FORMAL PLANNING REGULATIONS VERSUS THE NEED OF RESIDENTS: THE CASE OF DAR ES SALAAM/TANZANIA

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Abstract

In Sub-Saharan Africa urbanization is progressing at a rate unprecedented in human history. In most countries, the state is not in a position to apply a responsive legal framework and to mobilize adequate resources to guide urbanization. A major obstacle are the outdated legal framework and the inappropriate planning concepts inherited from colonial governments which often contradict post colonial policies and are unsuitable to respond to rapid urban growth.

The chronic underperformance of the public sector vis-à-vis rapid urban growth caused a large cumulative backlog in the provision of building land and basic services. In addition, uncontrolled informal urbanization has often caused dysfunctional settlement lay-outs and urban structures.

In Dar es Salaam, Tanzania informal settlements cover more than 70% of the city area because the statutory system cannot provide sufficient building land and settlers have to find plots on the informal land market. It shows the need for a new approach to statutory planning in order to guide urban development effectively, to create more functional settlements, to assist the urban poor to access affordable plots with basic services, and to release financial assets for the urban economy.

The paper will present results of a joint research analyzing empirically factors that determine space standards and land use in prevalent types of formally planned and informal settlements in Dar es Salaam. Goal is to identify parameters to ascertain the long-term suitability of settlements, understood as being functional and flexible to respond to future demands reflecting from socio-economic development.

At the centre of the research are the livelihood strategies of the residents. The overall aim is to evolve a responsive framework for statutory planning including spatial standards for settlements that reflect the current reality of urbanization under poverty while addressing future needs. Main actors will be local leaders and the community to ensure sustainable planning.

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1. Introduction

In Sub-Saharan Africa urbanization is progressing at a rate unprecedented in human history. In most countries, the state is not in a position to apply a responsive legal framework and to mobilize adequate resources to guide this rapid urbanization. Some of the obstacles are the outdated legal framework and the inappropriate planning concepts inherited from colonial governments. They often contradict post colonial policies (Ambe, 1999) and are unsuitable to respond to rapid urban growth.

The chronic underperformance of the public sector vis-à-vis rapid urban growth causes a large cumulative backlog in the provision of formal building land and basic services and leads to growing informal settlements. The outcomes of uncontrolled informal urbanization are dysfunctional settlements and urban structures (Scholz, 2008). The designation of specific land uses by planning authorities, the range of plot sizes and the reservation of space for public uses such as social and technical infrastructure, however, are important tasks to organize a harmonious urban development for the benefit of all (UN Habitat, 2008). Statutory urban planning has to balance the development opportunities of individual plot owners with public welfare and common interests.

Today, in Dar es Salaam, Tanzania informal settlements cover more than 70% of the built-up area. They have emerged primarily because the statutory system cannot provide sufficient buildable land for the demand. Inappropriate planning standards and inefficient land allocation procedures are serious bottlenecks. Most urban inhabitants who aspire to own a house in urban areas have to buy plots on the informal land market. The development of informal settlements does, however, not guarantee functional settlement structures, efficiency in the provision of basic infrastructure and adequate security of tenure (Kombe and Kreibich, 2007).

For urban residents and the poor in particular, a residential plot represents income and employment generation opportunities and essential livelihood assets. However, income generating activities on the plot can be supported or hindered by planning regulations. Additional costs can be caused or avoided depending on what planning regulations and standards are being applied. Too rigid standards, like exclusively residential zoning where no other uses may be allowed, can have a restrictive impact on livelihood strategies of urban settlers since it can make income generating activities difficult to execute. On the other hand, the absence of any formal regulation in informal settlements can also hinder income generating activities due to inter alia restrained accessibility when densities increase or land uses conflict each other. The absence of regulations can also have a negative impact on livelihoods due to unhealthy living conditions and overcrowding. Studies conducted in informal settlements have confirmed that unregulated densification coupled with increased income generating activities can cause threats to public health and sustainable livelihoods (Kombe and Kreibich, 2007; Sheuya 2004).

The same applies as well to planned settlements as the research conducted hitherto revealed. They undergo a process of informalisation due to the lack of development control on the ground and a high pressure on land for commercial land uses and multi-storey constructions.

In many British colonies, the British Town and Country Planning Act of 1947 was adopted uncritically, and even updated versions of the legislation retained the major features in several countries (Payne, 2001). In Tanzania, the British Town and Country Planning Act of 1947 was adopted via the Town and Country Planning Act of 1956. Land use planning standards including land use zoning were based on the model of a low density, green city that reflected the ideals of a colonial version of the "Garden City". This concept may have been adequate for colonial towns with modest growth that were physically and socially contained through restrictions of rural-urban migration. But it cannot cope with the high urban growth rates since independence and, above all, it cannot be implemented by weak public administrations with limited resources (Ambe, 1999; Payne, 2001). Furthermore, it is hardly suitable for the current process of urbanization under poverty where only small plots can be afforded by the majority of settlers. After independence, in Tanzania the colonial planning standards were modified but with little attention to post-colonial socio-economic realities. The 1956 Town and Country Planning Law has only recently been reviewed (Urban Planning Act 2007) but by and large the contents have remained the same (Basteck et al. 2007). Even the internal draft (2011, see Table 1) for the recent revision of plot size standards is far beyond of what urban poor dwellers can afford and does not support sustainable and compact urban development or optimal use of scarce resources including public finances for basic infrastructure services.

Table 1: Proposed revised plot size standards (in brackets current standards)

Density	**Plot size in sqm**	**Maximum coverage**	**Maximum plot ratio**	**Minimum setbacks front**	**Minimum setbacks side**	**Minimum setbacks rear**
High	300-600 (400-800)	40%	0.4	3 m	1.5 m	1.5 m (2 m)
Medium	601-1200 (801-1600)	30% (25%)	0.3 (0,25)	3 m	3 m	3 m (5 m)
Low	1201-1600 (1601-4000)	25% (15%)	0.25 (0,2)	5 m	4 m	5 m (10 m)
Super low *(new category*	1601-2500	20%	0.2	7 m	7 m	7 m

Source: Ministry of Lands, Housing and Human Settlements Development (Internal draft 2011, not published)

Currently, urban land use planning standards still require large plot sizes that are too expensive for the Government to service and unaffordable by most social groups, especially the urban poor. In a paper presented in the expert workshop of this research project in August 2011, W.J. Kombe highlighted the costs for different infrastructure standards in relation to plot sizes. He concluded that for the stipulated plot sizes infrastructure costs would be prohibitive. This reduces the ability of local government to fulfill its obligations of service delivery and contributes to the shortage of building land.[2]

The unmet demand for affordable building land is thus largely covered by the informal land supply system which operates with average plot sizes of about 100-200 sqm. It can thus be argued that inappropriate planning standards, especially the plot sizes, have compounded the problems of urban governance, mushrooming informal settlements and the absence of basic infrastructure services even in most of the new planned and surveyed areas (own fieldwork 2011).

For decades, there has been hardly any planned residential settlement in Dar es Salaam that meets the needs for low-income groups. Even areas planned and designed for the urban poor (so called high density areas), where plots were offered below market prices, did not reach the target groups because these could not afford the land prices requested or were bypassed in the allocation process. In some cases, rising land prices even forced residents to sell allocated plots (own fieldwork 2010).

