuvi
Water and Sanitation Programme, World Bank
- Residents – 16 individual interviews, 1 CBO group discussion

- External stakeholders – Informal discussions with others

All stakeholder interviews were audio recorded then transcribed and translated (from Kiswahili or Sheng to English in some cases). This transcription and translation was outsourced to post-graduate students in Nairobi. The transcripts have then been carefully and systematically coded within a comprehensive, sortable spreadsheet, see Appendix. Coding of data has been organised around the four key analytical themes; Life Today, Perception of Success, Institutional Perception, Development Direction. This spreadsheet has enabled a frequency analysis to be generated, the data from which has been graphically displayed to show the number of times particular issues were raised by interviewees.

The following sections present the analysis, assimilation and triangulation of all the data gathered from interviews and group discussions with the residents and stakeholders. The emergent key findings within each theme of analysis have been constructed from the data and are presented herewith.

Life Today

This section brings together the stakeholders' views on how life currently is for the residents of Silanga where new watsan facilities have been constructed. All residents interviewed are inhabitants of the village where the new facilities have been operational for approximately a year.

The emergent issues and discussion is presented here as coded topics grouped within themes; Physical issues, Social/Human issues, Livelihood issues and Other.

Table 16 – Life Today: Coded themes emergent from data

Physical	Social/Human	Livelihood	Other
Water	Cohesion	Employment	Good
Toilets	Security	Cheap	Bad
Flying Toilet	Ignorance	Finance	
Shower	Overcrowding	Amenities nearby	
Drainage			
Electricity			
Waste			
Environment			

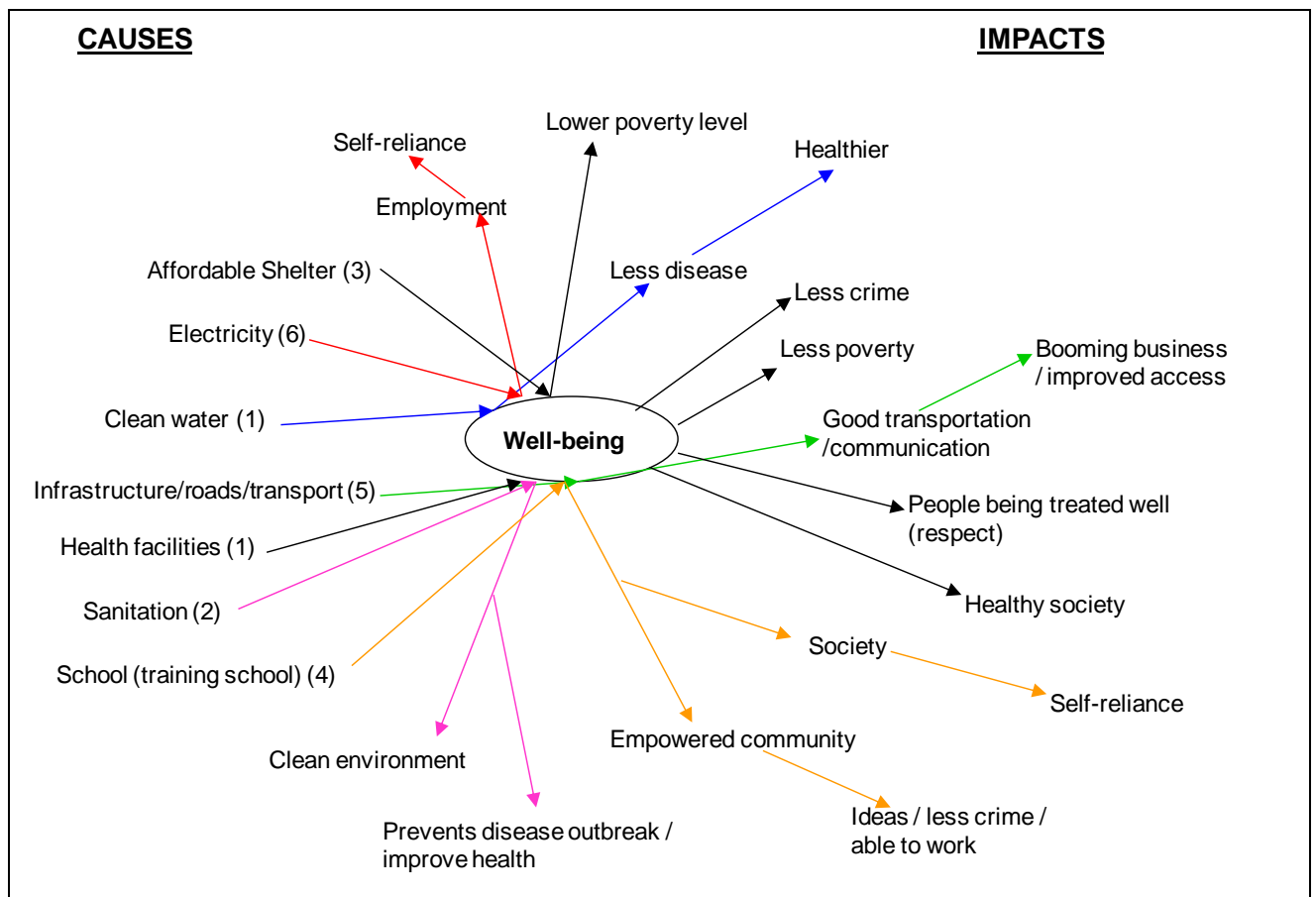
As well as individual interviews, a group discussion was conducted with eleven members of an existing community CBO, the Kibera Silanga Usafi Group (KISUG).

During the group discussion the residents were asked to discuss their perceptions of the necessary conditions to enable an individual or household to attain a higher level of well-being. Using chart paper the residents were asked to draw and indicate the causes and related impacts of things needed for well-being or a good life. They were also asked to identify linked items with coloured arrows. The resulting diagram can be seen in Figure 83.

Figure 82 – Silanga group discussion



Figure 83 – Cause-Impact of well-being in Silanga



The residents were then asked to rank the top six items they consider the most important needs for well-being. The rankings can be seen in brackets within the diagram. This exercise got the residents thinking about their priorities, needs and standard of their current life today. It can be seen that residents are clearly aware of the impact that infrastructure has on their lives. They have shown the link between clean water, reduced disease and during interviews revealed they are aware this has an impact on their expendable income as hospital bills are reduced. The provision of decent infrastructure for roads and transport was also shown to support communication, access and resulting business achievement. The residents are aware of the impact that infrastructure can have on their personal development, income and reduction of poverty.

During the group discussion the researcher sought to capture the development priorities of the respondents. The group were asked to discuss their current needs and priorities for life now, in the past and what they expected their future situation to be. The outcomes of the discussion draw light on whether support is needed to solve problems and the expectations of the poor. Listing, Ranking, Trend Analysis and Discussion PRA techniques were used.

The residents were asked to list and then rank in order of priority, the problems they are currently facing in their day to day lives. They were then asked to write a list of the problems they encountered in the past – say ten years previously, well before the development of the watsan facilities. They then indicated whether the situation was better or worse in the past. Finally the residents were asked what change they expected to happen with their problems in the future and to indicate whether their situation would improve or worsen. The results the residents gave have been

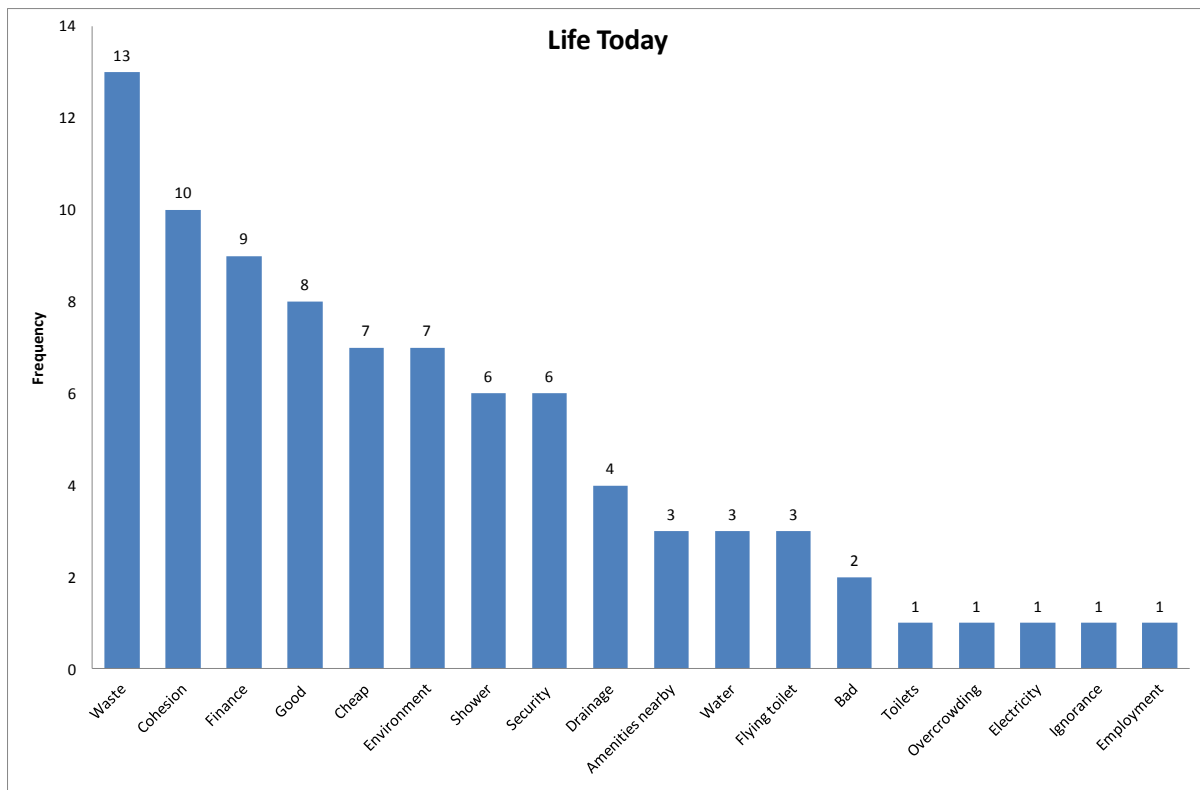
sorted and are presented in Table 17. The residents were generally optimistic about physical and infrastructure developments for the future but they were generally pessimistic that their most pressing problems of poverty, unemployment, crime and hunger would only get worse in the years to come. This indicates the residents' sense of hopelessness and low expectations of rising out of poverty while continuing to reside in Silanga. Residents indicated a low expectation for social issues including child and drug abuse, but revealed they feel more positive about future developments in roads, infrastructure, housing and help from the government. This optimism might be triggered by the ongoing government KENSUP slum upgrading activities which are clearly visible within the community.

Table 17 – Silanga Priorities

Problems Now	Ranking Now	Past Problems	Future Problems
Poverty	1	Worse	Worse
Unemployment	2	Better (before)	Worse
Insecurity/Crime	3	Worse	Worse
Not enough food	4	Better	Worse
Poor health	5	Worse	Better
Child labour/abuse	6	Worse	Worse
Not enough pay	7	Better	Worse
Poor housing	8	Better	Better
No good education	9	Worse	Better
Drug abuse (children exposed to)	10	Better	Worse
Pollution	11	Worse	Better
Roads/infrastructure	12	Worse	Better
Ignorance	13	Worse	Better
Government don't help	14	Worse	Better
Fire hazards	15	Better (more space)	Better

All of the themes emergent from the resident interviews can be seen in Table 16 and have been categorised within the coding spreadsheet which can be seen on the accompanying CD. This spreadsheet has been used to generate the chart in Figure 84 which graphically presents the frequency of topics mentioned during interviews discussing the conditions of Life Today in Silanga.

Figure 84 – Frequency of topics discussing Life Today in Silanga



The results depicted in Figure 84 show the cumulated responses from individual residents when asked to discuss their life today, not necessarily raise problems or priorities. However the issue of community cohesion is the second highest topic which matches with the social issues raised by the group discussion. Again finance appears as a frequently discussed topic, as was concurrent with the group discussion, lack of money is a significant issue the residents are facing in their current lives. An interesting outcome of this chart is the number of respondents who highlighted that their life today is good. Many residents expressed their contentment with their current situation and some went on to justify their position because of the advantage of cheap living that residing in Silanga offers. Much of the conversations with individuals discussed environmental and waste management issues. Interestingly residents did not mention education when discussing life today, but in the group discussions education was listed as a priority and stated as a link to empowerment and self reliance.

This section will now assimilate and triangulate all the data gathered from interviews and group discussions with the stakeholders. The triangulation of the data gathered from all sources strengthens the analysis of this case study. The emergent key findings within each theme of analysis have been constructed from the data and are presented herewith.

Physical Issues

Water and Shower

Three residents raised concerns regarding their water supply's quality and quantity (Alfayo 2009; Makau 2009; Mutindi 2009). Fear of dangers from the possible contamination of water and accessibility of water were raised. However, considering the number of interviews conducted, the

relatively small number of references to water indicate that residents at Silanga are not finding it too troublesome or worthy of significant discussion. This could be due to the success of the new watsan facilities within the village. This is correlated by the fact that water was not cited as a problem by the respondents of the group discussion. One resident explained that Kibera lies on a prominent site within the city of Nairobi on top of water pipe lines which connect to the more affluent suburbs of the city. Therefore when Nairobi is affected by water shortages which are not uncommon, Kibera is often the least affected because these pipelines are accessible to be tapped into. However, although water is available, the tapping in process can often cause contamination and resulting water quality problems (Bilal 2009).

The new watsan blocks include showering facilities but six of the respondents take showers in their home or compound where they carry water to use. Residents revealed that many shower more these days now that there is water and showers available nearby.

Toilets and Flying Toilets

Flying toilets were rarely raised by residents but were discussed in three cases when directly questioned. This and residents' responses support the notion that there is a sense of shame in admitting using flying toilets and in most cases people prefer to 'turn a blind eye'. One resident indicated that there is no need and it is a bad thing to use a toilet-bag if there are other toilet facilities around (Oside 2009). Another resident revealed that the cost of purchasing bags for defecation is more expensive than paying to use the facility which they consider a fair price (Muthoni 2009). Despite these responses, flying toilets are used prolifically around Silanga (Alfayo 2009) and Kibera generally, for a variety of reasons including cultural habit, security consequences at night for women and children, availability of latrines and cleanliness of latrines.

Some residents revealed that they do not use the watsan facility for the toilet as their compound already has a latrine provided to share with neighbours provided by their landlord. Other people said that now the watsan facilities are available they have a much shorter distance to walk to reach the toilet. The common cost for latrine usage in Silanga is 5Ksh but at the new facilities the cost is just 2Ksh which is a considerable saving for residents.

Drainage, Waste and Environment

Respondents said they were unhappy with the drainage situation in Silanga and if given the opportunity would move away for this very reason (Kavilu 2009), they are unhappy with open drains running across doorsteps (Kasoa 2009) and are unaware of where the waste ends up (Alfayo 2009).

There were numerous comments regarding the waste situation in Silanga. Residents reported disposing of dirty water and waste in ditches, trenches and dumps (Achieng 2009; Alfayo 2009; Kavilu 2009; Muthoni 2009; Nduko 2009; Nekesa 2009; Nzioka 2009). Some were not aware where the waste ends up, others are aware that it ends up in the river (Makau 2009; Mwikia 2009) or they directly deposit it there (Nekesa 2009; Nzioka 2009). One resident makes use of a garbage bin and collection service every Sunday (Kasoa 2009) run by the Silanga Youth Group (Alfayo 2009) and another resident reported storing and later burning their waste (Achieng 2009).

Residents said that their latrine toilets are manually emptied once full which can take three years (Josphat 2009; Kavilu 2009), others reported that their toilet sewerage is connected to the Nairobi Sewerage system (Kasoa 2009).

“Next to the tanks, there is a narrow channel where we pour dirty water that doesn’t have solid wastes in it. But when there are solid wastes, we pour it out in the open. I have never seen them [the latrines] filled up and I have also never seen toilets being drained. Rubbish goes to the garbage heap behind the toilets. We normally use dust bins before they are heaped there” (Amdi 2009).

When asked what they least liked about living in Kibera, one resident responded;

“The issue of drainage, sanitation, ignorance, poor sewerage and also some guys who are not ready to accept change” (Kasoa 2009).

Residents expressed their disapproval with the state of the environment being very dirty (Alfayo 2009; Amdi 2009; Muthoni 2009; Nekesa 2009) but reported a change in state of the environment since the watsan facilities have been running (Amdi 2009).

“According to me, the situation was pathetic. You would wake up to find faeces on your roof top. I mean, there were faeces all over. Other than the flying toilets issue, there were also no bathrooms. So people had to use their houses as a bathroom. After you are done, the house would be all muddy...Because we were living in deplorable condition before. But right now, you can comfortably walk without the ugly sight of faeces” (Amdi 2009).

Electricity

The minority of residents have electricity connections to their homes, but they are normally tapped in illegal connections for which they pay a fee (on average Ksh 300 per month) to the owner of the main connection. The appliances commonly run are lighting bulbs, T.V., Radio, and Heater.

Social & Human Issues

Cohesion and Ignorance

There were mixed responses from residents regarding community cohesion. Some residents reported tensions, that people don’t understand each other well and complained of drunks in the society (Muthoni 2009; Oside 2009). Others say they are comfortable in Silanga because they have support and company from their friends and people within the community, with a particular mention of the unity among the youth (Achieng 2009; Alfayo 2009; Amdi 2009; Josphat 2009; Kasoa 2009; Makau 2009). One resident felt ignorance and people unwilling to accept change detrimentally affects cohesion (Kasoa 2009).

“Here, it’s not even bad, but the people here don’t understand each other well. Some, you keep arguing and you feel you would rather get a house and move because you are not at peace with the neighbours, every time it’s just quarrels. We don’t understand each other here...Now you know if someone always wants to quarrel with you and they don’t want to greet you, you just know there is something wrong” (Oside 2009).

Security

Security issues were raised, particularly the issues during the post-election violence. As houses are not secure thieves can easily enter and steal possessions (Kavilu 2009; Nzioka 2009) and some unemployed youths engage in criminal activities (Josphat 2009).

Regarding security at the watsan blocks, residents said they felt ok and that the management of the blocks ensures security (Makau 2009; Nduko 2009).

“I may say that political factors hinders very much... As we can reflect back, in 2007, the clashes, we saw that maybe it could be very much of risk if one may be moving from one place to another since there was poor security and you could be killed by other communities. And that was as a result of poor politics because people were fighting due to election. As in maybe one party is saying that the other one wins, and the other party is saying that they won. So the fracas emerged due to politics. [We need to] put politics aside, and work as a team and promote unity in our nation...Politics is influencing life in Kibera because you can say that through politics, there is hatred of people because another person may be in a separate party and maybe his or her neighbour is in another separate party. So that there is conflict there such that unity is deteriorating (Alfayo 2009)”.

Overcrowding

Only one respondent raised the issue of overcrowding in Silanga, saying they hate the way houses are squeezed together due to limited space which affects freedom of movement and relaxation (Achieng 2009).

Livelihood Issues

Employment

Residents expressed the difficulties they currently face due to a lack of employment and raised the need for more companies and work opportunities to become available within Kibera (Kavilu 2009).

Finance and Cheap

Many residents reported their most costly expenditure each month is food, some mentioned medical bills. Many households send remittances home to their relatives in rural villages in quantities varying from Ksh200 to Ksh1500. A good proportion of residents are members of savings groups and some have their own bank accounts (Mwikia 2009). Savings were commonly said to be for school fees (Nzioka 2009). Reported savings vary from Ksh150 to Ksh400 per month. Monthly

household incomes were reported to range from Ksh700 to Ksh6000. A significant number of respondents also said they are in debt to friends and spend everything they earn each month (Muthoni 2009).

Cheap and Amenities Nearby

Many residents reported the best thing about living in Silanga is that life is cheap and it is the only place in Nairobi that they can afford to inhabit. Residents also reported the advantages of having all amenities nearby and the proximity to the centre of Nairobi (Kavilu 2009; Muthoni 2009; Oside 2009).

Other

Good and Bad

There were various reports from residents that life in Silanga is good and comfortable (Alfayo 2009; Makau 2009; Oside 2009). Justifications included good community cohesion (Amdi 2009; Kasoa 2009), affordability (Mwikia 2009) and family roots (Josphat 2009).

Less residents specifically said that they are uncomfortable (Oside 2009) and find living in the area challenging with nothing that makes them happy (Nduko 2009).

“One of the things that make me comfortable is that I love Silanga because I was born here” (Josphat 2009).

“Kibera is not bad. Kibera is good because the houses here are cheap, and then here where I stay, there is water nearby, there is everything nearby, that is what I like” (Oside 2009).

“I am comfortable because the people living in Kibera are friendly and they assist one another in different ways” (Amdi 2009).

Key Points

- Good life – many residents indicated that they are comfortable with their living situation in Silanga, particularly as the lifestyle is affordable
- Water – supply was said to be okay in Silanga, however water quality was sometimes compromised
- Waste – disposal and management was indicated as a major problem in Silanga detrimentally affecting the environment
- Overcrowding – a defining characteristic of slums, was not said to be a problem by most residents
- Cohesion – mixed responses from residents indicated community cohesion was fair

Perception of Success

The Rotary Club consider the project successful particularly due to the linkages that have been established both institutionally as well as the infrastructure services provided (Kuria 2009). The NGO PA consider the watsan project to have been a success which has been demonstrated by the level of community involvement and the number of people the new facilities have reached. PA believes 60,000 people are now benefitting from the facilities and even more have been reached through hygiene training. Approximately 2000 people use each block each day (Muriuki 2009). Another indication of success of the project is the strong partnership that has been established with the utility providers which will ensure sustainability of the facilities (Chege 2009). Further discussion on this partnership is discussed in the section on Institutional Perception. Other successful outcomes of the project are the income generation and employment opportunities for the staff at the blocks; economically the community have been empowered and are able to better their livelihoods. The residents are now receiving a better watsan service for a cheaper price (Owuocha 2009). Savings made by residents mean that they can now invest more in other aspects of their lives (Klingbiel 2009). There has been a general improvement in quality of life and health improvements brought about by improved watsan services (Chege 2009). Another advantage is that women are now having to walk less of a distance to collect water which saves them time to use doing other productive activities (Muriuki 2009).

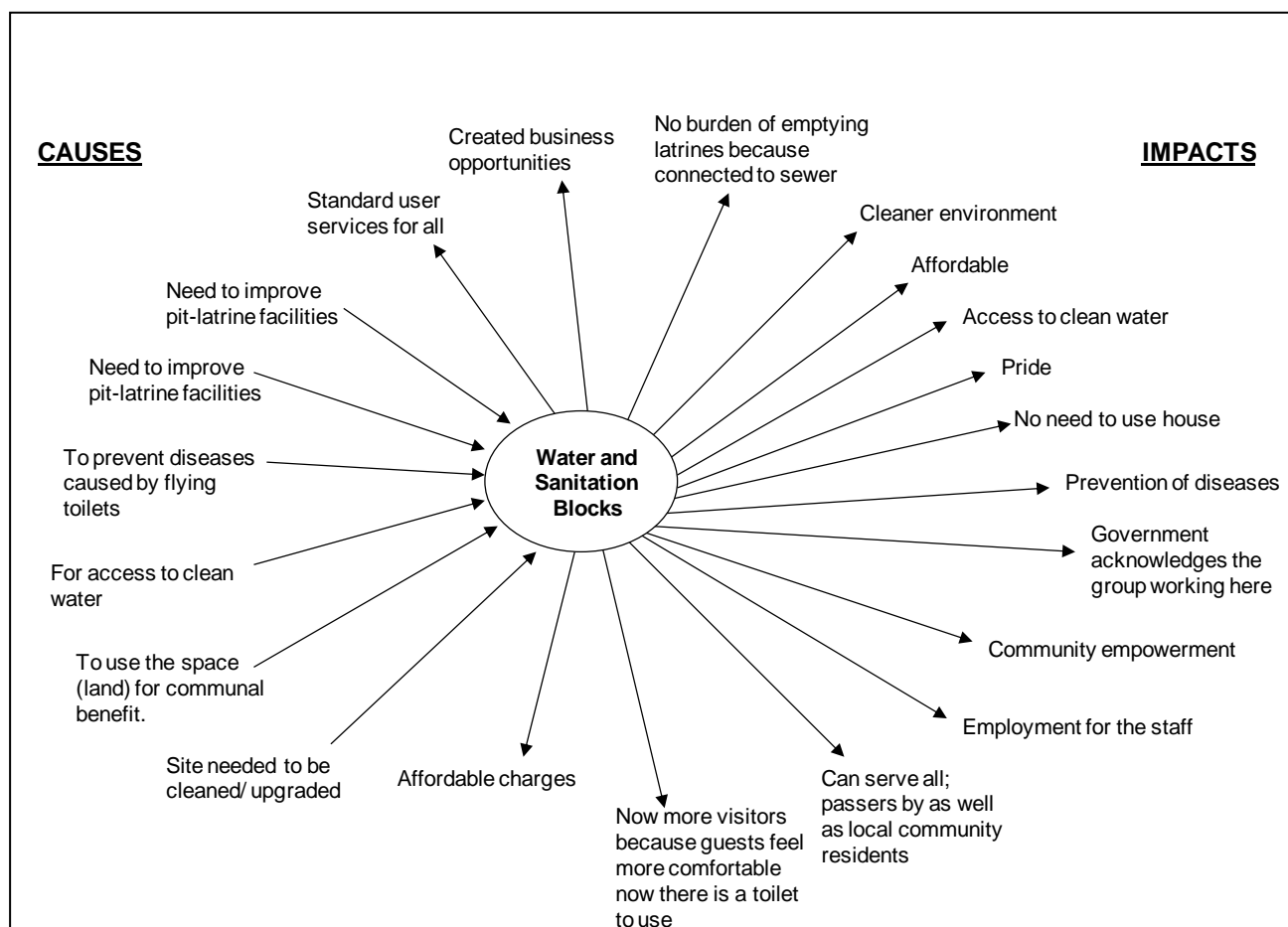
The project was stalled during the post-election violence and the construction stages were rather slow (Kuria 2009). Some of the facilities do not receive the water supply throughout the week, some on just two days a week which has had a detrimental effect on the targets PA had set for this project. Three of the facilities are not yet operable as they are still awaiting connection to the main sewers. The project partners found it a challenge to finalise the project at a time when Nairobi was suffering water shortages. The WSP think that some of the maintenance issues that have arisen may actually be attributed to the water shortages and hope that when the rains come the success of the project will be even more clear (Mbuvi 2009).

The interviews with residents reveal that their priority is employment and income generation, rather than watsan facilities. However they have demonstrated that they can see the link between clean water and savings from health bills later down the line. Generally the residents' perception of success of the new facilities is very high and there was virtually no criticism from residents. However, a number of residents are not able to benefit from the toilets as they are still awaiting connection to the sewers.

The opinion of the NGO has been proven from the findings of this research and in many ways the project has been a resounding success. This section will now bring together the various stakeholders' perceptions of the success of the watsan facilities.

During group discussions residents were asked to discuss the need for, cause, impact and success of the watsan project that has been constructed in their community. The residents were then asked to draw a cause-impact diagram on chart paper to indicate the reasons for the development of the watsan facilities and the related impacts they have observed. The outcome of this exercise can be seen in Figure 85.

Figure 85 – Cause-Impact of WatSan Blocks



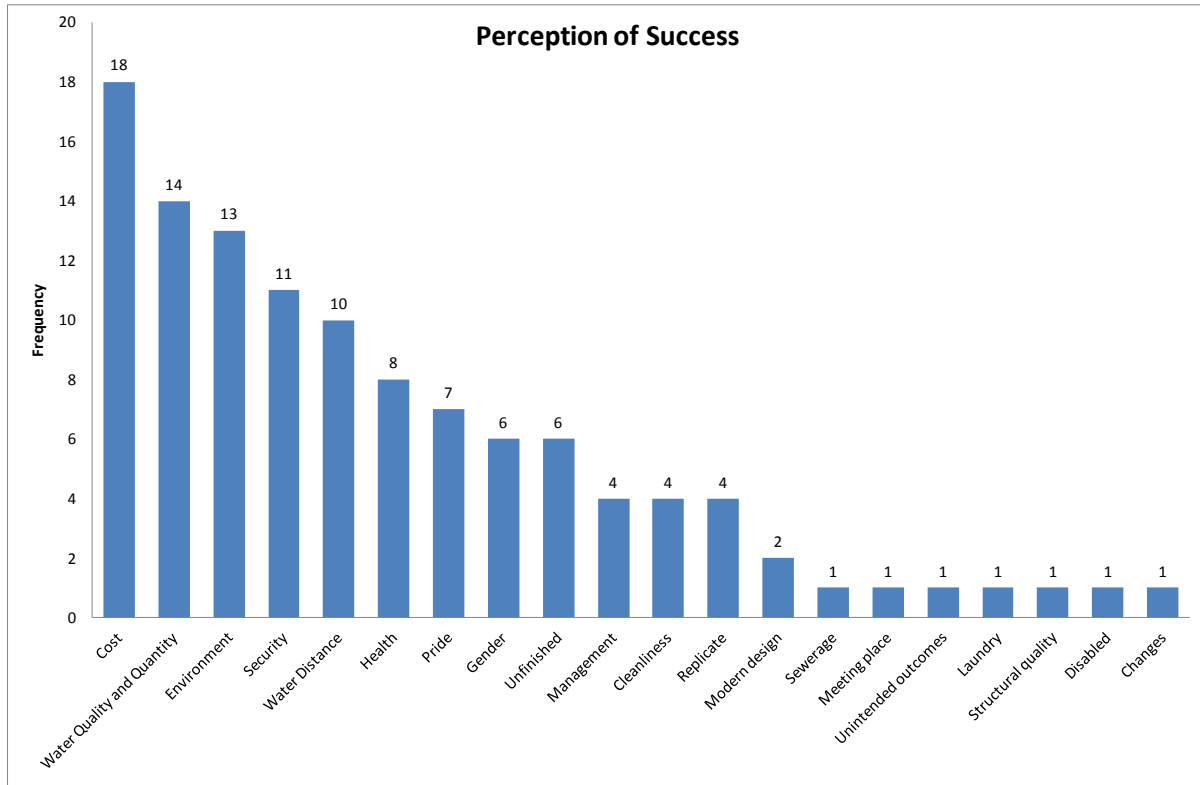
The group of residents who participated in the group discussion were members of an existing CBO, the Silanga Usafi Group. (Usafi is a Kiswahili word meaning clean and in this case implies both clean water & toilets). Therefore, these members already have a concern for water issues in the community and are well aware of the impacts of water supply and management. Their awareness of the topic is demonstrated in the results of this exercise which shows many well considered and informed responses. Many of the responses from the group discussion are matched and supported by the responses from the individual interviews. Themes emergent from the interviews have been grouped to describe the resident’s satisfaction of the new facilities, their delivery and management.

Table 18 – Perception of success: Coded themes emergent from data

Physical	Social/Human	Other
Water quality and quantity	Management	Laundry
Water distance	Security	Cost
Sewerage	Gender	Replicate
Environment	Disabled and Children	Changes
Cleanliness	Health	Unfinished
Structural quality	Meeting place	Unintended outcomes
Modern design	Pride	

A chart showing the frequency of responses for each topic can be seen in Figure 86. The most commonly arising topics during discussions include cost, water quality and quantity, environment, security and water distance.

Figure 86 – Frequency of responses for Perception of Success



Physical

Water quality and quantity

A high degree of satisfaction of the water facilities was reported by the residents. Many residents said they were particularly happy with the water quality, reliability and cost (Kasoa 2009; Makau 2009; Muthoni 2009; Nduko 2009) and have noticed significant health benefits since changing water supply (Amdi 2009; Nekesa 2009; Nzioka 2009; Oside 2009). Residents said they trust the new water supply more and no longer feel the need to boil water before consumption (Alfayo 2009; Amdi 2009).

Fewer residents reported dissatisfaction with the quantity of water supply because of the supply only being available at their local watsan block once or twice a week which is not enough supply for the population it was designed to serve (Achieng 2009; Kavilu 2009). One complaint being from a private water vendor who appears to be struggling against the competition in price as well as unreliable supply (Mwikia 2009). These water shortages were prevalent across Nairobi during the time of fieldwork due to water rationing brought about by drought.

"I am very much satisfied. Because the water that I get, mostly is treated one and there is no need again of coming home and maybe boiling the water to remove any impurities in it" (Alfayo 2009).

"I like fetching water there, because I know it's clean and is not like the one we used to get before which was dirty. The water is clean and free from germs. That other water was dirty and it was not healthy. But this water is clean and the place is well maintained, and the people around here know how to protect that place" (Oside 2009).

"This water is normally pumped after it has been treated, and so there is no need to boil or use water treatment chemicals on it again. It is safe and one can drink it and not get infected with any disease" (Amdi 2009).

Water Distance

Residents are benefiting greatly from having the new water supply facilities around the village and therefore closer to more people's homes (Oside 2009). Some residents reported previously having to trek 1500 metres and back to collect water but now the collection distances are greatly reduced (Achieng 2009; Kavilu 2009; Makau 2009; Nzioka 2009; Oside 2009). Residents also reported now consuming more water than before because collection is no longer such a hassle (Makau 2009).

The burden on women and children who might normally be tasked with the job of collecting water which is both time consuming and heavy carrying work, can now take advantage of more time for other purposes such as education and development. One resident told of how she is now able to leave food on the stove while she pops out to collect water (Oside 2009).

Not all residents in the village reside near to one of the watsan facilities and one reported that they still buy from private water vendors despite the increased cost, because of the distance to the facilities (Josphat 2009). This indicates that although the eight new blocks have increased facilities across the village, there is still not enough coverage for the population.

