# **Community Involvement in Informal Settlements Upgrading: Evidence from Dar Es Salaam Metropolitan City, Tanzania**

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# Abstract

Community involvement in informal settlements for upgrading is a world development debate towards finding viable strategies for enhancing livelihoods of the informal dwellers, securing tenure as well as improving urban environment. The paper contributes its knowledge by documenting and establishing lessons of experience on the effectiveness of participatory process in upgrading of informal settlements through land regularisation taking Ubungo Darajani case in Dar es Salaam. It explores the city informal settlements development trends, process involved in land regularisation in informal settlement upgrading and the outcomes of the process. Likely, the paper provides viable options on how community initiated land regularisation process can be enhanced within public-private management domains for improving the livelihoods of the poor in informal settlements. The paper concludes by providing the future outlook on how cities can adopt land regularisation process and therefore enhancing community development and growth process in rapidly urbanising cities of Sub-Saharan Africa with the same contexts.

**Keywords:** Community Involvement, Upgrading Informal Settlements, Land regularisation, Informal Settlements, Land Occupiers, Dare s Salaam and Tanzania

# **1.0 INTRODUCTION**

# **1.1** Community Involvement (CI) as an Agenda in Development Projects

Involvement of communities in land development and coordination for effective urban development in cities of Sub-Saharan is an important ingredient towards ensuring urban land is properly managed and efficiently utilised for increased city productivity. In dealing with planning for urban development, top-*down and bottom-up* approaches as forms of Involvement in urban planning seems to be adopted worldwide (World Bank, 2002; Kyessi, 2002) and Makereani, 2007). The top down planning approaches was acceptable and dominant in most Government-led urban planning processes of Sub-Saharan Africa including Tanzania. However, the approach could not effectively deal with some of the problems and challenges faced by respective communities in informal settlements including need for accommodating community interests, priorities and needs. To cope with the challenges, the *Bottom-up Planning approach* appears was introduced mainly as a response to enhance community Involvement in the development project cycle, with the principle that urban planning process should be initiated by residents of a particular area who furthermore seek Government support to process and complete the agenda.

In Tanzania like other developing world countries, it is worthy to recognise the Ujamaa policy, which enchanting the implementation of Arusha Declaration of 1967. The implementation of the policy centred on self-help and self reliance legacies, through which villagelisation Policy of 1974 was also established and implemented. This policy envisioned people to live and work together for community and National development. Likely, there are also various policies and legislations insisting the use of community Involvement in development projects in Tanzania. These include Urban Authorities Act No 8 (1982) on Local Organization; Land Policy of 1995; Local Government reform 1998 clause 61 recognizes Community Participation in Problem Identification; Land Act No 4 of 1999 section 60 (1-4) on Land Regularisation; Human Settlement Policy of 2000; Community Development Policy of 2004; The Land Use Planning Act, Act No.10 of 2007 and the Urban Planning Act, Act No 8 of 2007. The problem in Tanzania in view to urban development and coordination, these polices are poorly enforced and some are overlapping, the situation which led to fragmentation of urban development.

# **1.2 Population and informal settlement proliferation in an urbanisation context**

Understanding population and settlement development trends in Sub-Saharan Africa is essential in spatial land use planning and for determining the challenges to the sustainable use of urban land in developing cities. It should be noted that spatial land use planning and development projections depend, among other through population growth, resource assessment, and improved urban land governance, and livelihoods of the poor.

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Paradoxically, informal settlements and the scarcity of land in urban areas seem to be major challenges that may affect food security and urban environmental conservation for coming generations. UN-Habitat (2007) reports that the magnitude of informal settlements and population worldwide are expanding and therefore endanger urban land development in rapidly urbanizing cities, Dar Es Salaam in Tanzania inclusive.

UN-Habitat *Ibid* report shows that cities in Sub-Saharan Africa are very affected by uncontrolled urbanisation processes and the poor enforcement of land development policies and legislations. The report stress an urgent need for cities in Sub-Saharan Africa to adopt participatory planning frameworks able to coordinate and control land development. Such a framework will assist coordinating different land use functions, including urban agriculture that can be used to meet the needs of expanding populations and add value to land and goods in order to meet market and food security challenges. Table 1 summarises the increasing informal settlements in the region. Tanzania *inter alia*, is noted to be a highly prone country where informal settlements are expanding rapidly. These types of settlements endanger the future food security and may increase settlement degradation if no apt spatial urban land use planning measures and guidelines are put in place to recover.

Table 1: Informal settlements	population projection,	, 1990-2020 in Sub-Saharan Africa region

Country	Informal settlement population (Thousand)						nal settler ousand)	nent pop	ulation p	rojection	target		
	1990	2001	2005	2010	2015	2020	1990	2001	2005	2010	2015	2020	Reduce % by half 1990-2020
Angola	2,193	3,918	4,839	6,300	8,201	10,677	2,193	3,918	4,743	6,077	7,814	10,075	5,412
Congo	1,050	1,852	2,276	2,945	3,810	4,930	1,050	1,852	2,231	2,840	3,629	4,650	2,499
Kenya	3,985	7,605	9,620	12,905	17,311	23,223	3,985	7,605	9,432	12,460	16,522	21,972	11,771
Lesotho	168	337	434	596	817	1,121	168	337	426	576	781	1,062	568
South Africa	8,207	8,376	8,439	8,517	8,597	8,677,	8,207	8,376	8,254	8,147	8,039	7,930	4,398
Uganda	1,806	3,241	4,010	5,231	6,825	8,904	1,804	3,241	3,931	5,047	6,503	8,403	4,513
Tanzania	5,601	11,031	14,113	19,205	26,133	35,561	5,601	11,031	13,840	18,551	24,962	33,685	18,024
Zimbambwe	116	157	179	202	232	266	116	157	172	194	219	247	135

Source: UN-Habitat, State of the World Cities 2006/7.

According to a United Republic of Tanzania (URT) census report (2002), Tanzanian population has been increasing tremendously since independence in 1961. The report shows that in 2002, the population was 34 million people and with a population growth rate of 2.8% per annum. This indicates that it is among the most rapidly urbanising countries in Sub-Saharan Africa. The urban population of Tanzania is estimated at 30% and increasing at 11% per year with Dar es Salaam being by far the largest city in the country. Dar es Salaam was estimated to have more than 2.8 million inhabitants in 2006 compared with 2.5 million inhabitants in 2002 (URT, 2003; UNDP, 1998; 2006). Spatially, in periurban areas of Dar es Salaam, the land is sparsely populated and dominated by urban agriculture activities, aimed to provide a food supply to the urbanities compared to the inner zones. Thus, understanding food security challenges in Tanzania becomes a necessity in determining urban development processes.