A recent initiative of the Government of Tanzania (Dar es Salaam 20,000 Plots Project) which aimed at providing planned, surveyed and allocated plots to reach all income groups has again failed due to high service costs, disadvantageous locations and non-transparent allocation procedures (Kombe and Kreibich, 2007). In many locations of the 20,000 Plot Projects prices for plots skyrocketed from an initial average of TSh 400,000[3] for a high density plot (charged by the Government upon allocation) to TSh 5 Mio. (price in the land market) in less than five years. This is more than ten times the official price charged and reflects the development of land prices for surveyed areas (own fieldwork 2011).

Most of the urban poor, therefore, can only find a place for living in the informal settlements where they can access smaller plots at affordable prices for unserviced land. In exchange they will have to cope with higher costs for services and utilities like urban transport and water from street vendors.

[2] The cost of basic infrastructure services in comparison to full service infrastructure (i.e. including private water pipes and sewage) only doubles in case of small plots of 100 sqm. However, for larger plot sizes, i.e. according to the official land use planning standards (min. 400 sqm, see Table 1), the costs increase by more than three times. This is mainly due to the increased total length of infrastructure service lines such as roads, water pipes, storm water drains etc. in relationship to the number of costumers or households being served.

[3] 1 € = 2.100 TSh in February 2012

The lack of buildable land provided through the formal system has also increased the development pressure on existing settlements. The growing commercial and service sector in the current market-led economy has given rise to land use changes towards commercial activities in residential areas. Many property owners are changing their houses to accommodate economic activities such as shops, offices, and workshops due to higher rent expectations. Land use changes from residential to commercial activities are taking place since plots for commercial activities are not sufficiently available on the land market due to an insufficient designation of plots for commercial activities in former and current planning schemes. (own fieldwork 2011)

Another aspect of the pressure on land is the redevelopment of plots with multi-storey buildings following increased land values. While this development tends to support a more compact city, most construction activities under redevelopment, however, ignore the need for adequate set-backs leading to inadequate space between buildings. The planning standards in Table 1 do not include multi-storey constructions and their higher demand for setbacks. They seem to be designed for single storey buildings only and do not deal with floor ratios or setbacks in relationship to the height of the building (own fieldwork 2010).

These facts show the need for re-thinking central elements of the statutory land use planning system focusing on the increasing pressure on land, the need to guide urban development effectively, to create more functional settlements, to assist the urban poor to access affordable building land, and to release financial assets for the urban economy.

The land use planning system also needs to reflect hitherto unused capacities at the grassroots to supplement the role of public administrations in achieving strategic urban development objectives. As far as possible it needs to incorporate local administrative institutions and locally-based conflict resolution mechanisms. This does not mean in any way that formal institutions have to be replaced. The idea here is to explore mechanisms and strategies to reassign land use planning in response to the changing socio-economic and physical conditions.

2. Fieldwork in selected settlements of Dar es Salaam

The research analyzed formally planned and informally developed settlements in Dar es Salaam, Tanzania. Aim was to find out to which extend the formal planning regulations are applied and efficient, which current development processes are going on, how these processes impact on the livelihood strategies of the residents and which land use conflicts mainly take place due to the lack of development control.
Focus was to explore current processes of land use changes, densification, intensification, the livelihood needs of the residents in terms of space and land use as well as the impact and efficiency of statutory planning regulations including land use related conflicts. Land use conflicts in residential planned areas versus the uncontrolled/unguided mixed land use development were examined and the negative ef-

fects of such developments towards the adjoining land uses, residents and the overall functionality of the settlements were studied.

2.1. Applied methods and working steps

Seven settlements were selected for fieldwork (see Table 2): Planned and unplanned settlements under high densification pressure (case Sinza A1, Gongo la Mboto B2, Kawe B3) and an unplanned settlement which underwent a process of regularization and infrastructure upgrading (case B1 Sandali). Cases Mbezi Beach A2 and Bunju A4 serve as an example for settlements developed according to the formal planning standards with respective plot sizes. Case A3 Chamazi, however, is a planned settlement as well but as a model project with far lower standards of plot sizes of 144 sqm which is half of the plot size of Sinza A1 (288 sqm) which was developed as a site-and-service project under the World Bank scheme in the 1980s (see Table 2 and Fig. 11).

Table 2. Typology of Case Study Settlements analyzed

Typology of cases	**Planning approach**	**Selected Case settlement**
A1) Planned settlement under high development pressure	Site-and-service scheme of the 1970s	Sinza A1
A 2, A 3, A4) Newly planned areas	New planned development areas at the periphery	Mbezi Beach A2, Chamazi A3, Bunju A4
B 1) Upgraded informal settlement	Regularized informal settlement	Sandali B1
B 2, B 3) Newly informal settlements	New informal settlement at the urban fringe	Gongo la Mboto B2 and Kawe B3

A first expert workshop was held on July 8th 2010. It aimed at discussing and reviewing of the proposed research issues and research questions as well as at identifying potential case study settlements. After the workshop, intensive fieldwork started in the case study settlements of Sinza A1 and Sandali B1, followed by a second fieldwork in Mbezi Beach A2, Kawe B3 and Chamazi A3 in 2011 and Gongo la Mboto B2 in 2012. During the second expert workshop, held on 10th August 2011, preliminary findings from the first four case study settlements were presented and discussed.

The methods applied during the fieldworks were expert interviews to identify areas inside the case study settlement for in-depth survey and to conduct the interviews, followed by intensive surveys and land use inventory, semi-structured interviews with residents and operators of potential disturbing activities. Strategy for the selection of interviewees focused on identifying information rich cases or cases with a high conflict potential including disturbing land uses such as noise, dust pollution, solid and liquid waste production. These problems are largely associated with activities such as bars, repair workshops, retails business and function or congregation halls. Most of these land uses have emerged against official zoning regulations and land use change regulations but contribute to the income generation of the operators

and meet the demand of clients. However, they can conflict with livelihood activities of the surrounding neighbors.

Table 3. Overview on interviewed residents and operators of businesses

Case study settlement	Commercial operators	Residents
Sinza A1	4	16
Sandali B1	5	23
Mbezi Beach A2	3	24
Chamazi A3	Not available	5
Kawe B3	2	19
Bunju A4	4	19
Gongo la Mboto B2	4	26

The interviews reflect the wide range of the socio-economic figures of the residents in the different settlements (see Fig. 1 - Fig. 5). The relatively high proportion of interviewees above an age of 50 years was intended to collect views from residents who have stayed longer in the settlement and can provide a picture on the land use changes and development trends.