"That water is helping all of us here. Before there were water problems, and we used to go far to get it. And now that the toilets have been built, they will help us a lot. Now we don't have to go far. Because the water is just here, you can even leave something cooking and go get water there. Now I just go closer to the house here, let's say it's just like outside the door!" (Oside 2009).

"The distance from where I live [is far] so mostly I buy from the vendors. Though from the vendor's its more expensive. But the distance just forces me to buy from the vendors" (Josphat 2009).

"I use them and I have been using them for one year now. Because they have been built close to our home and we find them better to use than the ones we had previously. They [the watsan facilities] were needed but since the people hadn't afforded them before, we consider ourselves lucky now that we have them. [They] help the community. [They have changed our life] in a big way. One is because they have minimized the flying toilets we used to witness before" (Achieng 2009).

Sewerage, Environment and Cleanliness

Residents reported the improvement in their surroundings now that connected sewers dispose of sewerage properly rather than being left lying around the neighbourhood (Kavilu 2009). There was a lot of discussion regarding the environment during interviews. All respondents noted vast improvements to their local environment since the establishment of the new facilities. Residents reported a noticeable decrease in the prevalence of flying toilets, no longer stepping in human waste (Achieng 2009; Amdi 2009; Kavilu 2009; Makau 2009; Muthoni 2009; Nduko 2009; Nzioka 2009). It was also noted that general rubbish lying around the area has since been cleaned up as previous dumping sites were cleared to make space for the new buildings (Amdi 2009; Josphat 2009). Some residents also felt that the main purpose of constructing the watsan facilities was to improve the cleanliness of the community (Muthoni 2009; Nekesa 2009; Nzioka 2009) which is an interesting finding. Residents also commended the cleanliness, attractiveness and modernity of the facilities (Amdi 2009; Josphat 2009; Makau 2009; Nekesa 2009).

“I use them because of the way they have been built, their design and also because they are clean. They are very attractive and do not look like the ones we used before. They were very necessary. Many people do not have toilets and these toilets help them whenever they are in need...I can say they have been of great help since there has been a drastic reduction in the number of flying toilets. Before, people didn’t use the toilets. They would just defecate all over, such that as you walk, one could easily step on the waste, and now thanks to these toilets, there is some level of cleanliness” (Amdi 2009).

“Yeah, the blocks were needed coz if you look behind where the blocks are constructed, you used to get that somehow, there were dumping sites. So when the blocks are there the area is at least clean. Apart from that also, many houses, let’s say plots or, there are no toilet or washing places, so I think in some way, they are very much needed” (Josphat 2009).

Structural quality and Modern design

Residents have found the modern design of the blocks appealing (Kasoa 2009) and praised the structural quality of the construction and design (Amdi 2009).

PA feels that the project has particularly benefitted construction workers and artisans who have been able to develop their skills through training and experience on the construction of this project. These are skills which they can now apply on other buildings around Kibera as well as for more employment opportunities (Chege 2009).

Social/Human

Management and Security

Each block is managed by a registered CBO local to its site. The blocks provide work and cleaning opportunities for the CBO members who are employed as staff. This gives the community a great sense of ownership of the facility.

The NWSC have signed a Memorandum of Understanding with the community agreeing how the facility should be managed. So far the water company is happy with the conduct and management of the facilities and so far bills have been paid correctly. The community were given Operation and Maintenance training which was conducted by the NGO, PA, with no contribution from the water company (Caseve 2009).

Residents commended the management of the facilities and noted that they are doing a good job of maintaining the blocks and keeping them clean (Oside 2009). When asked about the security situation at the blocks most residents reported no problems (Oside 2009) and reported feeling safe (Achieng 2009; Muthoni 2009; Nzioka 2009) partly due to the presence of the toilet management attendant (Alfayo 2009). However some mentioned that at night it is not as safe for women to walk to the facilities and so men use them more at night than women (Kavilu 2009), a reason given for the blocks being less secure was the lack of lighting due to no power connections (Kavilu 2009). There were also reports of people forcing their way into the toilets without paying which scared residents due to the risk of attack (Amdi 2009; Kavilu 2009). It is clear that the blocks would benefit greatly from improved lighting around the buildings.

“Well, I can say that there is much security in the toilets because the toilets are well built and I can say there are some people who are there to collect the money from you before you enter a toilet and you are offered a tissue so that you can help yourself with after finishing your business” (Alfayo 2009).

“Ok, in terms of security, I don’t think that there will be a problem in terms of security. Coz the people that I do see them....who are responsible for the toilets, they are youths. And the best thing if you want to be secured, the thing that it is in the hand of youths, then I can say that it’s very safe. Coz they are the people around, they are the people who take care about things, they are the ...ok, I can say they are the security, coz the government doesn’t bring the police around for the security purpose” (Makau 2009).

Gender and Disabled

Residents have observed that the watsan facilities affect different sections of society differently, particularly women and children. It was noted that having separate cubicles for men and women has improved women’s sense of security (Nzioka 2009) although it was also remarked that women are still more likely to use the facilities during day-light hours for security reasons (Kavilu 2009; Makau 2009). Residents also mentioned that before the development of the facilities women were more likely to use ‘papers’ or flying toilets for their children’s excrement but that the situation has improved now (Amdi 2009; Muthoni 2009). The toilets have also impacted women considerably as they were normally the person within the family whose task it was to collect water (Kavilu 2009). Although disabled people constitute the minority of the population in Silanga, the watsan facilities have taken disabled access into consideration. Dedicated disabled facilities are provided with cubicle dimensions and seat heights more suitable to the physically impaired. The provision of such facilities are unique within Silanga (Josphat 2009; Kuria 2009). Hand rails are also planned to be installed in the future (Kuria 2009).

PA considers that the greatest beneficiaries of the project are women and children because they spend more time at home they suffer more from the lack of watsan facilities which this project has now addressed (Muriuki 2009). WSP have seen in other projects that children have been restricted from using ablution blocks because they are more likely to make a mess. WSP hopes that their evaluation will clarify if this has been the case in Silanga, although the residents' interviews indicate not (Mbuvi 2009).

Health

A good number of respondents chose to discuss the health benefits the new facilities have brought about, noting a decrease in waterborne diseases for their families (Achieng 2009; Alfayo 2009; Muthoni 2009; Nekesa 2009; Nzioka 2009; Oside 2009). And a reduction in hospital visits (Oside 2009). People often cited the health benefits and safety of the drinking water the key reason they are satisfied with the new facilities (Nekesa 2009). The presence of a tap and hand/body washing facilities were also mentioned as an advantage for promoting good hygiene (Alfayo 2009).

"I can say yes because before this water came I use to take my baby to the hospital. It was like every month my child would be admitted at Mbagathi. But since I started using this water the diseases have disappeared. They used to tell me it's Typhoid, and they even gave me some chemicals to put in the water that I drink and boil the water the baby was drinking. I use to be given water guard every month but now I don't use it at all and the baby stopped the diarrhoea and getting sick every time. So that's why I say it's good water" (Oside 2009).

"It [life] has so much changed because maybe from the toilets that I had been using before, maybe I could be coming from the toilet without washing my hands and maybe touching the food like that, that leads to maybe stomach-ache and diarrhoea but the toilets that we have by now, from after relieving yourself, you can maybe wash your hands in the tap there and you can clean yourself...[If more blocks were constructed in Kibera] I would like the situation to be very much, ok because through the blocks, I can say that by now, there is a low number of diseases outbreak like water borne diseases and I can say maybe like things to do with diarrhoea, vomiting due to poor sanitation. So if we have many blocks in Kibera, I can say that there will be no such things, maybe diseases outbreak....As I said before, by now, we can see that there is at least less reports on disease outbreaks due to proper sanitation and hygiene. And in the future generations, if the same will be maintained, we will completely have no breakout of diseases and the generation will live happily" (Alfayo 2009).

Meeting Place and Pride

As well as providing the obvious watsan facilities, the blocks also benefit the community by providing a meeting place for local society. Some blocks are used as a meeting place for youths at weekends which prevents boredom (Makau 2009).

A good number of residents said they felt proud to have the blocks within their community and count them as an asset. Reasons given were because they will help future generations (Kasoia 2009), flying toilets are reduced (Amdi 2009). Residents also said they felt a sense of responsibility to look after and preserve the block for the future (Achieng 2009; Kavilu 2009; Makau 2009; Nzioka 2009).

The bottom up delivery model has successfully achieved a strong sense of community ownership and pride in the facilities by engaging CBOs at every stage of the process.

Other

Laundry

Not all interviewees made use of the facilities due to the distance from their homes, however one respondent who normally buys water from local water vendors does use the block for the laundry facilities because of the cheaper cost of water (Josphat 2009).

“I think coz of the distance where I live, I’ll just, mostly I collect from the vendors but I’ll be using it in another way coz for example when we play our matches and we want to like, wash our jersey’s, I’ll just carry them there coz its cheaper. I can buy the water there, wash them there and maybe when the water vendor’s, coz you know they own the tank so they can be around when they want. So when they are not there, you have to go and buy there or also the water vendors don’t have water” (Josphat 2009).

Cost

During the project planning the CBOs were consulted on the cost and price they were prepared to pay to use the facilities. A monthly flat fee was also suggested to allow unlimited use within that month. The block managers are able to cover the costs of cleaning materials, water and sewerage bill and salary for the block attendant with the fees that they collect. Some money is also set aside for the umbrella CBO’s account which can be given back to the community at the end of the year (Muriuki 2009).

The water rates charged to the informal settlements by the NWSC are discounted where as outside informal settlements the fee is often much higher depending on whether you are an industrial or domestic user (Muriuki 2009). The NWSC water tariff to the city ranges from 18 – 38 Ksh per cubic metre. However the water tariff to the informal settlements is a flat rate of 15 Ksh per cubic metre which enables the CBOs to make a good profit on the water they sell (Caseve 2009).

The cost of the facilities generated the most discussion. Most residents felt that the fees charged for the facilities are fair and considered that the money was justifiably spent on toilet paper, water, soap and wages for the management staff (Josphat 2009; Oside 2009). The water companies agree with this and consider the community are getting a better watsan service for a cheaper cost (Owuocha 2009).

Charges for the facilities were given as;

- Ksh 2 for the toilet. Previously residents would normally pay up to 5ksh to use a toilet.
- Ksh 2-3 for a jerrican of water (20litres). Previously residents would commonly pay up to 5Ksh to a water vendor.
- Ksh 3 for a shower. Previously residents said they could pay up to 10Ksh for a shower.

One resident said that they sometimes don't pay to use the toilet facility or only pay Ksh2 (Mwikia 2009).

Residents also felt that the price was good for the facilities because they are cheap, reliable and available (Kasoa 2009) and that the facilities are kept clean and attractively designed and fitted out (Alfayo 2009; Amdi 2009) and are more hygienic than the flying toilet (Mwikia 2009). One resident also noted that it is worth paying for clean water rather than expensive medical bills later down the line due to water borne diseases (Alfayo 2009).

When asked if residents would consider using a flying toilet to save money they all said no due to the hygiene and environmental consequences (Achieng 2009; Amdi 2009; Makau 2009; Nzioka 2009) however, due to the community's sense of shame of using flying toilets, they would be unlikely to admit to resorting to the habit.

Respondents said that they felt that the money spent on the construction of the facilities was spent wisely (Makau 2009) particularly as they were connected to the main sewers which makes them unique in Kibera where pit latrines are most common (Josphat 2009).

"Yeah, I don't know much about how much was spent on the toilets, but, I think to me the presence of those toilets just impressive to me. I think it will really benefit the community. So, though I don't know the exact amount used, I think the money was well spent, coz the connection of the sewer line which is a very expensive thing to do here will be done on those toilets and also there are unique toilets around. There is no other toilet like those ones. So they are also unique" (Josphat 2009).

"Yes it was [money well spent]. Because, maybe, as you can see, from far, the block looks nice and beautiful. And it's very attractive. And as you enter inside the building, you can see that the toilets are well accommodated. I mean, water is there, the tiles that have been built with it are so much attractive and the bathrooms that are also there...Well, I may say that I wouldn't have done much with it [if I were in control of the money] but I would have done the same thing that those people have brought the project have done...I may say it's a fair price because it's not much compared to what you can spend maybe when going to hospital, going to dirty toilets and of course dirty bathrooms and using untreated water....Well, I may be saving money to use flying toilets but in the other way, I may be later or in future times, I may use much money towards I have spared to use flying toilets. Because, when I have thrown maybe...I can say faeces in the... in paper over there. And I myself come and step on it, then I'll contract a disease of which I will have to use much money compared to what I should have used going to the toilets" (Alfayo 2009).

Replicate and Changes

Residents praising the facilities frequently supported the idea that the blocks should be built all over Kibera (Muthoni 2009; Mwikia 2009; Nekesa 2009) particularly to reduce flying toilets (Nekesa 2009; Oside 2009).

One resident suggested that they would have organised the construction process differently in order to speed up the process, reduce waste and to employ more people (Amdi 2009). This point was also mentioned by the PA who found the construction and transportation of materials was a challenge due to poor access and road conditions within the village (Muriuki 2009).

“I would have employed many people...I would have bought the equipment required for the construction of those toilets and washrooms..And I would have encouraged people to work together in cooperation to put up those toilets. I would have bought the equipment required to put up the toilets and washrooms. Then I would encourage people to join in the construction work, so that the construction would take a shorter time in order to reduce the amount of rubbish around” (Amdi 2009).

Unfinished and Unexpected outcomes

A number of the residents interviewed, although all from the village of Silanga, were not benefiting from the new facilities for a number of reasons, mostly because the construction is not yet finished at their local facility (Ksoa 2009). In some cases the water is connected but commonly they were awaiting connection to the sewers (Josphat 2009; Makau 2009; Muthoni 2009; Mwikia 2009).

Residents have learned from the construction of the blocks that it is possible for toilet waste to be disposed of via sewers which run underground under their houses, something that was not common knowledge previously (Kavilu 2009).

Key Points

- Water – quality was reported to be very good at the watsan facilities but the quantity is not always good due to water shortages and connection problems
- Facility coverage – the success of the watsan facilities was reported to be very good, but there are not enough facilities to cater to the population of Silanga
- Cost – of the facilities was said to be fair by residents
- Environment – has improved in the village since the project development

Institutional Reform

This theme of analysis brings together the information gathered from stakeholders regarding the institutional frameworks and reformation brought about by the process of the upgrading scheme. The analysis indicates the longevity and futurity of the watsan facilities as well as impacts upon community groups and institutional frameworks.

This project successfully brought about the formation of a new community institution, the umbrella group, the Silanga Development Committee which collectively represents and brings together the individual CBOs who manage the facilities. This project has shown to have increased the capacity and cohesion of the community through the development and support of this large CBO by the NGO.

As well as the CBOs, the other institutions involved in this project were:

- Rotary Clubs of Denver and Langata - The main donor with the role to provide external voluntary financial and also technical support. A non-profit organization that has volunteers from business communities, and are able to get different stakeholders together using Rotary's credibility for world service. The international club draws on its members professional backgrounds for expertise and has 33,000 clubs worldwide (Klingbiel 2009; Kuria 2009).
- Practical Action – The NGO were the lead implementing agency.
- Water and Sanitation Programme, World Bank - A technical development agency engaged to conduct an evaluation of the project and provide lessons from their experience with other global watsan projects (Mbuvi 2009).
- Nairobi Water and Sewerage Company (NWSC) - Legally mandated as the service providers of water and sanitation in Nairobi with the responsibility to ensure the population has access to water. For this project they have provided material and technical support for the connection of the water and sewer pipelines (Caseve 2009).
- Athi Water Services Board - The body that regulates the water and sanitation programs in the Athi River Water region and oversees the NWSC. A state corporation under the Ministry of Water and Irrigation with the responsibility of developing water services infrastructure (Owuocha 2009). They provided learning to other places and organise the scaling up and of the delivery model of watsan for informal settlements to other slums in the country (Chege 2009).

A key success of this project is that PA were able to prove to the water service providers that it is a viable business model to provide water and sewerage services to informal settlements. Previously, the water companies concentrated on providing services to only the middle and up market estates of the city leaving the slums un-serviced. PA was able to work with the water companies and demonstrated via the Silanga project that it is profitable to service the slums. The water companies considered this first project in Silanga as a pilot, but have since gone on to replicate the delivery model elsewhere due to its success. With the support of PA, they have now realised that by engaging with communities residents will protect and not vandalise the infrastructure (e.g. pipelines) as they feel a sense of ownership of the project. The water company is now even extending its services further without the support of NGOs, is licensing the CBOs and extending the water pipelines. The companies are also now holding forums directly with the communities and have dedicated officers who work within the slums to monitor the situation on the ground. This

project in Silanga has completely changed the practice of the Athi water services board and the Nairobi water company and their attitudes toward the informal settlements (Chege 2009; Muriuki 2009). The water companies have now devised guidelines on the provision of water and sanitation in urban slums which detail their role and how they are able to now partner with other organisations to provide the facilities. Therefore, this project has directly and positively impacted the policy of these large institutions, and a viable and sustainable business model has been created which services the poor without the need for external financial or social support.

The NWSC have learned from the experience of this project and realised that they must tailor their method of watsan service delivery according to the recipient site and community. They also feel more prepared to handle challenges now. The project has resulted in various positive impacts upon the NWSC organisation. The company is now well known in the informal settlements, whereas previously it was unheard of, and residents now know who they should approach for help regarding water and sewerage. Since this first Silanga project, the NWSC have received a positive response from Kibera residents when they have sought to start new projects in other areas of the slum. The good reputation of the success of the Silanga project is well known by Kibera residents.

The project has also instilled a great sense of responsibility on the NWSC that their services must better reach the informal settlements, they must work harder and that they have a responsibility to ensure the service delivery. Although the NWSC was always mandated to provide their services to the entire Nairobi population, the slums were previously omitted as they were deemed too complicated to work with and less profitable. The NWSC has now learned to change that mindset and realised that the informal settlements offer a new customer base and previously untapped market. The NWSC has changed its policy to such an extent that last year they opened a new department for the sole purpose of servicing informal settlements (Caseve 2009).

The Athi Water Services Board (AWB) feels that this project has impacted their organisation by developing the way they engage with communities and increasing the numbers of people who use their facilities. The Silanga project has taught them a new implementation method. They have since replicated the delivery model of this project in other informal settlements now they have seen that delivering services to informal settlements is possible and can be effective (Owuocha 2009). AWB was affected by water sector reforms in 2003 which ensured watsan services were directed through the boards. The AWB was formed in 2004 and the organisation has since developed strategic guidelines for improving water and sanitation services which provides a synchronisation of how different players should operate. This includes identifying NGOs which are strong in informal settlements which the board engages with to ensure social as well as strong economic sense in their activities (Owuocha 2009). The AWB feels they have an effective model as they use the community approach which was particularly successful in Silanga for the obtaining of sites for the blocks. The AWB also has other projects ongoing in other informal settlements with an upcoming large project with the African Development Bank to finance major infrastructure works to develop bilateral sewer lines to the water lines that transverse through Kibera. This would enable the connection of any ablution block to the main sewer lines and would dramatically affect the incidence of flying toilets across the entire settlement. The AWB also plans to engage in a partnership with local universities to generate an impact assessment of their initiatives in informal settlements (Owuocha 2009).

WSP have agreed to conduct a monitoring and evaluation appraisal of the project when it culminates. They participated in earlier phases of the project by reviewing documentation. At the time of research WSP had engaged consultants to carry out the evaluation and devised the methodology to concentrate on monitoring the operation and maintenance (Mbuvi 2009).

Practical Action has also been impacted by this project as they have been able to apply lessons learned from Silanga to their newer projects in Nakuru and Kisumu. The key lessons PA have transferred are the formation of strong partnerships with the lead agencies. The other one is the community management mode of approach (Chege 2009).

The Rotary Club, the donor, is a voluntary service of experts who come together to address the social needs of the less privileged in society by giving the expertise, time and resources. One of the club's great strengths is the lack of bureaucracy which allowed them to help make an impact far quicker than many other organisations and their strong international reputation aided the formation of relationships with the other project partners particularly government institutions (Chege 2009; Klingbiel 2009; Kuria 2009). The Rotary Club have been able to draw from the expertise of their membership to support the project in different areas (Kuria 2009). The Rotary Club has been impacted by this project as they are now interested in scaling up the project to do a bigger project either in Kibera or other slums in Nairobi (Chege 2009; Kuria 2009). The Rotary Club have learned from this project that in order to be sustainable, slum upgrading projects should have an element of enterprise generation to enable residents to improve their economic situation and livelihoods. For example, commercial activities can take place at the watsan blocks such as phone/internet services, shop etc. They also realise that to be sustainable the grants that the club has invested needs to be recoverable rather than charitable, perhaps by adopting an enterprise approach from which the community can recover the costs (Kuria 2009). The club has big plans to scale up their watsan projects in Kibera and have engaged with US institutions and universities to conduct assessments of the impact their project has made on health for a second phase of the project. It is hoped that USAID will engage for Phase 3 (Klingbiel 2009).

During the group discussion with residents an exercise was carried out to capture the group's perception of institutions and their regarded importance by the community, to discover the influence the community perceives to have upon institutions and to determine the change and predicted evolution of institutions. The PRA techniques used were listing, ranking, trend analysis and institution-perception mapping.

The residents were asked to list all the institutions they are involved with, see Table 19 and then to map them indicating their perception of importance, strength and direction of relationship with the institution, and accessibility of the institution. The resulting main output in the form of a diagram can be seen in Figure 88.

Table 19 – Silanga Institutions

Institution	Comment	
KISUG	Kibera Silanga Usafi Group	Watsan and environmental upgrading
KISEP	Kibera Slums Education Program	NGO undertaking teacher training
Church		
USK	Undugu Soceity of Kenya	Empowerment of youth and marginalised communities
Care Kenya		
Practical Action		Relief and development NGO
MSF	Medecins Sans Frontieres	Health
Chief		
Maisha Bora		Savings and loans
Government		
AMREF	African Medical and Research Foundation	Health
SYG	Silanga Youth Group	Environmental upgrading
SUM	Silanga Usafi Na Maendeleo	Watsan and environmental upgrading, with savings group
Health institutions		
Well-wishers		
Community policing		

Figure 87 – Silanga group discussion perception mapping exercise

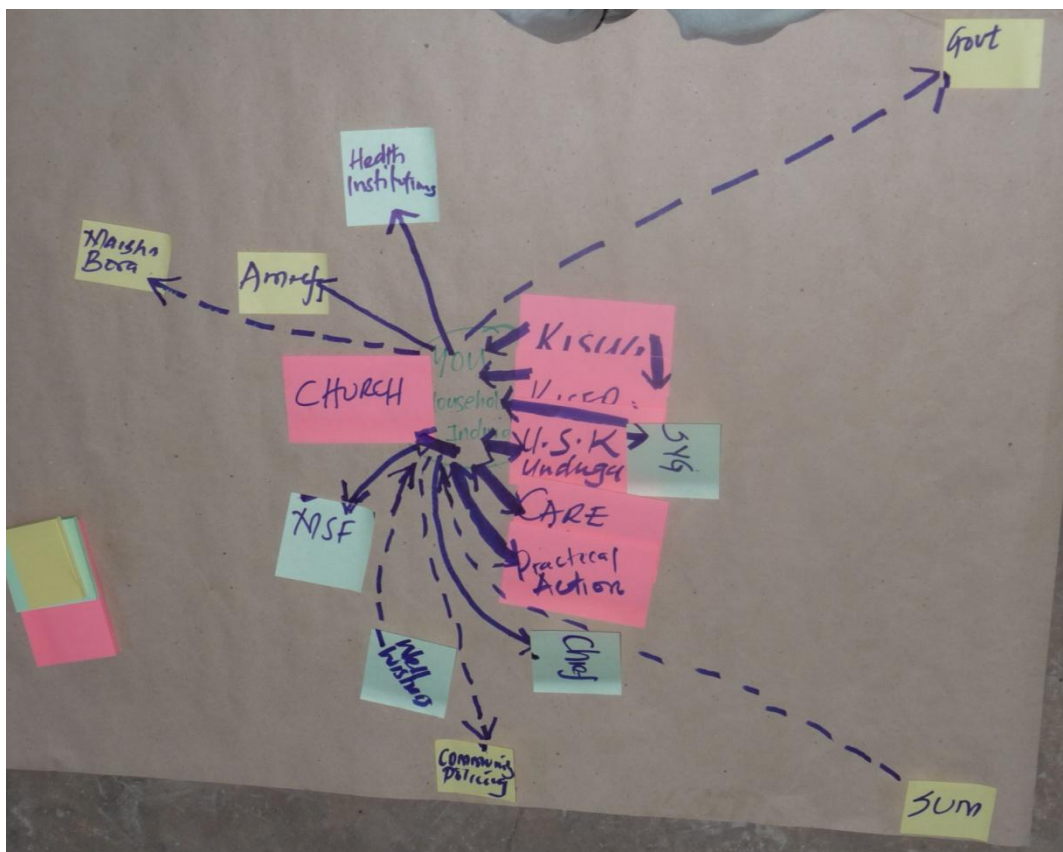
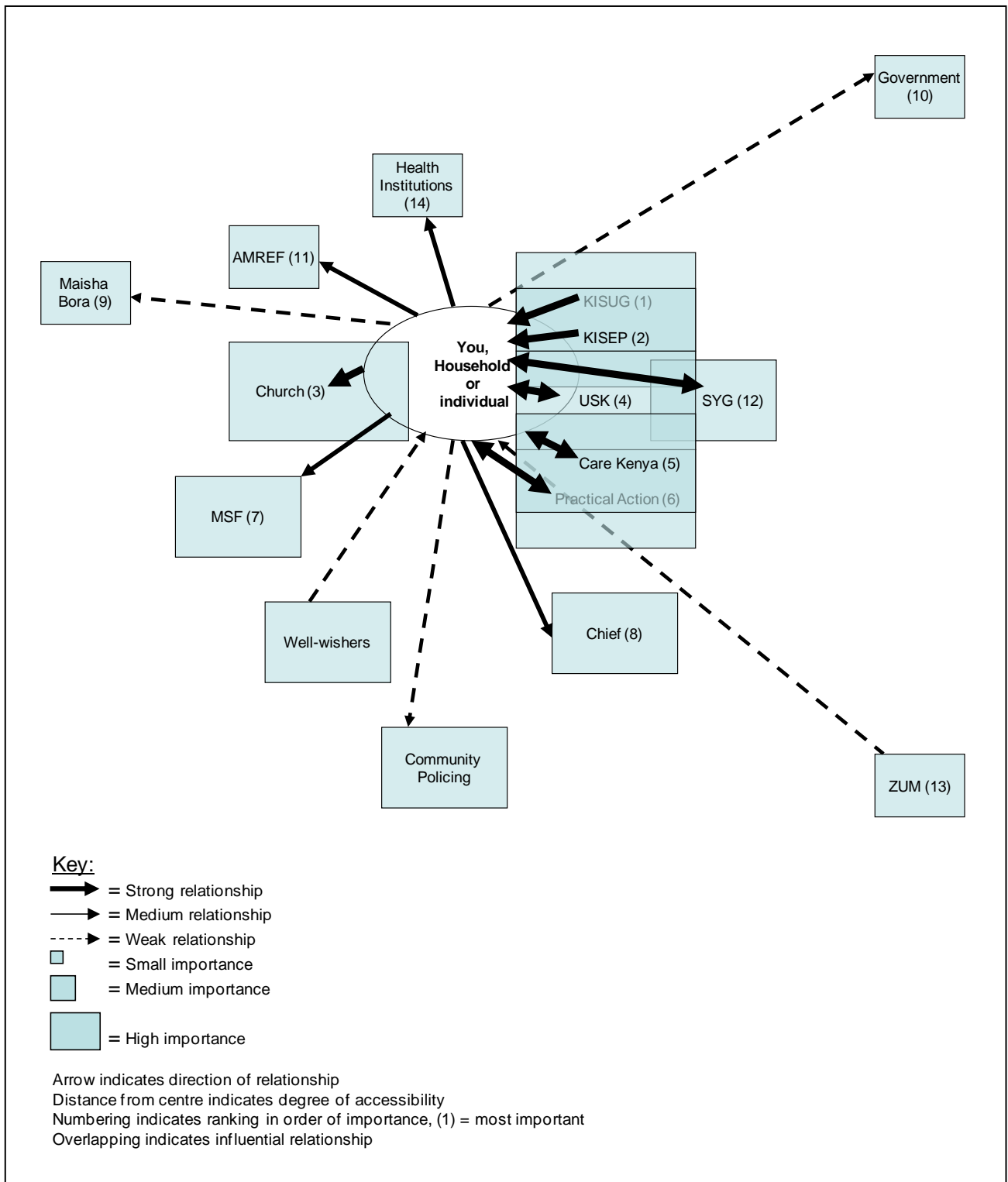


Figure 88 – Institution-Perception Map Silanga



The results of the institutional mapping exercise broadly groups the institutions into three groups in order of priority to the residents;

Group 1 – KISUG, KISEP, Church, USK, Care Kenya, Practical Action

Group 2 – SYG, MSF, Chief, AMREF, Health institutions

Group 3 – ZUM, Maisha Bora, Community policing, Well-wishers, Government

It is clear that the community in Silanga are impacted by a large number of institutions. As Kibera is well known to be a slum with extreme poverty in Africa, many international agencies concentrate their activities to helping the population there. It is obvious to see in Kibera the vast number of organisations, NGOs and CBOs active within the community.

As would be expected, the organisations with less presence in the community such as the government and less active NGOs (Group 3) have the weakest relationship and are considered the least important and least accessible to the community. Community policing, although central to the society, was also placed in this group as residents feel there is both a weak and a one way relationship. It appears that community policing is perhaps mistrusted by the residents in the group and communication could be improved.

Core community institutions such as those in Group 1 – The church, village-based CBOs and some particularly active NGOs, are considered the most important, most accessible to the community and with the strongest relationships to the community. The residents chose to position Practical Action close to the community which signifies they feel they are a highly accessible institution and indicated that the relationship is both strong and two-way. This is a positive indication that the residents feel they can both contribute to and gain from their relationship with the NGO and that there is a good level of communication and most likely trust. However, Practical Action was ranked as the 6th most important institution to the community which is at the lower end of this group, not surprisingly, the CBOs are more central to the community and were therefore ranked higher. Interestingly the residents chose to indicate that the top six institutions (CBOs and NGOs) all influence one another.

Group 2, which consists mainly of various organisations that work with communities and between communities and governments were represented as both medium and low importance. Three of the group are healthcare providers, but the village Chief was also placed in this category. As Chief, this person links between the government and local community, so this middle position is as might be expected.

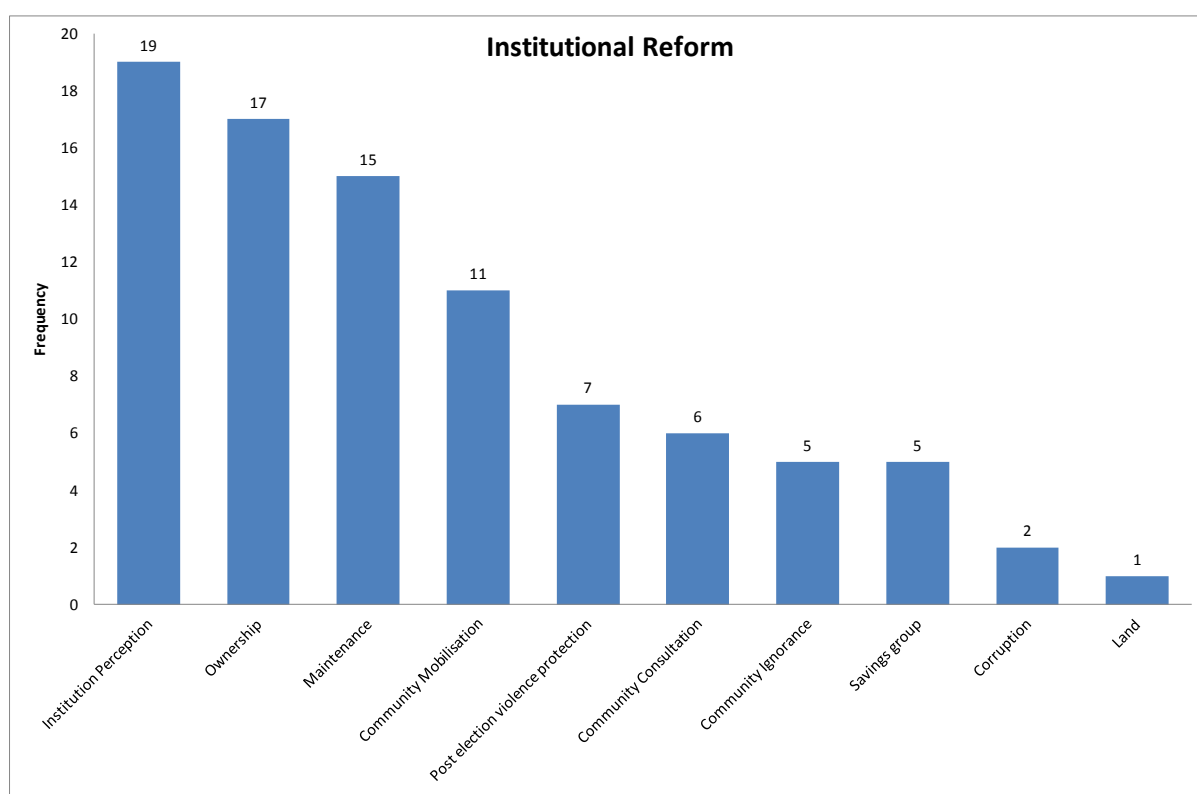
Table 20 presents the themes emergent from the residents' interviews discussing institutional reform. They have been organised into three categories to aid analysis; Governance, Social/Human and Futurity.