Table 2 Tanzania-Urbanization trends, 1948-2002
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	1948	1957	1967	1978	1988	2002
Total National Population (000)	7,480	8,786	11,959	17,050	22,533	33,584
Total Urban Population (000)	183	364	686	2,260	6,200	10,075
Urban Population as percentage of National Population	2.5	4.1	5.7	13.78	27.6	30
Growth rate of urban population		1948- 1957	1957- 1967	1967- 1978	1978- 1988	1988- 002
		6.5	6.0	11.1	9.6	11

Source: Kulaba S.M. (1986); URT census reports (1978, 1988, and 2002); and UNDP (2006).

1.3 Efforts Made to Upgrade Informal Settlements in Dar Es Salaam

Tanzania adopted and implemented the Slum Clearance Policy in 1967. The policy which intentionally aims to upgrade informal settlements and improving urban environments was implemented through the National Housing Corporation. The slum clearance approach, *interalia* aims to develop high-standard buildings on the cleared sites. The project by the end of the 1960s was abandoned. The remarkable reasons include high economic and social costs and negligible impact on the provision of the housing stock. Until the late 1980s, Sites and Services, and Squatter Upgrading projects formed the national strategy supported by the World Bank. The programme mostly covered parts of Dar es Salaam City, Mwanza, Arusha, Mbeya and Tanga. Later, the Hanna Nassif Community-Based Upgrading Project was initiated through the Sustainable Dar es Salaam Project (SDP), with support from the International Labour Organization (ILO) and the Ford Foundation. Subsequently the SDP collaborated with the World Bank on the preparation of further upgrading programs. However, delays resulted in a recasting of the Community Infrastructure Program (CIP) and ultimately only two settlements of Hannanasif and Manzese were upgraded. Table 3 presents a summary of Land Regularisation carried out in Dar es Salaam City as from 1960's just after independence up to 2000s.

# Table 3: Trends of Informal Settlements Upgrading in Tanzania

Period and Nature of intervention	Funding
<b>1960-1970.</b> In the 1960s, the approach to dealing with the growth of informal settlements in Tanzania, and in particular Dar es Salaam, was the common approach of slum clearance worldwide in less developed countries. The objective of slum clearance was to rid the City of the eyesores of squatter housing. To improve housing for the poor, the Government implemented its slum clearance and redevelopment policy by developing high-standard buildings on the cleared sites. The policy was implemented through the National Housing Corporation but proved unsustainable. By the end of the 1960s, it was abandoned due to high economic and social costs. The net addition to the housing stock was negligible.	Central Government, International donors funding. Top-down approach. (Kyesi,1997;URT,20 00)
<b>1970-1980.</b> The slum and squatter upgrading programs of the late 1970s and early 1980s implemented after slums clearance program. One major important aspect; the fact that Governments had recognised the need to improve the shelter, basic services delivery requirements of slum and squatter settlements and the importance of security of tenure as opposed to evictions. Despite these progressive thoughts in these programs they suffered from the project-oriented approach of the earlier programmes. For example there were no inbuilt mechanisms for follow-up on maintenance of the investments resulting to huge losses; the programme also suffered from lack of ownership by the beneficiaries as little time had been committed to community mobilisation and organisation. During that period the country also embarked on informal settlement upgrading that started in the 1970s with the National Sites and Services Project, financed by the World Bank. Due to dissatisfying results, this project was discontinued in the early 1980s (World Bank 2002).	Central Government, World Bank, donors finding. Top-down approach. No CP (Kyessi, 1997).
<b>1980-1990.</b> Sites and Services Project, financed by the World Bank. Due to dissatisfying results, this project was discontinued in the early 1980s (World Bank 2002). Settlement upgrading resumed in the 1990s under the Sustainable Dar es Salaam Project (SDP). A core element of the City-wide SDP was the Hananasif Community-Based Upgrading Project. The decade of 1980-90 was characterized by the expansion, consolidation and emergence of new unplanned settlements at the same time as the infrastructure installed under the early projects began to deteriorate due to lack of maintenance.	Central Government, City Council. International donors funding. Town planning approach with involvement of community.
<b>1990-2000s.</b> In 1992, UNCHS (Habitat) introduced the Environmental Planning and Management approach in Dar es Salaam. The Hanna Nassif Community-Based Upgrading Project was embarked upon through the Sustainable Dar es Salaam Project (SDP) with support from the International Labour Organization (ILO) and the Ford Foundation. Hanna Nassif, one of Dar es Salaam's unplanned settlements, currently housing over 20,000 people in 5,000 households The community had to raise TZS (Tanzanian Shillings) 8 million (USD 15,355) for upgrading but tenure question has not been tackled to date. (World Bank, 2002).	City council, donors, Ardhi institute. Top- down Approach with involvement of other stakeholder and the community, during implementation (URT, 2000; World Bank, 2002).

Source: Documentary Review

The above cited interventions tried to address land and housing issues for the urban poor following a largely multi-sector involvement through Top-down participatory approaches. Government-led projects on Land

Regularisation/ squatter upgrading have been on multi-Sectorial approach for achieving many things at ago, such as provision of roads, water, drainage systems, street rights and community services. To achieve all that has been seen as an expensive, unbearable burden to the Government and difficult to attain its objectives because of higher costs involved. Despite the interventions by the Government, populations has been increasing concurrently with the growth of informal settlements (Table 4).

Date	Population	No. of Settlements
1957	129,000	4
1967	272,821	7
1978	843,090	16
1998	1,360,850	25
2002	2,497,740	56
2009	*4,000,000	100+

Table 4: Population and Informal Settlements Growth in Dar es Salaam City
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Source: National Census Reports 1957-2002 and DDC, 2008. \* Projections

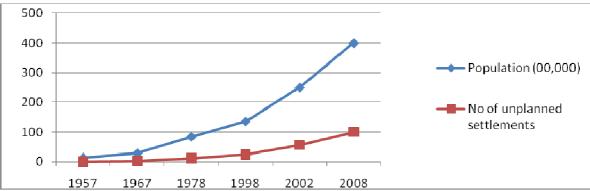




Table 4 and Figure 1 illustrate the relationship between population growth and sprawling of informal settlements. Based on various literature reviews and researches: informal settlements are expanding at alarming rates and that major causes are: lack of resources, failure in planned land supply and urban development policies, poor institutional arrangements and poor strategies to alter further growth of informal settlements (Kyessi,2002; World Bank,2002; Payne,2005).