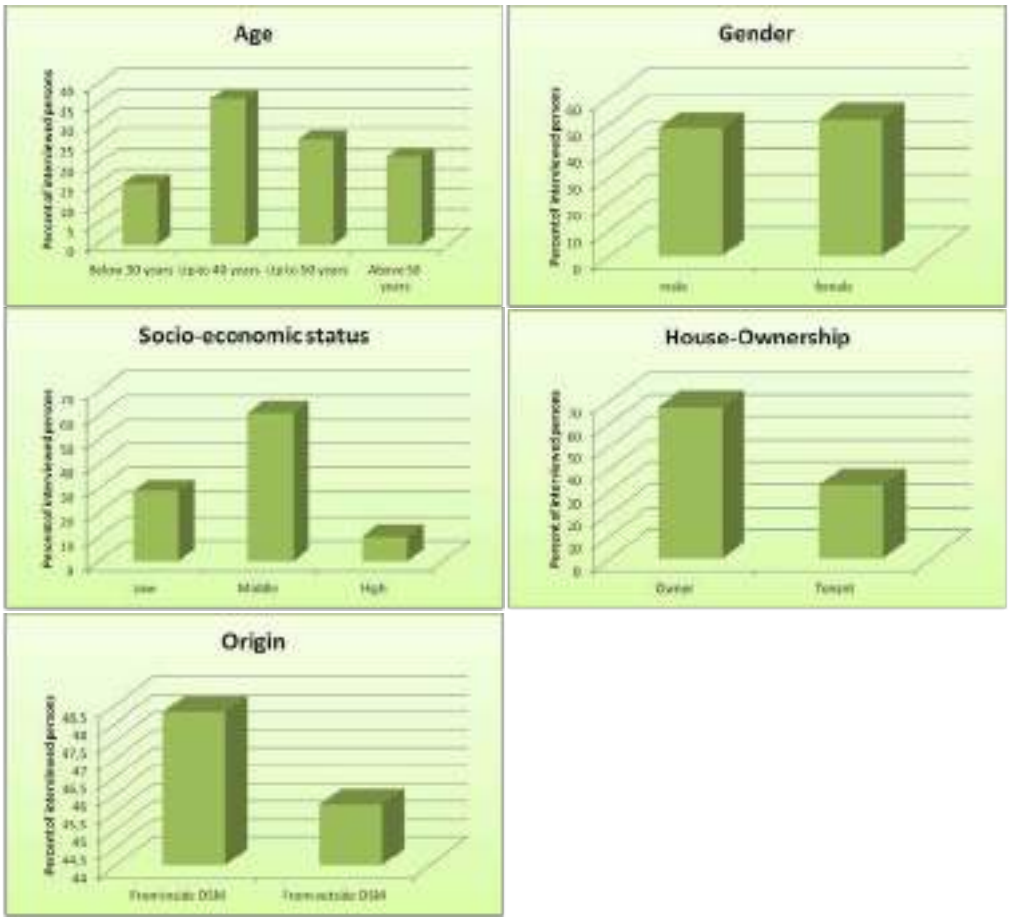

Fig. 1 - Fig. 5: Socio-economic data of the interviewed residents

When looking at the socio-economic figures, the interviews reflect the different income settings. B1, B2 and A3 are rather poor, while A1 and A4 is mainly for the middle class. A2 has been designed for the upper middle class but still rather poorer tenants live there temporally until the main construction is finished.

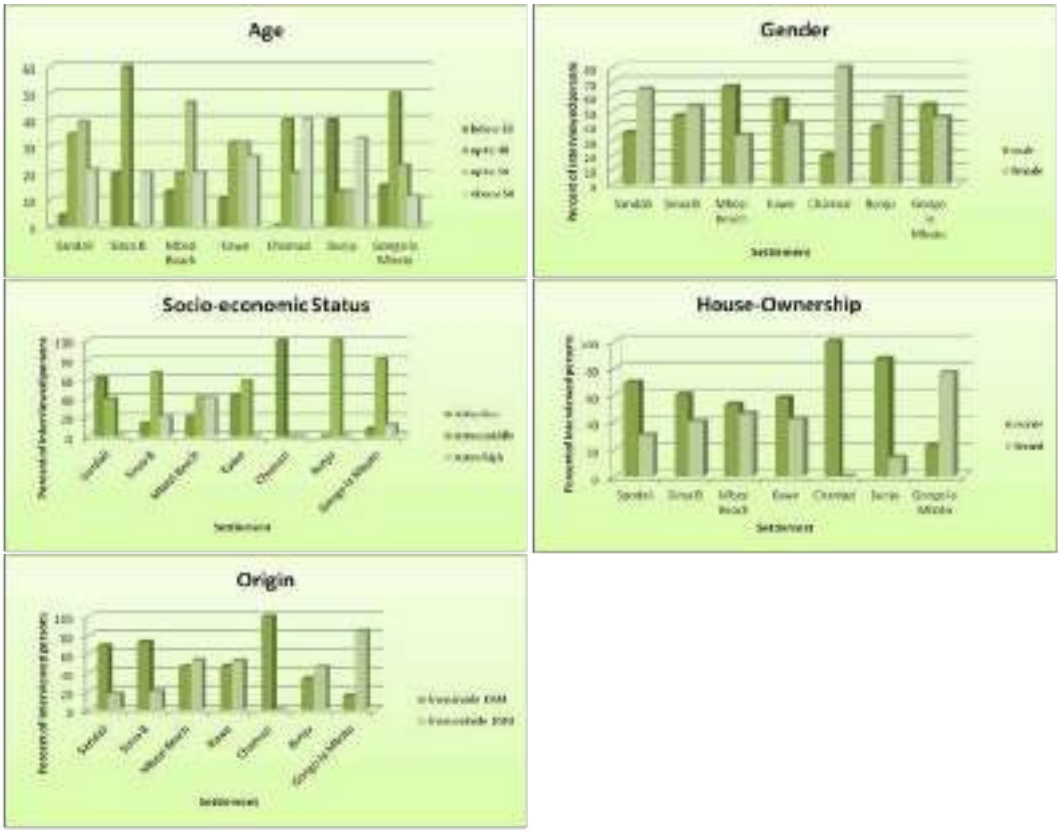

Fig. 6 - Fig. 10: Socio-economic data of the interviewed residents for each case study settlements

2.2. Findings from the case study settlements

The findings from the fieldwork were enriched by findings and conclusions from literature and expert interviews. The findings are differentiated along structure and land uses of the settlements, conflicting land uses, planning regulations and decision making, future development and wind up with a discussion whether planned settlements do not differ much from informally developed areas.

Structure and land uses

In all settlements (Fig. 12-17), the majority of the plots are for residential uses. The percentage of tenants is relatively low. In A1, B3 and A2, tenants, however, represent a significant number. For the rather affluent area A2 the figure is surprising but can be explained because many plots are not yet fully developed or construction has not yet started. In order to enhance the security of tenure, landlords are renting part

of the plot or the unfinished construction to avoid encroachment by other potential buyers (own fieldwork 2011).