Table 20 – Institutional Reform: Coded themes emergent from residents’ interviews

Governance	Social/Human	Futurity
Institution perception	Community consultation	Maintenance
Corruption	Community mobilisation	Ownership
	Community ignorance	Land
	Savings group	
	Post election violence protection	

Figure 89 shows the frequency of responses for the topics discussed concerning institutional reform during interviews with residents.

Figure 89 – Frequency of resident’s responses for Institutional Reform



Governance

Institutional perception and Corruption

Residents were questioned on their perception of institutions. There was much discussion regarding the government, landlords and NGOs. Attitudes towards the government were mixed but many responses were optimistic with people expressing hope that the government are helping the residents of Kibera and care about their welfare (Osidi 2009).

Residents did not report any corrupt activities related to the construction or management of the blocks. One resident said they felt the management structure was very transparent (Alfayo 2009).

Support from the government is noticed by residents due to the physical activity in Kibera for the ongoing KENSUP resettlement programme, and also as they have seen vulnerability capacity assessments carried out by government representatives (Alfayo 2009; Nekesa 2009).

Some residents feel that the support from the government is minimal, but again expressed optimism that the situation will change and the government is starting to become more aware of the issues (Nekesa 2009) and indeed should start to support more (Alfayo 2009).

However, it was mentioned that although NGOs and governments are aware of problems, they do not act quickly enough to address issues (Kavilu 2009) and do not fully understand the residents' problems (Alfayo 2009). It was also said that the government is very separated from Kibera and although have been more present in the past have since disappeared and there is a lack of intervention by the government (Makau 2009; Muthoni 2009). Another resident said the government have done nothing (Josphat 2009).

One resident suggested that governments can help more by empowering CBOs by supporting their projects in the community (Nekesa 2009), proper planning (Alfayo 2009) and by providing funds to physically upgrade the slum and work with NGOs to implement schemes (Alfayo 2009; Nduko 2009; Nzioka 2009). Increasing the number of toilets was mentioned (Amdi 2009). Another suggested that the government should help provide new employment opportunities (Kasoa 2009) particularly for the youths (Makau 2009), better security and hospitals particularly for the provision of anti-retroviral drugs and immunization to reduce child mortality. It was also suggested that each village in Kibera have its own hospital (Amdi 2009).

Attitudes towards landlords were also positive. Residents feel that landlords care about their welfare, safety and check on residents when collecting rent (Nzioka 2009; Oside 2009). It was also remarked that village elders and landlords complement each other.

These findings are also matched by the residents' expectations given in Table 17 – Silanga Priorities in the analysis for Life Today, where residents indicated that they expect the problem of lack of help from government, will improve in the future.

“Even the landlord too is someone who will worry about you because you are staying in his plot. And in case something happens in that plot, he will come ask you. I am saying even them they worry about us because when he is coming to collect the rent, he will ask you if there are any problems. And you get to explain to him if there is a problem” (Oside 2009).

“I would say hospitals [should be concentrated on by the government]. You know, many people die here. And mostly they succumb to HIV/AIDS. Now the hospitals would avail to them the anti-retrovirals so as to prolong their lives. Other than that, immunization of children also helps reduce child mortality. The government should look forward. Each village should at least have a hospital; one in Silanga, another one in Lindi, e.t.c. For example, I was sick last week. When I went to Silanga, I had to wait for so long. The doctors are so few and yet patients are many. So the number of hospitals should be proportional to the number of patients, and even the subordinate staff” (Amdi 2009).

Social/Human

Community consultation

PA conducted a large amount of community consultation to encourage participation. The NWSC and AWB were happy to leave this responsibility to PA as that is where their skills lie. However, the partner organisations were aware of the main activities and met regularly (Caseve 2009; Owuocha 2009). As a part of the inception phase of the project a baseline survey was conducted with participation from the community and resulted in GIS maps which identified the issues needing to be addressed and the most appropriate sites for the watsan blocks. The construction phase came next, during which participatory design clinics were held in order to educate the community in order to select the most appropriate technologies for their needs, the area and that were cost effective (Chege 2009).

Capacity building was a cross-cutting phase during the development of the blocks. Capacity building was delivered in the form of training residents on the watsan technologies, developing management skills for finance and leadership and hygiene behavioural change. PA targeted both households and schools for hygiene behavioural change and trained approximately 500 individuals (Chege 2009).

PA engaged and consulted with the community through local meetings, formal meetings and workshops to discuss and agree on the work plans, designs and the targets the project was set to achieve. Residents were also engaged as construction workers (Chege 2009). Three major training sessions have been conducted on operation and maintenance to the different CBOs which manage the different blocks (Muriuki 2009).

PA have admitted that the hygiene behavioural change training was not straightforward and took longer than anticipated. The hygiene awareness was often needed to be repeated for people to learn. Training on record keeping also had to be repeated to ensure the community staff attained the right standard (Muriuki 2009).

PA also planned an exit strategy to ensure the project was handed over to the community. PA trained the community in business planning to ensure that they have the skills necessary to effectively manage the facility and are capable of working together with the Nairobi Water and Sewerage Company which has the ongoing responsibility of providing watsan services in Nairobi.

Some residents reported that they were not consulted during the development of the watsan facilities (Mwikia 2009) but one said they would have liked to have been involved (Alfayo 2009; Oside 2009). Others were asked to participate from the first day of planning throughout the construction and remain involved now (Kasoa 2009). One resident became involved because of his prior membership of one of the CBOs which were embraced within the umbrella organisation Practical Action formed (Josphat 2009).

Community mobilisation and Community ignorance

The community within Silanga were already very mobilised prior to the project with a large number of active CBOs and a cohesive community. Many of the interviewed residents are active members of CBOs, including the CBOs that were consulted and involved with the planning, implementation and construction of the block. CBO membership numbers were quoted as varying from 5 -30 with an equal gender divide (Kasoa 2009). Other residents are members of women's' groups (Nekesa 2009),

college sanitation groups (Amdi 2009), performing arts groups (Alfayo 2009) and youth groups whom are particularly involved with the maintenance of the blocks and garbage collection (Josphat 2009; Makau 2009).

Some CBO members remarked that their membership numbers have been increasing since others become aware of the success of their projects (Achieng 2009).

It is clear that there are a large number of active CBOs within Kibera and it is common to be a member of such a group. This finding also came out of the group discussion which highlighted the high numbers of organisations within the community.

Although not all, some are not members of any CBO and remarked that they feel left out of community activities and do not receive information (Muthoni 2009; Mwikia 2009; Nduko 2009; Oside 2009). Some residents reported not being aware of the plans for the toilet blocks and are unaware as to why some blocks are not yet operable (Oside 2009), do not know who the owner is (Kavilu 2009; Oside 2009), and did not know how to access and become involved with the CBOs included within the management umbrella organisation (Nzioka 2009).

PA understand that encouraging the participation of the community in a project of this nature can be a challenge particularly in an urban setting like Kibera where many people are poor and are limited by their capacity to contribute time and finance. PA feels this presents a challenge for the sustainability or replication of the project and would prefer to have received more support and fundraising from the community themselves which would further ensure community ownership of the new assets (Chege 2009).

Savings group

Many residents are members of community savings groups, also known to the community as 'merry-go-rounds' which are often integrated within CBOs (Achieng 2009; Kasoa 2009; Makau 2009; Nekesa 2009). Such savings groups offer micro-finance facilities for saving, sharing and distributing money and residents consider it advantageous to come together as a group for this purpose (Achieng 2009). Responding residents said that their savings range from Ksh100 – 400 per month.

Post-election violence protection

During the post election violence the toilet blocks were not destroyed unlike many of the other buildings around Kibera (Nekesa 2009; Nzioka 2009; Oside 2009). Some residents say that they were protected by the community because the residents felt that they owned the facility (Kasoa 2009) and as they personally benefit from the facility they demonstrated their value by not damaging them (Alfayo 2009). One resident said that some security personnel were present to guard the buildings (Oside 2009).

Futurity

Maintenance

Measures were put in place for maintenance from the inception of the project and the community was involved in all stages of the process. Once the facilities were up and running a more formal handover was established between the community and the Athi Board and NWSC to ensure the

formal and legal recognition of the CBOs. An MOU was established which agreed that in case of problems, the two agencies would return to support the community in terms of repairs or other support that might become necessary (Chege 2009). The NWSC feels a strong sense of responsibility into the future to ensure the proper operation of the facilities, for the community's benefit but also to ensure their business remains running (Caseve 2009).

Residents expressed their collective responsibility to preserve and maintain the facilities (Alfayo 2009; Makau 2009; Muthoni 2009; Mwikia 2009; Nzioka 2009; Oside 2009) and consider maintenance important in order to retain the facilities for future generations (Nduko 2009).

Some problems with the facilities have arisen such as broken or stolen pipes which delayed the construction and operation of the blocks (Kasoa 2009). Whenever faults have been reported to the management and caretaker they speedily organise for the repairs and do a good job (Achieng 2009; Nduko 2009; Nzioka 2009). In many cases it is the Silanga Youth Group who work on the maintenance and garbage clearance for the facilities (Makau 2009).

Ownership and Land

According to PA the blocks are now owned by the Silanga Development Committee where a CBO has been assigned in each site to manage the facilities. However, the Athi Water Board and NWSC have expressed a desire to own the facility so that they can provide maintenance (Chege 2009). This is a model that is being replicated in other slums in Nairobi. The AWB and NWSC have said they would like to enter into a lease agreement with the CBO, whereby the community manages the facility under their lease. This is a working model which has been implemented in other slums for the provision of watsan by the utility providers (Chege 2009). According to the NWSC and AWB, although the land is government owned, the facilities and buildings are already owned by the Athi Water Services Board (Caseve 2009; Owuocha 2009). Although Athi water board should own the facility and NWSC should operate it, this division of responsibility and ownership needs clarification. The sector reforms and handover process were not clear enough which has caused confusion as to who actually owns the facilities (Caseve 2009). The AWB realise that there is an advantage for the sustainability of the project if the community feel a strong sense of ownership towards the project as it encourages them to protect and maintain it for the future. Therefore the AWB prefer to 'conceptualise the idea of a community led approach' (Owuocha 2009).

The land upon which the blocks are sited is owned by the government, however in many cases the sites were previously used as dumping grounds or had existing pit latrine toilet facilities owned by structure owners. The acquisition of sites was one of the biggest hurdles in the project (Mbuvi 2009). PA and the communities were able to acquire the sites through negotiation and a lot of dialogue via the umbrella CBO (Muriuki 2009) with the structure owners and in some cases they were given free or better access to the service in return. No monetary compensation was necessary as the structure owners could see the benefit to themselves and the community for the new facilities (Chege 2009). The NWSC considered the identification of sites at the beginning of the project a difficulty because of the unplanned and overcrowded nature of the slum. They wanted the watsan facilities to be strategically placed so that they could serve the greatest number of people (Caseve 2009).

Some residents are not aware who owns the facility blocks (Alfayo 2009; Nekesa 2009; Oside 2009). Others consider that they are owned by the community or the CBOs (Josphat 2009; Kasoa 2009; Makau 2009; Muthoni 2009; Mwikia 2009; Nduko 2009; Nzioka 2009). Another thought it was the researcher because they are asking questions, but felt that it should be owned by the community (Mwikia 2009). Because residents feel proud of the facilities they have a stronger sense of ownership and therefore the responsibility to maintain them and preserve them for the future.

Key Points

- Umbrella Group – was successfully formed by PA to bring together and strengthen the community
- Policy reformation – for the water companies and government agencies has been particularly successful and a key enabler of sustainability
- Ownership – continues to be a point of confusion for residents who are aware they are illegal squatters
- Community mobilisation – has been particularly effective due to the support of the umbrella organisation and sensitive training and communication with the community by PA

Development Direction

This theme of analysis brings together the stakeholders' priorities and aspirations for the future. The information gives an indication of the development direction that stakeholders are aiming towards.

Many of the project stakeholders indicated a sense of responsibility and ongoing link with the project even now it has been handed over to the community and have engaged in evaluation activities to maximise the lessons they can learn from the project. PA understand the importance of monitoring and evaluation for learning purposes. They conducted a mid-term evaluation of the project and have arranged for the Water and Sanitation Programme (WSP) of the World Bank to conduct a final evaluation. Daily monitoring has been ongoing in terms of the reporting schedule for the donor, end of year reports and bi-annual reports. PA also has its own internal monitoring process during which an annual project review is conducted to engage the project beneficiaries and stakeholders to review the project (Chege 2009). The NWSC also has its own monthly monitoring activities to ensure they are meeting budget and time goals (Caseve 2009). The Rotary Club is engaged in monitoring and impact evaluations with American universities (Klingbiel 2009).

Table 17 in the Life Today section shows the ranking of residents' current life priorities, generated during the group discussion. The top five results were; 1st – Poverty, 2nd – Employment, 3rd Insecurity/Crime, 4th – Food, 5th – Health.

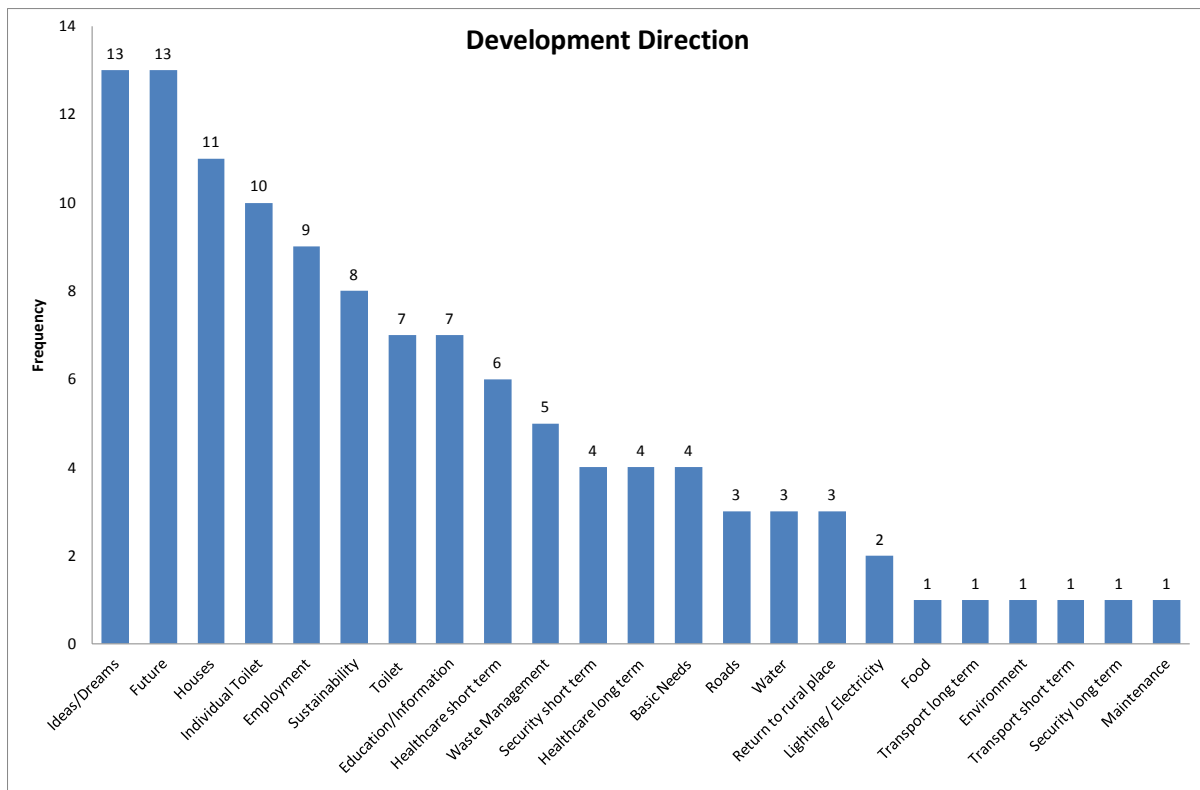
When questioned during individual interviews on the residents' short term needs and long term goals for life, the following tabulated results were generated, see Table 21.

Table 21 – Development Direction: Coded themes emergent from interviews

Priorities – Short term needs	Aspirations – Long term goals
<i>Physical</i>	
Toilet	Individual toilet
Houses	Environment
Water	Transport
Waste management	Maintenance
Transport	Sustainability
Roads	
Electricity	
<i>Human/Social</i>	
Employment	Basic needs
Healthcare	Resettlement
Security	Return to rural place
Food	Security
	Healthcare
	Education/information
	Ideas/dreams

The frequency of responses discussing development direction can be seen in the chart in Figure 90. Disregarding the non-specific topics of ideas/dreams, future and sustainability; the most frequently discussed issues were; houses, toilet, employment, education, healthcare, waste management and security. This correlates with the responses generated during the group discussion.

Figure 90 – Frequency of responses for Development Direction



Priorities – Short term needs

Physical needs

Toilet

Most residents considered the provision of the watsan facilities a prime need that has now been addressed. Many people suggested that there needs to be many more of the facilities in order to cater for the population.

Houses

Many residents indicated that their most pressing need currently is for adequate secure shelter and permanent houses. Some residents said that now they have better toilet facilities, a proper house is what they need, other residents said they would have preferred a house over toilets.

Water

Residents noted the pressing need for an increased quantity of clean water. The NWSC agreed that the community's most pressing need is the provision of basic services covering water, sanitation and drainage and they realise that the community needs support to gain the provision of these facilities (Caseve 2009). WSP also considers sanitation infrastructure to be biggest problem the community faces but thinks that the residents themselves would say the basic need of food (Mbuvi 2009).

Waste management

Some residents highlighted the need to deal with dumping sites and repairs to sewers.

Transport and Roads

One resident prioritised better transport for vehicles within the village. There is a need for better roads as currently the mud tracks are very hazardous.

Electricity

Power for improved lighting was mentioned as a prime need.

Human/Social needs

Employment and Food

Employment was frequently given as residents' most dire need. Many residents expressed a concern regarding lack of job opportunities, particularly for youths. Residents said that a lack of money is holding people back and preventing them from being able to afford to feed their families.

PA consider that economic power is the biggest problem holding the community back and feel that economic empowerment should be considered for all projects to encourage social enterprise and to improve livelihoods. For example, waste management and collection is a service residents can charge for while simultaneously improving their environment (Muriuki 2009). The AWB also understand the community are limited financially and feel the responsibility as a government institution to provide watsan services at affordable rates (Owuocha 2009).

Healthcare

Some residents said that they would have preferred better healthcare facilities for the community than the watsan blocks. Although other residents were aware of the link between cleaner water supply, improved health and reduced healthcare bills.

Security

Some residents considered better security and measures to reduce crime the most pressing need for the community.

Aspirations – Long term goals

Physical needs

Individual toilet

Residents were directly asked if they would have preferred an individual rather than communal toilet, and if so, would they be prepared to pay for it. All residents were in favour of this idea as it would improve privacy and hygiene but some expressed concerns regarding lack of space and affordability.

Environment

One resident said he was in favour of building more toilets across Kibera in future in order to improve the environmental situation caused by flying toilets.

Transport

Transport infrastructure was also cited as something that could be improved in the future.

Maintenance

Residents mentioned that they feel good maintenance is needed in the future in order to preserve the facilities.

Sustainability

English speaking residents were asked if they understand the meaning and concept of sustainability. A good few did, and could see the link regarding preserving the watsan facilities.

Human/Social

Basic needs

It was noted that most residents aspired to very basic needs and that they were held back from developing due to lack of income contribution to poverty. The AWB understand that the residents of Kibera need very basic needs to be met, food, shelter and clothing (Owuocha 2009).

Return to rural place

Many residents said they had come to Kibera for employment or education opportunities and that they intend to return to their rural place at retirement age. It was noted that very few elderly people live in Kibera.

Resettlement

All residents were aware of the ongoing KENSUP resettlement plans for other villages in Kibera. Residents expressed positivity about this scheme and a desire to be included in future plans. Residents are keen to live in better constructed houses that are affordable and remain close to employment opportunities.

Security

As was featured in the short term needs, security was also mentioned as a long term requirement.

Healthcare

Residents also mentioned improved healthcare as a long term goal as well as a short term need.

Education/information

A high number of residents commented on the importance of education in order for quality of life to improve in the future.

Ideas/dreams

Residents had many ideas for improving the status of Kibera for the future. These were mostly the provision of basic public amenities and food resources affected by drought. Discrimination and tribalism and the treatment of internally displaced people (IDPs) were also mentioned as needing to be addressed to better society. Residents also had the idea that government should be supported by companies and utility providers in their upgrading schemes for Kibera.

"I would help them, there are so many young men here, whose work is just stealing, others kill people, I would help them so that they can at least get something small and rely on themselves...There would be developments yes, and there would be no discrimination in tribalism or family. I would save all tribes and families, I would not discriminate. The way we are seeing now, there is discrimination in tribes. I would not just look at my family or my tribe, I would help everyone provided they are human beings" (Osida 2009).

"I think what I'd do is mostly, the thing that I would do is that at least, is that most residents in Kibera I think what they lack is the encouragement, information. I think its encouragement and information coz for those who are informed, they also find it difficult. They find it difficult to work on something that can at least improve their lives other than like..there is a high rate of those that are eeee, that are illiterate. So they lack information really, at least they should come up with ideas of how they can at least give information to the community. On at least issues that are, issues that are pertaining to life skills and many other things. Other than that, they should at least create some job opportunities" (Josphat 2009).

Key Points

Employment – continues to be the community's biggest concern and the hope of more job opportunities both immediately and for the future were expressed.

Basic needs – and services were given as development goals for a better equipped village, a better quality of life and for poverty reduction.

Children’s perceptions at Silanga

In order to capture the perceptions of the children, they were first asked to think about the things that they needed for a good life, what makes them happy and to have a good life. After a brief discussion the group of children indicated the things they felt that they need for a good life, they also collectively voted and ranked the priorities and indicated how they thought the situation would be for them in the future;

Table 22 – Children’s ranked priorities

Children’s needs for a good life	Ranking in order of priority	Future ranking in order of priority
Water	1 - Water	1 - Water
Food (plants/balanced diet)	3 - Food	3 - Food
Toilet	6 - Toilet	
Shelter	5 - Shelter	4 - Shelter
Education (schools)	4 - Education	2 - Education
Health (hospitals)	8 - Health	
Security (chief/administration)		
Air	2 - Air	
Clothing/uniform	7 - Clothing	5 - Clothes
Church		
Market place		
Respect		
Love		
Human rights (right to live)		
Peace	9 - Peace	
Bathrooms		
Friends		

After this discussion, the children were then given the task of drawing their current life in Kibera and particularly the way they use toilets, water and sanitation. Some also drew the things they needed for a good life. The children ranged from the age of 8-17 years. (A drawing by a child in the UK of the things they need for a good life has been included as a comparison.) Very basic needs for human survival, waste disposal, contaminated water and health implications, flying toilets and security hazards of using pit latrines at night are just some of the issues depicted by the children from Kibera. It should be noted that many of the children who completed this task have received hygiene training from the NGO Practical Action within their school. Children were photographed playing with handmade toys from recycled materials which have been featured in an exhibition along with the drawings and essays.

Some of the older children wrote short essays on a topic of their choice related to life in Kibera. They were asked to consider what they like most and least about Kibera, what they would like changed and how it could be changed. A selection of the essays and drawings can be seen in the following figures.

Figure 91 – Undugu school children undertaking drawing task



Figure 92 – Children playing with handmade toy cars



Figure 93 – Silanga child's drawing showing toilet facilities

Defecation in bushes, streams, papers, bags are depicted along with the issues of disposal of flying toilets which fall on roof tops. Pit latrines are shown to be used in the day time for a fee but not at night due to security issues.

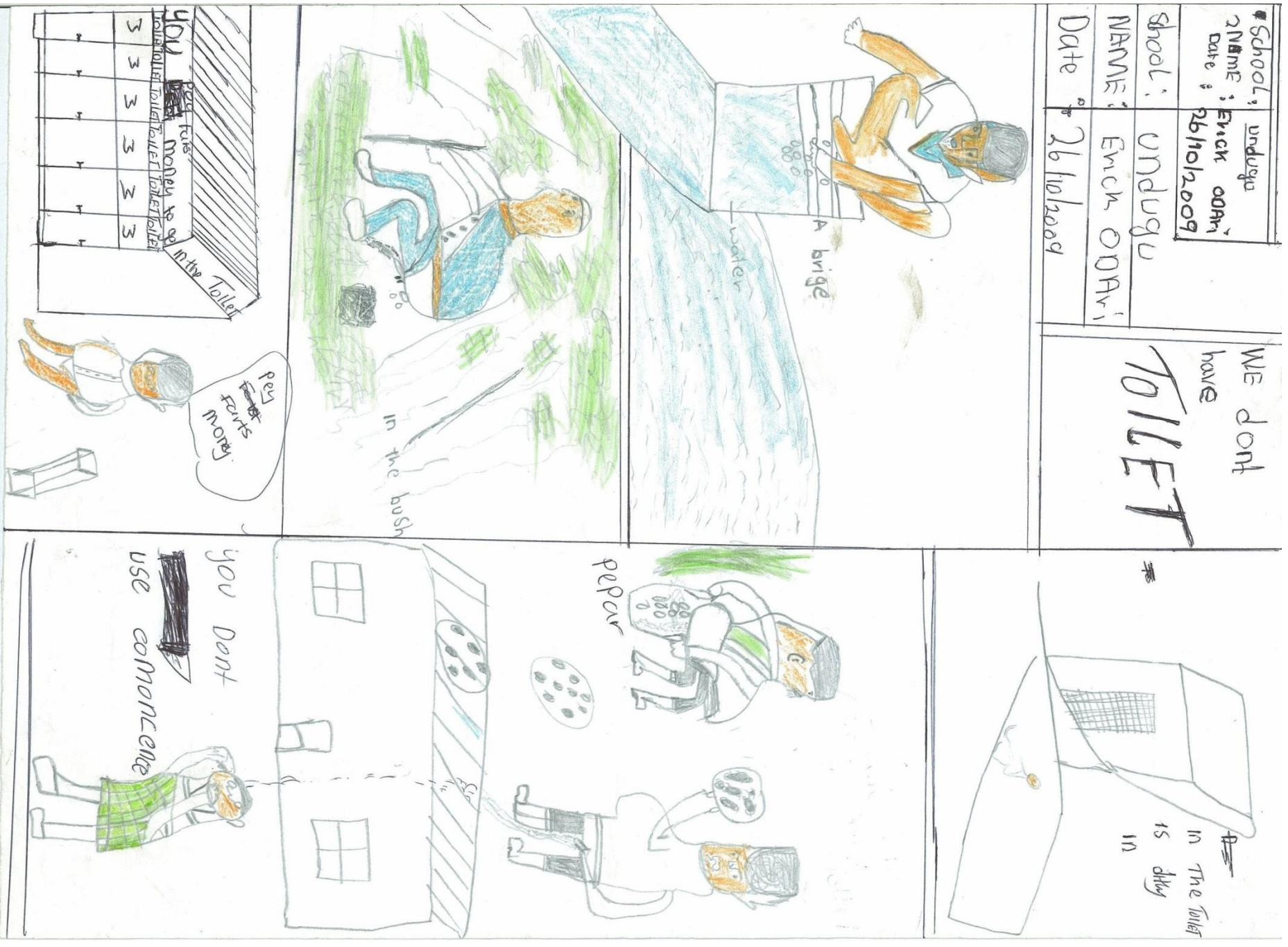


Figure 95 – Silanga child's drawing showing toilets

This drawing shows the various issues of disposing toilet waste and the health implications.

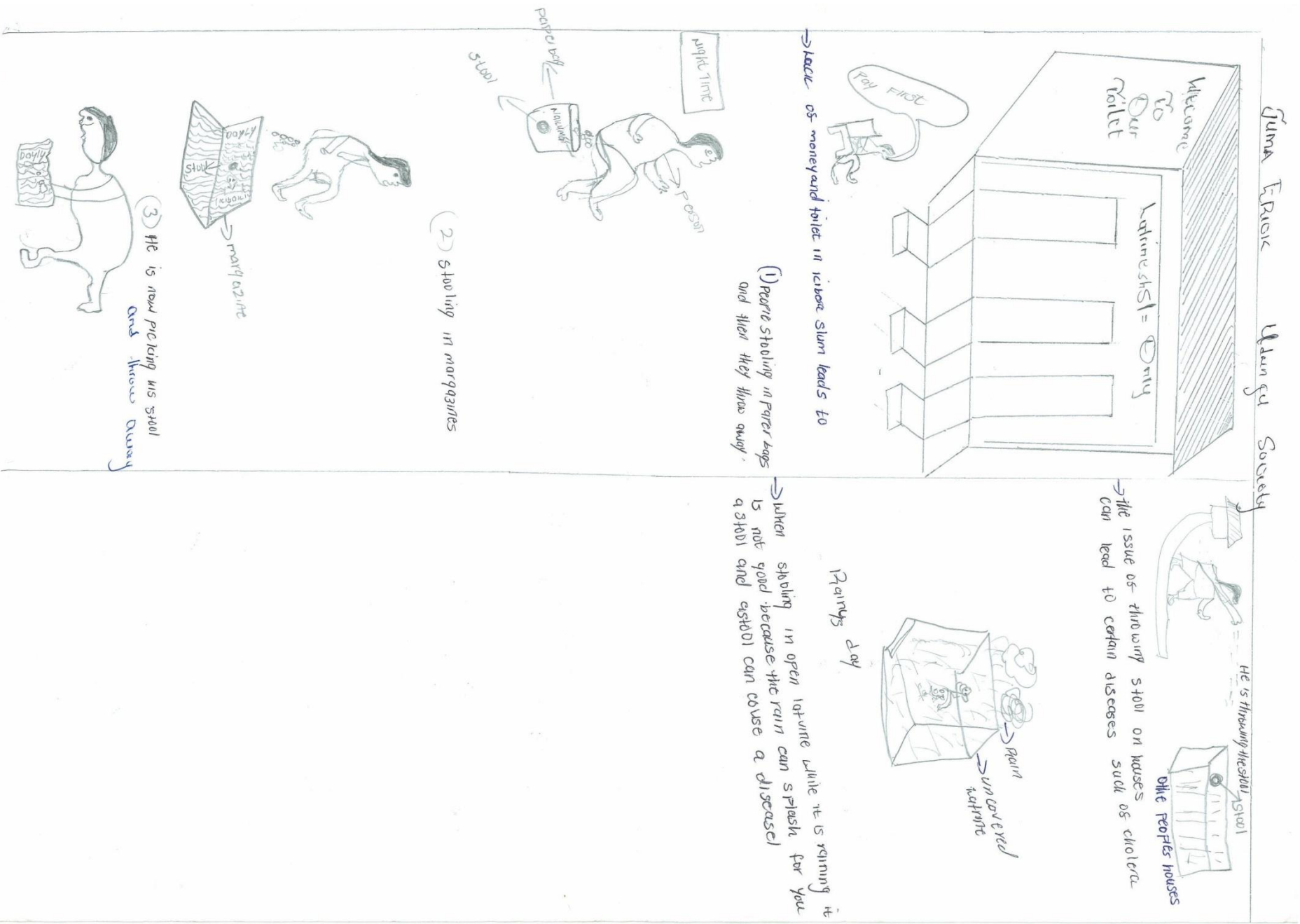




Figure 96 – Sianga child's drawing depicting the use of water

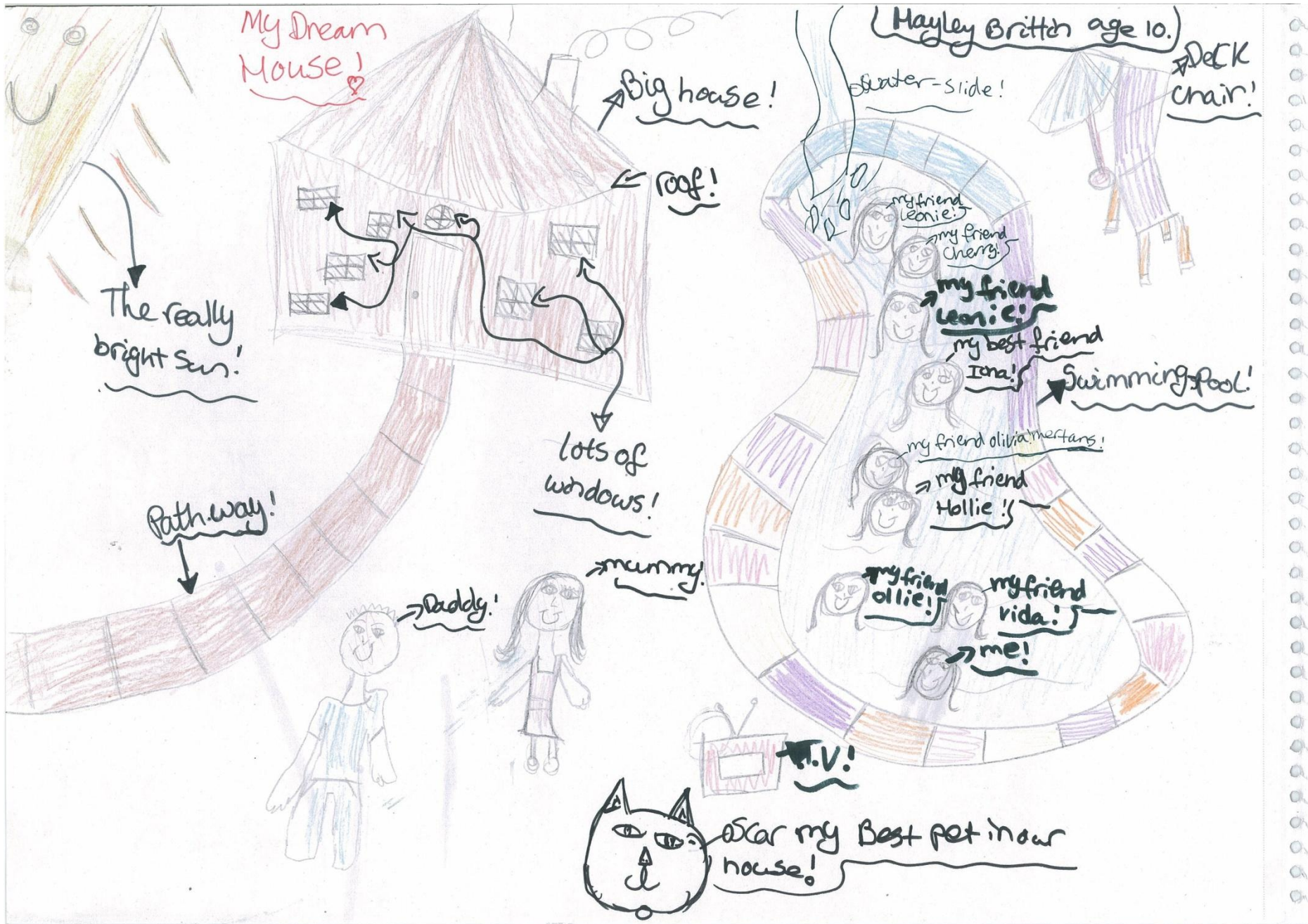
Tanks for water storage, open drainage channels and the connection of water systems between toilets and tanks are shown. Handwashing and designated drinking water are also depicted.