# 2.0 STUDY APPROACH

A descriptive research design has been adapted for this study, which was complemented by exploratory devise to capture elements/aspects that relate to knowledge and opinions of relevant actors in the land regularisation process. A case study methodology was deployed focusing on one informal settlement which has recently undergone LR under CP. A list of informal settlements and aerial photos were obtained from the MLHSD and used as sample frame in selection of the study area. Qualitative and quantitative data were collected from both primary and secondary data sources. The study employed qualitative data collection approach with periodic use of quantitative data gathered to enable the use of information from different sources for the purpose of triangulation. The mix of qualitative and quantitative data collection approach was preferred so as to enhance the search of different types of information from diverse sources.

# 2.1 Study area Description

Ubungo Darajani is part of the Kisiwani Sub Ward located within Ubungo Ward in Kinondoni Municipality. It is situated 12 kilometres from the City centre of Dr es Salaam along Mandela road. The settlement bordered by Mabibo Ward in the east, Kibangu Sub Ward in the west, and the other part of the Kisiwani Sub Ward (across river Ubungo) in the north and Mabibo Relini in the South. Ubungo Darajani covers 30 hectres and is accessible a tarmac road.

The field study revealed that the neighbourhood development depends on availability of land to developers. Acquisition of land in informal settlements is largely from Private Land Occupiers who sales land to developers. The study considered neighbourhood development and Land acquisition processes as main factors influencing the status of the settlement. The surrounding areas of Ubungo Darajani have not been developed consistently with the requirements of the Dar es Salaam Master Plan either (URT,1979). Rapid densification in the area was started in the 1980s after completion of Mandela road. Assortment of parcels of land development in the area is characterized by the presence of high quality buildings; single, double and multi-storeyed structures that include

the Land Mark Hotel and other related properties currently under construction. The settlement also accommodates old, poor constructed structures and some blocking roads, since it was not easy for property owners to redevelop them in accordance with master planning guidelines. A number of respondents participated to provide data and information for this study are depicted in Table 5 below.

Participant's Category	Ubungo Da			Total Participants	
	Men	Women	Men	Women	
Respondents	145	15	15	7	182
Informants	-	-	8	7	15
FGDs	14	5	15	12	46
Interviews	3	2	13	14	32
In-depth Interviews	7	5	3	2	17
Total	169	27	54	42	292

# Table 5.Number and Location of respondents who contributed to this study

\*Others combine participants from MLHSD, Municipalities, NGOs, ARU, private and UDSM 3.0 RESULTS AND DISCUSIONS

# **3.1 City Informal Settlements Development Trends**

Two years after independence in 1963 Dar es Salaam was largely developing in accordance with urban planning practices and the extent of the built up area was confined to a radius of about six (6) kilometres. Ten years later in 1973, the City and other urban centres in Tanzania became a destination of an influx of rural–urban migrants looking for employment, better life and therefore struggle to have their homes through constructing houses. In coping with housing provision, individuals bought land in the peripheral areas and constructed their houses (Kiunsi *et al*, 2004; Lupala, 2008 and Kyessi, 2008). This housing development process caused rapid horizontal expansion of the City, mainly along its four radial roads (Map 1). Dar es Salaam City Council-DCC (2004; 2007) observes that by 1978 the built up area of the City had expanded to more than twice its spatial size of the 1960s. The City had extended to 14 kilometres along Pugu (Nyerere) road beyond the current Airport and covered 12 kilometres along Morogoro and Bagamoyo roads. Today, the City has been expanding to over 50 kms from its centre (DCC, 2008). Table 6 highlights the City spatial growth coupled with informal settlements and population increase.

Period	Population and Density	Extension of the City from CBD (Clock	Number of Informal Settlements
		Tower)	
1891	The City had 4,000 inhabitants, a	Two (2) Kilometres to the hinterland from	One (Mzizima-Upanga)
	population density of 4.5 people per	the sea.	
	hectare.		
1955	City Population had increased to	The major growth areas were along the four	Three (Kariakoo, Mzizima,
	61,000 with population density of 30	major arterial roads of Morogoro,	Gerezani)
	people per hectare.	Bagamoyo,	
		Pugu (now Nyerere) and Kilwa Roads	
1963	The City population had increased to	The City growth had extended to six	Five informal settlements. Keko,
	151,000 and the gross population	Kilometres radius.	Mtoni, Buguruni, Manzese
	density was 49 people per hectare.		Kariakoo as major noticeable ones.
1978	The City had 843,100 people; the	The City had expanded to 14 kilometres	Sixteen informal settlements
	density stood at 74 people per	outside the CBD.	
	hectare.		
1988	The City had population increased to	The City extended to 18 kilometres from	Twenty five informal settlements.
	1.5 million and the gross density	the centre.	
	increased to 78 people per hectare.		
2002	The City had a population of 2.5	The City had grown on average a radius of	Fifty six major informal
	million. The gross population	30 kilometres.	settlements(Kyessi, 2002)
	density amounted to 52 people per		
	hectare.		
2008*	The City had a population of 4	The City had grown to an average of 35 Km	One hundred (100+) plus informal
(Projections)	million people, the gross population	from the City centre	settlements
(	density of 51 people per hectare.		(Kyessi, 2008)

 Table 6: Spatial Growth of Informal Settlements in Dar es Salaam City

Source: National Population Census (1978-2002); DCC City Profile (2004:2008); Kyessi (2008).

*Table* 6 Illustrates the spatial growth of Dar es Salaam City based on horizontal physical extension of the City and its population density and growth of informal settlements before and after independence. The majority of the

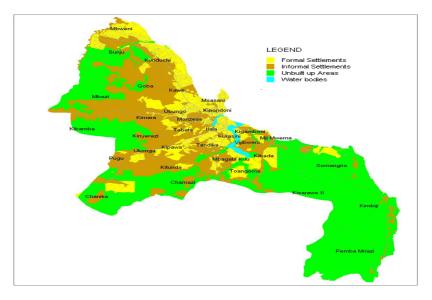
City's residents, over eight out of every ten (80%) live in warren unplanned settlements that are scattered in different parts of the City (DCC, 2008).

