

Barriers to Informal Settlements Upgrading in the Gauteng Province of South Africa

Mandisa. Sibiya, Clinton. Aigbavboa, and Wellington. Thwala

Abstract—Informal settlements are homes to millions of people in and around the world, particularly in developing countries. The purpose of this study is to assess the problems and challenges facing the upgrading of informal settlements and also to investigate the potential remedies for these challenges, with the aim of reducing or formalizing these settlements in the Gauteng Province, as it has become a reality of the present day. The data used in this study was derived from both primary and secondary sources. The primary data in this paper was collected through the use of a 50 structure structured questionnaire to officials of the Department of Human Settlement in the Gauteng province. From the 50 questionnaire sent out, 33 were received representing a 66% overall respond rate. The Data received from the questionnaires was analysed using descriptive statistics procedures. The secondary data used in this study was obtained through a comprehensive review of related literature. Findings from the study revealed that there are a number of problems and challenges facing the upgrading of informal settlements in the Gauteng Province. Paramount amongst these are: funding constraints, limited capacity and human resource constraints, scarcity of well-located developable land and slow decision making as a result of bureaucratic influence. Further findings revealed that adequate planning procedures, faster and more streamlined development planning approvals, and the strengthening of inter-departmental Relations are effective ways to remedy the challenges and problems facing the upgrading of informal settlements. This study contributes to the body of knowledge on the subject of the problems and challenges facing informal settlement upgrading in Gauteng, South Africa.

Keywords—Informal settlements, Upgrading, Gauteng Province, South Africa

I. INTRODUCTION

INFORMAL settlement is perhaps the biggest problem facing the urban developing world today. Informal settlements are homes to millions of people in and around the

Mandisa. Sibiya is a B.Tech. student with the Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, 2028 South Africa (corresponding author to provide phone:+27 (0) 11 559 6398; fax:+27 (0) 11 559 6630; e-mail: mandy.sibiya@gmail.com).

Clinton. Aigbavboa is with Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, 2028 South Africa (corresponding author to provide phone:+27 (0) 11 559 6398 fax:+27 (0) 11 559 6630; e-mail:caigbavboa@uj.ac.za).

Wellington. Thwala, is a Professor with the Department of Construction Management and Quantity Surveying, University of Johannesburg, Johannesburg, 2028 South Africa (corresponding author to provide phone:+27 (0) 11 559 6048; fax:+27 (0) 11 559 6630; e-mail: didibhukut@uj.ac.za).

world, particularly in developing countries. It is generally accepted that one of the most important factors that hinders development in the third world is rapid population growth. This, together with continuing poverty and lack of basic needs of acceptable life imposes a great challenge for sustainable development. What is even more important, however, is the fact that most of the population growth in the world during the next 15 years will be urban growth, and the vast majority of it will take place in developing countries. The population growth rate in years 2000-2020 is estimated to be 1.3 % in developing regions (2.4 % in Sub-Saharan Africa) compared to only 0.1 % in developed regions [1]. There remains a huge potential for urban growth for the countries in Africa, since in the year 2000 only 37.1 % of their total populations were urban - this is estimated to grow up to 47.8 % by the year 2020 [1].

Informal settlements are phenomena that exist in many parts, if not all, and are characterised by bad living conditions, poor service standards and absence of secure tenure [2]. Informal settlements arise when people build on land they have no legal tenure to or by not conforming to planning, registration and/or the building regulations of the respective local authorities in which they are located [3]. The structures are irregular; the dwellings are low-cost, often built of non-permanent materials and the settlements usually have a higher population density than other formal areas of housing [2]. The most noted course of informal settlements is the high migration from the rural area by people who are in search of job opportunities and better living conditions than what is available in the rural areas [4]. Natural population growth over the years and continued extension of urban boundaries to the areas where customary tenure existed has also lead to the increase of the informal settlements around the world, particularly in developing countries.