Figure 97 – Silanga child's drawing depicting things needed for a good life



This child has drawn the things they feel they need for a good life. It is clear to see the basic needs of shelter, food, education, healthcare and security. A balanced diet is highlighted as is the need for cleanliness and dams for electricity generation. The only non basic human needed depicted is football fields for leisure time.

Figure 98 – British child's drawing depicting things needed for a good life



By comparison, this British child's perception of a good life includes a big house, a swimming pool, friends, family and pets. The very basic needs of food, water and shelter are not listed as was in Kibera where children live in poverty. There is also more of an emphasis on human relationships for this child.

FIDRENCE NDUKUI AGE 15YRS
SIOAM ACADEMY

LIFE IN KIBERA AND SANITATION

11/11/2009

I live in Kibera slums, where I start my life when I was too young. Kibera is a place where it lives thousands of people. There is advantage of living there and disadvantages. But most of them are disadvantages; many things are affecting our health life and environment for instance ~~are~~: (A) Dirty environment (B) poor construction of houses, (C) lack of latrines, (D) Dirty water (contaminated) (E) child abuse etc.

Our environment ~~are~~ ^{is} dirty and it causes diseases which cost a lot of money to cure them. Houses are constructed poorly and they are weak anytime they can fall down.

Sanitation is poor in Kibera as people use flying toilets because they lack latrines and these makes streets to have rusts. Dirty water is used in Kibera as the water pipes pass through dams and streets which have dirty things like faeces people are urinating there. Dead animals like dogs, rats, cats are thrown there.

In this area things are cheap and life is easy to live. Example in transport it is easy to travel from here to the other place by paying twenty or thirty shillings. The government has set many schools and hospitals in order to assist peoples who are not educated to learn and enjoy their life by going to school without paying any fees because in Kenya we have free primary education. Others who are sick can be taken to hospital as fast as possible.

Peoples in Kibera like games, sports and traditional dancing which is also continued up to now. Those games and sports are played by both boys and girls in order to achieve the goal by using their talents and practising them for their future life. People whose talent is singing ~~can~~ can practice mostly in churches and also in schools. Sports like playing football it has advantage to strengthen our mind.

The other thing which I like in Kibera people are living peacefully manner and are social to each other so we can say that union is strength. They don't like corruption or tribalism. When the government police found a person doing a bad thing like taking drugs they can sentence you and charge much money.

Churches are constructed many in Kibera to help people to know God and respect him as a creature of everything. All people in Kibera except Muslims they are going to church every Sunday.

In order to change our village and all the environment to be clean, it normally needs everybody to be creative and active doing the work in his/her street to change it. Pupils in schools should maintain cleanliness. The government must support to build permanent houses and toilets, bathrooms are the most things which could be constructed in every place. People would not use flying toilets and throwing plastic paper bags. All dirty things should be collected together and burnt.

To change other things like drugs people should choose not selling some drugs like chang'aa, miraa, bhang, cocaine and heroine. If one could be caught using drugs should be taken to court. Dirty water must be treated or boiled in order to reduce some germs like cholera, bilharzia, typhoid, malaria etc. People are able to change their raiment and have good behaviours which should be practiced by everybody. Short clothes should be changed in our village to make popular to everywhere.

People are suffering from diseases like HIV/AIDS which cause population in Kibera to decrease. In order to reduce the spreading of HIV/AIDS people should abstain from sex and using sharp things like razor blade, needles, nail cutters and etc. The most thing which spread HIV/AIDS are having sex with an affected people.

DOMINIC OJENI
12 YEARS CLASS 7
M.O.C PRIMARY SCHOOL. HOUSING

Here in Kibera we always wonder about the type of houses we live. These houses if you see them from far you can think that they are where animals such as horses and donkeys live. This means that there is poor housing in Kibera. There are problems which people face because of these houses. For example people living near sewages suffer during the long rains. i.e. "El Niño" which is the longest rain. It makes people suffer in many parts of the country because it brings a lot of water like an ocean. Which therefore sweep away many poor houses in Kibera. Like the one we live in now is like just a shade of a tree, it doesn't look like a house.

Though there is a way we can prevent these problems we face. First of all, these houses in Kibera should be improved by constructing new houses so that people in Kibera should enjoy living in those houses because it is said that enjoy your life when you are still alive in this world. Secondly, people in Kibera should be provided with electricity in their houses so that they can ~~get jobs~~ afford light and energy for their daily activities such as welding, ironing and e.t.c. Electricity also creates employment opportunities so that they can get jobs and provide their families with basic needs. Third, these houses should be provided with water, toilets, bathrooms and kitchens and they should also be smeared with cement all over. They should have good iron sheets so that when rain falls it cannot enter in people's houses.

NAME-QUEENTER
JUMA
AGE-13 YEARS

OUR ENVIRONMENT IN KIBERA

14-10-2009

What I dislike most in Kibera is about our environment. In Kibera there is a lot of diseases because of rubbish around the place of Kibera people littering the gabbages. There is a lot of water in Kibera but the water that people drink is contaminated. There is a lot of toilets but people do not use them properly. If you go in the toilet you will encounter faeces on toilets. When walking on the way there is a lot of rubbish like faeces, nylon papers, plastic containers, broken bottles and others. Also in Kibera there is poor housing. On roofs you can get thrown on them like nylon papers, waste clothes, faeces on papers. Other houses have been built near the sewages that affect our children.

What I like most about Kibera there are many schools. This makes the fees to be paid to be little, hence encouraging parents to take their children to school. There is much water in Kibera that we can use in our domestic work like washing and others. In Kibera most of the basic needs that we use like foods, clothings, shoes and others are cheap because we have many business people. This increases the competition hence lowering the price of many commodities in the market. What I like also in Kibera is that electronic devices like mobile phones and second hand computers are cheap hence people can afford to

NAME - QUEENTER JUMA
AGE - 13 YEARS

buy them.

What I would like to be changed in Kibera is that the Government should change for us the houses that are old. The new ones drainage pipes that exposes water should be in good standard.

The Government should also improve the transport system in that the roads within Kibera should be tarmacked to reduce mudness within.

Energy system example electricity should be provided to people. So that the computer services and other useful function of electricity is provided.

The Government should also improve health services. Example building of more public and private hospitals. So that treatment of sickness and diseases becomes easier to people involved.

DANIEL MUSYOK

12 years old

LIFE IN KIBERA

In Kenya there is a division which is Kibera. It is divided into many villages of Sianga, Lindi, undugu and many more. In this Kibera is where I live. There are many things which I don't like in Kibera like miss behaviour. You can see a girl wearing a miniskirt and she is at school. Two" A dirty environment you can find rubbish everywhere. Even people are selling things how they want you can get if shopkeeper selling milk is 32 shillings inside of 24. So I don't think that is better.

I haven't mean that I hate all things in Kibera while I am one of the people who live there. First like schools, schools are many in Kibera that's good because you can be transferred from one school to another. Another one is sport if you can't exercise your self you can grow older quickly living your age back. Even I don't like this mzungus I mean white people who come to take pictures and live us without anything while they go to show there people so that they may have fun.

I want if dirty rubbish to be chanced I want it to be carried with torry and be thrown away because it can bring some more diseases eg cholera and etc

I also want people to sell their things cheaper because government has aloud that

NAME JEREMY MUSTON MUKHANGA
 SCHOOL MISSION OUTREACH CHURCH MAC Primary School
 AGE 15 Years Old

CRIME

Crime is unwanted thing in our Community, not our Community alone but it is illegal all over the world "Crime" is Cursed by everyone especially in Kenya crime is Mostly found in Kibera. I had been living in Kibera for almost eleven good years. So I have experienced life in Kibera. Everyday in Kibera I can hear Mothers crying up to this Cursed thing "CRIME".

It is true that Kibera is the second biggest slum in Africa, after Soweto in South Africa. Last Month the government of Kenya had done a research about Kibera. Government of Kenya came to notice that Most People living in Kibera are youths. Government of Kenya gave the rate Percentage of total youth in Kibera, the rate of youths was 65% (turnout). The Government was amazed to find that the rate of the youths who had jobs was 10% Percent. This means that 55% of youths are jobless.

This crime is due to un-employment of youths. Many youths had found themselves in various crimes like drug abuse. I myself had a challenge that I want to challenge Government because as a Kenyan I have to, MP challenges are the following that government should concern first.

POINTS -

1. Government should provide employment of youths
2. Government should provide good security.
3. Government should ^{improve} the living standards in Kibera
4. Government should improve ~~street~~ toilets of Kibera
5. Government should improve roads in Kibera.

Note Government should also care about the street children of Kibera, because the number of street children is going higher and higher.

Summary

The obvious successes of this project are the provision of an increased clean water supply and sanitation facilities to the community which has improved quality of life with both physical and human benefits; increasing dignity, safety and health. But the project's bottom-up delivery model has been worth investigating in detail to draw out the other impacts the approach has had on the sustainability of the project, the society and the stakeholders involved in the delivery.

The delivery model of the watsan project in Silanga was particularly successful in its approach to combine the existing CBOs in the community under an overall umbrella organisation. This method reinforced and strengthened the capacity of the already established organisations and empowered them. This resulted in a community that welcomed the development of the toilet blocks and voluntarily gave up land and space for the construction of the buildings.

The nature of the international organisation, the Rotary Club, means that it is more than just a donor. The expertise of the members both in Nairobi and USA contributed to the development of the project as they had a specific understanding of the issues needing solving and could tap into the knowledge of the membership for solutions. Combining the local Kenyan club members' expertise with that of the foreign USA members ensured that expertise based on appropriate local knowledge and awareness enriched the foreign expertise which could have been at risk of being inappropriate for the context. The Rotary Club combined with the local Nairobi office of the international NGO Practical Action resulted in a highly successful partnership.

The project has successfully created a model to prove to the governmental utility companies that the informal settlements could be viably served within their business model. The utility company's participation facilitated the installation of the water and sewerage connections and organised water vendors into business enterprises and licensed small scale water operators. There could also be an opportunity to link projects such as that at Silanga with wider government slum upgrading programmes, such as KENSUP. By linking with the wider government initiatives, there could be a greater opportunity to influence government policy and practice. This would also prevent NGOs from undermining and competing with the governments attempting to deliver such slum upgrading projects. Ideally governments should be providing watsan services for their people, not NGOs.

This Silanga project was one of the first of its kind in Nairobi and has since been replicated in other villages of Kibera. The utility providers claim that this is a project which gave them confidence to scale up their delivery to slums and has impacted upon policy changes to the organisation (Caseve 2009; Owuocha 2009). At the beginning of 2009 the utility providers published their first strategic guidelines for improving water and sanitation services in Nairobi's informal settlements. They have also employed a team of sociologists to work on the social components of services to informal settlements, 'acknowledging the inadequacy of a purely engineering approach' (Nairobi Water and Sewerage Company 2009). This project has had a direct impact on the governmental utility company's policy by successfully bringing about the institutionalisation of the delivery model within the organisational service delivery structure of the NWSC.

Although this project is very similar to other watsan upgrading in Kibera, the design and management of the blocks at Silanga stand out and indicate a consideration of gender issues and minority groups. In Silanga there is provision for disabled toilets, children's bathrooms, urinals and

recycling facilities which are not commonly included in other watsan designs. Soap is also provided and extensive hygiene awareness training was given to local school and CBOs to a wide reaching extent.

In order to support sustainability, the project partners have developed an exit strategy to ensure the proper handover of the facilities to the community and to support sustainability in the future. They were conscious that they did not want the community to become dependent and that the facilities were fully handed over. It can be seen that this has been achieved as the Athi Water Board and communities are now liaising directly and effectively.

This project has successfully created employment opportunities for those people managing the blocks, the toilet attendants, cleaners and the construction workers engaged during the earlier stages of the project. The project has used an enterprise approach to provide a commercial service to the people which enables them to use their own resources to maintain the facilities, a component of sustainability.

Chapter 8 - Soweto East Case Study

Kibera Integrated Water, Sanitation and Waste Management (WATSAN) Project, KENSUP

Within this chapter the terms; toilet facilities, blocks, watsan facilities have been used interchangeably to indicate the upgrading project.

The Kibera WATSAN project is a component of a wider national programme known as the Kenya Slum Upgrading Programme (KENSUP). KENSUP was initiated by the Government of Kenya in 2002 in collaboration with UN-HABITAT under a memorandum of understanding with the main objective to improve the livelihoods of slum dwellers in Kenya's urban areas. KENSUP is designed to improve the lives of slum dwellers according to the UN's MDGs and is in line with Kenyan national policies on housing and poverty reduction. Strong political will from the central government has been demonstrated by the allocation of funds in the national budget. However, the majority of funding is being provided by the multi-lateral agency UN-HABITAT from the UN's member states. UN-HABITAT is also advising the government on the planning of the programme. The entire KENSUP programme is estimated to cost US\$11.05 billion with a vision of 'improved and sustainable urban living environments in Kenya' (KENSUP n.d.). Slum clearance in Kenya was done away with in the 1970s when the government acknowledged that the residents of slums contribute to the economy of the country and are the man power behind many industries. However, uncoordinated planning activities meant that conditions in the slums were not improving. In 2001 KENSUP was conceived to prioritise the issues of urban poverty and to implement measures to improve living conditions for this section of society (Muraguri 2009).

The Kibera Integrated Water, Sanitation and Waste Management (WATSAN) project was one of the first phases of KENSUP implementation in Kibera. The WATSAN project planning began in January 2007 and UN-HABITAT reports publish its completion date as January 2009 (UN-HABITAT 2008). The community have been benefiting from most of the facilities since November 2008.

The Kibera WATSAN project is a pilot demonstration project which was executed through a partnership between the Government of Kenya and UN-HABITAT (the United Nations Human Settlement Programme). The key stakeholders involved were the Government of Kenya (Ministry of Housing and other ministries) and UN-Habitat. They worked with a Kenyan NGO, Maji na Ufanisi (meaning Water and Development) and the Settlement Executive Committee (SEC) representing the local community of the village of Soweto East. Other actors involved were the utility providers (Nairobi Water and Sewerage Company and the Athi Water Services Board).

The WATSAN project was designed within the overall goals of the KENSUP master plan focusing on three main thematic areas; water and sanitation, solid waste management and livelihoods development & infrastructure. With funding of US\$579,684 (UN-HABITAT 2008) the project aimed to use local expertise, labour and further develop local skills by supporting the formation and training of WATSAN management committees providing suitable structures for eventual up-scaling into housing cooperatives. The project was conceived to provide a replicable model for the

remaining villages of Kibera under the KENSUP programme (Ministry of Housing and UN-HABITAT 2006).

The project aims to improve the livelihoods of the residents of Soweto East by supporting small-scale, community based initiatives in water, sanitation and waste management, and by providing basic services, infrastructure and capacity building (UN-HABITAT 2007). The watwan component of the project had the objective to improve water, sanitation and waste management conditions, through the provision of storm water drains, communal water and sanitation facilities, and small-scale door to door waste collection and recycling services (UN-HABITAT 2008).

This case study is focused on the Water and Sanitation (watwan) thematic area of the WATSAN project in Soweto East, particularly the provision of communal water and sanitation facilities via the development of eight watsan facility blocks positioned throughout the village.

Soweto East village covers an area of approximately 21 hectares of land with a population of roughly 71,000, occupying 2840 structures with 10,745 households. Before the KENSUP WATSAN project was implemented, the people of Soweto East had access to just 110 toilets and 50 bathrooms (Ministry of Housing and UN-HABITAT 2006).

The blocks were open for use at the end of 2008 and were visited a year on in November 2009. Seven of the originally planned eight blocks had been constructed to contain toilets, showers, water storage tanks and water kiosks. Soweto East village is divided into 4 zones, A, B, C and D. The plan was for each zone to have two blocks (Dihanda 2009). Each block provides six toilets, therefore this project has contributed another 42 toilets to the village bringing the total to 152. This may seem a small number for the use of 71,000 residents, however it has increased the provision of toilets by over a third. According to Maji na Ufanisi, the local NGO commissioned to undertake the community sensitisation, this project has reached over 700 households which is an estimated equivalent of 2800 beneficiaries (Maji na Ufanisi 2010).

Figure 104 – Soweto East watsan blocks and water kiosk



Figure 105 – Soweto East watsan facilities



As previously mentioned, the Soweto East WATSAN project is a component of the wider KENSUP resettlement programme which is currently ongoing in Soweto East. A 'decanting site' of housing has been constructed at Langata on the border of Kibera, See Figure 106. Sections of Soweto East are being temporarily moved into the decanting site while their homes are being demolished and re-constructed. Once the new buildings are complete, the residents will move into their new homes back on their old site. This model is expected to be repeated across zones of Soweto East and it is planned that eventually the entirety of Kibera will be re-housed this way. The new houses are five story high-rises, organised into three-roomed apartments with an individual toilet, kitchen, balcony and with water & electricity connections. The rent for the three-roomed apartment is Ksh1500 (Ksh500 per room) and Ksh300 for electricity and Ksh200 for water.

Figure 106 – Langata decanting site



Because of the new KENSUP housing, if the clearing of Kibera and resettlement project goes ahead as planned, these toilets will no longer become a necessity for the residents. However, this may take quite some time. There was much discussion among stakeholders regarding the wider KENSUP project and its impact upon structure owners and land tenure.

The watsan facilities and stakeholders involved in this infrastructure project have been visited and interviewed approximately one year after operation commenced, during a three month period from August – October 2009.

Key informants:

- Multi-lateral Organisation – Joshua Kaiganaine, KENSUP Project Manager
UN-HABITAT
- Government – Leah Muraguri, Director of Slum Upgrading Projects
Ministry of Housing
- NGO – Nancy Githaiga, Programmes Director,
Maji na Ufanisi
- CBO - Bishop Dihanda, Chairman
Settlement Executive Committee
- Residents – 17 individual interviews, 1 CBO group discussion

- External stakeholders – Informal discussions with others

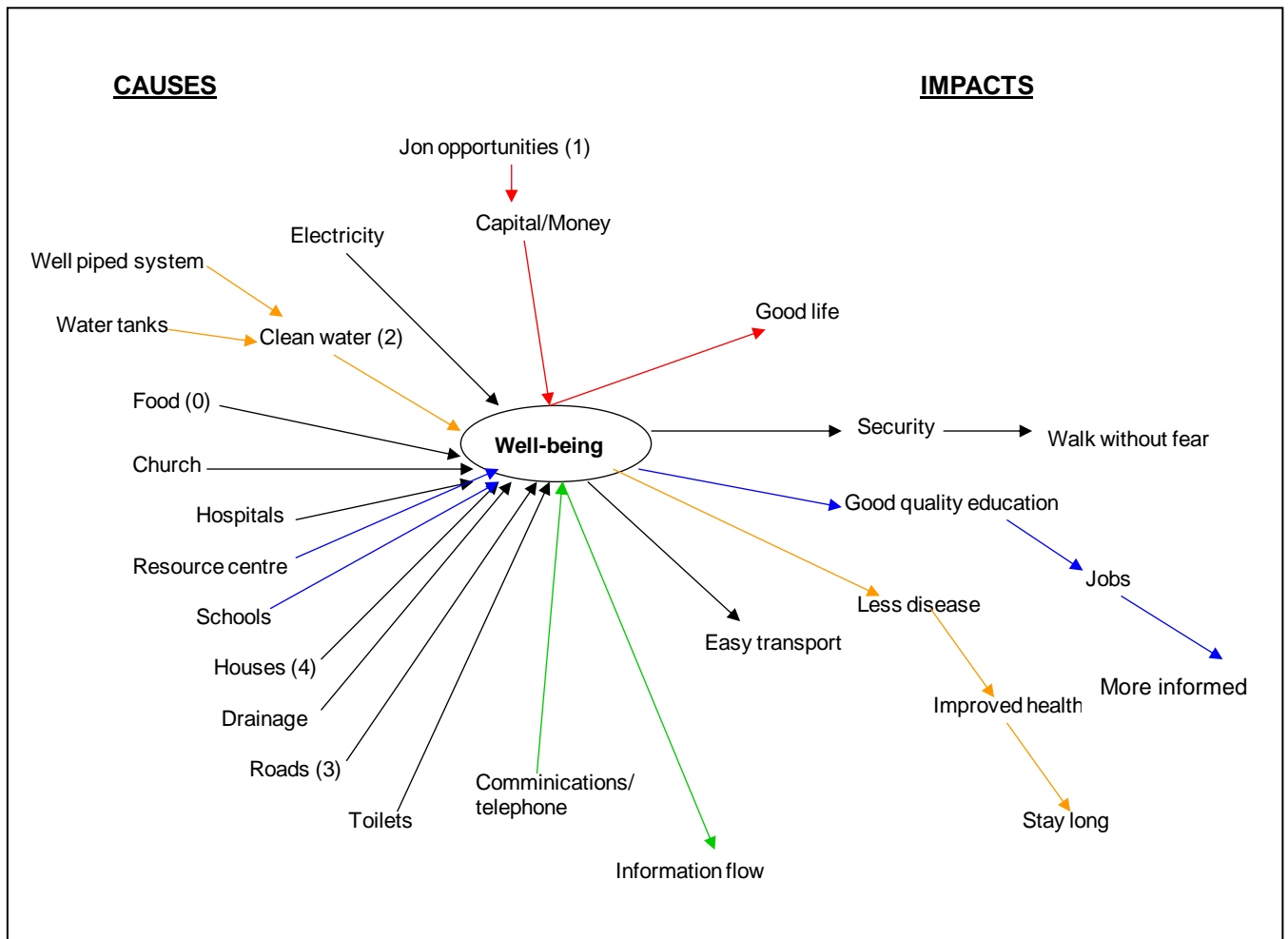
Table 23 – Soweto East group discussion priorities

Problems	Numbered priority		
		Now	Past (10 years ago) Future
Unemployment	1	Better	Worse
Expensive food	2	Better	Worse
Lack of water	3	Better	Worse
Schools	4	Worse	Better
No meeting hall	5	Worse	? we hope for
Insecurity / mugging	6	Worse	Worse
Government hospital	7	Worse	Worse
Electricity	8	Worse	Better
Lack of toilets	9	Worse	Better
Lack of resource centre	10	Worse	?
Poor houses	11	Worse	Better
Child abuse / child labour (fetch water, cook)	12	Better	? hope for better
Video shops distracting children	13	Better	Worse
Poor drainage	14	Worse	Better
Dirty environment	15	Worse	Better
Government doesn't help	16	Worse	Worse
Hatred between people (from election violence)	17	Better	Worse
Brew selling clubs	18	Better	Worse
Drug abuse	19	Better	Worse
Rape	20	Better	Worse

The main problems that residents revealed they are facing today are unemployment, costly food and scarcity of clean water supplies. It was indicated that these issues have got worse over time and residents are expecting the situation to worsen in the future. However, residents did say that public amenities and facilities such as schools, hospitals, meeting places, electricity, toilets and security are better today than they have been in the past. A large number of social problems were listed including security, drug, child and sexual abuse; although the physical problems tended to be ranked higher than social issues.

The following cause-impact diagram was drawn by the residents to indicate the things they felt they needed for a good life / well-being, and what impacts these in turn generated. Any links between the cause and impacts are indicated with matching coloured lines.

Figure 109 – Soweto East Well-being Cause-Impact Diagram



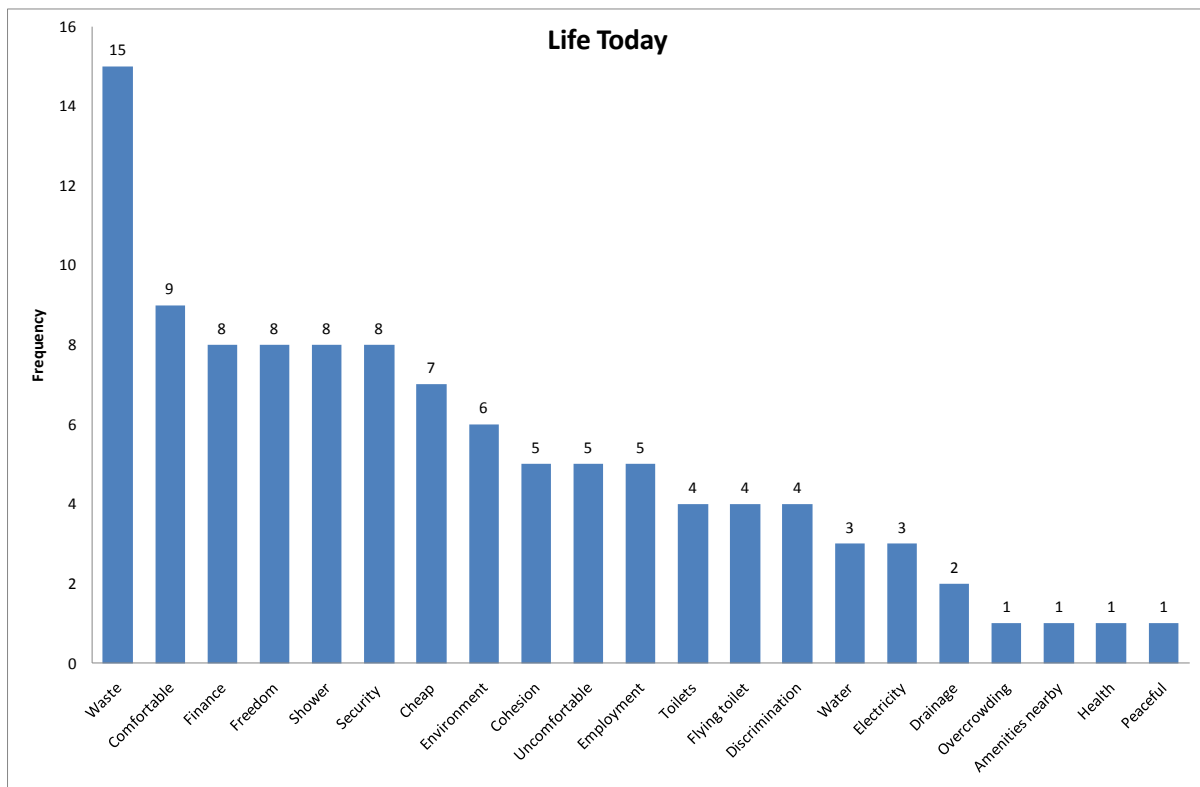
The Soweto East residents indicated a range of things they felt they needed for a good life and matched some items with a related impact. They also ranked in order what they considered to be the most important. Again, job opportunities and basic food and water needs were the priority, then the physical needs of housing and infrastructure. Residents indicated the link between schooling and access to information as enabling them to gain a job in the future. They also showed a connection between piped and tanked water supplies (preventing contamination) leading to improved health.

This section now brings together the stakeholder’s views on how life currently is for the residents of Soweto East where new watsan facilities have been constructed. The issues raised have been identified through the analytical coding of interviews. The issues are presented here structured around three themes; Physical issues, Social/Human issues and Livelihood issues.

Table 24 – Life Today: Soweto East Coded themes emergent from data

Physical	Social/Human	Livelihood
Toilets	Cohesion	Comfortable
Flying toilet	Cheap	Uncomfortable
Shower	Overcrowding	Employment
Waste	Security	Finance
Drainage	Health	Amenities nearby
Water	Peaceful	
Environment	Discrimination	
Electricity	Freedom	

Figure 110 – Frequency of topics mentioned during interviews discussing Life Today



The results depicted in Figure 110 show the cumulated responses from individual residents when asked to discuss their life today. It can be seen that waste, finance, freedom, shower facilities and security were discussed most often. More than double the number of respondents said that they felt comfortable living in Soweto East compared to those that were uncomfortable.

This section will now assimilate and triangulate all the data gathered from interviews and group discussions with the stakeholders. The triangulation of the data gathered from all sources strengthens the analysis of this case study. The emergent key findings within each theme of analysis have been constructed from the data and are presented herewith.

Physical Issues

Toilets, Flying Toilets and Showers

There was of course conversation regarding the toilet facilities and the reduction in the use of flying toilets since the creation of the new facilities which has improved the environment of the village. Some residents use the shower facilities but others continue to wash within their homes.

"I told you it was difficult so [laughs] me I was just going to my friend's if it was possible, in fact the truth is good, we just threw the flying toilets near the railway line, there" (Ambeyi 2009).

"You know before we used to use the flying toilets, now since they came, we were happy and we saw that clean surroundings were the ones we needed. People needed the toilets. As I told you, before we used paper bags and faeces were all over even in ditches, but when the toilet was build, there is no more dirt" (Kwamboka 2009).

Waste, Drainage

Many people complained about poor waste management and drainage making the environment dirty particularly when it rains as the earth roads turn to mud (Kwamboka 2009). Residents commonly reported disposing their waste directly into the river (Kamau 2009; Wanjiko 2009; Wanjiru 2009), into the small open gullies (Nyamoita 2009; Okore 2009; Tutti 2009; Wairimo 2009) that run in front of people's homes and later connect with the river and some reported being unaware of where their waste ends up (Ambeyi 2009; Kamau 2009). Some residents reported using designated dumping sites for solid waste (Khamali 2009; Nyamoita 2009) and explained that people are hired to manually exhaust pit latrines when they become full (Kimocho 2009; Kwamboka 2009; Nyaboke 2009; Okore 2009).

"I'm not comfortable because half the environment is not good...there's nowhere we put the dirt, no place where we can throw our dirt where we have been using things, there's no good drainage so the environment is filthy. People are many...and even there's no security in fact am not comfortable" (Ambeyi 2009).

Water

Regarding the status of water supply in Kibera today, one resident said it was the best thing about Kibera that there is water available (Khamali 2009), where as another said the worst thing is that there is not enough water (Nyaboke 2009). Another resident said that due to Kibera's location within the city, it lies upon major water lines which connect to the suburbs and hospitals. This allows connections to be tapped into these main lines and means that Kibera is rarely affected by water rationing (Bilal 2009). Despite the new facilities being positioned around the village, some residents are still forced to buy their water from water vendors due to the distance for carrying and as they have no one to supervise their children during collections (Nyamoita 2009).

“In Kibera people are more lucky than Mukuru [another slum] in terms of water, they get more water regular than any other place than Nairobi. Because they have been complaining...most often they are always complaining so those guys from Nairobi Water felt a bit under pressure so they have to deliver. And most of the water lines that go to hospitals, police lines, they pass here. So they are very close to Kibera. So we have those guys who connect illegally they have very many connections. You can get very many places in Kibera have water from Police lines, hospitals. That is why most of the time, Kibera has water. And the water is there even when it is dry. And the water when it rains, it passes where there is a drain and not in sewages. Like in that sewage, there is no water line that passes through here” (Bilal 2009).

Environment

Residents have said that the worst thing about living in Kibera today is the unsanitary conditions and dirty environment (Khamali 2009; Makobi 2009; Nyamoita 2009).

Electricity

Approximately three quarters of respondents have an electricity connection in their home, of which most were illegal connections from neighbours. Respondents reported paying fees ranging from Ksh200-500 and commonly run appliances are light-bulbs, TV, radio, heater, mobile phone charger.

Social/Human

Cohesion and Overcrowding

Residents reported a feeling of community togetherness, sympathy, understanding (Kamau 2009; Nyaboke 2009) and equality among neighbours (Kimotho 2009). Only one resident complained of overcrowding in the settlement (Nyamoita 2009).

Cheap

Many residents considered the best advantage of living in Kibera is the cheap life available (Kamau 2009) and considered it a reason they are comfortable with their living situation (Kimotho 2009; Tutti 2009; Wanjiko 2009). Others are content with their situation as they live within their means (Khamali 2009; Okore 2009; Wanjiru 2009).

“It’s ok [here]. What makes us really like staying here since we came is...when I arrived, I stayed with my brother, let’s just say I have been bred here. I have gotten accustomed to this kind of life. So be it good or bad, the kind of life we lead here is cheap. Yea, the security situation here is not that bad and the food prices are cheap. Also, these houses that we live in are cheap and that’s why we live here” (Okore 2009).

Security

Some residents complained of the security situation (Ambeyi 2009; Kamau 2009; Nyamoita 2009), although others feel the security is good and gave it as a reason he is content in Kibera (Kimotho 2009; Okore 2009; Wanjiko 2009).

“In our Soweto we have so many people who are jobless and this leads to mugging being on the rise” (Wanjiko 2009).