# **3.2 Land regularisation attempt in the City**

Community Infrastructure Upgrading Programme (CIUP) for Dar es Salaam City in 2004 indicates that there are more than 100 unplanned or informal and under-serviced settlements in Dar es Salaam (See Table 6: Map 1). These informal settlements are characterized by lack of secure tenure, basic infrastructure services, overcrowding and poverty (UNDP, 2002, CIUP, 2004; DCC, 2007). Nguluma (2003) and CIUP (2004) further provide that informal settlements in Dar es Salaam can be put under three categories in terms of densification of housing and population increase:

- (i) Those at infancy stage, sparsely built up, densities are low because houses are scattered with some agricultural activities with ongoing subdivisions of land for housing. Land regularisation is possible at minimum cost to pay for compensation of developments;
- (ii) Those at consolidation stage, subdivisions taking place with active development of residential and commercial properties. They require relatively low cost to compensate for developments affected by new plans for Land Regularisation;
- (iii) Those at saturated stage with high density of buildings, intensification of land use are carried out through extensions, infill and gentrification. Land Regularisation has to involve a large sum of money to pay for compensation and to open roads and land reserve for urban services. Map 1.1 depicts the distribution and status of informal settlements in Dar es Salaam city

Map 1: Informal Settlements in Dar es Salaam City (Source: DCC Land Use ,2008).



Before 1961 the City had relatively slow growth rate of 2.6 percent per annum (Kyessi, 2002). After independence the City's population growth has been above 7% per annum and at the time the City spatial expansion has been growing without strict controls because of inadequate institutional capacity, resources and the use of conventional approaches in urban management, which are less flexible to respond to immediate changes in demand for planned land.

A noteworthy increase in number, size and growth of informal housing in Dar es Salaam City has been recorded. In Dar es Salaam for example, the number of informal settlements increased from 25 in 1979 to 40 in 1990 (Lupala, 2002). By 2000, this number had increased to over 56 and over 100 in 2008 (Kyessi, 2008). The property tax records for three Municipalities of Dar es Salaam indicated that in 2004 there were 500,000 housing units in the data base of which only 150,000 were in planned areas. The rest 350,000 units in informal settlements occupy more land than those in the formal settlements, implying that densities in these areas are relatively higher in terms of land coverage. Outdoor spaces which are critical for supporting social as well as economic activities are also diminishing through the densification process.

# 3.3 Community Involvement in Land Regularisation at Ubungo Darajani

The study sought to investigate the potentials of Community Involvement in Land Regularisation in Informal Settlements. The settlement accommodates a population of 4,245 people of whom 2,420 (57%) are women and the rest are men with gross residential density of 163 persons per hectare (URT, 2002). According to Sub Ward

records, the neighbourhood hosts a total of 849 households; 300 are Land/house owners who participated in the Land Regularisation Project and the rest were tenants/residents.

Land occupiers/owners initiated the idea of Land Regularisation project in 1999 and started operations in 2000. The community started negotiations for the preparation of a Town Planning Drawing of the area between Land Occupiers and the Kinondoni Municipal Council officials in 1999 and it took two years to get it accepted and approved by the MLHHSD. The improvement of the settlement through Land Regularisation was adapted in an effort to make sure that the neighbourhood is planned and surveyed to enable preparation of land title to land occupiers.

# 3.4 Land acquisition at Ubungo Darajani

Land acquisition at Ubungo Darajani has largely been on market base through buying from the Land Occupiers (Settlers). Table 7 illustrates the means used by Land Occupiers to acquire/access land and houses at Ubungo Darajani.

Means of acquisition	Men	Women	Total	Percentage
Buying	132	10	142	88.8
Gift	0	1	1	0.6
Inheritance	13	4	17	10.6
Total	145	15	160	100
Percentage	90.6	9.4	100	

#### Table 7: Land Acquisition at Ubungo Darajani

Results presented in Table 7 show that 142 (88.8%) of property owners bought parcels of land from original settlers, one person got land from his former employer as a gift (0.6%), and 10.6% through inheritance, invasion and occupation of land by virtue of absence of landlords was not recorded at the area. This has a connotation that land occupiers at Ubungo Darajani are likely to have ability to pay for Land Regularisation. Women (9.4%) compared to men (90.6%) are seen to be the least involved in property acquisition. This could be caused by patriarchal dominance in accessing property and ownership rights in African families.

# 3.5 Reasons for Implementing CP in LR at Ubungo Darajani

The Land Regularisation at Ubungo Darajani was initiated by the Land Occupiers after most of them failed to get loan facilities from established financial institutions due to the fact that they had no land titles for collateral purposes. Others were seeking security of their investment and hedge for evictions as illustrated in Table 8 below.

Reason	No. of Land occupiers	Average %
To secure Loans	46	29
To avoid eviction	40	25
Security of investment	45	28
Easy transactions costs	29	18
Total Respondents	160	100

The data in Table 8 depict that 29% land occupiers joined the project to facilitate use of property for securing loans from banks and collateral; 25% of respondents joined the exercise to avoid eviction or expropriation of their land by Government; 28% did so for security of investments already made and 18% joined in to enable new investments on the plot. Other reasons which led to self-help Land Regularization at the neighbourhood was to adhere to formal land development in order to get access to basic services that include access roads to each plot, water supply, storm water drainage systems, solid waste management and finally to use their registered title to borrow money from financial institutions and develop their land according to town planning guidelines. During FGDs, it was noted by the Sub Ward Chair Person that the overall initiatives of Land Regularisation project were to regularize the informal settlement in order to enhance social and economic position of residents through using Land Titles over their investments made on land to access loans and collateral. Further, it encourages land to be used for highest and best uses while allowing owners to capture capital gains from sales.

#### **3.6 Community Involvement**

The participatory approach which involved negotiation among landowners was adopted during the regularization process with an emphasis on inclusion of all members of the community in decision-making. The aim for community involvement was to identify planning issues of concern and ways of addressing Land Regularisation process through community meetings and to open negotiation with individuals who had complaints about the project. Through this approach, UCLAS in collaboration with property owners and the Ubungo Darajani

Settlement Development Association (UDASEDA) managed to identify public and private rights, resolved conflicts on plot boundaries and improved accessibility in the new plan.