Currently, the number of informal settlements in South Africa have increased from around 300 informal settlements to over 2600 informal settlements [5] and according to estimates by Statistics South Africa these settlements are homes to almost 1.4 million households [6]. According to the Department of Housing [7] “government strives for the establishment of viable, socially and economically integrated communities, situated in areas allowing convenient access to economic opportunities as well as health, education and social amenities, within which all South Africa’s people will have tenure, ensuring privacy and providing adequate protection against the elements; and potable water, adequate sanitary

facilities including waste disposal and electricity supply.” This vision of the government seems not to have materialized yet. The increasing number of informal settlements is an indication that the current approaches to addressing the complex issue of informal settlements in South Africa are relatively ineffective. Therefore this paper seeks to analyse the problems and challenges facing the upgrading of informal settlements in Gauteng, it will also explore the shortcomings of the current methods and approaches, particularly in-situ upgrading, that are being used by both the government and non-government organisations. This paper will also investigate the potential remedies for sustainable upgrading of these settlements.

II. AN OVERVIEW OF INFORMAL SETTLEMENT

Informal settlements have though history been given different names. Common expressions used are slums, shantytowns and squatter settlements, but the most appropriate concept is ‘informal settlement’, which is the term mostly used in South Africa. “slums” (although not a popular term in South Africa) are defined as “any area that meets the following six criteria: 1) Lack of basic services, 2) inadequate building structures, 3) overcrowding, 4) unhealthy and hazardous conditions, 5) insecure tenure, 6) poverty and exclusion [2]. The UN Habitat Program proposes that informal settlements are defined as: i) Residential areas where a group of housing units have been constructed on land to which the occupants have no legal claim, or which they occupy illegally; ii) Unplanned settlements and areas where housing is not in compliance with current planning and building regulations (unauthorized housing) [2].

The inhabitants of informal settlements experience a wide range of problems and challenges, such as poverty and violence [8], poor housing and living conditions amongst others. It has also been indicated that due to their unauthorized nature, informal settlement communities experience a lack of full political representation, and powerlessness, which open up opportunities for political exploitation. There are three types of informal settlements in South Africa which exist in other parts of the world. Although there exist informal settlements in rural areas, backyard shacks and the illegal occupants of inner city buildings. However, the concept of informal settlement as used in this study only focuses on urban informal settlements, which are typically located within or adjacent to urban areas as common in major cities of the world. Whilst informal settlements are all different, one similar factor in their formation is that they typically provide an initial point of access into the urban environment for incoming migrants, or for those moving from other parts of the city. More importantly, they afford such access at a very low financial cost and the barriers to entry are low. Informal settlements thus serve a critical function as ‘holding places’ where people can access the urban environment at extremely low financial cost and piece together various livelihood strategies there. Some might remain permanently and even ultimately gain access to formal housing, whilst others might reside temporarily for

specific purposes which, once fulfilled, result in them moving elsewhere in the city or returning from whence they came. This does not mean that all informal settlements are well located, but in many cases they are, and where they are not, they typically still afford a better access opportunity than the next best option (e.g. continuing to remain at a traditional rural homestead or at a more peripheral location on an urban boundary).

III. INFORMAL SETTLEMENT UPGRADING

The South Africa Government is a signatory to the United Nations Millennium Development Goals, which provide for the significant improvement in the lives of at least 100 million slum dwellers by 2020. In addition to these conventions, South Africa also adheres to the following declarations under the UN Habitat programme: the Vancouver Declaration on Human Settlements (1976), the Istanbul Declaration on Cities and Other Human Settlements (1996) and the Habitat Agenda (1996); the focus of which is to address the plight of persons without adequate housing living in informal settlement. The Upgrading of Informal Settlements in South Africa is consistent with the above conventions with its primary objective being to cater for the special development requirements of informal settlements.

The term ‘informal settlement upgrading’ does not have a clear and concise definition. It applies to any sector-based intervention in the settlement that results in a quantifiable improvement in the quality of life of the residents affected [3]. For instance, the Department of Human Settlement [5] defines informal settlement upgrading as providing inhabitants with security of tenure, adequate housing and access to essential services; such as water and sanitation. Whilst Horen [9] views upgrading as of physical infrastructure (roads, water, sanitation, garbage removal, drainage, flood protection, electricity) and social services (health, education, recreation and community facilities). Also, Harrison [10] refers to upgrading in South Africa as Township establishment and/or formalisation. Formalisation in this context refers to legal processes where townships are created (township establishment) with formal services through which residents obtain formal security of tenure. This normally includes the development of top structures such as the subsidised low-income houses construction in South Africa. However, the UN-Habitat [1] states that ‘Slum’ upgrading consists of physical, social, economic, organizational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities.