“What I hate most is the pick-pocketing situation. You cannot walk at night because they can strike anytime. The youth who engage in such acts really get to harass you. Such kinds of activities are what we do not like. Life is not that bad, but if we have an alternative that can help us move away from this place, then we can support it (Okore 2009)”.

Health, Peaceful and Freedom

One resident commented that their health has improved since moving to Kibera from their rural area (Kwamboka 2009). One resident described their life in Kibera as peaceful (Nyaboke 2009) and another as having a sense of freedom (Ambeyi 2009).

Discrimination

Residents did speak of tribal discrimination within the society at Kibera which has affected employment at the blocks and also certain areas and facilities of the village which are used by particular tribes only (Ambeyi 2009; Kimotho 2009). The SEC were responsible for hiring labourers and Maji na Ufanisi say they do not get involved with recruitment (Githaiga 2009) although SEC states that all wages were paid by Maji na Ufanisi (Dihanda 2009). Kibera’s villages are already organised into tribal communities so there was bound to be tribal segregation.

However Maji na Ufanisi consider that the project healed previous discrimination towards minority groups such as those affected by HIV/AIDS, the disabled, women, because the community committees they formed ensured that all sections of society were included.

“They were hiring people according to the “tribe”. They were using people that they know according to “tribe”, if you are not the same of these people, you cannot get a job. So it was just according to tribalism. Yes, during construction [of the block]. Even if you go there now, you will just get it’s a particular tribe that is there. There’s another block you can get the Luo tribe, another block you get another tribe of Kikuyus” (Ambeyi 2009).

“While we were implementing the project, there is a community committee that was formed that encompassed all these people the representatives within groups, disabled, those who are living with HIV/AIDS and that stigmatization or that segregation in the community no longer exists. As much as it’s there, they are now appreciated, and their decisions are heard of and put (in place) making something. And as I have mentioned earlier, now the women groups and those who also depended on those who are living in their houses, since they cannot be recognized in the society now. The (tender) businesses and run other groups in a well managed manner, and they also earn income from it and they feel they are now part of the community and they are recognized” (Githaiga 2009).

Livelihood

Comfortable, Uncomfortable

Many more respondents reported being comfortable with their state of life than being uncomfortable. Reasons for comfort included the affordability of the lifestyle (Kamau 2009; Khamali 2009; Okore 2009; Tutti 2009; Wanjiru 2009) and proximity to the city for work opportunities (Kimotheo 2009) and good community (Makobi 2009; Wanjiko 2009). Residents who said they were uncomfortable gave reasons including dirty environment (Ambeyi 2009), overcrowding (Nyamoita 2009), rent hikes (Omondi 2009) and lack of income to afford anything better (Wairimo 2009).

“Very many reasons [that life is comfortable]. Kibera is a ...ok, we live here as a cosmopolitan people. People mix with different cultures, different tribes and all that, that’s one. Two, Kibera is very easy to communicate. If you want to go to town, if you want to go top industrial area, it is easy. I am trying to imply here is that when you are in another slum or something or in any other estate, you will find it...connecting to Nairobi town is a little bit hectic. But when in Kibera, the transport is not...is not that much. If you have it or if you don’t have it, you can still walk by foot. You go to work, it’s easy. That’s why in fact most people prefer to stay here, compared to other slums in Nairobi. What I dislike about Kibera is only one thing about the dirtiness. But the rest of the things, I don’t see any problems. There is no problem like insecurity; there is no problem of what. The other thing that makes us unwell is when we have elections, at times we normally have some small skirmishes, fracas, and all that. But the rest of the time, we are ok” (Makobi 2009).

Employment, Finance and Amenities nearby

Residents complained of lack of employment opportunities (Ambeyi 2009) but others remarked that there are good business opportunities in Kibera (Nyaboke 2009) particularly with its proximity to town and amenities being nearby (Omondi 2009; Wairimo 2009). Residents reported struggling financially and that most of their income is spent on food preventing them from saving (Ambeyi 2009; Kimotheo 2009). Another costly expenditure for one respondent is school fees (Nyaboke 2009). Monthly household incomes were reported to range from Ksh1000- 17000. Some people save money ranging from Ksh100-1600 monthly. Many residents send remittances home to their family in rural areas ranging from Ksh100-3000 per month.

“You know when we talk of jobs, actually jobs should be given the first priority. Because when I have a job, then I won’t stay here, I can leave and go look for somewhere to stay. So let the job be given the first priority and then water and sanitation. The reason why we came up with the water and sanitation is because we cannot implement employment to people. We cannot get jobs to the people...so we cannot close jobs outside, that one should be given first priority. And then the other things like ah, water is life actually. Don’t forget water; water is life and sanitation is also needed. So then we are talking about a job and then sanitation. Now you also know that in African countries, job is a problem.... Yah but the greatest need for the community I think... everybody came here to look for employment. And that should be the greatest need for the community. The issue of toilettoilet facilities is just part of their also needs. Because they also prefer to stay at a clean place, they prefer to have clean water, yah, but the greatest problem should be job” (Dihanda 2009).

Key Points

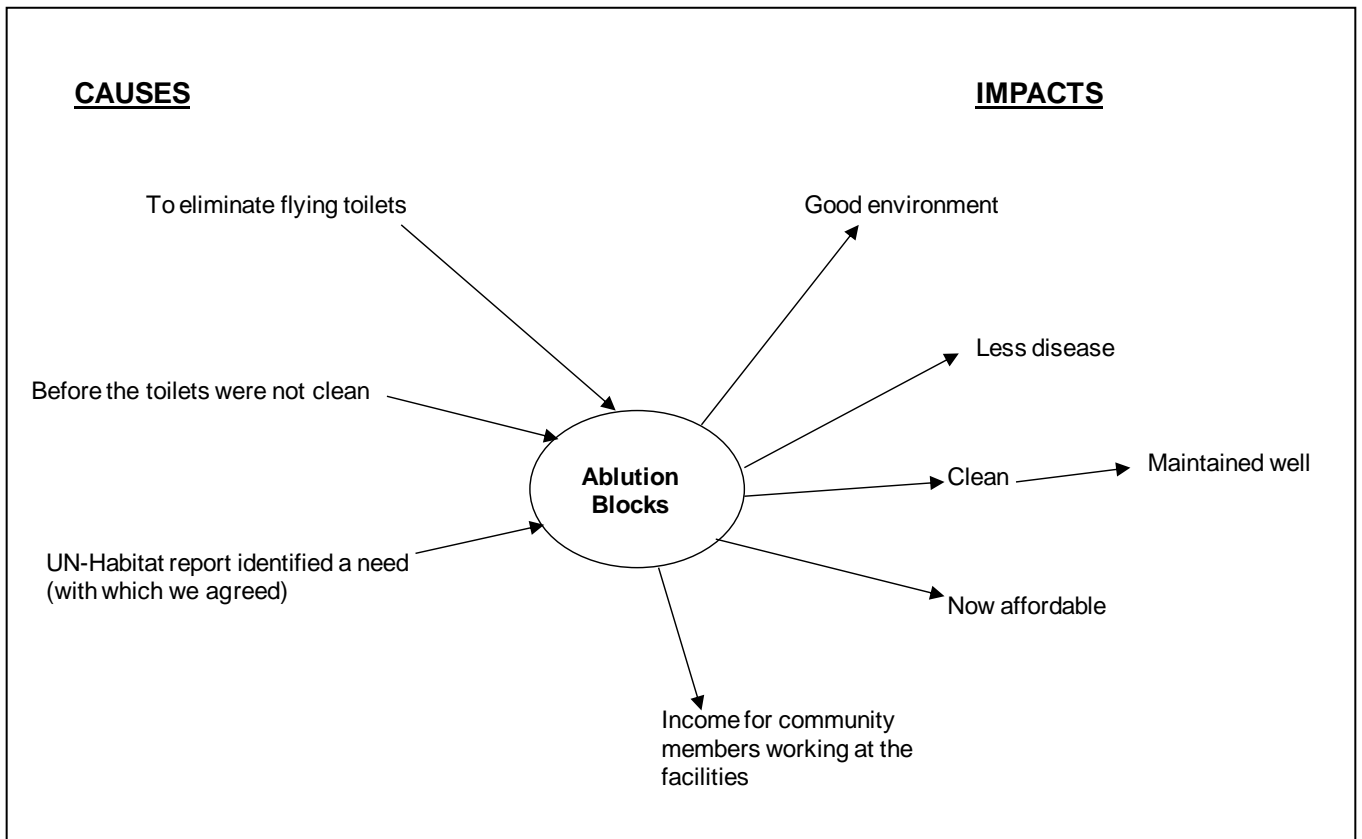
- Comfortable – The analysis has shown that many residents are actually content with their quality of life particularly as it is affordable to them. Overcrowding – a defining feature of slums was rarely mentioned as being a problem to residents.
- Employment – Lack of job opportunities were highlighted as a problem which has also contributed to the poor security situation.
- Environment – The dirty environment bothers many residents
- Food/Water - Cost and availability of these basic needs are a struggle for residents.

Perception of upgrading success

This section brings together the stakeholder’s perceptions of the success of the watsan upgrading project.

During the group discussion the residents were asked to draw a cause-impact diagram of the reasons why and impacts from the construction of the new watsan facilities at Soweto East. The following diagram was generated;

Figure 111 – Cause-Impact of watsan facilities at Soweto East



The diagram shows the reasons why the residents felt the new watsan facilities were created. Few reasons were mentioned, but environmental concerns dominate. The impacts cited were also mainly environmental improvements and their related impact on health. Affordability and income generation for residents were also mentioned.

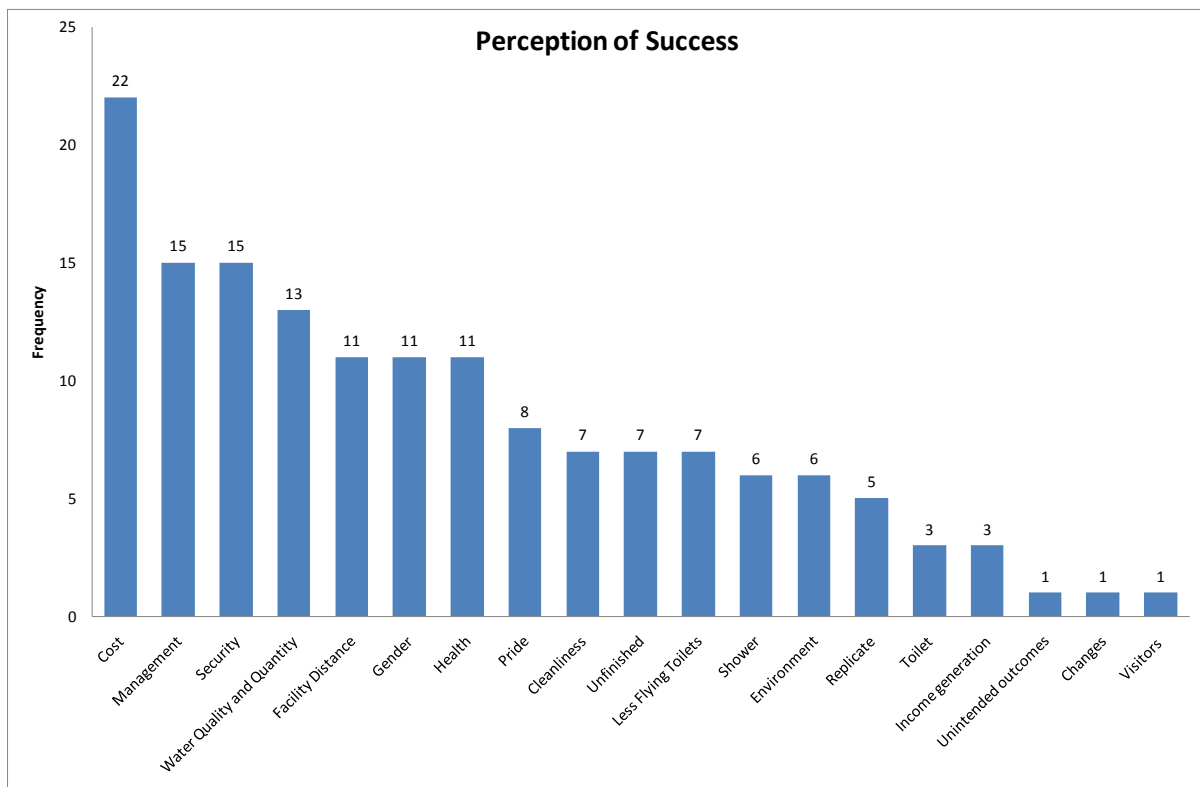
Themes emergent from the interviews have been grouped below to describe the resident’s satisfaction of the new watsan facilities and their delivery.

Table 25 – Perception of success: Coded themes emergent from data

Physical	Social/Human	Other
Facility distance	Management	Income generation
Water quality and quantity	Security	Cost
Toilet	Cleanliness	Unintended outcomes
Shower	Gender	Unfinished
Environment	Health	Replicate
Less flying toilets	Pride	Changes
		Visitors

Figure 112 shows the frequency of responses for each topic. The most commonly arising topics during discussions include cost, management, security and water.

Figure 112 – Frequency of topics discussing Perception of Success



Physical

Facility Distance and Water

Since the development of the blocks, many residents now benefit from a water supply and toilet facilities closer to their home and gave decreased distance as an indicator of success of the project (Kwamboka 2009; Nyaboke 2009). Residents reported previously walking for kilometers to collect their water (Ambeyi 2009; Kimotho 2009). They find it easier to have a toilet closer by and do not have the worry of a long walk to the toilet to then find queues and less worry when visiting at night (Nyaboke 2009; Tutti 2009). Residents reported that they now have more time available for other activities and are able to leave their children and cooking unattended (Wanjiko 2009). Other residents are not benefitting from the new facilities as they are still far from their homes and not as convenient as existing facilities (Tutti 2009). There are still not enough facilities to cater for the entire population of Soweto East.

Residents reported adding waterguard/purification agents to the water they collect from the facilities as they do not trust it entirely because they see burst pipes not being fixed immediately which exposes them to contamination (Ambeyi 2009). Others are satisfied with the water quality as it is (Khamali 2009; Kimotho 2009; Nyaboke 2009) and are aware that it is chlorinated (Kwamboka 2009). Water quantity was mentioned as being a problem with water rationing within the settlement causing some of the facilities to only receive a water supply once a week (Tutti 2009; Wairimo 2009).

Toilet and Shower

Residents admitted resorting to using flying toilets in the past but are now taking advantage of the new facilities which are widely used by residents and making a significantly positive impact on the community (Kimotho 2009; Makobi 2009; Okore 2009). Some residents are continuing to wash within their own homes (Kimotho 2009) but others are taking advantage of the privacy of the new facilities and enjoying showering now they don't have to wait for the darkness of night (Nyaboke 2009; Tutti 2009). Residents are enjoying the cleanliness of the facilities and consider the price fair (Wanjiko 2009).

“Yeah because mmmh.. we used to live in shame because we used to go for long calls in the house in the presence of our children [laughs]. We’d go for long calls in the house with our children. We’d send the kids out for paper bags. Ok, we used to buy those polythene bags & we used to use them in front of our kids. On the floor of the house. Yeah & the kids used to know what’s happening. And the minute they see a paper they’d know there’s something being done here. When you’d send them to the shop to buy a paper, he or she used to know what you’re going to use it for. Flying toilet [laughs]” (Kimotho 2009).

“Yes they are [benefiting us]. In fact I talked about that issue. That measure is brought about by...ok, with the human excretion and all that and if you have such like a facility, we are very much relieved. In fact we are helped. We are very much grateful to them in fact, to be precise” (Makobi 2009).

“You know, once you use those new ones, you can flush. They are like the modern ones. They are so good. You know, the toilets are the major asset that a community should have. Without the toilets, life becomes unbearable. I think the toilets are really used by the residents, which is a good thing” (Okore 2009).

“I thank God, at least we have changed from another situation we used to be. People used to shower outside. Waiting for the night to come when they go out to shower. Yea, but now they can just go and shower at daytime... And they enjoy the showering... The other time...the other time we used to shower outside, at night. We used to wait, shower at night. But right now we can shower at the bathroom. You can go at any time you feel like showering, you shower then you come back” (Nyaboke 2009).

Environment, Less flying toilets

Residents have noticed a significant improvement in the cleanliness and hygiene of the environment around the village and decrease in the incidence of flying toilets (Ambeyi 2009; Kwamboka 2009; Nyaboke 2009; Wanjiko 2009; Wanjiru 2009).

A local shop-keeper who sells the papers and bags commonly used for flying toilets reported that since the opening of the watsan blocks his sales of bags have significantly decreased, by around two thirds. However some bags are still selling because they are cheaper than the cost of paying for the toilet (Bag-seller 2009).

“You know before we used to use the flying toilets, now since they [the new facilities] came, we were happy and we saw that clean surroundings were the ones we needed. People needed the toilets. As I told you, before we used paper bags and faeces were all over even in ditches, but when the toilet was built, there is no more dirt” (Kwamboka 2009).

“I like them because now that people rarely use the flying toilets and they used it due to lack of a toilet. I open at 5.45 am and the line of people I get is so long. Now imagine if they did not have a toilet, they would have used the flying toilets which is unhealthy” (Wairimo 2009).

“They are clean, and the houses we live in have no showers and these ones have. They were really needed and had they come earlier, they would have helped a lot. [They were built] So that they can help the people here since in these areas there were no toilets that were important since the ones we were using were a safety and health hazard when we used it. It has helped since the area we are living now is clean and we are healthier now” (Wanjiko 2009).

Social/Human

Management

The blocks are run by locally based management committees which allows employment opportunities for the locals. Some residents reported being happy with the way in which the facilities are managed, others voiced complaints. Soap is not always consistently provided (Ambeyi 2009), toilets often do not flush and it takes time for broken parts to be fixed (Ambeyi 2009). One resident suggested that only local people should be allowed to use their local facility and ID should be sought to avoid outsiders from damaging the facilities (Ambeyi 2009). Some residents feel powerless to have a say in the management of the facility (Kamau 2009) although others feel they could voice their opinion (Kimotho 2009; Kwamboka 2009). It was also reported that the management is good (Kwamboka 2009; Omondi 2009; Wairimo 2009; Wanjiko 2009; Wanjiru 2009) and not corrupt as the individuals have been picked from different tribes and genders (Kimotho 2009). Residents feel that the people who work at the facilities should not have to pay to use them (Kamau 2009; Khamali 2009; Wanjiko 2009). If a crisis occurs at the facilities the management committees come together to devise a plan to fix it (Makobi 2009) but residents feel that they were not given enough support from UN-Habitat and Maji na Ufanisi on how to manage the facilities properly (Tutti 2009).

“The problem is that those people [UN-Habitat and Maji Na Ufanisi] who built the block they did not give us enough civic education on how to manage the block. They just brought the block to us and they have left like that. So they are waiting to see if at all we are going to manage it or not. But we don’t have any civic education on how to manage the block”(Tutti 2009).

“I think the management is good, our money is protected and our interests are safe” (Wanjiko 2009).

“The management is ok. It changes after one year. You just group which are managing each. We do election after every one year...But if we see they are nice people, we still leave them there. The community votes [for the committee]. They are the people who are saying that you should not elect this one, elect that one, take care of our property, nini (and all) that way. Ok, since we are chosen we are five. We have chairman, we have treasurer, we have organizer. And we have the...secretary, treasurer, chairman, organizer and the trustee. Out of that, we arrange and choose the members. We are the people to choose the members who are going to take care of the facilities. Those people who are going to select the other ladies, who are going to be cleaning the facilities, yea. So when we choose, we have these organizing people...those people who take care of the toilets. We have those ones who stand for it. So when we sit as a group, as a community, we ask; Who is going to take...who is going to work for us, so one of the committee members raise her hands up, we choose the community member, he goes there and she should be paid. So from where we have chosen that...the committee member, we have the one who we as the organizing, secretary and chairlady and the chairman, we choose. This lady, is the one who is going to take care of the facility. If any problem will occur, we are the person to ask, ehe?” (Nyaboke 2009)

Figure 113 – Block managers and attendants



Both men and women reported feeling safe at the facilities (Ambeyi 2009; Kamau 2009; Khamali 2009; Kimotho 2009; Nyaboke 2009; Okore 2009; Omondi 2009) and like the fact that the facilities are manned and well-lit (Makobi 2009). However it was reported that at night-time women and children do not always feel safe and lighting is not always reliable which makes them resort to using papers/flying toilet (Tutti 2009). An employee of a block reported a customer being mugged and robbed of Ksh500 at the block, and said there is a need for better security. She is often kept company by other group members when working at the block for safety in numbers (Wairimo 2009). Another resident feels that the government should provide proper security at the block which would enable the facilities to stay open later at night (Tutti 2009). According to the chairman of SEC there are two security men who work to maintain safety at the blocks. Along with community policing he reports that crime levels have decreased (Dihanda 2009).

“The security is not enough because most of the people here are unemployed.... So if they feel that there is money that is there, we can easily be attacked. They know that we don't get a lot of money. That is why we have not gotten any problem. No [attacks have happened yet]. But we feel they can do...Because around here the last two months there is someone who has a shop here has been attacked twice. Not one, two people. One on this side and the other on this side.... And they are just our sons from the village here. So if they feel that we have enough money here, they can try and attack us. [Women and children] They are scared. Women are scared because they can't go out after 8 o'clock at night but men we can go. So women fear going. Like that place we have passed at the corridor, women fear passing very late in the evening. So if they want to do their shopping, they have to ensure that they have done it before 6 o'clock and by 6 o'clock they have bought everything and they are just within the house. [Lighting] it is there but is not always there. Lighting here, our electricity comes at times and sometimes it is not there.

The government is not doing enough. The government should have sent some security men to come and give us security. Even we could be running up to late hours. So we are closing at 8.30 because of security. That's the main reason that's why we close early before people are still moving. You can't wait until late. But if we had security, we can even have shifts, someone working during the day and someone working during the night. Even if there is lighting, and everybody is asleep, when you are there alone, you can be attacked” (Tutti 2009).

“No, with that, you do it perfectly. You are inside and nobody is troubling you, you know! That is one of the sections we have. It's comfortable. There is water, there is shop (soap), for washing your hand, you know. I feel safe” (Nyaboke 2009).

“Sort of, sort of they've improved. Sort of they've improved because you see, at that toilet you know there will be...ok they will find someone. So their security is somehow...is sort of guaranteed. Rather than the usual.... The communal one where maybe you want to go to the toilet at night, you'll only go alone and something like that. But you see these ones, it's being manned with something. So at least you will find someone there and your security is sort of guaranteed. Sort of improved. And you know where they are, they always have lights and all that. So it's not in darkness” (Makobi 2009).

Cleanliness , Health

Many residents feel the blocks are hygienic and clean which has had a positive impact on the community (Ambeyi 2009; Kamau 2009; Kimotho 2009; Wanjiko 2009) and upon people's health and bad smells (Nyaboke 2009). As sanitation has improved people have noticed improved health (Khamali 2009) and are less affected by typhoid and other waterborne diseases (Kimotho 2009; Kwamboka 2009; Nyaboke 2009; Wanjiko 2009).

"You know back when we had the flying toilets, we used to throw papers all over and the water settled and the mosquitoes bred there, but now with the toilets, the papers are lesser and thus less mosquitoes so our health is better" (Kwamboka 2009).

"Before because we were using the pit latrines and flying toilets, the human refuse was all over, so the flies were coming in and out and now you can see there are no flies. So I can say our health has changed" (Tutti 2009).

Gender

Both men and women have been positively affected by the blocks. One resident says there is no discrimination (Ambeyi 2009). One male resident said that his wife does not feel entirely comfortable sharing the public facilities with men (Kimotho 2009). Another resident said that more men use the toilets than women (Kwamboka 2009). One resident said that women benefit from the facility more than men because it is women who are collecting the water for the household, but that women are most concerned by security implications particularly when using the facilities at night (Tutti 2009).

"No. Because of the bathrooms. [Women] they can't use the showers as freely as we [the men] do. Ok, the African way, women don't interact with men in such, you know eeerr...It's very awkward to find a woman bathing in a public place. Yeah they feel uncomfortable. [My wife] She doesn't. She doesn't. Yeah, she feels uncomfortable" (Kimotho 2009).

"In fact women benefit a lot more than men. When we go on duty, we relieve everything from there and we are here we don't use it. But the women are the ones who benefit more than the men from that block. One they get their water form near. Because they are the ones looking for water... You see like mine she is a housewife, she is here always since she doesn't go anywhere. She is here always so she is using the toilets always. But me at times I don't use it because I can use when I am on duty" (Tutti 2009)

Pride

Many residents said they felt proud to have the facilities within their community (Nyaboke 2009; Omondi 2009), consider them an asset (Kamau 2009) and feel responsible to maintain them for the future (Khamali 2009).

“Even when I am there, I usually wash and take care of it like it is my own house” (Wanjiko 2009).

“Yeah, very very proud. Because they have good plans to use the money that is raised from there to uplift their lives. Even my wife is one of the members” (Kimocho 2009).

“One, it has made our environment clean, and we feel at the end of the year, we will get something small from that. That’s what we are being told. The money they are collecting at the end of the year, we will get something small from it” (Tutti 2009).

Other

Income generation and Cost

The development of the blocks has enabled jobs to be created for the local residents managing and maintaining the facilities. This was highlighted by residents as an indicator of success of the project (Omondi 2009; Wairimo 2009). The people involved in the management committees are expecting a share of the profits at the end of the year (Tutti 2009). The profits generated at the blocks are shared among the committee members’ cooperative and used for housing and shelter expenses (Dihanda 2009; Githaiga 2009). The presence of the facilities has also aided a local businessman who runs a video shop, his customers now have the convenience of the toilets which has helped business (Kimocho 2009). Maji na Ufanisi have observed that their project has helped the community to develop skills (for example experience in construction and management) which they are now able to use to obtain meaningful employment or to establish their own businesses (Githaiga 2009).

Most residents feel that the money was spent wisely on the construction of the blocks, but one resident said if they’d been in charge they’d have given the money to help the orphans (Wanjiru 2009). Some residents said they feel the fees at the facility are fair and that they receive a good service (Kamau 2009; Khamali 2009; Kimocho 2009; Tutti 2009). When asked if residents would prefer to use papers/flying toilets in order to save money they said no (Omondi 2009; Tutti 2009).

It was reported that the cost of the toilet facility has changed over time from Ks3 to Ksh5 and it still varies from time to time (Ambeyi 2009), as does the cost of water depending on if there is water rationing (Kimocho 2009). Residents said that water charges vary from Ksh2 to Ksh20 for a 20 litre jerry can, which is restrictive for many people. It emerged that some of the blocks charge more than others which has an impact on the pattern of usage and has resulted in one of the blocks barely being used by the community (Kwamboka 2009; Nyaboke and Bilal 2009). It was observed that this particular block also has private water vendors nearby who are undercutting the price of the water at the block, and residents prefer to walk a bit further to make a saving (Nyaboke and Bilal 2009).

There was also reason to suspect that prices were being manipulated at a particular facility by the management committee in order to increase profits for their personal benefit and the management

are not being transparent with the community. The management committee and community have not been advised or sensitized properly by SEC and so money is being wasted (Nyaboke and Bilal 2009).

However, it also emerged that paying for the papers can cost more than paying for the facilities. One particular commonly used type of black carrier bag costs Ksh5. They used to cost only 50cents which was then raised to Ksh1 and is now Ksh5. This was following the government Ministry of Environment tax regulations in an effort to reduce the incidence of flying toilets (Nyaboke and Bilal 2009).

Residents do not mind paying for the facilities but commented that its harder for the people who are unemployed who may be short of money and resort to using papers and toilet methods of the past (Ambeyi 2009). This however was disagreed with by other residents who said this is just a perception and the real reason people don't want to change their toilet habits is because of embedded cultural practices (Nyaboke and Bilal 2009).

“And maybe one more thing is that those who are working in the...the facilities, and those who are semi skilled or those who are not skilled at all, out of the little income that they were getting during the construction and through our officers, they have been taken through, not formal training, the informal trainings and they have been able to save and start new businesses. So in a scenario like now there is no construction going on except the road now, I think they cannot construct the road. And also...we are talking of now women. They can now start their own businesses and they are running well. And they are now able to say that they have now... they are earning an income from a skill they learned through the construction of this project” (Githaiga 2009).

Unintended outcomes, Visitors

On top of the obvious benefits to the community, residents said that they now enjoy having more visitors from outside Kibera to their home now that there are decent toilet facilities available (Nyaboke 2009). The facilities have also had a beneficial impact on attracting people to local businesses, such as video shops, now that toilets are available for customers (Kimotheo 2009).

Unfinished

Many residents complained that their local facility was not finished and not fully operating. Toilets are not connected so not flushable, and water pipes and sewerage lines are awaiting connection (Ambeyi 2009; Khamali 2009; Kimotheo 2009; Omondi 2009; Tutti 2009). Residents reported that the facilities were handed over to the community before they were complete (Tutti 2009).

The KENSUP project director at the Ministry of Housing was aware that the blocks are not connected to the sewers but said that UN-HABITAT has plans underway to connect them to ensure the futurity of the facilities within the settlement (Muraguri 2009).

Seven of the eight planned blocks have been constructed. The final block has been held up as Maji na Ufanisi are still negotiating with the community for space for the site (Githaiga 2009). All of the

blocks were designed to be connected to the city's sewer system apart from one which has a septic tank due to site location restrictions (Githaiga 2009).

“We were informed to do an election so we did the election, then they promised a day and when we went there they handed it to us. In fact they handed it over when it was incomplete. It was not totally complete. For example we have to have somewhere to throw our rubbish, like a septic tank. They are not complete up to now. They are telling us they will complete but we don't know whether they will complete. The UN told us, from Maji Na Ufanisi they told us that they don't have money for now, they don't have money for now. They are looking for more money. And we are still waiting for them to come and finish the facility” (Tutti 2009).

Replicate and Changes

Residents felt that replicating the blocks all over Kibera is a good idea (Kamau 2009; Khamali 2009; Wairimo 2009; Wanjiko 2009) but some commented that funds would best be spent on constructing new housing with integrated watsan facilities (Ambeyi 2009). The SEC Chairman also commented that long queues often form outside the facilities and so more of the facilities are needed to cater to the population (Dihanda 2009). The NGO Maji na Ufanisi admits that the impact of the new blocks is not enough and many more need to be constructed (Githaiga 2009).

Key Points

- Employment – Job opportunities at the blocks have been a key success for the residents.
- Environmental improvements – The lower incidence of flying toilets has improved the environment which in turn has had a beneficial impact on health.
- Toilet practices – Despite the new facilities, many residents continue to use flying toilets. Reasons include financial cost of using the toilets and engrained cultural practices.

Institutional Reform

This theme of analysis brings together the information gathered from stakeholders regarding the institutional frameworks and reformation brought about by the process of the upgrading scheme. The analysis indicates the longevity and futurity of the watsan facilities as well as impacts upon community groups and institutional frameworks.

The key institutions involved in this project were:

- The Settlement Executive Committee (SEC) – Community based governance organisation.
- Management Committees – CBO groups composed under SEC to manage the individual facilities.
- UN- Habitat – The multi-lateral agency who funded the project and co-managed it with KENSUP.
- The Kenyan Slum Upgrading Programme (KENSUP), Kenyan Government – Within which this project falls.
- Maji na Ufanisi – The NGO engaged by UN-HABITAT for construction management and community consultation.
- Nairobi Sewerage and Water Company – Installed the water lines and sewerage connections.

The Ministry of Housing did not have an active role in the implementation of the project. However they looked over the paperwork and planning documents and advised UN-HABITAT where they felt was necessary (Muraguri 2009). The Ministry of Housing says that this project has influenced their organisation and brought about institutional reformation on planning policy. The ministry now recognises and supports slum settlements as they would do for other formal housing estates. Since this project there are now plans to connect the blocks to the formal city sewerage system when previously they would have been unconnected (Muraguri 2009). Since the conception of KENSUP other government departments have been influenced to cater for the informal settlements. For example the city council is now mandated to provide services to the slums and the ministry of lands is mandated to ensure the area is formally planned (Muraguri 2009). The Kenyan Power and Lighting company has also been influenced by KENSUP to provide formal electricity connections to the settlement (Githaiga 2009). The ministry of the environment is now cleaning up the river with the youth groups, an action which is directly attributable to the existence of KENSUP (Muraguri 2009). The youth groups conducting waste management services are now also formally licensed to enable them to extend their waste services to other settlements (Githaiga 2009).

Maji na Ufanisi, meaning water and development, is an NGO focusing on water and environmental sanitation. They try to reach the marginalised through pro-poor community approaches and community based systems to manage water, the environment and sanitation (Githaiga 2009). Maji na Ufanisi worked with UN-HABITAT to prepare a proposal for the project and a community needs assessment. Together they felt that improved in-situ watsan facilities would be a good entry point for the wider KENSUP project. Maji na Ufanisi is also currently involved in organising the construction of a road through Kibera in partnership with UN-HABITAT. The project was organised into different components which covered more than the basic toilet, water and shower facilities at the blocks. One such component focuses on solid waste management and has engaged youth groups to coordinate door-to-door collection activities. Maji na Ufanisi encountered hurdles which slowed

down the project. The initial community consultation and sensitisation phase took longer than anticipated which delayed construction. Acquiring sites for the construction also took time to negotiate with the community to release the land. The project has had a good impact on the NGO by raising its profile and they are now more aware of the country's policies for slum upgrading. They have also learned it is better to form partnerships rather than contractual agreements for upgrading projects of this nature as they are not a construction company and it has allowed them more flexibility rather than working to fixed timescales (Githaiga 2009).