Internal stakeholders in the project at Ubungo Darajani were of varied capacities in terms of finance. The community had well-to-do people as well as some poor Land Occupiers. The well-to-do people joined the group to further regularisation process but after a time of delays they left the group and surveyed their parcels of land individually. That was after community efforts to get the TP–drawing in 2000, proved futile. The Chairperson to the Land Regularisation Committee at Ubungo Darajani had this to say during interviews *that* 

"Two hotel owners at the area detached themselves from the group efforts because some of land occupiers were unable and reluctant to pay their contributions in time as such the project delayed their agendas. Well to do Land Occupiers were not participating in our meeting except for one who is running a Nursery School. The difference on income between members of the community has been a real problem to community development projects in our neighbourhood. Those who were able to pay over Tshs 500,000 hired private surveyors to work for them and by now they have their title deeds while for us who failed to raise such amount of money we are still going to the KMC to seek assistance to get our Offer of Right of Occupancy".

Further to the above in quotes the respondent while explaining issues of income levels while pointing at two multi-storey buildings and one poorly built house in the area to verify that the gap in terms of income is too big.

# 3.7 Actors Involvement in Land Regularisation process

Different actors with different roles have been involved in land reguralisation process. Table 9 indicates this: Table 9: Actors Involved in Land Regularisation at Ubungo Darajani

Category	Number	Involvement
Land Occupiers	300	Planning process, Resource contributions (money, land for public use).
Local Leaders	10	Convened meetings, communication with KMC, Sanction application letters for offers, Confirm land ownership.
Tenants	4	Attended meetings and planning process on behalf of Land Lords.
Groups/CBOs	5	Attended meetings, advised on follow-ups to KMC and MLHHSD
Grassroots leaders	12	Supervised land demarcation, boundary conflicts resolutions, follow- ups to Sub Ward, Ward, Municipality and Ministry of Lands.
Financial Institutions	1	NBC Ubungo- through CBO saved contributions in the USADESA account.
UCLAS (ARU)	9	Preparation of Town Planning Drawing.
KMC	8	Scrutiny and Certify the TP-Drawing, and forwarding to MLHHSD
MLHHSD	4	Approval of Town Planning and Survey Plan.
Total Participants	353	
Source: Field Data (No	(ambar 2012)	

1 able 9: Actors involved in Land Regularisation at Ubungo Daraja

Source: Field Data (November, 2012)

Actors in Table 9 were actively involved in the project to meet their roles. The chair- person to the Land Regularisation Committee at Ubungo Darajani confirmed that there was a sufficient level of interaction between stakeholders during the course of the project. The Settlement Land Regularisation Committee helped by UCLAS and *Survey Consult* were timely in recognizing issues and dealt with them appropriately.

# 3.6 Land reguralisation Outcomes and Resource contributions

# Land use planning

Landholders (3000) living within and outside the area were involved and contributed cash and others did so in kind. The study revealed that during the preparation of the detailed layout plan, only 100 (60 %) out of 160 land holders paid their contributions. The rest of 60 (i.e.40%) did not contribute because of various reasons including misconception and distrust of local leaders. The data kept by Chairperson of Land Regularisation Committee indicates that out of 300 Land occupiers, 180 (60%) contributed in cash, 81 (27%) paid in three to five instalments, 39 (13%) paid in more than five instalments. The survey revealed that 58% of the contributions were made within a week and two months after the land occupiers agreed to make contributions, while 42% of contributions took more than three months. The implication from the trend in making contributions for Land Regularisation reflect the fact that most of Land Occupiers participate and contribute in full after gaining a trust of the project leadership and deliverables.

The preparation and approval of the detailed layout plan was completed after 3 years while the plan was approved by the Director of Physical Planning in November, 2002. The local leaders equally convened a general

meeting for land occupiers to inform them about the approach of the detailed layout plan and commencement of the next phase, which comprised cadastral survey. To this effect, the total cost of the preparation of the TP-Drawing was Tshs 1,260,000/=. Submission of the TP-drawing to KMC for scrutiny, endorsement and for submission to the MLHHSD for approval was facilitated by UCLAS on behalf of the Ubungo Darajani Land Occupiers.

UCLAS was involved in making follow-ups to the MLHHSD offices in collaboration with leaders in Ubungo Darajani Land Regularisation Committee to ensure that the plan was approved by the Director of Physical Planning at the MLHHSD. Organisation and responsibilities of Key Actors or Participants at Ubungo Darajani in Land Regularisation activities are presented in Figure 2

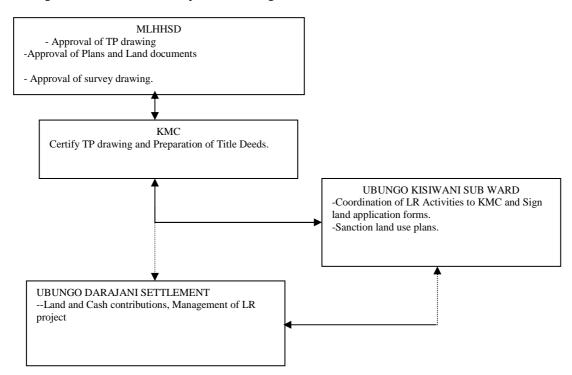


Figure 2: Flow of Activities on Land Regularisation at Ubungo Darajani

# Cadastral Survey

Plots surveying was the next step after the approval of TP Drawing (neighbourhood layout plan) by the Director of Town Planning at the MLHHSD. The Ubungo Darajani community convened a meeting which agreed on the plan, endorsed and directed the project team to identify a Surveyor who could help to survey their area. The Land Regularisation Committee (LRC) in collaboration with Sub Ward leaders and Consultants (UCLAS and Survey Consultants) was charged with the carrying out cadastral survey to enable title preparation. In the course of surveying work, LRC, UDASEDA and local leaders consulted the Kinondoni Municipality and were directed to consult UCLAS for quick solution of their problem. The surveying department at UCLAS submitted an estimate showing that the cadastral survey of 26 hectres would cost Tshs 21 million. Another surveying company quoted 28 million. The Chairman of the Land Regularisation Committee informed the community about the cost quoted by two surveyors at a general meeting that directed the Committee to approach the MLHHSD for help. The MLHHSD referred them to look for a Surveying company which could agree to undertake that work at cheaper charge from the first tenders. M/S Surveyconsult surveyors were consulted and they asked the community organization leaders to submit an approved layout plan (TP-Drawing) for costing purposes. The cost for cadastral survey of 237 plots was at a tune of Tshs. 4,099,000/=. In order to be in a position to start the work M/S Survey Consult asked the community to seek surveying instructions from Kinondoni Municipality. A letter was written by the representatives of the regularization project and submitted to Kinondoni Municipal surveyor in charge. The survey instructions processes took nine (9) months as from mid January to October 2004.