A. Problems and challenges facing current approaches of informal settlement upgrading

The failure of slum upgrading has, to a large extent a result of inadequate allocation of resources, accompanied by ineffective cost-recovery strategies [1], limited funding constraints; difficulties in coordinating the multiple sources of funding required and low levels of co-operative governance, which is a key constraint to upgrading; and limited capacity

and human resource constraints amongst others. Others include lack of adequate skills - due to skills shortages at local government and a lack of management as well as leadership, many strategies, policies and programmes are not implemented effectively and efficiently, especially those reality to service delivery [11]; corruption – this makes the process of informal settlement upgrading counterproductive since competence and performance are seriously compromised and many contracts are consequently poorly performed. The situation is apparently now at critical levels and is made worse by a ‘tyranny of silence’ [12] to corrupt practices.

Similarly, failure of governance at the level of implementation is another major constraints to upgrading of informal settlements. This is because the important factor that s will improving housing and living conditions of the low-income groups in informal settlements and slums is the presence of a genuine political will to address the issue in a fundamentally structured, sustainable and large-scale manner [1]. Also, the acute scarcity of developable and well located land in the urban area for partial or full scale relocations is an issue. Land appropriate for low-income people is expensive (if available) and in most cases is under the traditional authorities and private land owner [11].

IV. RESEARCH METHODOLOGY

The data used in this paper were derived from both primary and secondary sources. The primary data was obtained through the survey method, while the secondary data was derived from the review of literature and archival records. The primary data was collected through the use of a structured questionnaire survey with the officials of the Department of Human Settlement in the Gauteng province, of South Africa. These officials (50) were chosen as the sample frame since they are the ones that deal with housing issues on a daily basis in the province. From the 50 questionnaire sent out, 35 were received back representing a 70% overall respond rate. The Data received from the questionnaires was analysed using descriptive statistics procedures. The secondary data used in this study was obtained through a comprehensive review of related literature which informed the structured questionnaire. The questionnaire did not form part of an existing valid instrument relating to informal settlement, but a stringent content and thematic analysis of the factors of challenges as discovered from the reviewed literature, informed the questionnaire.

A 5-point Likert type scale was used to determine the challenges and problems that are faced by informal settlement upgrading, as well as possible remedies to these problems and with regard to the identified factors from the reviewed literature. The adopted scale read as follows, 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly agree. The five-point scale was transformed to a mean item score indices (MIS) for each of the factors of the problems and challenges facing informal settlement upgrading, as well as potential remedies, as assessed by the respondents. The indices

were then used to determine the rank of each item. The computation of the relative MIS was calculated from the total of all weighted responses and then relating it to the total responses on a particular aspect. This was based on the principle that respondents’ scores on all the selected criteria, considered together, are the empirically determined indices of relative importance. The index of RII of a particular factor is the sum of the respondents’ actual scores (on the 5-point scale) given by all the respondents’ as a proportion of the sum of all maximum possible scores on the 5-point scale that all the respondents could give to that criterion. Weightings were assigned to each responses ranging from one to five for the responses of ‘strongly disagree’ to ‘strongly agree’. This is expressed mathematically below. The relative MIS was calculated for each item as follows, after Lim and Alum (1995):

$$MIS = \frac{1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5}{\sum N} \dots\dots \text{Equation 1.0}$$

Where;

n_1 = numbers of respondents for strongly disagree...

n_5 = numbers of respondents for strongly agree...

N = Total number of respondents

Following the mathematical computations, the criteria are then ranked in descending order of their relative importance index (from the highest to the lowest). The next section of this paper presents the findings of the survey and some discussions.

V. FINDINGS AND DISCUSSIONS

Findings from the 33 usable questionnaires, it was revealed that 52% of the respondents who were officials of the Human Settlement Department had diploma as their highest qualification while 39% had bachelor’s degrees and 9% only possessed Matric certificated. Further findings revealed that 45.5% of the respondents, had between 1 to 10 years of experience working in the Department of Human Settlement, while another 9% had between 11-15 years of experience and the others had more than 15 years of experience in the housing department. The following sections present the problems and challenges facing informal settlement upgrading as well as the potential remedies for these problems and challenges.