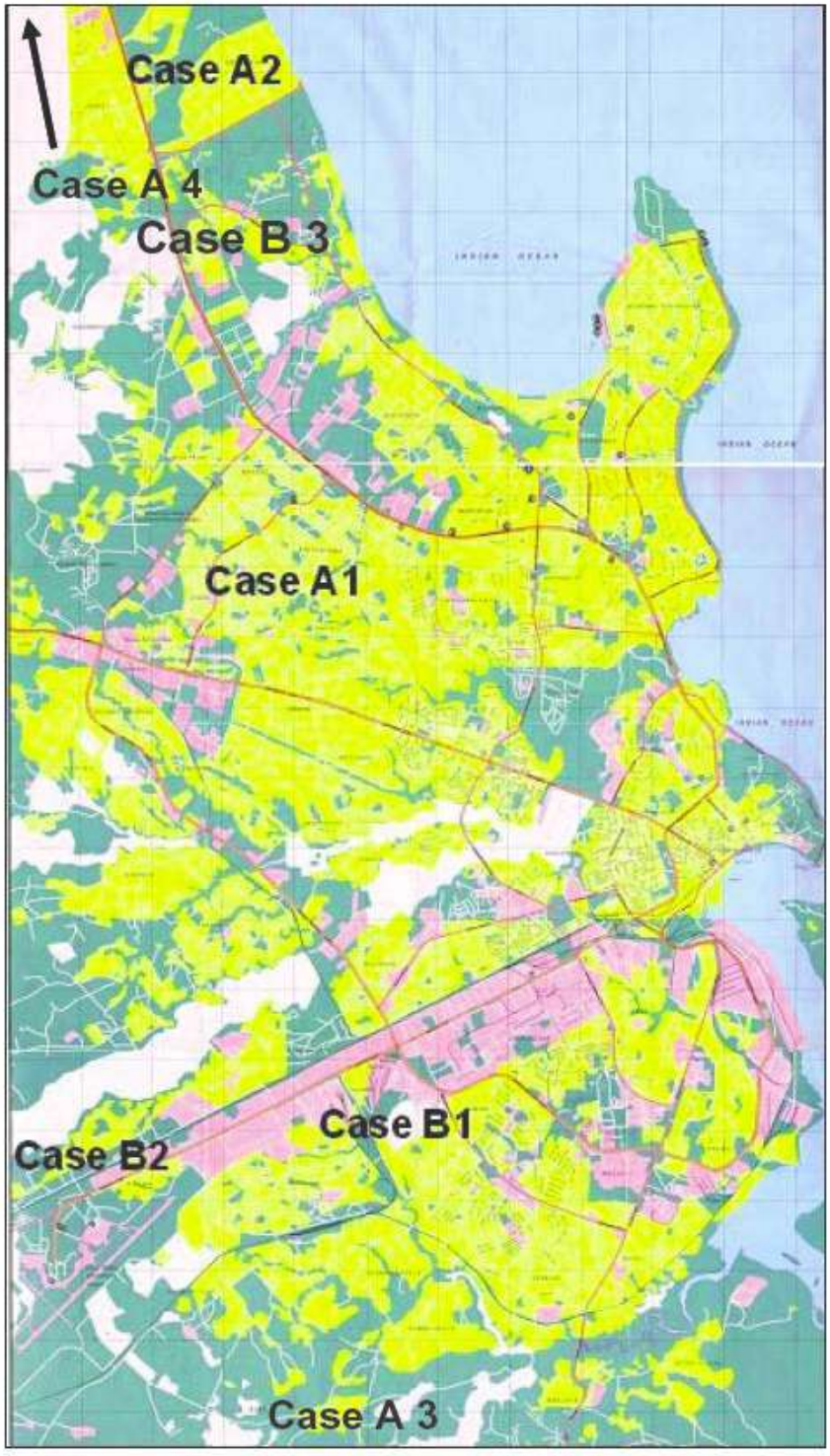

Fig. 11 Selected Case Study Settlements

Fig. 12 Land use inventory in Sinza (case A1) *Source: Fieldwork 2010*

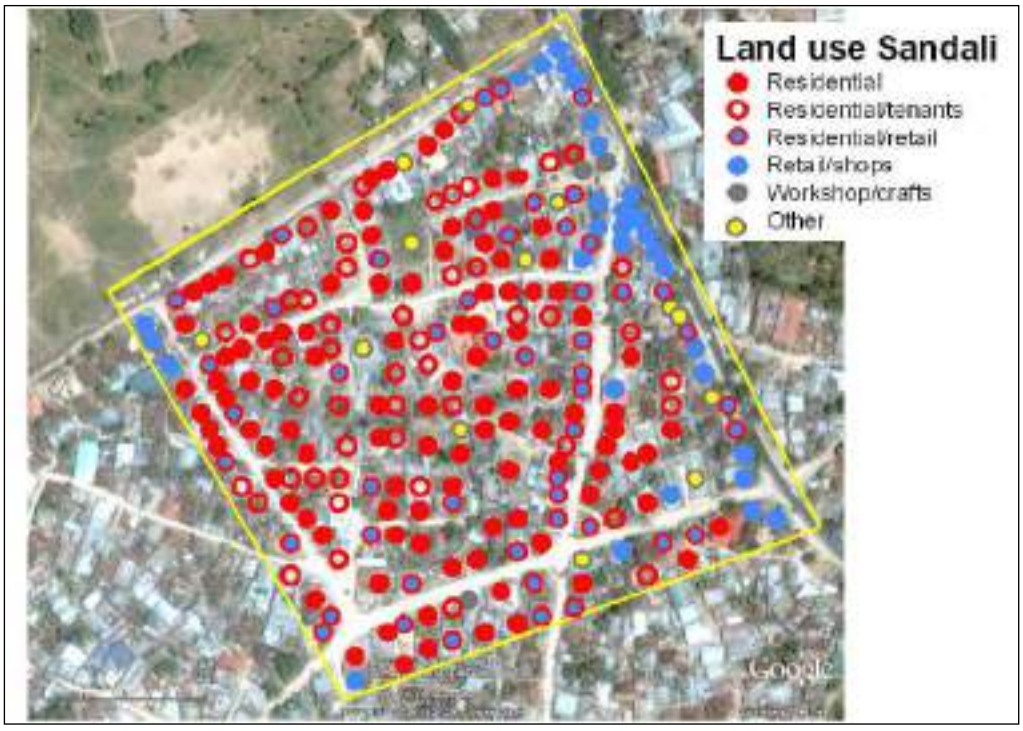

Fig. 13 Land use inventory in Sandali (case B1) *Source: Fieldwork 2010*

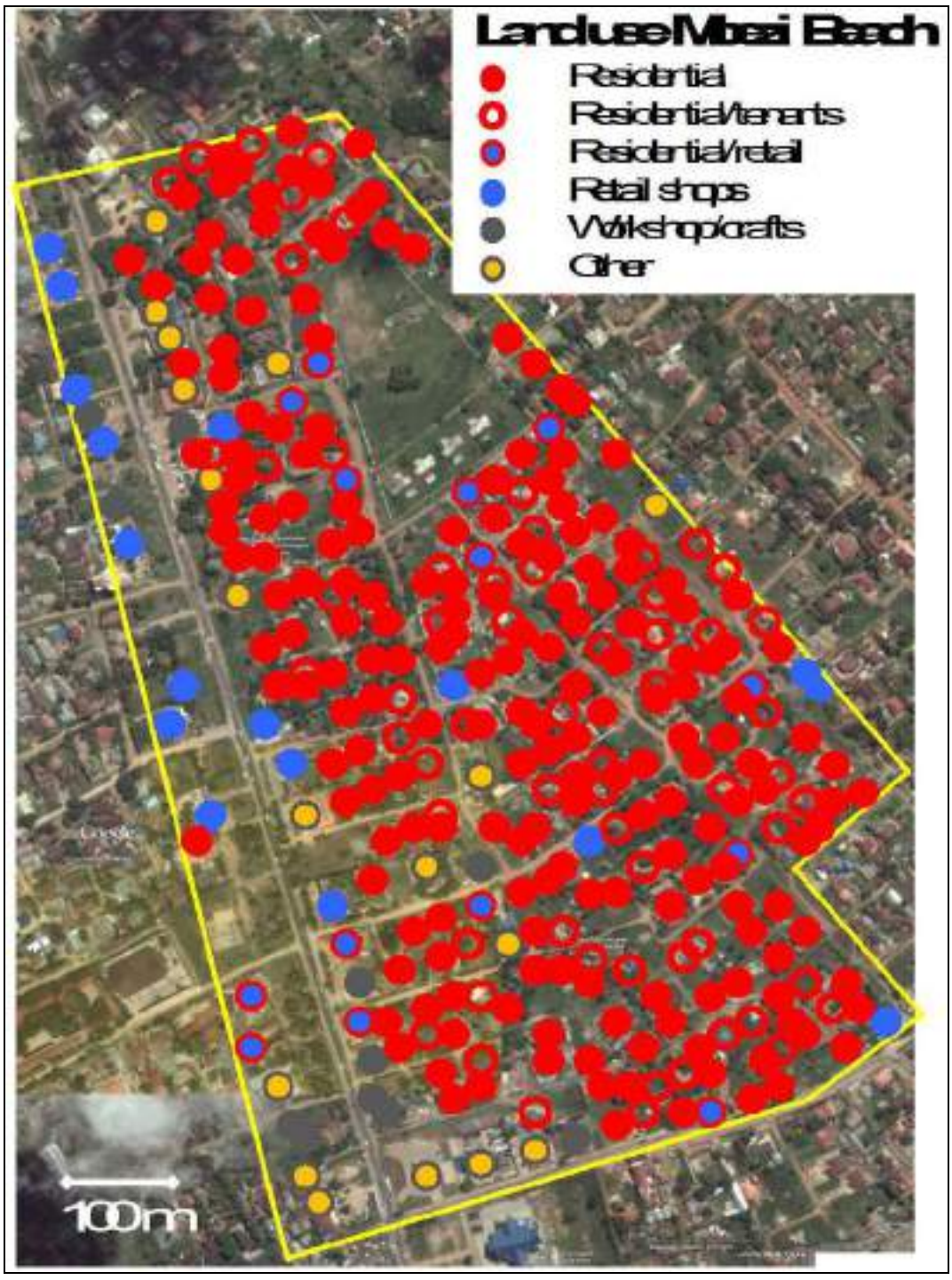

Fig. 14 Land use inventory in Mbezi Beach (case A2) *Source: Fieldwork 2011*

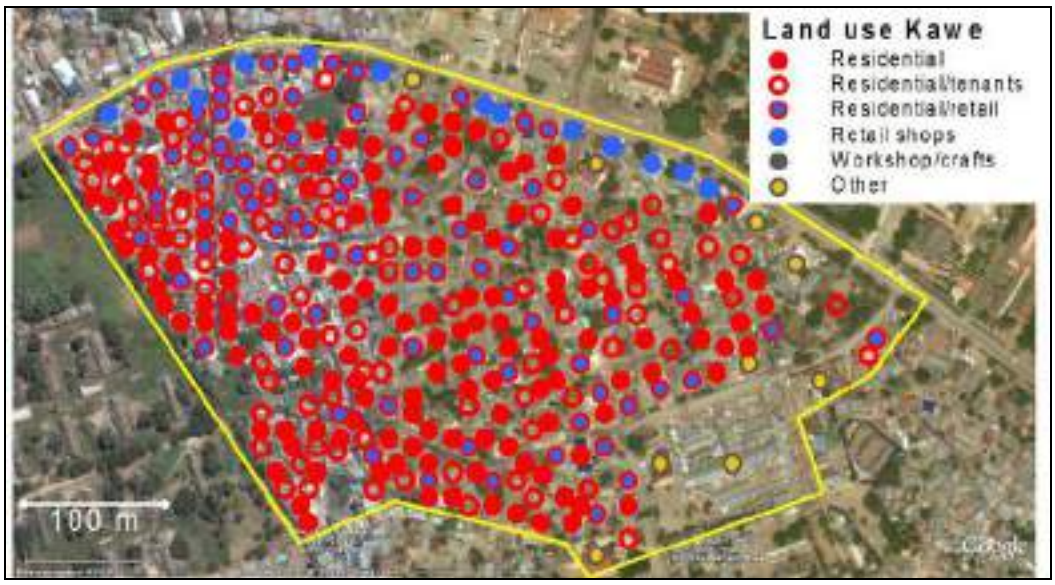

Fig. 15 Land use inventory in Kawe (case B3) *Source: Fieldwork 2011*

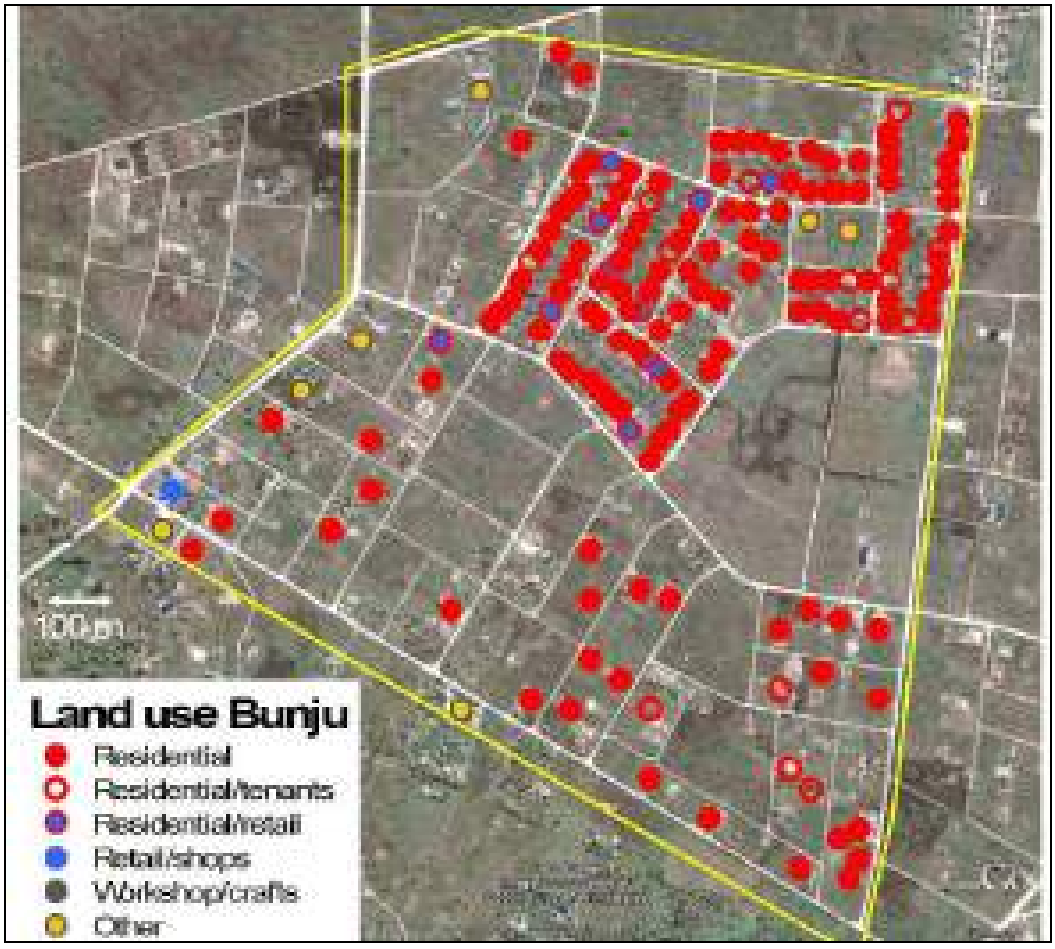

Fig. 16 Land use inventory in Bunju (case A4) *Source: Fieldwork 2011*

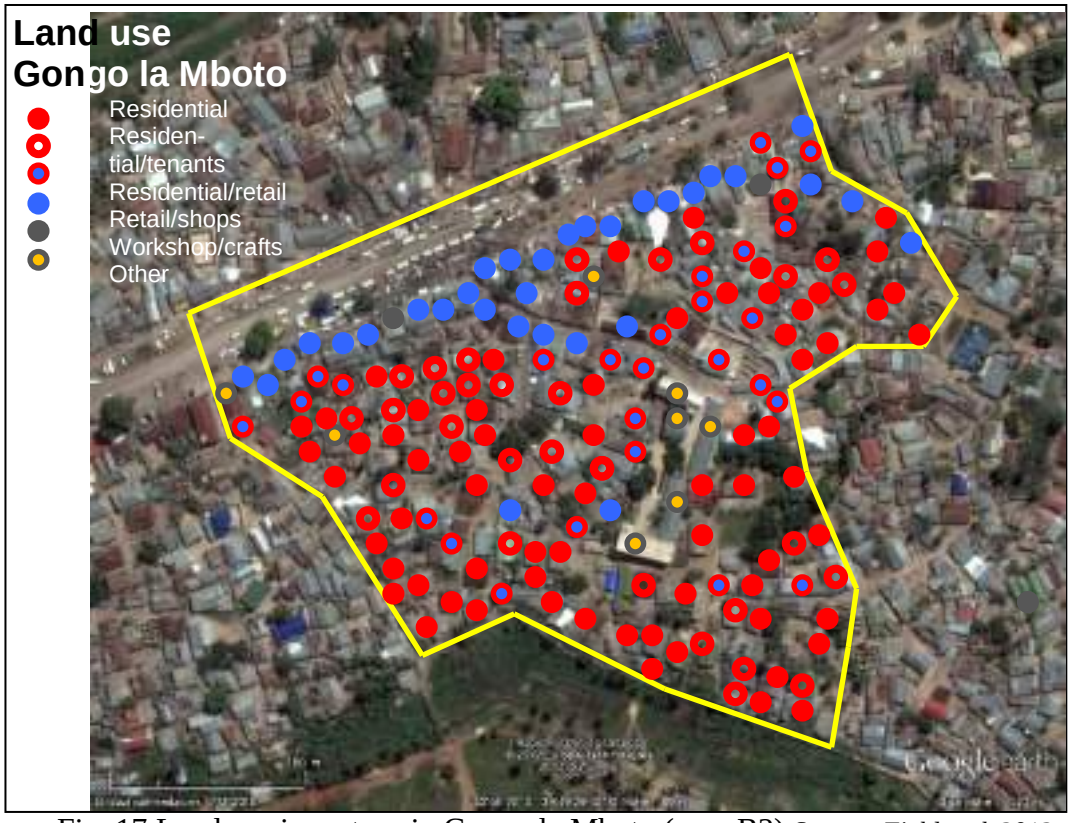

Fig. 17 Land use inventory in Gongo la Mboto (case B2) *Source: Fieldwork 2012*

Commercial uses are mainly located along main roads and at the fringe of the settlements (see Fig. 12-17). Locational preferences of the operators of commercial activities along the main roads are associated with the desire to ensure accessibility and proximity to the major costumer flow channels. However, the resulting functional structure of the settlement is a clear contradiction to the official neighborhood design concept in Tanzania inspired by Clarence Stein (1929) which designates land for communal services and commercial uses at the centre and not at the periphery of the neighborhood.

While this finding reflects the common understanding of locational preferences of such land uses, the contradiction to the official planning concept reveals an important shortcoming. Formal layout plans in Tanzania are bound to the neighborhood planning concept which designates and permits commercial activities only in the neighborhood centre but not at the periphery along the main roads. Therefore, market mechanisms are reversing the designation of the zoning concept since commercial activities tend to locate at the periphery especially along the main roads. This will have severe negative impacts on the functionality of the settlements since plot sizes, parking areas and set backs of the former residential planned area are not designed for such commercial activities and their spatial and functional needs.