The Land Occupiers of Ubungo-Darajani were able to contribute Tshs. 4,099,000/= to cover the cost for cadastral survey through their own initiatives after the UDADEFU Chairperson signed a contract with the *Surveyconsult* surveyors to survey the area. In this phase of Cadastral Survey, a deposit account was opened with Tshs.3 million deposits where Landholders did deposit their contributions.

# Outcome of Land Regularisation at Ubungo Darajani

Ubungo Darajani informal settlement has been described in terms of the development of settlement administration and land tenure security. The roles of various actors in the community have been discussed in this paper together with challenges encountered in the implementation of the Ubungo Darajani Land Regularization project. In order for Ubungo Darajani to accomplish this goal, it provided various levels of public involvement, which had the potential to reach all Stakeholders. First of all the community survey was administered in order to provide an avenue for the general public to provide input. Members of the community that wanted to take a greater role in the planning process had the option to participate in community events such as community meetings, mapping and cadastral survey of the area. Secondary, participating land owners had the opportunity to work directly with UCLAS Town Planners during the development of the Community Agenda to support Land Regularisation at the area as well as to work with Land Regularisation Committee during the project implementation.

The Ubungo Darajani Land Regularisation project had the potential to breathe new life into the area and to transcend into other settlements. The outcomes of this initiative include:

- 26 new business areas have been created;
- 12 roads stand to be opened / introduced within the area to enhance accessibility;
- 48 businesses will be formalized after opening of new roads;
- 3 public areas for dispensary, water collection points are to be offered by private land owners on voluntarily basis;
- Social services and garbage collection points were set to be enhanced;
- 320 plots are surveyed for residential purposes according to the plan of the area;
- Database on land and houses have been established after the completion of regularisation, which enhanced property tax collection and Land Rent to boost KMC revenue after titling.
- Settlement planning has been instituted as a tool for development control and this plan is the basis for infrastructure planning and provision by utility service providers.
- The release of land for social facilities and public use stands to improve the quality of life of all residents of Kinondoni Municipality and the Ubungo-Darajani community
- At individual level, acquisition of land title can be used as collateral to access loans from banks for income generation activities and other businesses. UNDP (2005) observes that Banks in Tanzania now do not contemplate lending on the basis of anything other than a title registered under the Land Registration Act No.4 of 1999 which reduces the scope of their lending to less than 10 percent of the land in the country. Therefore, those receiving land titles will be free of that barrier.
- The Ubungo Darajani settlement had the capacity and skilled people to plan the journey for Land Regularisation, monitor its implementation with local leaders, municipal Authority and MLHHSD.

# 3.7 Lessons Learnt from Ubungo Darajani Community involvement in Reguralising Informal settlements

The implementation of Land Regularisation under bottom-up approach involving Community Involvement at Ubungo Darajani has key central issues of experience to learn as documented below:

#### Culture of collaboration and partnership in Land Regularisation at settlement level enhanced.

Through successful Land Regularisation carried out at Ubungo Darajani land occupiers have had an opportunity to participate fully in decision making on matters affecting their lives. Land occupiers gained the knowledge of Land Regularization from collaboration with Sub-Ward and Ward leaders, KMC, UCLAS, *Survey Consultant* and MLHHSD, who helped them to identify priorities and negotiate on change of parcels of land boundaries for Land Regularisation.

### Accumulated knowledge on Land Regularisation in the settlement

Through engagement of land occupiers in the Land Regularisation projects, land occupiers have gained the knowledge on how Land Regularisation process is done. The success of Land Regularisation at Ubungo Darajani is an alert to the Urban Authorities and the MLHHSD, that initiatives made by land occupiers should not be neglected, since they can create good environment for the success of City-wide Land Regularization.

#### Improved local knowledge in tackling issues in informal settlements

Local people have a rich knowledge base and experience of making things done in their informal settlements, especially on approaches used to conduct meetings, timing on collection of contributions and boundary dispute resolutions. Government officials have to know that local communities are much more likely to come up with solutions to their problems when given the opportunity to participate.

#### Trust and good leadership created and enhanced

There was trust and good collaboration among land occupiers and community leaders about the handling and care of project resources. There was committed, motivated and informed leadership that has been instrumental in community led-activities. The degree to which members of the community trust and have confidence in each other, especially their local leaders and members of selected committees to pursue issues of Land Regularisation on their behalf is of importance in mobilizing community-led projects.

#### Capacity building to the settlement residents

Capacity building on issues of planning has been put among stakeholders, and surveyors and urban planners have been enabled to work with both male and female members of the settlement community in physical planning, surveying and implementation of Land Regularisation projects. Local leaders and Land Regularisation Committees were involved in the whole process of the project and some have gained knowledge of map interpretation on the ground, hence, being able to solve some minor physical planning problems at their settlement in the future.

#### Actors' change of attitude

Practitioners in urban planning have shown a change in adapting to using collaborative strategies as they worked together in harmony to further Land Regularisation in the study area of Ubungo Darajani. While helping each other practitioners changed from conventional way of planning to collaborative planning. That enabled the community, UCLAS, Survey Consult, KMC and MLHHSD to utilize potentials and available resources from the community for effective and efficient Land Regularization, generation of planning standards to suit the field situations.

#### 3.8 Land Regularisation through Community Involvement Challenges

# Some of the remarkable challenges noted include:

# Inadequacy and limitations of financing mechanisms

From this study, it was noted that there are inadequacies and limitations of financing mechanisms for informal settlements' regularisation. The Central and Local Governments cannot afford regularizing informal settlements at once because of budget deficit to run its activities while donors are no longer providing enough grants for urban development as was of one before 1990s. Neither the private nor financial institutions alone are able to finance the whole Land Regularisation venture as they insist on cost sharing.

#### Difficulties to access land information

The study reveals that there is a complexity of many of the statutory provisions applied to land management and development in the country, which are not known to land occupiers. There are over-bureaucratized and centralized activities in land management at MLHHSD, hence the Ubungo Darajani Land Regularisation Committee failure to get data on TP-of their settlement until they engaged a consultant. Access to land information has been raised as a major area of concern during FGDs and interviews with Government officials and residents in the study areas.