A. Challenges and problems facing informal settlement upgrading

Based on the ranking (R) of the weighted average of the mean item score (MIS) for the listed problems and challenges facing informal settlement upgrading, it was observed as shown in Table I, that the most dominant problems and challenges in the Gauteng Province were delay in decision making and approval process by the Department of Human Settlement management (MIS=4.03; R=1), scarcity of developable and well located land and on-going changes in government personnel and processes with MIS=3.91, both ranking second on the list.

TABLE I
CHALLENGES AND PROBLEMS FACING INFORMAL SETTLEMENT UPGRADING

Environmental qualities	MIS	Rank(R)
Slow decision making and approval process by the state	4.03	1
Scarcity of developable and well located land	3.91	2
Ongoing changes in government personnel and processes	3.91	2
The increasing number of migrants to informal settlements	3.82	3
Development planning and approvals (difficulties and delays)	3.66	4
Corruption e.g. corrupt procurement	3.64	5
Legal challenges	3.61	6
Lack of specific guidelines to assist municipalities, Department of Housing officials and project implementing agents	3.30	7
Low levels of motivation and low work ethic	3.30	7
Lack of participation from inhabitants of informal settlements	3.30	7
Lack of project preparation guidelines	3.24	8
The housing subsidy funding will only fund internal municipal engineering services for greenfield developments as a last resort and not of upgrading	3.21	9
Lack of data allowing for the identification and quantifying of service and infrastructure	3.21	9
Difficulties in co-ordinating the multiple sources of funding required and	3.13	10
Funding constrains	3.03	11
low levels of co-operative governance	3.03	11
There are significant skills deficits in general and project management	2.97	12
Capacity and human resource constrains	2.94	13
Provincial Departments of Housing generally do not actively support incremental upgrading and may in fact discourage it	2.79	14

Also, the increasing number of migrants to informal settlements (MIS=3.82; R=3) was rated as the third most challenging problem and development planning and approvals difficulties by the respective State organs (MIS=3.29; R=4). Other factors identified in the study include; legal challenges (MIS=3.61), lack of participation from the informal settlement inhabitants, delay in approving shop drawing (MIS=3.21; R=9) amongst other were identified by the Department of Human Settlement officials as the challenges facing the upgrading of exiting informal settlement in the Gauteng Province of South Africa. These findings were in agreement with a number of scholars research findings [13] [14] [15]. These scholars highlighted slow decision making and approval process by the State, scarcity of developable and well located urban land as the major problems of informal settlement upgrading in Gauteng.

B. Remedies to challenges and problems facing informal settlement upgrading

When the respondents were asked to rate possible remedies to the problems and challenges facing informal settlement upgrading in Gauteng as identified, the following results were obtained as shown in Table II. First amongst this list was the recommendation of cooperation between the various State departments responsible for informal settlements upgrading (MIS=4.47;R=1), also, the officials stated that the reasons for

the increase of informal settlements should be analysed and addressed (MIS=4.35; R=2); making of use of alternative and denser housing typologies (e.g. row housing or double storey units) as against the current stand-alone house should be address and that the state should increase funds for the upgrading of informal settlements amongst others. These factors were listed as the dominant remedies to address the barriers facing the upgrading of informal settlement in the Gauteng Province of South Africa. According to the literature reviewed Cooperation between the various departments of the municipality responsible for informal settlements was also found as one of the most remedies to informal settlement upgrading.

TABLE II
REMEDIES TO OFFSET CHALLENGES AND PROBLEMS FACING INFORMAL SETTLEMENT UPGRADING

Environmental qualities	MIS	Rank(R)
Cooperation between the various departments responsible for informal settlements upgrading.	4.47	1
Reasons for the increase of informal settlements should be analysed and addressed (where possible)	4.35	2
Making of use of alternative and denser housing typologies (e.g. row housing or double storey units)	4.30	3
State should increase funds for the upgrading of informal settlements	4.22	4
National Department of Housing should require all municipalities and Metros with significant urban informal settlement problems to do a rapid assessment on the possibilities of upgrading	4.21	5
Decision making and approval processes should be quick	4.19	6
The state should partner with the settlement dwellers	4.18	7
The uniqueness of a settlement should be taken into consideration when planning upgrading, to ensure success	4.13	8
Eliminate the faceless "landlords" and encourage the squatters to develop and maintain their own plots	4.10	9
Maintenance should be planned and budget for in upgrading projects	4.06	10
Solutions should be rapidly formulated to address the planning and environmental approval constraints that affect upgrading and interim relief measures	4.00	11
Strategically located land, suitable for low income settlement, be identified, acquired, planned and serviced in anticipation of future influxes and informal settlement growth	4.00	11
More effective local or area-based planning and decision making structures should be put in place in order to address the issue of informal settlements	3.91	12
Preference should be given to easily available fabric, components and structures	3.88	13
Flexible tenure arrangements which 'protect residents against arbitrary eviction' whilst minimizing the land administration costs and capacity requirement	3.88	13
Traditional and current work procedures, within urban planning, have to change	3.88	13