Conflicting Land Uses

The fieldwork revealed that disturbances for residents caused by conflicting land uses are mostly related to noise from bars, music halls and religious buildings, less from commercial activities like workshops or repair workshops. Income generating activities such as shops, pharmacies, tailoring shops are generally more tolerated while leisure activities such as bars and worship places are less tolerated by residents in case they cause disturbances. Problems in the settlements are mainly related to conflicting land uses (uncontrolled change of the land use and tendency to mixed uses). Some of the mixed uses have a negative impact to neighboring settlers (e.g. bars etc.) while small corner shops or small scale workshops have little or no significant negative impact (A1, A2, B1, B2, B3).

Planned open spaces or road reserves are mainly used for commercial activities than as green areas (Sinza A1, Mbezi Beach A2, Sandali B1, and Kawe B3). The operators of workshops who have encroached upon communal open space in Sinza A1 (Fig. 12) have started into informal negotiations and agreements for a co-existence with the surrounding residents. The operators are not only aware of the disturbances but also of the regulations and laws that operating such activities in the area is illegal. In most cases, only a temporary permit was issued by local authorities and therefore, they try to avoid open confrontation with their neighbors.

In another case of a bar in Sinza A1 with loud music after midnight, adjoining settlers won a court case on noise reduction; however it was successful only for a short time and music after midnight started again. Sinza is increasingly becoming an area for commercial activities with hotels, bars and groceries which often disturb the residents. An easy access to main roads, good connectivity to other residential areas and suitable plot sizes, including the possibility to make use of the road reserve in front of the plot, have accentuated these commercial activities. Economic agglomerations lead to more business activities which also contribute to traffic congestions and related parking problems.