#### Lack of wherewithal for land Planning

(*i*) Lack of updated base-maps coupled with high rate of haphazard house construction forced urban planners to use an approach of direct layout design in piece meal to guide land surveyor in carrying out cadastral survey during land regularization process. The use of this approach creates difficulties to establish road hierarchy since layout designing is not done comprehensively.

(*ii*) Lack of technical staff: Inadequate number of practicing Urban Planners, surveyors and Land Officers in Dar es Salaam Local Authorities was observed as one of the big problems that confront land office's attempting to carry-out Land Regularisation.

(*iii*) Lack of Standards for Land Regularisation: During land regularization in the study area, standards for adoption in Land Regularization of informal settlements were not in place, hence hindering the application of conventional standards normally used in planning new areas. The Urban Planners were compelled to adhere to planning standards which would lead to demolition of few parts of houses in the future.

## Deficiency of Institutions and Actors Involvements

Institutions/Organizations and authorities at different levels and civil society groups have different motives and interests. The following obstacles were found during the research:

(*i*) Lack of Participatory strategy for land development: There is lack of participatory institutional arrangement in the Top-down Land Regularisation process led by the government. The land planning and management system does not sufficiently involve land occupiers in land planning and surveying process as key players in physical planning activities. (*ii*) Bureaucracy in titling process: Despite the success and completion of land survey in Land Regularisation projects at Ubungo Darajani the actual number of land occupiers who got Land Titles is very low due to bureaucracy, which harbour environment for corruption.

*(iii) Lack of real political commitment and government officials' commitments:* There were fussy political and government officials commitment which caused the project to take a long time to complete.

(iv) Lack of involvement of urban developers and service providers: There was lack of Involvement of most stakeholders in Land Regularisation projects, while the Land Occupiers have sustained on the process to regularize their settlements at Ubungo Darjani no any infrastructure provider (TANROADs, ADAWASA, TANESCO) involved.

(v) Lack of project Management skills: Lack of trained leaders was envisaged to be a weakness in the preliminary stages of the project at Ubungo Darajani. Engagement of communities in setting the agenda for improved settlement requires relevant skills in project planning and management, there were a shortage of professionalism to ensure that specific problems are dealt with in an integrated and direct manner.

# 4.0 RECOMMENDATIONS, CONCLUSION AND FUTURE OUTLOOK 4.1 RECOMMENDATIONS

The study recommendations the following for enhanced community Involvement and land reguralisation process in developing countries, Tanzania inclusive:

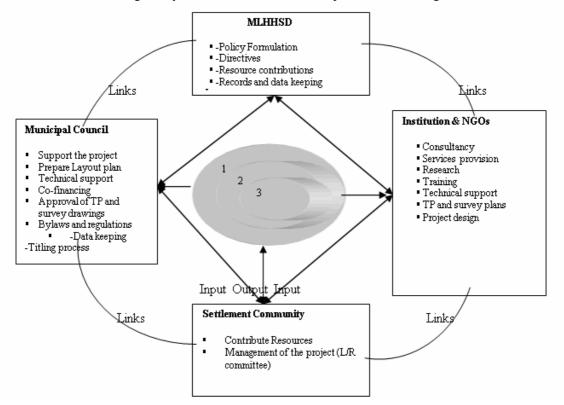
- Legislations and government policies on Land Regularisation need to be streamlined and made more consistent and uniformly enforced as stipulated in Land Act No.4 of 1999 and Town Planning Act of 2007.
- (ii) There should be meaningful recognition of land occupiers' rights and well defined responsibility to stakeholders in order to reduce hanging and overlapping activities which create tensions during the implementation of Land Regularisation projects.
- (ii) There should be open and well conceived land titling programs, environmental and resource management planning of informal settlements regularisation to enable land occupiers' full Involvement.
- (iii) There is need for long-term institutional arrangement to enable sustainable Community Involvement in land regularisation projects. That should involve training programs for capacity building elements, resource mobilization and projects management.
- (v) It should be necessary to shift from the culture of top-down planning approach towards bottom-up community Involvement in informal settlement activities.
- (vi) There should be training of urban Authority Officials to be courteous, friendly and helpful to reduce complaints and disputes with land occupiers during execution of Land Regularisation projects.
- (vii) The future of land regularisation of informal settlements should be on the ability of the local Governments to improve relations between communities and Government agencies, urban services and utility providers.
- (viii) Administration of implementation of land regularisation needs to be strengthened to ammonise diversity among Land occupiers with different income levels, and distinct political direction and economical obstacles, which obscure the way forward for Land Regularisation projects' processes.
- (ix) The strategies for implementation of MKUKUTA and Tanzania Vision 2025 are important ingredients to build upon the progress of land regularization for secure land tenure to guarantee that communities living in informal settlements enjoy the rights to their lands.

- (x) The recent achievements recorded by Ubungo Darajani and Ali Maua "A" should be emulated and used as foundation for a new era in the land regularization for provision of secure land tenure to people living in informal settlements.
- (xi) Improved land administration and enhanced participatory approaches should be the key for future Land Regularisation processes.

# 4.2 FUTURE OUTLOOK FOR ENHANCING LAND REGULARISATION

From this study it has come out clearly that interventions in informal settlements under Land Regularisation have been dominated by Central and Local Governments, giving little or no chance to land occupiers to participate in the process. That situation has caused Government projects to fail or halt Land Regularisation processes before completion. Most of the failures stemmed from lack of resources aggravated by poor involvement of land occupiers and the settlement community as a whole, lack of Involvement of training institutions, private, NGOs, property developers and institutions that provide urban infrastructure and services.

The proposed structure for Land Regularisation in Figure 3.1 is considered to garner concerted efforts of all stakeholders based on Bottom-up strategy in order to use resources owned by land occupiers to finance the major part of the cost for Land Regularisation. Land occupiers in informal settlements are not all that poor based on category and standards of houses in Ubungo Darajani settlement. There is a need for them to contribute resources for Land Regularisation in their settlements. Figure 3.1 below provides the proposed operational structure for Land Regularisation process under Bottom-up Community Involvement through initiatives of settlement residents (Land Occupiers) partnering with other actors/stakeholders in urban development. The structure and the process will make it possible for effective utilisation of pillars in Community Involvement, which are: Resources; Regulatory framework; Institutions; Empowerment and Organisation.



#### Figure 3: Recommended Structures for Land Regularisation of Informal Settlements

Key: Step 1= Land Titling (ownership, development, user rights).

- Step 2= Incremental Development (Infrastructure, Urban services).
- Step 3= Redevelopment, social and environmental sustainability.