VI. CONCLUSION

This paper reviewed the problems and challenges facing informal settlement upgrading in Gauteng, South Africa. From the structured questionnaire survey directed at the officials of the Human Settlement Department, it was found that there are varieties of problems and challenges that informal settlement upgrading faces. Prime amongst the findings were: delay in decision making and approval process by the Department of Human Settlement management, scarcity of developable and well located land and on-going changes in government personnel and processes. Also, the increasing number of migrants to informal settlements for economic reason was rated as a major challenging. Other factors identified in the study include; legal challenges, lack of participation from the informal settlement inhabitants as the Human Settlement Department still adopts a top-down approach when embarking on upgrading the settlement.

REFERENCES

- [1] UN-Habitat. (2003). *The Challenge of Slums. Global Report on Human Settlements*: Earthscan: London.
- [2] Ackelman, H. and Andersson, M. (2008). *Methods to Solve the Problem of Informal Settlements-the Case of Hangberg, South Africa*: Master of science thesis: Kungliga Tekniska Högskolan.
- [3] Abbott, J. (2002). *An analysis of informal settlement upgrading and critique of existing methodological approaches*: Habitat International, 26 (2002) 303–315.
- [4] Njamwea, M. M. (2003). *Upgrading Informal Settlements by securing public spaces: case study of informal settlements in Blantyre City, Malawi*. National institute for Geo-information Science and Earth Observation Enschede: The Netherlands
- [5] Department of Human settlement. (2009). *Incremental interventions: Upgrading informal settlements: Part 3 of the national housing code*: Department of Human settlement.
- [6] Statistics South Africa. (2007). *Community Survey 2007: Municipal Data on Household Services*.
- [7] Department of Housing. (2004), *Breaking new ground. A comprehensive plan for the development of sustainable human settlements*. As approved by Cabinet and presented to MINMEC on 2 September 2004. Pretoria: DOH.
- [8] Zwane, W. (1998) *The Challenge is to change ourselves*. Available online: <http://www.csvr.org.za/wits/articles/artzwane.htm> on 20 June 2013. (Accessed 16 August, 2013)
- [9] Department of Human Settlements. (2010). *Gears up for full delivery*. Available online: <http://www.dhs.gov.za/Content/Media%20Desk/Media%20Adversory/2010/22%20November%202010>.
- [10] Horen, B.V. (2004). *Community upgrading and institutional capacity building to benefit the urban poor in Asia*. Forum on Urban Infrastructure and Public Service Delivery for the Urban Poor Regional Focus: Asia, New Delhi, India India Habitat Centre
- [11] Harrison, P. (2009). *New Directions in the formalisation and Upgrading of Informal Settlements: Development Planning & Urban Management: City of Johannesburg*.
- [12] Tshikotshi, V. (2009). *The Challenges of Eradicating Informal Settlements in South Africa by 2014. The Case of Seraleng Sustainable Human Settlement, North West Province*: Master of science thesis: University of the Witwatersrand
- [13] Misselhorn, M. (2008). *Position paper on informal settlements upgrading*: Urban LandMark.
- [14] Aigbavboa, C. O. & Thwala, W. D. (2010). *Lessons learned from in situ upgrading and eradication of informal settlement in Gauteng Province in South Africa*, International Journal of Housing Markets and Analysis, Vol. 3 Iss: 3, pp.233 - 244
- [15] Ogunfeditimi, O. (2007), *Assessment of structural quality of houses delivered through the people's housing process in South Africa*, University of Johannesburg, 2007
- [16] Huchzermeyer, M. (2009). *The struggle for in situ upgrading of informal settlements: a reflection on cases in Gauteng*, Development Southern Africa, Vol. 26 No. 1, pp. 59-73.