The owner of a large function hall in Sinza A1, having realized that his business can only run smoothly if the neighbors are comfortable, has recently reconstructed the premise with a parking space on the ground floor and a air conditioned sound-proof hall on the first floor. Although the high investment costs of the entire construction has increased, it makes sense, since he will not face complains from the neighbors and can run the business smoothly. Another example from Sandali B1 (Fig. 13), however, displays a different picture where workshops for used oil are operating in a residential backyard. The surrounding residents have complained about the pollution of this dangerous activity but without any reaction from the operators. The subward leader stated that he is not able to stop these activities since the operators are tenants only and the landlord is living outside the settlement and therefore not accessible for the local leader. Only after termination of the rental contract, the local leader promised to stop new activities. This case shows the limitation of locally made decisions or local regulating systems which often lack of knowledge and awareness as well as

statutory enforcement. Similar findings were revealed in the case study settlement of Kawe B3 (Fig. 15) and Gongo la Mboto B2 (Fig. 17) where land is under high development pressure. Also in these areas, commercial activities along the main road and inside the settlement around the market have given rise to conflicts related to noise, pollution and parking problems as well as increased building density. The sparsely developed cases of Chamazi A3 and Bunju A4 (Fig. 16) still do not exhibit land use conflicts due to the low density and the lack of commercial activities.