Figure 3.1 illustrates the model expressing linkages, responsibility and resources contribution by stakeholders participating in Land Regularisation for secure tenure. The structure establishes the formal communication

system in Land Regularisation and recognises formal and informal networks which create various patterns among stakeholders. The vertical as well as horizontal links of the set/design organisation or operation structure in Figure 3.1 is intended to ease communications within the teams, and reflects team working, accountability and controls during Land Regularisation.

## 4.3 CONCLUDING REMARKS

The study shows that local community Involvement is important towards enabling residents in informal settlements to come together and fights against their right of securing tenure in informal settlements. However, linkages synergy and partnership in view to Involvement process and contribution of different resources appears to be an important ingredient in enhancing local community in securing land tenure and therefore safeguard urban environment. Roles of different actors including the central government, local government and other planning and development institutions need to be clear and therefore contributed to enable local community initiated project such as land regularisation to be implemented effectively. This may be the case in most Africa countries, where the need for upgrading informal settlements is an agenda.

City investment process is cumbersome and follows global markets and investment needs. Preparing the city land development strategy and framework can help provide conditions for developing each parcel of land and accommodate market forces. In the City of Dar es Salaam, after the death of the master plan of 1978, no land use plan proposal is in place to coordinate land development plans for the city and therefore unorganized activities are common. Likewise, putting in place land rangers to ensure proper land coordination is needed once the land is declared as a planning area ripe for development. Land rangers are lacking in the city. This also may help prevent informal housing development, which has detrimental effects on agriculture land. Similarly, it will help provide room for negotiation among actors and reduce unnecessary land conflicts.

Generally, the implementation urban informal settlements upgrading strategies fall under the question of planning, budgeting and investment planning and responsibility. This indicates that human, financial and information resources are a concern in implementation. It requires commitment, transparency and assigning roles and responsibility. The government cannot do it alone. A partnership is needed to improve informal settlement in rapid urbanisaing city like Dar es Salaam City and land use planning for reduced poverty and for subsequent implementation, monitoring and review. However, regulatory guidelines for the planning of new urban developments may not be applicable when upgrading is carried out in old developed informal settlements in urban and periurban areas. Where these have put land to intensive use, and layouts are more informal than in officially planned areas, the imposition of regulatory guidelines in full is impossible. This requires flexible and agreed planning space standards in a participatory manner to consolidate the object of the exercise and therefore improve informal settlements in Tanzania and other countries of the same context.

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# **5.0 REFERENCES**

- Community Infrastructure Upgrading Programme CIUP (2004): Resettlement Action Plan, prepared by UCLAS and SMV for the three Dar es Salaam municipalities.
- Dar Es Salaam City Council (DCC) (2007): Capacity Building Needs Assessment and Capacity Building Plan, Dar-es-Salaam Cities Alliance Programme Action Plan to Upgrade All Unplanned and Unserviced Settlements in Dar-es-Salaam by 2015.
- Dar Es Salaam City Council (DCC) (2008): Action Plan for upgrading Unplanned and Unserviced settlements in Dar e s Salaam. UN-HABITAT, Nairobi.
- Kyessi, A., (2002): Community Planning in Urban Infrastructure Provision: Servicing the Informal Settlement in Dr es Salaam. PhD.Un-published Thesis University of Dortmund, Germany.
- Makereani, H.M., (2007): Citizen Involvement in informal Settlements; Potentials and Obstacles: The case of Iran, Shiraz, Saadi Communities. Academy of Science, Engineering and Technology, Volume 22, ISSN 1307-6884.
- Nguruma H.M (2003) Housing Themselves, Transformation, modernisation and spatial qualities in informal Settlements in Dar es Salaam City.
- Kulaba, S.M. (1986): Urban Growth and the Management of Urban Reforms, Finance, Service and Housing in Tanzania, Unpublished research report. Dar es Salaam: Ardhi Institute, Centre of Housing Studies.

- Payne, G., (2005): *Getting Ahead of the Game*: A twin-track approach to improving existing slums and reducing the need for future slums. *Environment and Urbanization*. 17(1):135-145.
- United Republic of Tanzania (URT) (1967): Arusha Declaration, Government Printer, Dar es Salaam

United Republic of Tanzania (URT) (2006): Land Use Planning Act, Government Printer, Dar es Salaam.

United Republic of Tanzania (URT) (2006): Urban Planning Act, Government Printer, Dar es Salaam.

United Republic of Tanzania (URT) (2003): Population and Human Population Census Report Government printer, Dar es Salaam Tanzania.

- United Republic of Tanzania (URT). (2002): Population and Housing Census General Report, Government Printer, Dar es Salaam
- United Republic of Tanzania, (URT) (2000): National Human Settlement Development Policy, Government Printer, Dar es Salaam.

United Republic of Tanzania (URT) (1999): Land Act, Government Printer, Dar es Salaam.

- United Republic of Tanzania (URT) (1999): Government Notices, Orders, Technical Instructions and Circular Commonly Referred to in Pursuance of Human Settlements Development, Dar es Salaam.
- United Republic of Tanzania (URT) (1988): Population and Human Population Census Report Government printer, Dar es Salaam Tanzania.
- United Republic of Tanzania(URT) (1982): Local Government Act No.7 and 8, Government Printer, Dar es Salaam.

United Republic of Tanzania(URT) (1979): Dar es Salaam Master Plan, Government Printer, Dar es Salaam.

- United Republic of Tanzania (URT) (1978): Population and Human Population Census Report Government printer, Dar es Salaam Tanzania.
- United Republic of Tanzania (URT) (1956): Town and Country Planning Ordinance-Cap 378 Revised in 1961, Government Printer, Dar es Salaam.
- UN-Habitat (2007): State of the World's Cities 2006/7-The millennium Development Goals and Urban Sustainability: 30 Years of Shaping the Habitat Agenda, Earth Scan, London.
- UN-Habitat (2007): Land Governance, Issues and Perspectives from UN-HABITAT. Paper presented to the international workshop by *Szilard Fricska on Global Campaign for Secure Tenure*, Oslo, January 2007.
- UNDP (2006): Human Development Report; Beyond Scarcity: Power, Poverty and the Global Water Crisis. New York.

UNDP (1998): State of the World Population Report, New York: UNFP.

World Bank (2002): Upgrading Low Income Urban settlements Country Assessment Report, Tanzania, AFTU 1&2.

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