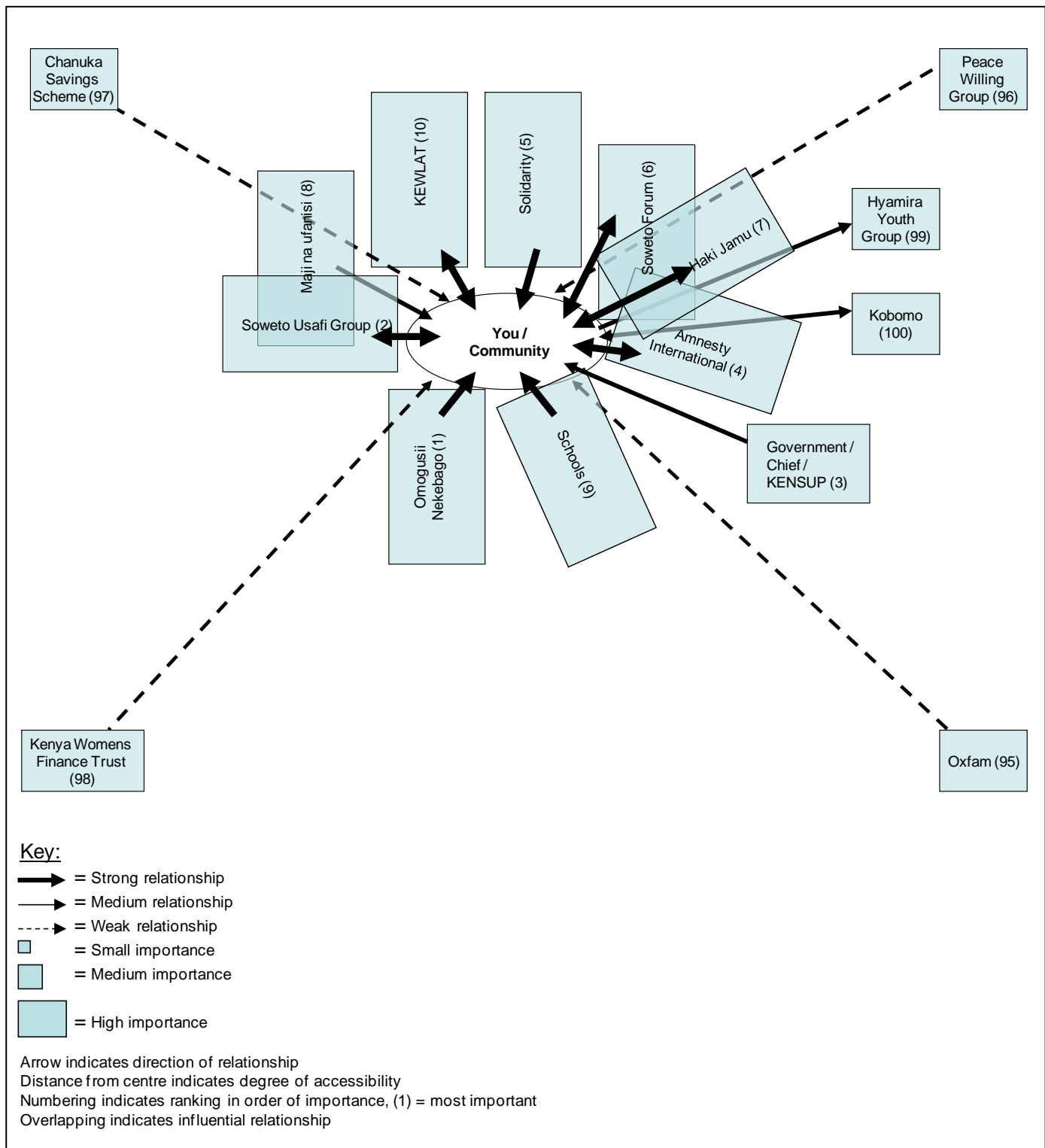
The Settlement Executive Committee was an already well established CBO within the community before the inception of this project (Githaiga 2009) but the facility management groups were formed due to the project. The SEC aims to be a democratically elected group representing all sections of society, and is a two-way link between the government and the community. SEC has been particularly involved in the KENSUP project planning, implementation and the formation of management committees for the individual watsan facilities (Dihanda 2009).

During a group discussion the residents were asked to list all the institutions they are involved with, see Table 26 and then to map them indicating their perception of importance, strength and direction of relationship with the institution, and accessibility of the institution. See Figure 114.

Table 26 – Soweto East Institution List

CBOs	NGOs	Financial	Other
Omogusii Nekebago	Maji na Ufanisi	Bidii Kenya	Government of Kenya
Soweto Usafi Group	Pamoja Trust	Jamii Kenya	Chiefs
Sohima Group	Umande Trust	Keyrep	Administration
Soweto Youth Group	Amnesty International	Kenya Women Finance Trust	KENSUP
Soweto Forum	Haki Jamu	Sizdo	Churches
Soweto Highrise Saving Scheme	Kewlat	Bidii Kenya	Shelter Forum
Solidarity	UN Habitat	Jamii Kenya	Kituo cha sheria
Kobomo	Care Kenya	Keyrep	Oxfam
Lady Soweto Federation	KISEP	Kenya Women Finance Trust	Amref
Bidii Yetu	Faula Kenya	Sizdo	Clinics
Action for Life			Schools
Chanuka Saving Scheme			Clan/village elders
Imani Women Cooperative			
Nyamira Youth Group			
Tumaini Group			
Highrise Stars Group			
Nyabomo Welfare Group			
Luphina Womens Group			
Tujiendezeze Women Cooperative			
Nabii Christian Group			
Peace Willing Group			
Precious Women Group			

Figure 114 – Soweto East Institutional Mapping



It can be seen that there are a vast number of organisations active within Kibera, particularly CBOs, NGOs and micro-finance organisations. Many of which are international organisations who have come to Kibera as it is widely known to be badly affected by urban poverty and so receives much international attention, funding and support. As would be expected, the community based organisations were indicated to be of the highest importance and have the strongest relationship

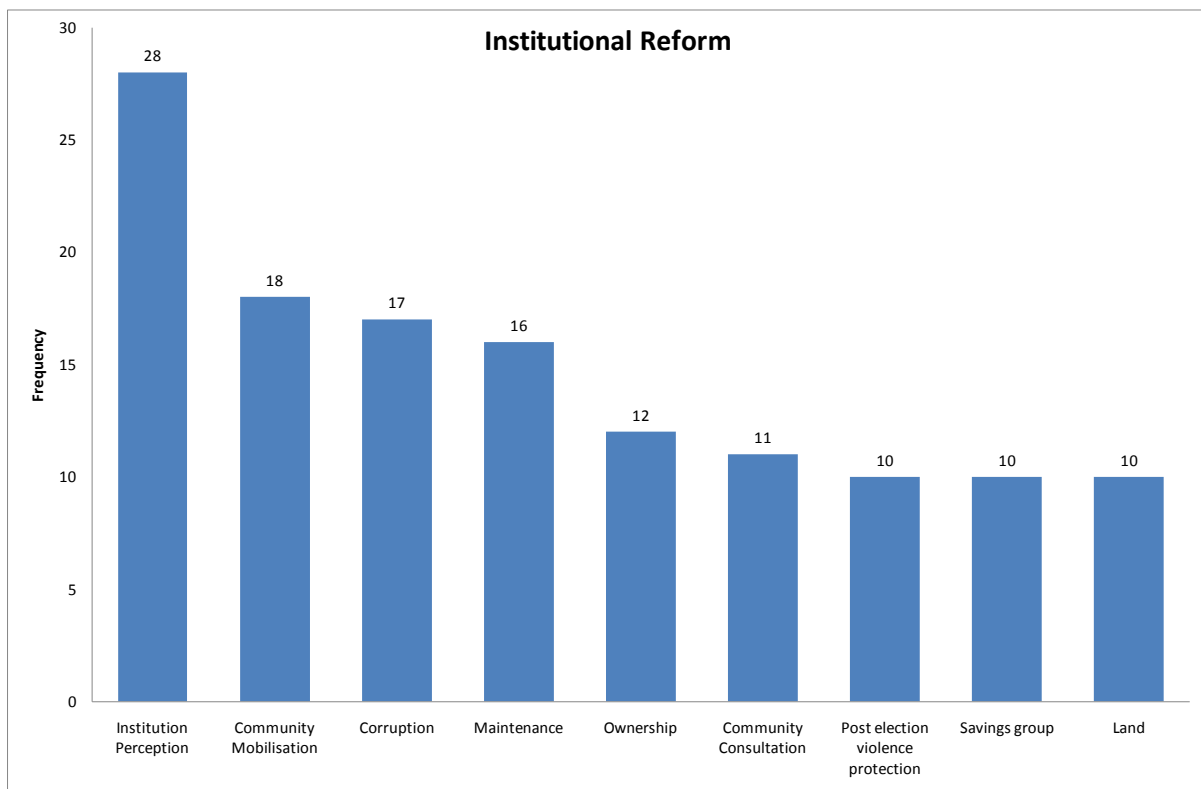
with the community. For the residents at Soweto East, a medium-strong relationship was indicated between the community and the local governance, although not two-way.

Table 27 – Institutional Reform Coded themes emergent from residents’ interviews

Governance	Social/Human	Futurity
Institution perception	Community consultation	Ownership
Corruption	Community Mobilisation	Maintenance
	Post election violence protection	Land
	Savings group	

Figure 115 shows the frequency of responses for the topics discussed concerning institutional reform during interviews with residents.

Figure 115 – Frequency of resident’s responses for Institutional Reform



Governance

Institutional perception

Some residents said they do not feel that the higher institutions of government, NGOs and structure owners really understand the needs of the residents of Soweto East and are unsupportive (Kamau

2009; Makobi 2009; Wairimo 2009). Although some feel that when they work with the UN the government seems to understand better (Nyaboke 2009; Nyamoita 2009). But residents are also aware that they are a valuable vote bank to the politicians and feel that they are only taken notice of when there is an election coming up (Makobi 2009). Although they admit they have benefitted from the new toilet project which was co-organised by the government (Kimotho 2009; Okore 2009). One man said that it would help if the government communicated better with the community, face-to-face (Kimotho 2009).

The perception of NGOs was not quite as poor by residents who felt that they at least come to the community and speak with the people (Kimotho 2009; Kwamboka 2009) but it was also said that the NGO Maji na Ufanisi has handed over the watsan project to the community unfinished and have now abandoned them (Tutti 2009). Maji na Ufanisi say they continue to support the community and feel that they have a good relationship with the people. The community still calls on the NGO to preside over elections and to be signatories to their bank accounts (Githaiga 2009). There were many criticisms from the residents that Maji na Ufanisi's community sensitisation efforts were poor and ineffective resulting in a lack of ownership and management problems (Nyaboke and Bilal 2009).

"Partly yes [the government are fulfilling their responsibility], partly no. Ok, it's like Kibera residents are a forgotten lot. That's what I can summarise. Because they are like you see, we are only heard when an election is called, we are the ones that are being used to go and howl, to go and make noises at the stadiums, and all that. But when there are no major incidences or something like that, we are just forgotten lot...I don't know how I can say it but everybody forgets all about us. We are just there for ourselves, we are just there for ourselves...I will say they do [the institutions understand the needs of Kibera's residents], because if someone is concerned with you, at least someone will ask you how, ok you are doing, what is happening around you and all that. But when it comes to the government, they don't even listen to us; they don't even ask us anything. So you can't say that, ok the government is involved in this. They are not concerned" (Makobi 2009).

"Mmmh, the government, mmmh. What will I say concerning them? They do nothing, in fact they don't come. They should link us with someone or meet face to face with the residents" (Kimotho 2009).

Support that residents have noticed from the institutions is the construction of the new KENSUP housing (Wanjiko 2009), assistance with moving belongings to the decanting site at the new housing (Ambeyi 2009) and aid in the form of food, blankets and shelter when fires have hit the settlement (Kwamboka 2009).

Figure 116 – Moving people and belongings from Soweto East to the decanting site



Support that residents expressed that they felt they should get from the government included compensation to structure owners losing their buildings under KENSUP demolition plans (Kamau 2009), lower commodity prices (Khamali 2009), better security at the toilet facilities (Tutti 2009) and the construction of a market for businesses (Wanjiko 2009). Residents also expressed feeling cheated by the government and misled that they would receive good houses under KENSUP, they perceive that in the future the situation will only worsen as the government seeks to reclaim the land of Kibera (Kimotheo 2009). It was also said that the government do not understand which community members are the most needy which results in help going to undeserving people (Wairimo 2009).

Corruption

It was reported that tribal tensions have affected the upgrading project resulting in discriminatory employment of construction workers for the blocks (Ambeyi 2009) and that this has extended to the operation of the blocks also; It was said that there are particular areas and blocks which are frequented by particular tribes (Ambeyi 2009). However another resident said that their local facility had ensured the employment of people from different tribes and genders within the management committee (Kimotheo 2009). There were also reports that the SEC was not democratically elected and unfairly excludes certain sections of society; this in turn has had an impact on the membership of the management committees (Nyaboke and Bilal 2009).

Residents also expressed doubts that all the project money has been spent wisely as from the outset they were informed all funding was in place, but now some facilities have not been completed due to lack of funds which infers that money has gone astray (Tutti 2009).

Other informants said they had seen no forms of corruption within the upgrading (Kwamboka 2009; Makobi 2009; Okore 2009; Omondi 2009; Wairimo 2009; Wanjiko 2009; Wanjiru 2009).

It was also suggested that to avoid corruption occurring with the allocation of the new housing under KENSUP there should be better identification of residents who are entitled to the new housing in order to prevent outsiders from grabbing the houses for themselves and to prevent bribery in exchange for a home (Ambeyi 2009), the same was said of aid generally (Okore 2009). A resident also commented that they felt a lot of money has been handled for the watsan blocks and not all has been put to good use (Kamau 2009).

“I think it [corruption] was there. Because initially, as we had been told by SEK, everything was planned for and the money was brought which until now it has not been completed. Which means the money was diverted to other things. The money was not all used to it. Maybe the corruption took place there” (Tutti 2009).

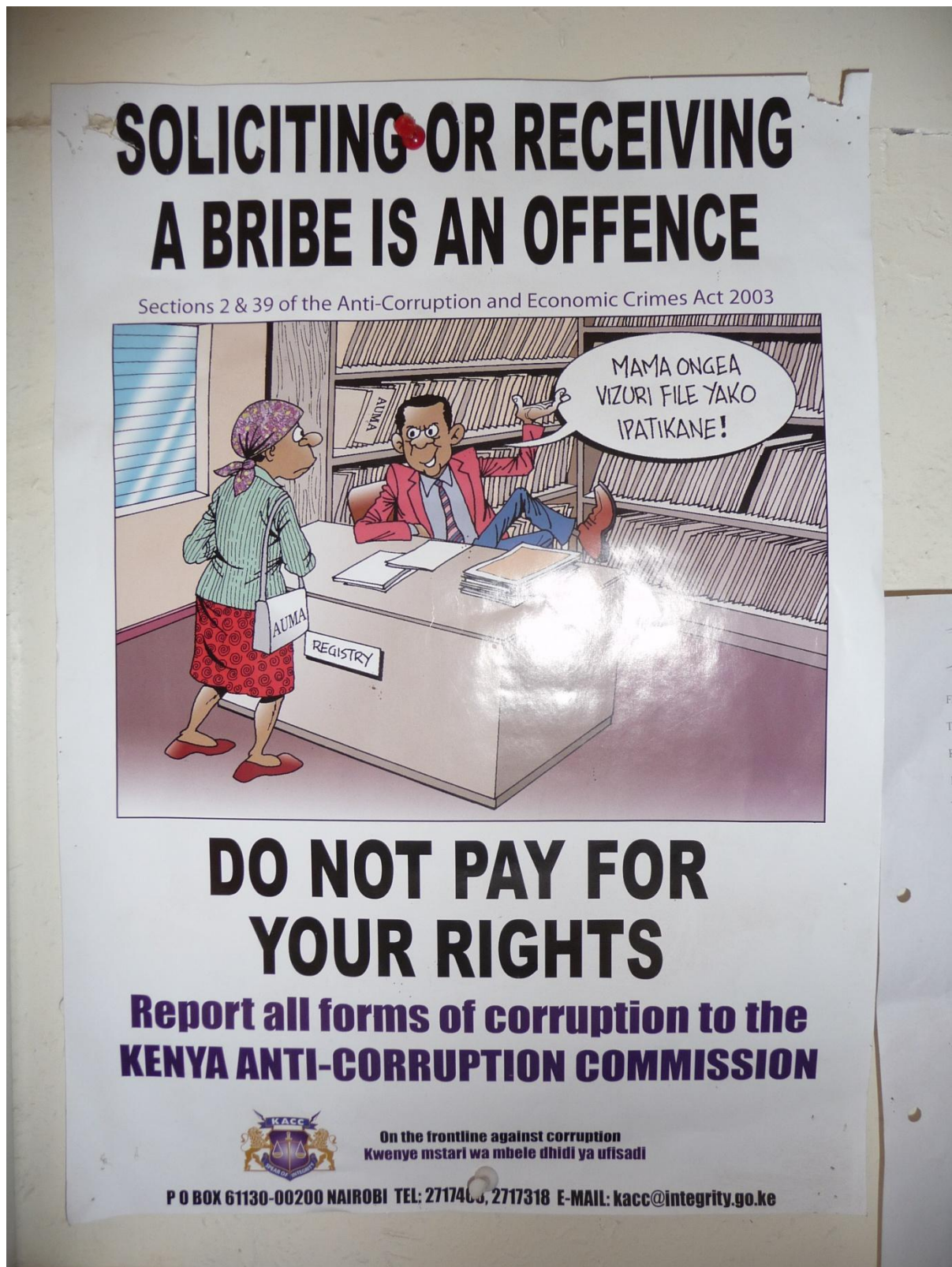
“What is needed is at least rules to govern the toilets and the houses as a whole. And even its good for some identification. Identity because...in the side of when we talk about the rooms because the UN-Habitat, because when they started with the equipment, they were asking questions. Writings in forms, the way you’re writing etc. just putting us in one place because when this project started of the UN, people were coming from different places wanting to grab the houses. So without identity of the people staying here, people from other sides will come to grab our facility. Identity will just come from us because we know ourselves, there’s nobody who can come to bribe us. Us we know, this is my neighbour so even the chief can go door to door with his people collecting” (Ambeyi 2009).

“Just as I had said, yes there is aid coming. But it gets to certain individuals and not to the needy residents. That is why some people may claim that they gave out a given amount of money to be used for a given project, but then it disappears into thin air. That’s why I said that if corruption will not end, then no change will be realised. I would propose that if possible, the leader s should even come and follow up, asking if the funds got here and what they were used for” (Okore 2009).

Figure 117 – Anti-corruption signage at government offices



Figure 118 – Anti-corruption poster displayed at government offices



Social/Human

Community Consultation and Mobilisation

The community was already well mobilised prior to the project, but new management committees have also been established for the individual toilet blocks. Many residents said they are members of CBOs (Khamali 2009; Kwamboka 2009; Nyaboke 2009; Nyamoita 2009; Tutti 2009; Wanjiko 2009; Wanjiru 2009). SEC felt that their voice was heard and the community were able to communicate with Maji na Ufanisi via SEC on their views on the upgrading (Dihanda 2009).

The government's ministry of housing has had little interaction with the community and has no mechanism for monitoring an evaluation with implementation being left to UN-HABITAT. But as the people have been cooperative with the development they assume the residents are happy (Muraguri 2009).

Some residents said they have been involved in the management of the blocks (Kamau 2009; Omondi 2009), others have had no involvement but said that they would have liked to have been consulted and would not have known who to ask for further information (Kimotheo 2009; Nyamoita 2009; Okore 2009; Tutti 2009; Wairimo 2009; Wanjiko 2009). Residents said they would have liked the opportunity to be employed in the construction of the blocks (Ambeyi 2009). It was said that the village chief would have been consulted and that he should then have communicated to the residents (Nyaboke 2009). A structure owner commented upon the delivery and organisation of the wider KENSUP housing project and said that they should have been consulted and involved rather than cut out of planning discussions which were conducted with other residents (Makobi 2009).

Maji na Ufanisi had the responsibility of organising training which they conducted parallel to the construction. Training was conducted on general management, financial management, leadership, money management, book keeping etc. (Githaiga 2009). Maji na Ufanisi consider the newly mobilised communities to be a key indicator of success of the project. The management committees are formerly registered and have bank accounts set up and making profits which they are saving in a cooperative for shelter improvements. They also feel that social cohesion has been improved as the facilities provide focal points within the community (Githaiga 2009).

Residents reported, the toilets were handed over to the community unfinished and with no training on operation and maintenance to the management committees (Tutti 2009). Another man reinforced the point that there was no civic education delivered by Maji na Ufanisi on how to properly manage the blocks (Omondi 2009). Maji na Ufanisi have said that they conducted training with the community but have had to return to help the residents since project completion and formal handover as the residents have needed additional help as their initial training was not sufficient (Githaiga 2009).

Maji na Ufanisi admits that the true cost of social capital building is something that they miscalculated. They thought the process would take three months, but it has resulted in taking 24 months and costing much more than they had anticipated. The NGO has learned from this and has admitted that they struggled significantly in this area.

UN-HABITAT indicated that there had been strains between their relationship with Maji na Ufanisi and that the NGO had struggled to organise the community, either perhaps because they had poor

community mobilisers or they couldn't deal with the complicated community that Kibera is. There have also been conflicts between the two organisations regarding money (Kaiganaine 2009).

UN-HABITAT explained that sections of the community at Kibera have their own political interests which can interfere with slum upgrading activities. For example slum-lords who are against upgrading and are able to bribe the community with free housing in exchange for them to not cooperate with slum upgrading activities (Kaiganaine 2009).

Community sensitisation at Soweto East appears to have failed as evidenced by the disagreements regarding compensation and residents not being willing to freely give up land for the good of the community. Management issues have also arisen, as it has emerged that particular facilities are manipulating the charges to profit themselves (Nyaboke and Bilal 2009).

There is also a lack of community ownership as residents consider the management committees under SEC own the facilities, not the common society. This is because the community were not properly engaged and involved in the process of development. SEC is made up of a small number of people who are representing thousands and SEC was not fairly elected. Many residents were not aware of the voting procedure and it was conducted on a weekday to purposefully exclude many residents from being able to vote (Nyaboke and Bilal 2009).

“According to what I know about Maji Na Ufanisi they don’t do much sensitization, as long as they constitute a committee, they just leave the committee to run that project. And this committee, you know people if you go to a low income settlement and people are very desperate, they are jobless, extreme poverty, it’s like people have their own individual personal interests so unless the implementing agency has got restrictions on what they want done, and then the committee will do its own work no work, but if the implementing organization tells them what to do, they will follow up, so they will have to do it” (Nyaboke and Bilal 2009).

“We were not [consulted in the development planning], we were not. We as landlords, we were not. In fact we slotted our...let me call it request. Because we told them we need this and this and in fact we requested. We told them; please sit with us as stakeholders. There are landlords here...ok we can say structure owners, tenants, church leaders, business men or whatever. But all the other groups were listened to. Whatever they were saying, it was considered, yea. It was put into consideration. But the views of the structure owners, we were just assumed, we were put in a...let me say in a circle. We were circled as if we were thick, we were the wrong group, we are the people that are not wanted and all that, so we did not have much say. [Committees are in place with structure owners as members] they were there but their views were not listened to, yes. The rest of the other groups, yes. Churches, businesses and whatever, they were listened to. [Structure owners weren’t listened to] because structure owners...ok, to say the truth, this is the pivotal group. Pivotal, central focus... Ok, if anything is circulating around these people, because you see, for you to have business here, it must have been this structure owner who has built the house for you to settle there. So you see, everything is circling around this person. Ok, so it’s like the backbone. But simply because we are the minority, our views were not taken into consideration. So the views of the many was listened to” (Makobi 2009).

“No we were not given any training [on operation and maintenance]. Yes there was a handing over ceremony. No training. We were informed to do an election so we did the election, then they promised a day and when we went there they handed it to us. In fact they handed it over when it was incomplete. It was not totally complete. For example we have to have somewhere to throw our rubbish, like a septic tank. They are not complete up to now. They are telling us they will complete but we don’t know whether they will complete” (Tutti 2009).

“The problem is that those people who built the block they did not give us enough civic education on how to manage the block. They just brought the block to us and they have left like that. So they are waiting to see if at all we are going to manage it or not, .but we don’t have any civic education on how to manage the block. It was UN-Habitat and Maji Na Ufanisi” (Omondi 2009).

Post election violence protection

Many residents said that the toilet facilities were not destroyed along with other buildings during the post election violence (Kamau 2009; Khamali 2009; Kimotho 2009; Kwamboka 2009; Omondi 2009) which may indicate the value of the facilities to the community. However one resident claimed this was only because the buildings were just empty shells which were used for refuge, with reports that other toilet facilities were vandalised and had their water tanks slashed (Tutti 2009).

“Yeah, yeah. Yeah, we’ll guard it. Yeah it is [an asset to the community]. It was not affected [during the post election violence] because everyone knows the purpose of it. It’s something that everyone needed. Nobody touched it. Nobody! You know it’s for us. The community. Nobody touched it. We were even hoping that would opened so that we could go inside & save ourselves. It was locked. [During the violence, life here...] It was just like a movie. You couldn’t believe what you were seeing. People just turned to be wild. Everyone had a machete or a club. And their faces looked different & everyone was an enemy to the other. It’s something that no one would like to see again, forever. Of course. After the violence here, during that time we used to have problems. In the morning, mostly women, we used to be locked in the house. And our men go out to look for peace. Look for peace. Because most people were not on good terms. Every person had his own ideas. So they used to come together & try resolving. Ok we are the people of kibera, let us stay in peace, let us stop fighting. What are we looking for? We are the same people. Leave us to live good lives. But I’m telling you it was hell” (Nyaboke 2009).

“It was not affected. In fact it helped some of us. Some took refuge in the block. They were staying inside. By then it was not being used. It was just a building and it was not being used. So when some people were attacked from that route, they ran and they were staying inside there. But I know some blocks from the other CDF blocks in the other side were affected, for example the tanks of, those tanks were cut and even they are not working up to now. The CDF tank, you see the CDF had built some toilets around and they had tanks so the group from these side, you see here we were fighting a group from this side, so when they went to that side, they even cut the tank, so they destroyed that tank. So this one was not in use, so nobody attacked it” (Tutti 2009)

Savings groups

Many residents are members of savings groups (Kamau 2009; Kwamboka 2009; Nyaboke 2009; Nyamoita 2009; Omondi 2009; Wanjiko 2009). Some save privately with their bank (Kimotho 2009). Some are members of informal groups with their neighbours (Khamali 2009). Some are residents of a savings group that UN-HABITAT started up to support the upgrading programme but the members interviewed did not have a clear idea of what happens with their contributions. They were not confident that they would see their money again due to poor management so have since pulled out of the savings group (Ambeyi 2009). Another resident feels more positively about the cooperative activities that the facility management committee members conduct as it enables group savings for house building and repairs (Kimotho 2009). Monthly household savings were reported to range from Ksh100-3000.

"I am in the co-op that was started by the UN-Habitat for the upgrading program. I started with saving some money but now am not saving. It just collects money every week but there was a committee that was set to govern it, so far our role is to take our contribution to that place. I don't know [what they do with the money]. Actually I cannot tell you what they do with the money. [You contribute] according to the way you want, according to your income. Once your money is in the co-op, once your money is there, chances of getting it back is very difficult. If the co-op is serious with the amount the management and they are trying to tell us, at least you can get something but if anything else will be in that co-op, then you will live to lose, if the management will be stable you will benefit and if it's not stable, we'll lose"(Ambeyi 2009).

Futurity

Ownership

Many residents are not sure who owns the watsan facilities (Khamali 2009; Kimotho 2009; Okore 2009). Many think the surrounding community owns them (Kamau 2009; Omondi 2009; Wairimo 2009; Wanjiko 2009) or the UN (Kwamboka 2009; Nyaboke 2009) or government as it's government owned land (Nyaboke 2009) or the NGO Maji na Ufanisi (Makobi 2009).

The Ministry of Housing confirmed that the facilities are owned by the community through the organised groups. The handover was presided by the executive director and was preceded by training for the people who manage the facilities. The training was conducted by Maji na Ufanisi with some KENSUP officers supporting (Muraguri 2009).

Maintenance

The residents consider it to be the community's responsibility to maintain the facilities (Kamau 2009; Khamali 2009; Tutti 2009; Wairimo 2009) or the people employed to manage the blocks (Kimotho 2009; Tutti 2009; Wanjiru 2009). When things have become broken they have been speedily repaired (Kamau 2009; Kimotho 2009; Kwamboka 2009). But problems were also reported due to the blocks being handed over incomplete and to a community with no technical knowledge or guidance which resulted in significant delays until the repairs were organised (Tutti 2009).

Monthly monitoring reports are submitted to SEC by the individual management committees detailing the rates of users at the blocks and if there are any maintenance issues or management issues needing resolving. These reports are submitted to UN-HABITAT (Dihanda 2009).

"Yes we have had problems. Because we were handed the blocks without qualified people....When we have a problem with plumbing we don't work, we don't know where to go to. We were not given the technical part of it. So we just look for somebody, and when you give him he does it. So we are not given any proper technical maintenance....It's not easy [to get help]. We have our people here who are called SEC. They are the ones to approach Maji Na Ufanisi but they take a long time. Like when you have a running tap, how long are you going to wait for someone to come? Maybe they are taking a week, they are not coming. So you just look for someone to come and fix it" (Tutti 2009).

Land

The residents and structure owners of Kibera know that the land is owned by the government. Therefore when space needed to be created for the construction of the watsan blocks, some houses were demolished to the detriment of structure owners (Okore 2009). Some landlords are not optimistic about compensation (Okore 2009). But there are landlords who have been seeking compensation for their loss of investment in the structures and rental revenues via a court case with the government. Land was cleared for the watsan blocks, and now large sections of Soweto East are being cleared to make way for new housing under KENSUP. Approximately 80% of structure owners reside within Kibera (Makobi 2009) and they hold informal agreements from the local chiefs/village elders for the plots upon which their structures are situated, money changes hands too (Okore 2009). At present no title deeds are held by the structure owners, but they are campaigning for this. Land ownership continues to be a battle for Kibera and prevents owners from investing further in developing their buildings. Some residents do not feel that the structure owners deserve compensation as they illegally occupied the land (Tutti 2009), although others feel that the ownership of land should be formally allocated to the residents and structure owners to enable people to develop their houses themselves (Wairimo 2009; Wanjiko 2009).

“That one [KENSUP] I think it’s a good thing but it was not well planned, or it was well planned but there is resistance from the structure owners. They are not willing people to move away. They feel it is here they get their daily bread and when people move, they will be rendered having no income to them. [I want to be included in the relocation plans] very much, I am waiting for that day to come to be included in it. Even if they tell me to move right now, I will go. Most of the tenants are willing, but the structure owners are not willing...Me I feel it’s not okay to feel like that. First they got this land free, they are using it freely. They have been getting income from it. Even some have gone as far as building better houses from this area. And they are not paying anything to the government. If at all the government wants to improve the poor that were living here in this area, the structure owners could have accepted that and leave the government to improve the living standards of those people that are here. Most of the structure owners are not coming from Kibera. Some they are coming from far or they were here before. Since they got some money they decided to buy a good place and live there. They have relocated themselves to a better place. So I feel they are not doing good because they are claiming to be compensated to which I feel they should not be claiming for it. They have got enough from what they built. For example like this house, I have been living here for 20 years and there has never come a time when he has told me you have paid enough. They left the houses to their daughter and they still want the money from me. And they are not staying here” (Tutti 2009).

Leah Muraguri from the government’s ministry of housing explained that the complication of land ownership at Kibera is whether to grant ownership to the residents or the structure owners. Therefore the government is now suggesting that once the housing is all redeveloped and properly replanned that the land can be owned communally through the formation of housing cooperatives which will enable residential security for residents. The government will remain to have a say on how the land is planned and used (Muraguri 2009).

Clearing space within the settlement for the construction of the blocks was a hurdle and required some residents to lose their homes. These residents are complaining that they were not given a proper place to stay in and wanted to be compensated (Muraguri 2009). According to the housing minister, community sensitisation was conducted by UN-HABITAT. The residents at Soweto East were not influenced by whatever sensitisation activities were conducted and did not want to freely give up their land for the common good of the communal facilities. The government's stance on people seeking compensation due to loss of structure or income from their structure is that compensation is not possible. The people of Kibera do not own the land and do not pay taxes on the incomes they generate either. The government did once try to compensate residents affected by slum clearance in Mathare, but the scheme failed. For uniformity, no one is compensated now (Muraguri 2009).

Despite the government's clear-cut stance on no compensation, it was reported by Maji na Ufanisi that residents did receive compensation from the community themselves. Compensation occurred to secure the sites of 4 of the blocks, the other sites made use of abandoned pit latrines (Githaiga 2009). There were also informal reports from residents that structure owners had been compensated for their loss for the KENSUP watsan project (Bilal 2009). However the Ministry of Housing and UN-HABITAT are adamant that no compensation took place and that the community are not capable of raising the funds for compensation themselves (Muraguri 2009).

UN-HABITAT are clear that no compensation was given to structure owners and said that the only form of compensation the residents would have been able to raise would not be in monetary terms but perhaps in kind, assisting with the rebuilding of homes or acquiring alternative sites for homes to relocate to (Kaiganaine 2009). The issue of compensation is a contentious issue with the project partners. UN-HABITAT have had disagreements with Maji na Ufanisi regarding compensation and at one point were removed from the project as they were confusing the residents and structure owners (Kaiganaine 2009). NGO members are pro compensation, where as UN-HABITAT supports the government's view that it is not possible. Therefore *if* some funds have somehow been directed from the UN via the NGO to the community then some corruption has taken place (Kaiganaine 2009).