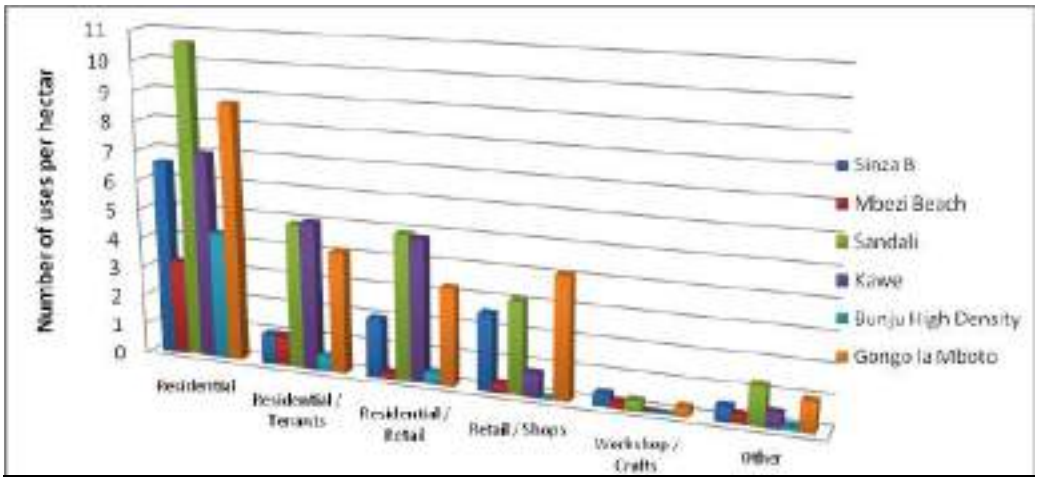

Fig. 18 Distribution of land use categories
Source: Own fieldwork 2010 and 2011

A comparison of the land uses in the case study settlements obviously shows that the informal settlements of Sandali B1, Gongo la Mboto B2 and Kawe B3 are more densely build and display a higher variety of land uses including commercial activities while than the planned settlements of Mbezi Beach A3 and Bunju A4. However, Sinza A1 as a planned settlement displays also a high density and high percentage of commercial activities. This reflects the development pressure on the settlement and the tendency to more commercial uses in the purely residential area (see Table. 4).

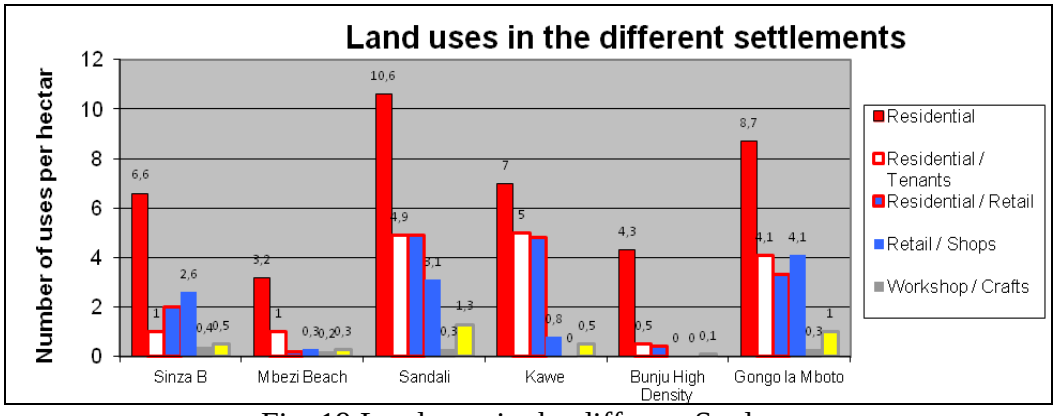

Fig. 19 Land uses in the different Settlements
Source: Own fieldwork 2010 and 2011

Planning Regulations and Decision Making

The interviews in the case study settlements of Sinza A1, Sandali B1, Gongo la Mboto B2, Kawe B3 and partly Mbezi Beach A2 revealed that there is hardly any sensitivity or adherence to planning regulations and land use categories among the residents. Only plot boundaries are respected especially road reserves. Developers are aware that structures can be demolished if built on the road reserves.

Most respondents state that they lack of knowledge on planning regulations and potential positive or negative impacts of the regulations. This is a contradicting finding since in Sandali B1 planning instruments and urban layout plans were used during the regularization process. In this process, intensive surveys were undertaken and demolition of buildings executed to facilitate the expansion and construction of access roads and storm water drainage. The situation is similar in the formally planned settlement of Mbezi Beach A2 where a comprehensive layout plan is in place but not well known to the individual developers.

Also at the institutions at the grassroot level of the Government (Mtaa, ward level), there is a lack of awareness of planning regulations. For instance, in the subward office (mtaa) of Sinza A1 and Mbezi Beach A2 even a copy of the land use and layout plan was missing. It seems that in the understanding of residents as well as local leaders, planning only focus on the change of land use at the plot level approved individually by the local leaders and not according to the general planning scheme. Thus individual decisions happen often not according to the existing plans (Sinza A1, Mbezi Beach A2, and Bunju A4) or general regulations (Sandali B1, Gongo la Mboto B2, Kawe B3). Permission to build, extend or to change the use of a building are issued by local leaders rather based on the political influence of the applicant and thus in disregard of public interests. Therefore, conflicting land uses easily emerge. Such permissions focus only on the plot itself and ignore the neighbors' plot and the construction (concerning size, height, set backs and land use) on it.

Future Development

Congestion is seen one of the key future challenges in Sinza A1, especially because many individuals would like to build multi-storey buildings on the same plot which is today occupied by a single storey house and therefore it will increase in turn the congestion. In Sandali B1 new, modern buildings which are replacing the old structures made of rather poor building materials are seen as a symbol of a better future. However, up to now, multi-storey buildings are generally only few and the redevelopment is taking place in form of new single storey buildings. But because most new buildings are fenced like in Sinza A1 it will create a higher "visible" density, might block access to some buildings and hinder ventilation. Even in the well-planned area of Mbezi Beach A2 with relatively large plots, congestion is likely to occur. In one case two neighbors have built in disregard to the minimum setback regulations and as a result their two storey buildings are hardly one meter apart while the larger part of the plot is left open as a garden.

In Kawe B3, the density in term of plot coverage is already very high and new multi-storey buildings will compound congestion and limited accessibility and thus will cause more problems in the future.

For the case of Bunju A4, so far there are only few building extensions in the well planned more densely build staff quarter up to now. However, the on-going constructions in the privately developed areas for wealthier settlers (Fig. 16) with a higher plot coverage than permitted and insufficient set-backs can easily lead to a problematic density and land use conflicts in the future.

Are planned settlements and informally developed areas different?
There seems to be little difference between planned and informally developed settlements (cases A and B) in terms of adherence to planning and building regulations. In both, they are violated. However, the planning authorities both at national as well as at local levels consider the informally developed areas as unplanned areas in which no regulations can be enforced. Therefore, no one takes care of the basic regulations concerning set backs, land use, plot coverage and plot ratio. In planned areas, at least the settlement structure with a chess board pattern helps to avoid blocked areas.