SEC was also adamant that there was no compensation given and that sites were acquired with the assistance of the village elders and village chief (Dihanda 2009). A leading member of the Soweto Youth Group which was engaged in the acquisition of sites (via negotiation) for the watsan facilities explained that some of the residents resisted the development of the blocks and spoke with the Provincial Commissioner to try and stop the project, but in the end they were forced to comply by the administration. He said that he was not aware of any financial compensation actually occurring but thought that people may have been told they would receive money in order to persuade them to move. He reported that residents were assisted by being relocated to new areas but if any money changed hands it was done in secret and not to his knowledge (Ataly 2009). This conflicts with the reports from Maji na Ufanisi and rumours around the village that monetary compensation did occur. The research assistant for this investigation was also informed by various residents that compensation occurred but refused to give the contact details of any of the recipients (Bilal 2009).

“Yes, sometimes they had to be paid to leave. But not by the organisation, Not money from UN Habitat or Maji. Now the community themselves organising and paying off a structure owner. They make small contributions to pay off... From the CBOs they pulled their savings. They meet and every time they meet they decide maybe to...they are contributing ten shillings per meeting or whatever amount. And that amount collectively is now used to purchase or to buy off land of the structure owner” (Githaiga 2009).

“The space did not belong to the structure owners, it belonged to the government. So how can we compensate empty space? No, I say with a capital letter NO as the chairman. No compensation was made at all. As the chairman of the settlement executive committee, who was heading all those facilities and who was giving the spaces, there was not even a day I saw Maji na Ufanisi compensate anybody and they cannot compensate anybody unless through the Settlement Executive Committee. Of which they did not do. There was no compensation at all...For all those spaces...YOU see when you just ask anybody who didn't know the details, the real details of the project, they can just give you what they think is right but indeed it is not right. For truly in all those seven facilities we did not compensate anybody...Even those empty spaces, some people claimed to be theirs. But they were called by the chief and the D.O. and they were told the truth that the empty spaces belong to the government. And in fact the government declared that all the empty spaces belong to the government, so they had to surrender these spaces” (Dihanda 2009).

“No there is no compensation at all because the land belongs to government...and most important is that these people were getting...public utilities are more important than private use. So what...what usually the community would do is identify the space, free it up, then the people...if there are any structures that are within this site, alternative open spaces would be given to the structure owners then they put up their structures and with no compensation...That is not true [that compensation was given]...that is notif it happened, that is not true, and that is not the way...Maybe within the community, they would have done it. The compensation would really be... not in monetary terms but in kind; in getting space for them, compensation for the space, alternative accommodation, maybe a few youths would be used to construct...and help the demolished structures, to just reinstate the former....No, no, no. There is no money...there is no money for compensation. There is usually a very dire need to get compensation done. And people would like to perpetuate that policy so that it becomes regularised. Something that is very irregular, to become very regularised...In their notions of the mind, that's what they would want. Loss of income, loss of constructing these structures. Literally, you've squatted on land for all those years, you've recovered your investment, you've never paid any taxes, you don't pay to anybody, you don't provide any services. So there is a moratorium on zero compensation” (Kaiganaine 2009).

Structure owner's views on slum clearance, land ownership and compensation – Albert Makobi, Soweto East

When a resident structure owner was asked of his opinion of the way land was cleared by demolishing buildings for the watsan facilities and the larger-scale demolitions for the KENSUP housing he responded;

“Mmh, To my conscience, I think it was ok. It was done; it was supposed to be a right thing. But the way they were doing it, they were not doing it a better way. Because sort of, people had to be compensated. But when it comes to this, there is something I don't understand completely. But maybe you ask me why people should be compensated... Because in one way or another, this person has borrowed some moneys somewhere. He's tried to invest this money, at least to help someone to have a house, you know. And then you see, when these houses are being cleared and there is no clear cut that maybe this is going to happen and this, it's as if maybe we were thieves, maybe, we assumed that maybe we are not...I don't know how I can explain it. I don't know what to say. It's something that I cannot understand. But you see, if it was done in a good faith, we could understand wholly and we could be...we would not have any rift but the way things were done, it was not done in a better faith...Urm to improve it, they would have done this; Ok, they would have asked us to form like cooperatives, in fact we have one. But we don't have much faith in them. We would have formed cooperatives, chosen leaders of our own, we negotiate with banks. Banks can lend us money; we build these houses on our own. And the government would assist us in building the roads and all that. But the way it's being done, it's not done the way we wanted it to happen.

In fact I have been affected thrice. Three of my houses have been brought down. I did not feel so bad. Ok, I felt bad, let me put it that way. Because the way it was being done, it was not done in a right way. Had it been done in a right way, I would not feel bad, yes...No we were not [compensated], but we would wish to be compensated....That's a good one.

As I told you earlier, structure owners are considered as people that, I don't know. That are thugs, that are thieves in the first place. In fact we are being labelled names that maybe we built here in a wrong way...there are just bad stories about structure owners. So there is no way you can go and tell them that I want to do this and this. Nobody is ready to listen to you. At least for now. Maybe tomorrow or something. Maybe things would have changed, I don't know...We...ok, there is a problem here. We've had a problem between land...no between structure owners and tenants. Tenants are supposed to be paying, yea? At least something little to return, to return your...ok, for compensation of what you...ok, you know you borrowed a loan or something. So you see this loan or whatever is supposed to be repaid, yea? But here it comes a case whereby the person who is in the house is not even paying the house. Maybe one month or two months or three months or whatever. And it happens not once, but it happens from one person to the other or something. So you see, when such like things happen or whatever, the grudge is built. Now you see, these people since are many, they'll want to say anything bad concerning the houses they live in. That is the same thing when people were being relocated here. The first phase, some people went on the roads, started demolishing the houses and yet the owners are there. And the court has said we wait until maybe we finish, maybe the case is heard and determined. But you see, they were taking law into their hands, son it's sometimes there is a problem. So landlords are not considered, it's like they don't have rights [to build our structures] you have to ask for permission.

You have to ask from the divided or allocated to people, we are asking for title deeds. That's one. administrators, because it's aand you have to explain why you want to do that. Maybe you can tell him or the administrator, ok. There is a small piece of land somewhere here and I want to erect some small house. Of which maybe tomorrow or a day after tomorrow or something, it can help me have enough capital maybe to elevate...to help me carry out what I am doing. Maybe, ok your income is also not that so good. So this is something to substantiate. So it gives you an extra income or something like that. But first, you have to dip into your pockets for you to get whatever you intend to. [Compensation] that is the first thing I would ask for, but I don't know who...I don't know if there is anybody who is going to listen to us since nobody is....I see is not listening.

Well, I've not consulted so much [with other structure owners], but I think from my understanding, most of us, our voices were not heard. That's why we had to opt for court issues and all that, so we thought, maybe that is going to be remedial. Maybe someone, maybe God is going to pass through somewhere and we will be heard...Ok, I don't know how I can say this. The structure owners, what they want is very simple, yea. Let the houses be built, but for the houses that are here, since we were not heard in the first place, so let us just be compensated. Because we wanted to be heard to form those cooperatives am saying. We...ok, if need be, we were supposed to be asked to produce 10% or 20%, or 30% down payment for us to borrow...for the government to borrow money for us. And then we build houses that we share equally among ourselves, regardless whether you have...you are a structure owner or a tenant. At least when you pay the down payment, it means you are concerned with the project or what is taking place. So what is happening in court, they just only want to establish whether, whoever has a structure or whatever, he should be compensated in a way or be shown somewhere else and be given a title deed. It's also a form of compensation but not in a money. Because now we are saying in form of compensation, maybe we are talking about money. Not only money is the issue. We can be compensated in a different way, at least to say thank you for all that you were doing. You host people who are working in industrial area. We quote for example our MP here, honourable prime minister. There is a company that is associated with him, which is East African Spectacle, maybe Chandaria biscuits and all that, we have Nyachae has very many factories. But you know, these people, there are companies. There are people who are working there who do not earn more than 10,000 (shillings). For this person to live in a house like Nyayo Highrise, or any other high rises or good structure houses or whatever was just difficult. This person had to opt to go in a slum simply because of the rent. That is one. Two, the distance covered from work to the house is also considered. Time that is taken along the way, even if it is a car or something, if you are living very far from town, most of the time you'll be getting to work very late. But now you see what? This group that I'm talking about is a group comprising security people, maids, ok these people who do odd jobs, you know. They are supposed to be there right on time. So the best place they could live in is Kibera. Now, for the fact that is put here a structure, this person did so much to help to sustain the economy. Because this money will be going somewhere and it's time wasted. And so many...many more conflicts over here, but this person did something for them to be around....to move from this place to the other. Because you see, if someone is earning less than 10,000 and you are telling him to go and go and live in a house he is going to pay 5,000, this person, maybe, the salary will not be sustainable to him. It will have to force him to leave this job to go elsewhere or whatever. Then in essence, he will not find someone to do that work, living in that house. So it means, that factory is bound to collapse. [Our court case...] As it has been established that this is a scheme in Kenya that has never been. Two, we want the government also to

help us to build the houses. After they have given us the title deed, you know if you have a title deed, you go to the bank, you are accessible...you have access to the money. So there at least we'll have...that's a firsthand information of acquiring a loan or something. But the way it is at the moment, nobody can listen to you if you don't have that title deed. The title deed shows the ownership. It's our prayer [that the government will give us the deeds], it's our prayer. And you know with a prayer, you're always...you are optimistic. If things do not come your way, fine, but you are always optimistic that I am praying that this has to happen" (Makobi 2009).

Key Points

- Policy reformation – had occurred within the Ministry of Housing and other departments to now service slum populations.
- Expectations of government – residents expect support from government.
- Compensation – Land tenure and ownership rights are complicated and many residents are demanding for compensation.
- Community sensitisation – and training conducted by NGO was of poor standard.

Development Direction

This theme of analysis brings together the stakeholders' priorities and aspirations for the future. The information gives an indication of the development direction that stakeholders are aiming towards.

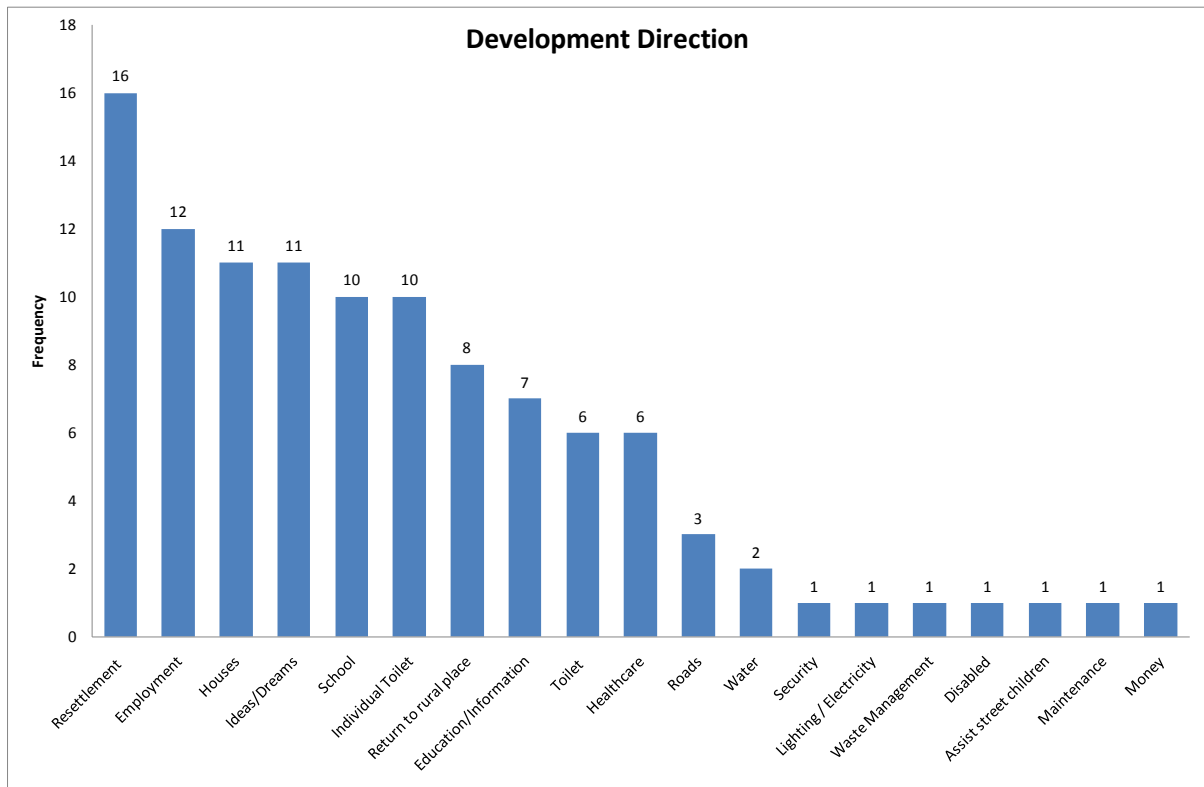
When questioned during individual interviews on the residents' short term needs and long term goals for life, the following tabulated results were generated, see Table 28.

Table 28 – Development Direction: Coded themes emergent from interviews

Priorities – Immediate needs	Aspirations – Long term goals
<i>Physical</i>	
Toilet	Individual toilet
Houses	Resettlement
Roads	Return to rural place
Lighting/Electricity	
Water	
Waste management	
<i>Human/Social</i>	
School	Assist street children
Employment	Education/information
Healthcare	Ideas/Dreams
Security	Money
Disabled	

The frequency of responses discussing development direction can be seen in the chart in Figure 119. Disregarding the non-specific topics of ideas/dreams, the most frequently discussed issues were; Resettlement, Employment, Housing and Education. This correlates with two of the top responses generated during the group discussion on priorities for life today – employment and education. The basic needs of food and water did not frequently occur.

Figure 119 – Frequency of responses for Development Direction at Soweto East



Priorities – Immediate needs

Physical Needs

Toilets

Toilets were mentioned by residents as a priority need (Kimotho 2009; Kwamboka 2009; Tutti 2009; Wanjiko 2009) and justified because ‘they are the source of all dirtiness’ (Okore 2009). But it was said that many more toilets are needed to cater for Kibera’s population (Omondi 2009).

Houses

An urgent need for better housing shelter was mentioned by many residents with some saying it was the main priority (Kwamboka 2009; Okore 2009; Tutti 2009; Wairimo 2009; Wanjiru 2009). It was suggested that housing with integrated and private watsan facilities would be a good solution to Kibera’s problem (Ambeyi 2009; Tutti 2009). It was also suggested that the government should provide the residents with building materials and leave the residents to construct their own homes (Kamau 2009).

The Ministry of Housing recognises the dire need for better shelter and housing at Kibera along with basic services which the residents are unable to provide for themselves (Muraguri 2009). The

ministry said that they have measures in place to prevent the growth and formation of new slums via development control regulations. It also has a mission to provide affordable housing via specific programmes but that these are limited by lack of funding (Muraguri 2009).

The wider KENSUP programme is aiming to improve housing conditions for the residents of Kibera and is charging rents at the new decanting site. When the permanent houses are constructed back on the Kibera main site it is expected that the residents will purchase their new homes from the government. However creating space is the priority of the government, not cost recovery (Muraguri 2009).

The government has been approached by international property developers to redevelop the entirety of Kibera but they have since dropped out as developers would be unable to recoup their costs or make a profit;

“Several investors have come and asked, but what again arises is that the investment involved and the costs. The costs that they are....how they will recover their costs, they make profit, as an investor becomes a challenge. So, it has not been successful as such. But the government would wish to have such coming. Because actually, we are not in a position to do the redevelopment. There are several [developers] that have approached us, but when they do their cost analysis and all, it ends up being very expensive which majority of our people cannot afford. And that company would need to recover its costs and its business from. That’s why the government has just to take some funds and do it itself. They [the developers] approached the ministry, sometimes through the ministry of finance. But the hard part has been that the types of houses these companies produce end up still being unaffordable to the majority...There have been several investors who come to us and some of the conditions that they put to us, also it becomes difficult for the government to guarantee. Because they want the government to guarantee that I will cover these costs. And they do the analysis, the government cannot commit itself that, because it means, sort of, it’s the government to pay the investor” (Muraguri 2009).

Roads

Roads to aid transportation within the settlement were suggested as a priority need (Kwamboka 2009; Wanjiko 2009; Wanjiru 2009).

Lighting/Electricity

One resident suggested lighting needed to be improved immediately (Wanjiru 2009).

Water

Two residents said water supply should be a priority (Khamali 2009; Nyaboke 2009).

Waste management

Improved waste management and dedicated dumping sites were requested (Kimotho 2009).

Human/Social needs

School

There were many suggestions from residents that schooling is needed urgently (Ambeyi 2009; Kamau 2009; Kimotho 2009; Makobi 2009; Tutti 2009; Wairimo 2009; Wanjiko 2009). Many residents of Kibera are forced to pay school fees to secure a good education for their children (Nyaboke 2009) and there are not local schools to each area in the large settlement of Kibera (Okore 2009).

Employment

Employment needs received a very high number of discussions among residents and the need for more employment opportunities was stressed (Ambeyi 2009; Khamali 2009; Kimotho 2009). Training, education and support to establish businesses were highlighted (Nyaboke 2009) and suggested that the government could support, for example by building market places or offering business start-up loans (Omondi 2009; Wanjiko 2009). Residents said that lack of income due to lack of work is holding back their development (Nyamoita 2009). Maji na Ufanisi have conducted participatory urban appraisals with the community and understand that it is lack of income that is holding back the community from moving to better living conditions (Githaiga 2009).

“One thing I could come out is to ensure that those people coming from Kibera, the young ones, those who are going to school, after schooling I would ensure that they get employment. After that, then Kibera would come to a different phase. But since we don’t have, for example in Kenya it is very hard to get employment if you don’t have someone there to support you... Even here in Kibera we have people who have gone to school. Even we have graduates here but to get employed is very hard because they don’t have someone there to give them the job. So if I was the president, I would have ensured that people who are coming from Kibera; they get employment and get first priority. For example when we are employing people from the police force, I could set a bas her. I would take the young men from here first and they are employed in the police force. When they come back with that salary, they will improve here. And they will change the living standards of the people at Kibera, but we are not doing that. We struggle, we take our children to school, after that, they will still come back here; they don’t have employment, now they will engage in bad activities” (Tutti 2009).

Healthcare

The basic government service of healthcare was highlighted as lacking (Kimotho 2009; Okore 2009; Omondi 2009; Wairimo 2009) and currently not being affordable for Kibera’s residents (Kwamboka 2009; Nyaboke 2009).

Security

Improvements to Kibera’s poor security situation were mentioned (Kamau 2009)

Disabled

Better support for disabled people was mentioned as being needed (Ambeyi 2009).

Aspirations – Long term goals

Physical needs

Individual toilet

Many residents supported the idea of having a private toilet for their household and said they'd do their best to contribute towards the cost (Khamali 2009; Tutti 2009; Wairimo 2009; Wanjiru 2009). People said it would be best to have watsan facilities within their own home rather than communal blocks for hygiene and security reasons (Ambeyi 2009; Kwamboka 2009; Nyaboke 2009; Wanjiko 2009). One resident felt that individual toilets within homes would not be possible due to space restrictions (Makobi 2009).

However the Ministry of Housing do not think individual toilets are feasible for the settlement as they would not fit with the future redevelopment plans and the unplanned nature of the site would make it very difficult (Muraguri 2009). Maji na Ufanisi feels it would be unsustainable to have more individual toilets per plot because it would not be possible to connect to the main sewer system and ownership rights may cause issues as to whether the tenants or the plot owner own the facility (Githaiga 2009).

Resettlement

The KENSUP plans for resettlement to new housing were most frequently discussed, but with mixed responses from residents. Some are looking forward to being re-housed in better conditions with integrated watsan facilities and electricity connections (Ambeyi 2009). Others disagree and feel that the current problems of Kibera will move with the people to the new housing (Kamau 2009), that the housing will be a failure (Makobi 2009) and that the houses will be wrongly occupied by the residents with more people and drive the poorer people away as has happened with earlier housing projects at Kibera (e.g. Highrise) (Khamali 2009). Residents also said they thought the houses will end up being of poor quality as has happened in the past (Kimotho 2009). And will cause problems for structure owners losing their assets (Kimotho 2009). Residents feel that the decanting site is an inconvenient location and will detrimentally affect their business and that the rents at the new housing are too high, so are considering moving to another slum (Makobi 2009). This point is supported by another resident who claims the charges are far too high, 'a sham' (Wanjiko 2009). Others would like to move to the new housing but cannot afford the rents (Wairimo 2009). Some residents have also seen that people who previously relocated had to move back as there was no water available and so do not want to be included in the resettlement plans (Wanjiru 2009).

Others think the relocation plans are good and are looking forward to being allocated a new home with more space and better facilities (Kwamboka 2009; Nyaboke 2009; Nyamoita 2009; Okore 2009; Omondi 2009).

“That’s bad [the new housing]. That’s very wrong because there are pupils who couldn’t make it from where they were taken to school, that was interrupted. There are those who go on foot from here to the industrial area of Nairobi to work there. Now they can’t go working. The houses that they were taken to have no electricity, have no water in the toilets. And if you break a window pane you can’t repair it. It’s pretty expensive” (Kimotho 2009).

“I was supposed to be in the first lot [of people relocating]. But then I had to sit down, compared how much am going to pay when am there, and the time I will be spending on the road [travelling to work], how much I will be paying, I had to look for another place to relocate to rather than being taken there because there I think it is a bit inconvenient. Urm,. It’s a bit funny. In fact the clear cut answer I can tell you; maybe I will move to another slum. Until all slums are cleared, maybe in the country, that’s when I’ll have to say, ok, goodbye to the slums let me go to a better house. Because you see, one, ok we were saying, as we were coming to Nairobi, we even saw these other big or good houses. But everybody chose. You chose where to go. Because you see, one, you looked for affordability, you looked at the convenience of travelling. Now if you tell me that I have to move to Highrise or something or those houses, then it means my expenses is going to go up, so unless I have to look for something. Or else, I can even go at home [to my rural village] at once and then leave Nairobi completely....No, no, no. [Kibera should not be left as it is] It should be upgraded but in a better way. The people on the ground should be involved. [KENSUP] It’s going to collapse. It’s going to collapse because there is no mutual understanding between all the stakeholders. It’s not sustainable. It’s just going to collapse like the one they started in Mathare, this one is also going to collapse. Because you see, if you have a house, first thing is to call all the stakeholders. Even if this other person does not have much say, the one who has more say and the one who has small say, call them together, ask them what they need. Don’t dictate what you want them to do. If you do that, you are going to fail” (Makobi 2009).

“I think this is a foreign donation [KENSUP Housing]. The UN wants people to live in good standards. It’s a very good idea. I have personally been there. It is so nice. One is given a three roomed house, though others are given single rooms depending on the family size. For example as a family man, I would be given a three roomed one. One is my bedroom, the other is the sitting room and the last one is for the kids. That is a very good lifestyle, and if it will be charged at five hundred shillings then it is a better plan. [Relocating my business] That is the challenge. I may go there and be given a house on the storey. And there is no space to do the business. It will affect me slightly but as you know, any good thing must have hiccups at the beginning. I believe with time, we will adapt. But even if I am relocated, I still have my hands and will look for a job elsewhere and continue with life. And it is also being said that once they build these ones into good structures, we will be allocated working space and if that plan continues, we will appreciate...Just as I had mentioned, initially. It will be a little tough. But with time, we will cope. But again, as I had said, we were told that after the redevelopment, we will have workshops at the ground level. We will just be given back the workshops, for those who have the expertise like us...You know, this is the government land and it is up to them to decide whether they will give you anything for the relocation process. For example, you cannot carry these iron sheets to the new place. But as I said, that depends on the government” (Okore 2009).

Return to rural place

It was common for residents to plan to return to their rural ancestral home once they feel they have earned some money and experience in the city (Ambeyi 2009; Nyamoita 2009; Omondi 2009). Residents expressed a desire to retire in their village and to return to a farming livelihood (Kimotheo 2009; Tutti 2009).

Human/Social needs

Assist street children

One resident said that Kibera needs to develop to better protect street children (Nyaboke 2009).

Education/information

Longer term education prospects were highlighted as a development need to enable future generations to better themselves and gain meaningful employment (Kimotheo 2009; Nyaboke 2009; Nyamoita 2009; Omondi 2009; Tutti 2009; Wanjiru 2009).

Ideas/Dreams

Residents expressed many dreams and ideas for an improved Kibera in the future. Help for minority groups particularly orphans and the disabled was mentioned (Ambeyi 2009). Employment opportunities (Khamali 2009), provide loans to support businesses (Wanjiko 2009) basic services such as healthcare and schools (Kimotheo 2009). Redevelopment of the settlement by residents and structure owners themselves (Makobi 2009; Wanjiko 2009), to build houses and eliminate corruption (Okore 2009), allocate land ownership (Wairimo 2009), Bishop Dihanda, the SEC Chairman said there is a need in the community for a meeting hall (Dihanda 2009).

“I’d make this place to be beautiful. To change the outlook. .The good outlook, yea... To change their lifestyle. I connect for them water, I make them... like go to seminars, get educated, be given money for business, I train some members. I still use the same members to train them, to employ them, and they have jobs, you know” (Nyaboke 2009)

“It’s very simple. I’d ask all these people to come together, ask them all to come together, have them form cooperatives, as the ones that are on the ground, ask the people to give some down payment. Those that are ready, we negotiate with banks, we build them structures and they start owning them immediately, not relocating them from here to the other side or whatever. Because here is the place they chose, it’s nearer to the town, it’s nearer to the place of work and all that” (Makobi 2009).

“I would have built them houses and you know, here in Kibera, there are those who go hungry. We have different kinds of people. There are even those who cannot afford the money to buy water, just here in Kibera. And I would, since I know there is normally money that come here as donations, I would strive to ensure that these people get the aid. But this is not normally the case since those who handle the money are corrupt. And as the president, I don’t know if it would have been possible to walk door to door, giving out that aid or what. Because if these other people are sent, the report does not reach the residents as desired. And for sure, people are suffering. Not that I am trying to add my own lies. It is true. Then I would like these houses to be built, but without any form of corruption. I would ensure there is food, so that poverty levels can go down. Because even if we can take a walk down there, there are places that if you go to, you wouldn’t believe your eyes. You can’t believe it. So I would like to ask that the upgrading project should continue” (Okore 2009).

Money

One resident said their basic need for now and the future is simply more money (Wanjiru 2009).

Key Points

- Basic needs – Residents immediate and short-term needs cover very basic services and requirements for human survival.
- Education – and access to information is felt to be holding residents back from developing and aspiring to a better quality of life.
- Resettlement – Mixed reviews about the KENSUP housing plans have split the community.
- Commitment to place – Long term most residents intend to return to their rural place so have no real emotional ties to the settlement or their housing, therefore renting suits the majority.

Summary

Many of the blocks are not reaching their potential as they are either unfinished, mis-managed or damaged. During field visits three blocks were reported by the facility managers to not yet be connected to the sewers. On average the blocks were open from 6am – 8.30pm. Soap is provided in five of the facilities for showering only. No security incidents were reported to have occurred within the block, but there were reports of people's fear to use the blocks at night due to distance from the main road. Incidences of muggings just outside the blocks have been reported. Some of the showers and particularly child's bathrooms were used as storage areas for building materials therefore not functioning. During the months of the visit to the facilities there were water shortages in Nairobi. There is a lower tolerance of water shortages in Kibera as there is usually a steady supply of water to the settlement due to its location above major city water lines. However, this water is not necessarily clean (Bilal 2009). These shortages meant that many of the blocks only received flowing water one to four days a week due to water rationing. Therefore although some of the facilities were connected to the water lines it was necessary to manually flush with buckets of water which had been stored for use during such water rationing periods.

The key stakeholders involved in the project are very pleased with the results of the project. Although they are yet to realise their plans for the construction of the final 8th block for which space for a site is still being negotiated in the community (Githaiga 2009). The responsibility of completing the three remaining sewer connections is down to the utility companies.

One of the seven toilet blocks is barely being used by the community. Just 20 visitors a day, compared to the average 200 visitors at the other blocks. In discussion with the residents this is partly due to the fact that nearby water vendors are now undercutting the cost of the water sold at the block by Ksh1. The local residents are choosing to walk the short distance to collect their water at a cheaper rate. Some of the other residents claimed that they preferred to use the flying toilets as they are also cheaper than paying for the toilet facilities at the block. This is contradictory to the

fact that the cost of some types of plastic bags has risen, but demonstrates that residents are prepared to recycle previously used carrier bags and newspapers to save money. The community formed management committee of this block is not meeting regularly and is lacking advice from the Settlement Executive Committee (SEC) to improve the situation.

This upgrading project was led from the top by the government with UN-HABITAT. The NGO Maji na Ufanisi was hired (via an advert through the local paper) as building contractors to organize the construction of the facilities, as community mobilisers and for community sensitisation; but they admit that the cost of ongoing social capacity building has been considerably more than they had originally budgeted for (Githaiga 2009). Maji na Ufanisi worked in collaboration with the Settlement Executive Committee (SEC), which was elected to represent the community residents, structure owners and local authorities in the village. The SEC was conceived to form a communication link between the community and the government and was supposed to be democratically elected. Individual management committees were formed and registered as community based organisations to manage the individual toilet block facilities.

Soweto East's residents reported that they were not aware of the election to vote for community representatives of the SEC. They expressed a view that they would have liked to have had the option to have their say in who should represent their village (Nyaboke 2009). The voting was done on a week day when most residents were at work and many were not informed or invited to express their view in the voting process, suggesting that the SEC formation was not as democratic a process as had been planned. This may have had implications on the selection of labourers jobs (recruitment was organised by the SEC) available for certain tribal groups. One village resident expressed his disappointment that he was not hired as a construction labourer for the block development due to his tribe (Ambeyi 2009). Indeed there is also tribal domination within SEC (Kaiganaine 2009).

It was also found that some residents of Kibera and active members of SEC are relatively wealthy and benefitting from running businesses within the settlement without paying taxes (Dihanda 2009). These are individuals with assets but who choose to operate and reside within the slum to save money and presumably as they prefer to avoid a middle-class lifestyle in order to enable them to run their tax free livelihood. Other members of SEC were found to reside outside of Kibera despite representing the community.

Chapter 9 – Cross-case analysis of Kibera

One cannot deny the need for clean water and decent sanitation facilities in Kibera, although if the residents are asked what is their biggest need, income generation is prioritised. The two upgrading projects in Silanga and Soweto East have both significantly contributed towards raising standards of living in Kibera. Improvements in health (and saving costs of healthcare), time cleared for activities (other than water collection), income generation (for the management committees), hygiene awareness, a meeting place, defecation with privacy and a sense of pride to have the facilities in their community are just some of the benefits mentioned by the community. The community value placed on these toilet facilities was demonstrated during the post-election violence when the toilet blocks were protected from destruction by the community. Both delivery models in Silanga and Soweto East have resulted in a successful development project in the short and current term (Cronin and Guthrie 2011).

Security of tenure, land issues and governance remain the primary hurdle to overcome in upgrading or developing Kibera. Due to community sensitisation the residents of Silanga freely gave up their land for the construction of the toilet blocks. However, in Soweto East, there are claims that the toilet construction was forced upon them resulting in compensation claims from structure owners for the loss of their buildings. Some structure owners claim they were compensated, some claim they were promised compensation but never received it. The NGO Maji na Ufanisi states that the structure owners were deservedly compensated through small community contributions (Githaiga 2009). When the community were asked about this they adamantly denied that this would even be possible as they do not have the capacity to raise the quantity of money that structure owners require. When UN-Habitat was asked about the issue of compensation they adhered to government policy that structure owners at Kibera can never be compensated as they do not hold any rights to the land which belongs to the government. It seems that Maji na Ufanisi and UN-Habitat have conflicting views on the issue of compensation, and somehow some funds managed to reach structure owners (Bilal 2009; Nyaboke 2009). Conversely, in Silanga, the NGO partnered with existing community groups right from project inception. Extensive community sensitisation meant that the community welcomed the construction of new facilities and so gave up the sites freely. No demands for compensation were reported.

Maji na Ufanisi had previously been working in Silanga but no single facility of theirs is working, they did not complete what they started and are considered by some stakeholders to be an ineffective NGO. Many of the committees that were formed to manage those facilities are facing problems (Nyaboke and Bilal 2009). Practical Action's approach of bringing existing NGOs together under an umbrella organisation network allowed the existing community to drive the project and have significant ownership. This approach was much more effective than UN-HABITAT's approach of forming new committees which once left unsupervised fall apart. This has shown that Practical Action's approach of bringing together and strengthening the existing groups is much more sustainable long term.

Long term, and when considering sustainability, the two delivery models each have their advantages and disadvantages. Short term, the Silanga ('bottom-up') project had a more successful model of engaging with communities, understanding community needs (as visible in the appropriateness of

the block designs) and better management of facilities. The Silanga project also commendably influenced the policy of the utility companies to realise that delivering their water services to the informal settlements of the city was a viable business model, and one which they have said they will be repeating across the city. Long term, the Silanga toilet project will someday be demolished when the government's KENSUP resettlement project reaches Silanga village.

Short term, the Soweto East ('Top-down') project had a less successful means of engaging with communities which has impacted upon the management of the toilet blocks. However, at the time of the field visit, more of the Soweto East blocks were fully functionally than at Silanga (due to unfinished sewer connections). Transfer of knowledge and capacity building at state level to function more along the lines of the ('Bottom-up') approach successfully demonstrated in Silanga could greatly benefit the government KENSUP implementers. However, the government-led project had a strong influence on government departments dealing with public services and has drawn beneficial attention to the situation of the urban poor in Nairobi.