In both types, uncontrolled building constructions, extension, in-fills and change of land use are persistently going on. This includes redevelopment towards multi-storey buildings without respecting the setbacks and coverage (Sinza A1, Mbezi Beach A2, and Kawe B3), change from residential into commercial uses (like groceries or bars) and neglecting regulations for noise pollution (bars, churches, workshops). In Sandali B1 and Mbezi Beach A2 processes of land use changes are less dominant but gradually increasing. The land uses in the upgraded informal settlement are likely to be similar to planned settlements (Sandali B1) because of processes of gentrification and the pressure of the real estate market on these settlements which are often located in attractive areas of the city. When comparing the plot coverage ratio (Table 4), it becomes obvious that formally planned areas under development pressure like Sinza A1 do not differ from informal settlements as B1, B2, and B3.

Table 4. Calculation of plot coverage ratio

Case study settlement	Total area / analyzed in sqm	Building land in sqm	Built up area in sqm	Plot coverage ratio
Sandali B1	16,032	13,385	6,255	0.5
Kawe B3	8,694/4,783	6,864/4,305	3,267/2,644	0.5/0.6
Bunju A4	50,874	44,734	4,800	0.1
Sinza A1	6,933	6,933	4,059	0.6
Mbezi Beach A2	31,000	30,364	7,007	0.2
Gongo B2	7,385	7,134	3,180	0.5

Source: own fieldwork 2010-2012

Both types of settlements, planned and unplanned, generally enjoy a good security of tenure and infrastructure supply (including improved storm water drainage like in Sandali B1). Therefore, both types are permanent settlements and not a temporally phenomenon as initially perceived by officials. Both planned and informally developed settlements undergo processes of land use changes, densification and potential gentrification following the rules of the real estate market and seek for a more economic land use.

Misguiding Concept of Plot Sizes as Land Use Control Instrument

Although some planned areas were designed as high density residential areas for low income groups, the urban poor as the target group has not benefited. The high density plots (400-800 sqm) are too large and thus too expensive for the low income households. On the informal land market most poorer residents opt for a plot of about 100-200 sqm which reflect their income status and affordability.

Today, the received colonial urban land use concepts and standards such as plot size categories and the resulting zoning in residential neighborhoods based on high, medium, low densities have not much impact on settlement development. Either many middle income residents occupy high density plots designed for the urban low income groups or these plots are used for commercial activities. Setbacks and allowed maximum plot coverage regulations are ignored (Sinza A1 and Mbezi Beach A3 and Gongo la Mboto B2 Kawe B3).

The smaller size of plots in Sandali B1 which is far below the official minimum standard size seems not to be a problem for the residents. Most residents seem to be satisfied with smaller plot sizes as they correspond with their affordability and income status. In this respect, official high density plots are still too big and smaller plots would be ideal for the poor. This could be especially the case if they are not fenced and setback requirements are observed (own fieldwork 2011)

The same applies to the newly developed settlement of Chamazi A3. In this area, a NGO is constructing houses for displaced settlers on a 144 sqm plot which is only half of the size of Sinza A1. Interviews revealed that settlers are satisfied with the plot size and the new home. However, the project is still under construction so a long term study on the suitability of the plot size is needed.

Therefore, efforts to focus on the plot size alone are not adequate to guide urban land use development. Other factors related to land use control like setback control in relationship to the height of the building and plot coverage are more promising but are presently simply not being implemented or adhered to. Landlords seem to have the understanding that after the purchase of a plot the owner can do whatever he/she wants on the plot including developments with a negative impact on the neighbors (noise pollution, solid waste production, excessive plot coverage and building height, etc). Especially, the relationship of the height of the building and increasing necessary set backs are ignored (A1, A2, B2, B3).

Fencing plots is becoming more popular to enhance security especially of the newly constructed houses held by the middle class (almost all in Sinza A1, Mbezi Beach A2, Bunju A4 and new buildings of the middle class in Sandali B1) while poorer residents still use unfenced plots. Unfenced plots allow sharing the space between neighbors and increase the space available for changing activities. On the contrary, fenced plots restrict the flexible space available between the buildings, block potential cross-ventilation and increase the perceived plot coverage ratio.

Land Use Categories do not meet Resident's Livelihood strategies

The majority of the residents in Dar es Salaam is poor. However, as noted earlier there is not any planned area dedicated to low income residents. The rigid land zoning concept and land use categories (residential, commercial, and residential cum commercial etc.) does not reflect the reality especially residents' needs for flexible livelihood including changing employment and income generating activities. Today, the planned residential areas are rather mixed use areas instead of a purely residential as planned.

Commercial uses are necessary in settlements and provide income and services for residents. However, there is a need to regulate and designate them in specific suitable areas in advance before they emerge uncontrolled. Operators of small workshops on leased land are aware of the disturbances and negotiate with residents while bars and music halls do not. Political influence and economic power seems to be the key issue.

There is no clear concept for the distribution and localization of the emerging commercial and service related activities. They are spread haphazardly in the entire settlements without a proper planning concept. In Sinza A1 half of the plots are residential cum commercial while in Sandali, the majority of the plots is still purely residential. Retail shops and workshops are located in separate buildings along the main roads. In many cases they occupy the triangle shaped spaces left open after demolition of buildings for road and drainage construction.

Since these commercial uses are necessary in settlements and provide income and jobs for residents, there is a need to allocate them in specific suitable areas. This calls for the review of the current zoning concept. It should rather address to locate disturbing uses like bars, warehouses, workshops along the main roads at the fringe of the neighborhood on the one hand and purely residential uses in the centre on the other hand. This means the spatial reversal of the neighborhood design concept used in Tanzania and the development of new land use categories in combination with plot coverage rules and increasing set backs according to the height of the building.

Idea is that as soon as sufficient and well designated areas for the critical non-residential uses are available covering the demand, land use changes could be fairly well controlled. At the same time land owners must be aware of which land uses are allowed for their plots and which not. Today, it seems that any land use can be real-

ized anywhere in the settlement and any redevelopment regardless plot coverage, floor ratio and setback or other environmental requirements, e.g. solid waste management, can take place.

3. Conclusion

The fieldwork revealed that current land use planning system especially the plot size standards and zoning concepts based on stringent land use categories are not suitable to guide the current development trends and cannot respond to the changing needs associated with search for sources of livelihood.

Focus of planning regulations should rather address issues related to mixed land uses and mechanism to guide the processes of densification and intensification in the settlements. While small scale enterprises including land uses such as corner shops and workshops find ways of negotiating with the surrounding neighbors, larger uses like open air bars or the unregulated densification processes with a too high plot ratio and/or multi-storey buildings without appropriate setbacks are developed without taking care of the needs of the surrounding buildings.

Therefore, there is a need to adjust the planning system and practice towards suitable regulations which are appropriate to residents´ needs and allow them to engage in different small scale income generating activities but also to control conflicting land uses and larger constructions. In order to implement such regulations, there is a need for simple, transparent and codified norms which can be executed on the local level by officers and persons who are not skilled and well trained in planning related issues. Besides there is also a need for clear negotiation and decision making processes that ensure the direct involvement of the settlers.

Therefore, future research will explore the need and the potential for regulation of land uses, densities and plot sizes on the local level. It will also pick up lessons learnt from the far more developed South African planning system as well as from standards applied in self-regulated informal settlements in other African countries.

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