Long term, it is the Government of Kenya who owns the land of Kibera and who should have the responsibility of the development of its own settlements and cities and who has the responsibility to provide an enabling environment for its citizens to develop livelihoods. If it was possible to increase the community ownership of assets, for example having access to land and other services, this could enable residents to improve their livelihoods. With the KENSUP project the government has demonstrated their acknowledgement to serve the low income population of their country and is taking valuable incremental steps towards developing sustainably.

Despite the many positives that have come out of these two watsan projects, there are also consequences to consider when a larger volume of water is supplied to an informal settlement. With the increased water volume, there now also needs to be intervention to improve drainage and waste water as well as storm water management within the settlement.

Despite the obvious successes, it is clear that the new facilities are still not enough to cater for the current and growing population of Kibera. Many residents are still having to use flying toilets and poor pit latrines as simply the demand is too high.

Another negative point is that some structure owners who were previously generating an income by charging for the use of their private pit latrines, are now finding their businesses are suffering. Watsan projects in Kibera could partner with structure owners to strengthen their toilet businesses while improving the watsan infrastructure.

Nairobi suffers from water shortages brought about by drought. Therefore perhaps other toilet technologies could be considered as well as the conventional flushing toilet which consume less water. For example ecological sanitation solutions and biogas technologies might offer opportunities for Kibera. Any new technology however will have challenges in terms of cultural acceptability and maintenance.

The residents of Kibera are held back from developing due to economic deprivation causing poverty. As well as the government providing an enabling environment, there is a need for the private sector in Nairobi to develop the economy to encourage job opportunities and improvement of livelihoods. There could also be an opportunity in Kibera to concentrate more on an enterprise development

approach when upgrading watsan facilities. The blocks that are constructed could be used to strengthen livelihoods further than they currently are by providing a small on-site commercial space, for example for phone/internet and shop services.

During conversations with residents it is clear that employment opportunities are considered the most pressing need by residents, as residents consider lack of employment and funds are contributing to the situation of poverty in Kibera. Many of the residents interviewed would also prioritise job opportunities above physical upgrading activities such as the provision of toilets and water supply. However, residents are well aware of the advantages and savings made thanks to clean water supply and reduced medical care needed due to improved health. However, the research found that residents would still prioritise job opportunities and be willing to make do with their physical conditions and environment. After all, their rural places are physically better living environments, but people continue to migrate to Kibera in search of work. This is also something which many rural family members rely on their relatives in the city sending remittances home. This research has shown that despite poor water and sanitation facilities in Kibera, many residents consider it a good place to live as it offers them an affordable lifestyle along with work and education opportunities. This may be due to the community's low expectations and aspirations not helped by a lack of education opportunities. It was also commonly found that most residents at Kibera do not consider the settlement their long term home and plan to return to their rural place for retirement, therefore they do not have an emotional attachment to the place.

It is clear to see the successful impact that capacity building has had upon the communities involved in these projects. But in future, communities need to have even further improved capacity to enable them to invest their own resources to find solutions to their problems. This capacity and capability needs to be improved via better education and to improve residents' aspirations and drive to better themselves rather than make do with the situation and assume government handouts.

These two projects have successfully demonstrated that watsan services can be delivered to informal settlements and have overcome planning barriers which previously prevented the government and utility providers from servicing this section of society.

At the time of research, many of the structure owners whose buildings are facing demolition under the KENSUP plans are currently unhappy in Kibera. A court case at the end of November 2009 ruled in favour of KENSUP as landlords have no legal ownership of the land upon which their structures are sited. Therefore there will be no compensation and the demolition of structures on Soweto East has begun. The fear for the new KENSUP houses is that the rich will occupy them and the needy be shunned out as has happened with previous projects such as at Highrise which are now inhabited by civil servants. One solution for Kibera could be for the government to allow the structure owners to invest in developing the site, in accordance to master planning guidelines formulated by the government. If local residents and/or structure owners were given the assets in the form of the land title deeds, they would then further invest in their assets. Many structure owners are in a position to raise funds for such construction work and could in turn generate a rental revenue from their investments. This would be using the capacity of local resources and not rely on external funding or support. It may also be the case that Kibera's structure owners are quite capable and better connected to the community than any NGO or development agency and so have a good understanding of the real needs of their tenants. Structure owner redevelopment could provide a

sustainable business model which simultaneously houses and services the urban poor. However, the government have clearly stated their position that property rights to Kibera's land will not be transferred and no such plan would ever be permitted.

Thus far there is no sign of any construction for the new housing under KENSUP because of ongoing court cases and upgrading contractual logistics between the Ministry of Housing and UN HABITAT. The structure owners are appealing the court's earlier decision against the government award of compensation for the loss of structures required to be cleared to make way for the new housing. However, UN-Habitat and the Ministry of Public Health have been able to construct a community resource centre and health facility for people living with disabilities. The building is complete but is yet to be opened (Bilal 2011). The majority of residents who have been moved into their temporary houses at the Langata decanting site are very happy with their new homes and services (Bilal 2009). The general feeling among the residents of the villages yet to be resettled is that they are very keen to be included within the plans and hope to soon realise their dreams of a better future in a better Kibera.

Chapter 10 – Conclusion, Reflection & Further Work

This research, spanning two continents, has found that there are many misconceptions around slums which can affect the sustainability of measures to upgrade informal settlements. The way that international development organisations and westerners view slums is often very particular and not always resonant with the way that slum-dwellers view their living situation. Priorities for development are not always consistent across stakeholders and upgrading partners who normally come from varying cultural backgrounds and professional situations.

Reliance on service provision

Outsiders of the slum may see physical deprivation, chaos and inefficiency, but from the inside slum-dwellers see their home, a situation they are able to cope with and in many cases that they are quite content with, if not happy. Many slum-dwellers actually make an efficient service out of what they manage to gain from the slum. For example, if they know they only get electricity for one hour a day they work their lives around it, similarly, if they know they can only get water from a communal tap-stand they adapt to the situation and know when the best time is to do their washing. The residents are flexible and learn to live with their situation. Their elasticity is high, even if their service provision is low. Perhaps their elasticity is high *because* their service provision is low. If people have a higher service provision they will develop an increased reliance and so have lower elasticity, as is common in more developed communities. In the west where many international development professionals originate, the populations are less able to respond to such a situation and would consider it a crisis. Reliable service provision is expected to be provided in many western communities, but the priorities of developing communities are more basic. Where the next meal is coming from and educating future generations is of more concern than service provision.

Differing backgrounds and priorities for development across stakeholders have an impact on the sustainability of slum-upgrading delivery models. This research conducted across a range of slum upgrading options and contexts has enabled a number of interesting observations to emerge;

Choice

Many people choose to live in a slum. People with reasonable incomes reside in slums for a variety of reasons. Taking advantage of the informal economy and tax evasion in an informal settlement enables people to generate middle-class incomes that they might not have done otherwise. Slum-dwellers also benefit from low or no housing rent, subsidised services and charity. For some people, sitting outside formal government structures is advantageous. However, despite comfortable incomes, many slum-dwellers do not value middle-class lifestyles. In India in particular people are often less materialistic than in the west. Many believe in the notion of Karma or Samsara and reincarnation, and willingly accept the standard of living that god has given them in this life, holding the belief that if they do their best with their situation, their next life will be better. In Kenya, many see their current situation in Kibera as an interim stage and an advantageous opportunity allowing them to get work from the city with the plan that they will return to their villages to retire. For many, home is considered to be the village. Therefore life in Kibera is a good opportunity to make the most of, not the desperate situation that many outsiders see on the surface. This research has shown that people's priorities in the slums are not the same as those in the developed world. Therefore international development organisations should remain sensitive to the pragmatic

advantages of being a slum-dweller. However, despite the positives of living in a slum, residents still have to struggle with a desperate daily life overcoming issues such as crime, abuse, prostitution, poor healthcare etc. Many people live hand to mouth and are exploited because of their situation.

Community cohesion

International development organisations should not impose the assumption that slum-dwellers always aspire to a particular lifestyle or physical living condition. Although materially they may appear to be living in poverty, spiritually they may in fact be very rich, something which is often overlooked by outsiders. One of the defining characteristics of a slum (as defined by international development organisations) is overcrowding. This research found that slum-dwellers do not consider crowding a priority issue to be resolved. This is supported by urban density research conducted by Arif Hasan and IIED which demonstrated that high density building designs work for the poor (Hasan 2010). In the informal settlements investigated, both in India and Kenya, community cohesion is more important. Such communities live together following a way of life that is often alien to those in the developed world. For example, in India generations reside together as joint families and the idea of putting an elderly relative in a care home or a newly married couple setting up a separate home together is considered strange. Westerners often live a more isolated lifestyle where it is not unusual to have never met one's neighbours, something unheard of in informal settlements where communities support each other in a very positive way.

Appropriate building design

In all the case studies tribal tensions, community hierarchy and domination emerged as causing tension among communities but overcrowding was not found to be a negative aspect of residing in a slum. Slum housing which is normally at ground level enables families to use the threshold and outside areas as social and living spaces which are highly valued by slum-dwelling people. This aspect is crucial for the cultures of these communities and is an example of how the built environment can have a powerful influence upon social cohesion, happiness and life generally. Appropriate housing design for slum-dwellers following these living cultures is therefore vital for the sustainability of a slum-upgrading development. Slum dwellers also appreciate flexible building designs which give the occupant more control and the option to make incremental additions and extensions as their family grows. The NGO Shelter Associates worked in collaboration with communities and understood the importance of outdoor space for the culture and so designed their low-rise housing accordingly. The SRA project at Nanapeth was confined by building footprint and therefore used a high-rise building design which had the detrimental effect of breaking up communities and eliminating the threshold which was so important to the residents. The research found that high-rise buildings and living at altitude is not the problem, but the internal layouts that were designed which have detrimentally affected community cohesion.

Security of tenure

Some individuals are held back from bettering their living situation and are forced to reside in a slum. Due to insecurity of tenure, lack of affordable housing and poor economic mobility, residents are either unwilling or unable to make investments in their home. A commitment to the settlement or housing is needed for residents to invest in their property themselves, but if they do not hold the title deeds to the land, they will always be reluctant to make such investments as they could be taken away from them at any moment. In many cases slum-dwellers accept this situation and the accompanying benefits that if they are illegal squatters they do not have to pay formal rents or taxes

and the opportunity that the slum in the city offers e.g. for better employment and education opportunities. Residents make the conscious choice to accept their housing situation but remain to be held back by insecure tenure.

Coordinated planning policy, governance and partnerships

Provision of affordable housing and basic services may be considered to be a government's responsibility, for which coordinated master-planning is needed. A piece-meal approach to developing slums via pilot and NGO projects does not support the wide-ranging, far-reaching and forward-thinking strategy which is needed for cities to develop sustainably and cater to growing populations. Only governments have the power to influence planning policy for their cities, but as this research has shown, government projects do not always successfully engage with communities or implement their schemes as sensitively to communities as they could do. NGOs however work in a different way and are able to successfully communicate and empower communities to embrace slum-upgrading interventions better than governments. But, NGO projects ultimately undermine governments unless they have an impact upon institutional frameworks and are able to implement activities to influence governments for future projects, such as Practical Action's successful influence upon service provision in Nairobi's slums. The alternative stakeholders have very different professional working styles which affect their capability to work coherently together. But governments can learn from NGOs and the parties would be best to operate alongside each other in a supportive manner rather than compete and undermine. The SRA in Pune has developed a successful and city-wide strategy to improve urban slums with the support of private developers. This delivery model is highly sustainable, but would benefit from the involvement of an NGO to form a better community relationship and to design more socially appropriate housing such as that at Hadapsar delivered by the NGO Shelter Associates. Despite their short-fallings, the KENSUP and SRA schemes are in the long-term more sustainable than any more socially sensitive and appropriate housing delivered by the NGOs in Pune and Kibera which may be sustainable in the shorter-term. In an ideal world, NGOs, governments, the private sector and donors would work together in a partnership approach to combine their skills and working styles. Donors such as the Rotary Club with their unique approach enabling cross-cultural communication, skills as well as funding; private companies with professionalism and efficiency; NGOs capable of gaining the trust and support of communities; and governments with the power to repeat and scale up projects. Ultimately, political will and supportive institutional frameworks are crucial for sustainable slum upgrading.

Ownership

The research has shown that the management of the operation and maintenance of upgraded infrastructure needs to be under the control of the recipient, be that the state or the community. An appropriately designed and implemented intervention that the recipient is able to maintain, and is motivated to maintain is an indicator of the sustainability of the project. This sense of ownership is crucial for the success of a physical intervention and was demonstrated by the communities at Hadapsar and Silanga which had been mobilised to be involved with the upgrading at every step of the implementation. At Hadapsar the residents had contributed financially which aided the community's buy-in and had a real sense of ownership. The upgrading was made affordable to the community. As was mentioned previously, this successful sense of ownership can only be achieved with the release of title deeds and security of tenure to the community.

Livelihood generation

Enterprise development and employment opportunities are needed alongside slum upgrading activities for poverty reduction. A key component of the success of the watsan projects in Kibera was the formation of management communities and jobs created for the facility managers. These jobs helped position the new facilities within the centre of the community and helped to gain the respect of the society and therefore value of the project. By valuing the project the community consider the facilities to be an asset to the community and are more likely to protect it for the future and operate, manage and maintain it as best they can for the good of themselves and future generations, thus supporting sustainability. Conversely, although highly sustainable in other aspects, neither of the two Indian case studies had core enterprise development components. Business units were provided at Nanapeth but these were found to be limited and the community at Hadapsar were forced to relocate away from their previous livelihoods due to the hazards of the river. Again, the engagement of an NGO to work with and support communities with their livelihoods at Nanapeth would have been beneficial, and had the overstretched NGO at Hadapsar had the funds and resources to better support income generating activities the communities would have been able to improve their economic mobility.

Cultural differences

The interviews conducted during this research revealed significant differences between the Kenyan and Indian residents which affects the sustainability of slum upgrading interventions in those contexts. In India the people were found to be a strategic, hardworking and forward looking population with the hope and desire to better oneself and situation of future generations. The mentality in Kenya differed in that there was less of an emphasis on personally bettering oneself and more of an expectation of support from others and particularly the government with less responsibility on the individual. It could be interpreted that the people's aspirations differ across cultures and impacts their hopes and desires. Aspirations in life may be developed from an awareness of opportunities, access to information and education which both cultures have been deprived of.

Advantages of slum-dwelling

The slum development discourse has been led by people who do not reside in slums and often international development professionals coming from a developed or westernised point of view. Such people may consider the physical manifestation of slums as demeaning in some way of the human ambition. Some more wealthy people may be repelled and fearful of slums as in a sense the expression of where society needs to escape from. But this research has shown evidence that slum dwellers do not always consider the slum as a key feature of their lives, but rather their relationships, spirituality, creativity, hope, ambition and their dreams. In the west we have an obsession with cleanliness and order and slums fly in the face of both, although there is a resilience to slums that is probably far greater than is found in more ordered and controlled societies. Slum dwellers know how to live with intermittent services, unhygienic conditions, inadequate income and so on in a way that more structured societies could not.

This research has benefitted from a methodology with ground level surveys that allowed people to express what they really felt rather than answer questions that the researcher had predetermined the priority of. The rigorous, academic yet personal nature of this research methodology has enabled more sensitive data to be gathered which has highlighted the common misconceptions

around slums and slum upgrading intervention. For sustainability, any slum upgrading activity must be sensitive to the situation of an individual community and culture, and not assume that the residents are unhappy living in desperate poverty, as it has been shown, many choose to reside in a slum. Slums may be dirty, poorly serviced and overcrowded but are also places of great human energy, community spirit, kindness, hard-working, creative and happy places that many consider home.

Considerations for practitioners

This work has shown that the views of the various stakeholders involved in slum upgrading are not always consistent, no matter whether they are from the local context or outsiders. Priorities differ, and so this has a significant impact on how upgrading should be delivered to satisfy the different parties' needs. The route to sustainability is not always clear-cut but there are common characteristics across the slum upgrading case studies investigated. The culmination of this research can offer a number of recommendations that slum upgrading practitioners may consider when aspiring for sustainability in their work;

Table 29 – Considerations for slum upgrading practitioners

Do not impose your values

- Don't assume that what is being delivered is what the slum-dweller wants. Don't assume that the slum-dweller wants help to develop. According to your expectations you may feel it is needed, but it may not be considered a priority to the slum-dweller. Be culturally sensitive.

Be sensitive to the pragmatic advantages of slum-dwelling

- Residing in a slum may have benefits such as; tax evasion, free healthcare, affordable lifestyle, central location. If standards were higher, the cost of living may be unaffordable to the slum-dweller, therefore the slum may offer an advantageous opportunity. Many people reside in slums out of choice.

Consider appropriate design

- **High density** housing may be preferred by the slum-dweller; overcrowding may not be an issue and can aid cohesion in low-income communities. Consider the impact of building design upon community cohesion which has been shown to be a priority for slum-dwellers.
- **Flexible building designs** which enable the inhabitant to make incremental additions, or with the option to extend are often preferred by slum-dwellers.

Security of tenure

- A commitment to the settlement and/or security of tenure is needed for residents' sense of ownership, to be incentivised to make investments themselves, and to maintain and care for the assets into the future.
- Do not assume slum dwellers want to own their home or prioritise housing in their lives. Slum-dwellers may not care about ownership and security of tenure preferring to rent. There are advantages to renting which may suit residents best.

Governance

- Coordinated master planning is needed by governments for their cities. Political will and supportive institutional frameworks are crucial.
- NGOs should not undermine government, but share their skills to work together with governments.
- Measures are needed to prevent the formation of new slums. The provision of affordable housing and related infrastructure for a growing population is vital.

Scaleable

- One-off pilot projects which cannot be reproduced, scaled up or do not positively affect housing and planning policy are unsustainable.

Maintainable and Operational

- Management of operation and maintenance needs to be under recipient control. Upgrading should be affordable to maintain, with parts and skills available. Recipients need to be motivated to want to maintain the upgrading.

Affordable

- Costs should be appropriately affordable to the context in order for upgrading to be scaled up, repeated and maintainable. Financial contribution towards housing aids sense of ownership and value of the assets.

Livelihood generation

- Simultaneous enterprise development and job creation is needed alongside upgrading for poverty reduction and to enforce asset creation, sense of value of the upgrading and the community's incentive to maintain it for the future.

Reflection and Further Work

The interpretive qualitative epistemology of this work was ideal for sustainable development research of this nature. The methodology designed for the investigation was particularly effective as it enabled the capture of behaviours and attitudes which was most appropriate for this research focussing on the social aspects of sustainability. The particularly distinctive multi-disciplinary nature of the work has enabled a broad investigation of sustainability. The ground level methodology has been unique and enabled the capture of rich data directly from the source minimising the chance of misinterpretation. The case studies have offered both depth and breadth to the investigation and the rigorous process of analytical coding has effectively drawn out the key perceptions of the stakeholders. The research has been independent which gave the researcher access to all stakeholders in order to bring their individual accounts together. This research has been distinctive in its multi-disciplinary, independent, ground level approach enabling a longer-term assessment of the sustainability of slum upgrading interventions. The side-by-side case studies of longer-term sustainability with honest accounts of all stakeholders are unique. This work has added value to the existing limited knowledge of how to achieve sustainability in slum upgrading, and, by representing all stakeholders it gives a voice to the poor and emphasises the right to adequate housing. The research also contributes knowledge to the wider picture of international development assistance, engineering development, appropriate design, building services and the built environment. It is hoped that the recommendations offered in the conclusions chapter will be a valuable resource for slum upgrading practitioners.

The methodology for this work was highly effective, but being qualitative has enabled only generalisations to be deduced from the data rather than the creation of theory, however, this qualitative method was the most appropriate for the sustainable development research. The researcher was limited to a finite period of time in the field which controlled the quantity of data to be collected and number of interviews to be conducted. However for the scale of this multiple case study, a more than adequate amount of data was retrieved. The researcher was an outsider to the case study contexts which may have affected her cultural understanding. However, perhaps being

detached from the stakeholders gave the researcher an independent insight into the situation which was advantageous to the interpretation of the analysis.

The methodology was first tested in the field in Kenya, after which changes were made to the data collection method for Pune in order to make the process more efficient. In Kenya the researcher collected maps detailing the distances travelled for watsan before and after the upgrading, and user statistics were gathered for each of the blocks. This data proved to be surplus to requirements for the analysis and not appropriate for the Pune case studies. This iteration of the methodology enabled fine tuning, and the collection of data from various sources via different methods (semi-structured interview, group discussion, PRA techniques etc.) enabled the triangulation of data which strengthened the results considerably.

This research has spanned four case studies across two cultures which has limited the depth of investigation for each case. This research could be furthered by repeating the methodology over more surveys in different contexts, or perhaps a larger number of slum contexts at a more superficial level. However, in the case of this research a richer data emerged due to the depth of the studies which could only be achieved by the detailed ground level investigations conducted.

There is much more research that could be done with the passage of time to further investigate the sustainability of the slum upgrading, for example, if the case studies could be revisited in another five years, ten years and so on, in order to track the development of the upgraded buildings, infrastructure and communities.

It could also have been beneficial to survey the communities before they were rehabilitated as well as after. By collecting baseline data, particularly in a case such as the flooded settlement at Kamgar Putala, the impact of the resettlement upon those residents who moved, compared to those who remained in the slum, would have been an interesting comparison.

It would be particularly interesting to see how the residents feel about their housing in Pune once the cooperative societies have been formally handed over the title deeds to the properties, and to see if any families choose to sell or rent out their tenements. It would also be valuable to learn how the management and operation of the buildings at Nanapeth fares in the future when the developer hands over all responsibility to the residents (after 15 years).

For Kibera's case studies, it would be worthwhile investigating the usefulness of the watsan facilities once the villages have been rehabilitated under the KENSUP housing plans. The KENSUP housing rehabilitation scheme is obviously having a huge impact on the entirety of Kibera, despite currently only being active in Soweto East village. The actual impact of the scheme and future relevance of the watsan facilities and their place within the master plan for the settlement would be an interesting study.

The evolution of future influence of institutional frameworks and policy brought about by these case studies would be valuable to study. For example, how SRA policy has evolved and improved over time in Maharashtra and how service provision by utility providers impacts the future development of Kibera.

Further work could concentrate more on health and environmental impacts, personal development and community investments in their homes and assets. Slum upgrading and evolution in the past (e.g. Victorian Britain) in comparison to today could also be interesting to investigate.

A key point to note is that any further work conducted relating to this research would benefit greatly from continuing a methodology which concentrates on depth of data collection rather than a more superficial surveying method. The semi-structured qualitative interview method of this work has enabled a richness of data which would not have been achievable via other data collection methods.

Appendices

Appendix A - Example resident stakeholder interview prompt sheet for Nanapeth

SRA Interview

Many thanks for agreeing to contribute to this interview.

I may ask you some questions to which the answers seem obvious, however I would like to see the way that you respond and the perception, experience and opinion that you share.

Interviewee Name: _____

Audio file no: _____

Date: _____

Time: _____

Interview location: _____

Others present/listening: _____

Background

Can you give me a very brief summary introduction to your organization and explain what it is trying to achieve?

Do you think there are other organizations aiming to achieve the same things? *Slum upgrading, e.g. NGOs, private developers*

Is the delivery model of the SRA different to other organizations that may have the same goals?

Why is the delivery model of SRA the way it is, what makes it effective?

How long have you worked for SRA?

How long have you worked on this project for?

What has your involvement with the Housing project been?

How was the project conceived/commissioned? *dates, ideas*

Where is the funding coming from? How much? over what time? *(break down of expenditure)*

Can you tell me a little about the phases, stages of the project?

Perception of success (Exploring well-being)

Do you think this project has been a success, why?

What impact has the project had on the community? *positive and negative impacts*

Do you think the project has affected different sections of the community differently? How? *e.g. women, children, disabled, elderly*

Has there been any monitoring and evaluation of the project? At what stage, by who?

Did the project encounter any obstacles at any stage? How were these overcome?

If you were to do the project again, would you change anything, what?

Handover, Assets, Ownership, Operation and Maintenance

Who owns the new housing?

Who owns the land? Who owns the structure? How did you organize this? Did you pay for it?

How did you organize the handover of the operation and maintenance to the community?

Did you encounter any obstacles?

Were the community consulted during the planning, design, construction, operation, maintenance, management phases?

How did you consult them?

How did you take the community's feedback/contributions into consideration?

Was there any training for operation and maintenance?

Do you feel any responsibility for the project now that it has been completed? How long do you think your responsibility will last?

Institutional reform (Institutional analysis)

Has this project had any impact on your organization? What? *e.g. policy changes*

What other organizations were involved in the project? *map stakeholders*
What are their responsibilities?

Have you noticed that the project has had any impact on any other institutions?
e.g. government, policy reform, private sector, NGOs.

Has the project had an impact on future projects of your organization?
e.g. have you learned lessons from this and applied to other work.

What other stakeholders were involved in the project?

How do you think the project affected them? Do you think it has changed them?

Did the project bring about the creation of any new organizations?

Sustainable Development Priorities (Priorities of the poor)

What was the goal(s) of this project?

Why was this the goal(s)?

What do you think is the most desirable thing the community think they need for well-being?

Do you think the community wants or needs help to achieve this?

What do you think is the community's biggest problem? Which groups of the community?

What do you think they can do to overcome this?

Do you think the community's greatest need and problem has changed since this project was introduced? What was it before the project? What will it be in the future?

What does sustainability mean?

What does sustainability mean for this project?

Do you think this project is sustainable? Why?

What measures did you take to seek sustainability for this project?

Closing Actions

Interview duration: _____

Check audio file no: _____

TAKE PHOTO if agreeable and not requiring anonymity.

Observations

Reaction of interviewee:

Conditions of the interview:

Appendix B - Example Resident Interview Sheet

INTERVIEW SHEET

Interviewee name: _____
Address: _____ _____
Audio File No: _____

Date: _____ (day)___
Time: _____
Interview location: _____
Interviewer name: _____
Assistant name: _____

Gender:	Male	Female				
Age:	19 or below	20-29	30-39	40-49	50-59	60+
Main Occupation:	_____	Unemployed	<i>Weekly/daily/monthly salary /casual work</i>			
Place of work:	In community	Outside community				
Marital Status:	Married	Single				
Caste:	_____					

Observations: *e.g. weather, anyone else listening in, day of week*

Observations

Reaction of interviewee:

e.g.

Open & friendly

Suspicious & surly

Timid & reserved

Aggressive & unhelpful

Cheeky & dismissive

Sexist & loutish

Conditions of the interview:

Appendix C - Example of coding : Stakeholder interviews at Nanapeth

CASE D	NANAPETH, PUNE	
D-R	NANAPETH RESIDENTS	
D-R-SHS	R1 - Shamshad Hussein Sheikh	
D-R-AK	R2 - Afiza Khan	
D-R-SSJ	R3 - Surekha Suresh Jadhav	
D-R-SBS	R4 - Sundar Bai Salve	
D-R-	R5 - Dilshad Murad Khan	
DMK		
D-R-LSK	R6 - Leela Shankar Kharat	
D-R-BSS	R7 - Bahrathe Sambhaji Sonawane	
D-R-AJ	R8 - Asha Jadhav	
D-R-AJK	R9 - Atul Jekate	
D-R-SJ	R10 - Sumit Jadhav	
D-R-MS	R12 – Mrunalie Sonewane	
D-G	NANPETH GROUP	
D-G-N	G1 - Nanapeth Group Discussion	
D-S	NANPETH STAKEHOLDERS	Organisation
D-S-IP	S1 - Ishwar Parmar	iParmar Developer
D-S-RO	S2 - Raman Oswal	iParmarChief Engineer (Developer)
D-S-SM	S3 - Sandeep Mahajan	Omkar Associates Architect
D-S-VR	S4 - Vikram Raje	Land owner
D-S-SK	S5 - Sanjay Kolte	Slum Rehabilitation Authority
D-O	OTHERS - NANAPETH SLUM RESIDENTS	
D-O-LK	O1 - Lata Kamble Shaaraabi Shafaquat Hussain Sheikh	
D-O-NS	O2 - Nanapeth slum chat	

Appendix D - Example of coding - Qualitative analysis at Nanapeth

LIFE TODAY	LT	Count	Notes:
Finance	LT-FI	2	spending... On what, expenses, savings, remittances, bank account
Toilets	LT-T	7	
Waste	LT-W	8	waste disposal, cost and management
Water	LT-WA	18	water supply, cost and management
Electricity	LT-EL	11	
Lifts	LT-L	7	
Stairs	LT-S	12	
Health	LT-H	13	impact on health
Taxes	LT-TA	2	taxes
Elderly	LT-E	2	implications for the elderly
Animal husbandry	LT-A	1	keeping animals
Businesses	LT-B	4	businesses/shops
Kitchen	LT-K	1	kitchen facilities, perception of
Social cohesion	LT-SO	5	communication and cohesion between residents and social cohesion
Garden Open Space and amenities	LT-G	8	open space, garden - for children, clothes drying and laundry
Fresh Air	LT-F	1	fresh air
Peace	LT-P	2	noise pollution, disturbing sleep
Cleanliness	LT-C	3	cleanliness and hygiene awareness
Overcrowded	LT-OC	2	overcrowded
Empowerment	LT-EM	2	empowerment, education, awareness to speak up

DEVELOPMENT DIRECTION	DD	Count	Notes:
PRIORITIES - Short term needs	DD-P	0	
Happy as is	DD-P-H	1	happy with what we have, no needs
Water	DD-P-W	1	water supply
Stairs	DD-P-S	0	
ASPIRATIONS – Long term goals	DD-A	0	
Desire to move/stay	DD-A-		
	DM	8	
To provide for children/family	DD-A-F	5	motivation to provide, future depends on family, control and decisions
Adequate housing	DD-A-H	0	appropriate housing, row houses, enough space, balcony
Open spaces	DD-A-O	1	parks for children, open spaces
Female representation	DD-A-		
	FR	1	females to be in the committee
Eliminated poverty	DD-A-P	1	
Employment	DD-A-		
	EM	2	
Education	DD-A-E	4	
Ideas/Dreams	DD-A-D	1	
Basic Needs	DD-A-		
	BN	1	
Future	DD-A-F	5	
Money	DD-A-		
	M	1	

PERCEPTION OF PROJECT SUCCESS	PS	Count	Notes:
Cost	PS-C	6	money paid for the house/facility
Space	PS-Sp	15	
House	PS-H	2	
Safety	PS-S	4	
Relocation process	PS-R	9	
Improved - Positive	PS-I	8	
Worse - Negative	PS-W	19	
High rise	PS-HR	1	
Privacy	PS-P	1	
Education	PS-E	3	
Same	PS-Sa	4	
Structure /Water tight	PS-WT	2	
Separated families	PS-SF	1	
Futher investments	PS-FI	1	
Objections	PS-O	5	

INSTITUTIONAL REFORM	IR	Count	Notes:
Community Consultation	IR-CC	18	
Community Mobilisation	IR-CM	4	CBO membership or organisation or formation
Gender empowerment	IR-GE	1	women reps on committee
Ownership	IR-O	15	
Savings group	IR-F-SG	6	aka merri-go-roung
Institution Perception	IR-IP	5	eg. Government, developer, landowner perception
Maintenance	IR-M	10	
Corruption	IR-CR	15	

Appendix E - Example of coding spreadsheet – Development direction at Nanapeth

	A	B	C	D	E
1	Interviewee	Code	Quote	Comments	
1	D-R-SBS	DD-A-DM	Interviewer: How long would you like to stay in this house? Sunder Bai: I will stay here till I am alive (laughs). I have a son, so I will live here. Interviewer: Have any of your neighbors sold their house or are they still living here? Sunder Bai: All the neighbors from the slum are residing here, no outsider. Interviewer: Do the old people like the house or is there anybody who sold it and moved elsewhere? Sunder Bai: No all of them liked the house and are staying here.	desire to stay	
2	D-R-SBS	DD-A-F	Interviewer: If you are given a choice, which house would you prefer to live in, this house or the previous house? Sunder Bai: How can I say. My choice alone does not matter. I have a son and it depends upon my son. I will stay with him, where ever he stays.	family	
3	D-R-SBS	DD-P-H	Interviewer: What is your biggest priority now? Sunder Bai: I am happy with what ever I have now. Interviewer: Before coming here what was your prime need? Sunder Bai: We wanted every thing, but we had no money (laughs). We work hard to earn the bread. My son is not employed.	happy as is	
4	D-R-SBS	DD-A-F	Interviewer: How do you think will be your future and that of your family? Sunder Bai: I have lived my life. Now it all depends on how my son does, I cannot say anything.	family	
5	D-R-DMK	DD-A-DM	Interviewer: Do you plan to move from here? Dilshad Murad: Actually we have planned that we won't sell it, but we will rent it out and move from here.	desire to stay	
6	D-R-DMK	DD-A-DM	Interviewer: Was there anything about your old house that you did not like? Dilshad Murad: No. Interviewer: If you are given the choice that you would get your old house back, will you move back to that house? Dilshad Murad: Yes.	desire to stay	
7	D-R-DMK	DD-A-F	Dilshad Murad: It is all disturbed since I came to stay upstairs. I don't think much positive about the future after coming to this house. All my family has split.	future	
8	D-R-LSK	DD-A-DM	Interviewer: How long do you plan to stay in this house? Leela: Minimum five years. Interviewer: What after that? Leela: Then I will consider. After my children grow up, their education is over. If the family grows then this place will not be enough. We will search for another bigger house, either by selling this one or something else.	desire to stay	
9	D-R-LSK	DD-A-E	Leela: My biggest need is to get help to educate my children as I need to educate them. My daughter is doing graduation (BE d). If I get some assistance for the college expenses,	education	

Entire spreadsheets for each case study can be viewed on the accompanying CD.

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