

Piecemeal Planning and Small-Town Development in Mlandizi and Sirari, Tanzania

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Abstract

Urbanization is vivid in big urban centres as well as in small and emerging urban centres, thus causing pressure on planning professionals to provide planning solutions for guiding spatial development. As a result, in Tanzania, small towns are planned piecemeal, regardless of the fact that the practice is contrary to planning policy in countries that have adopted the master planning approach. This article examines the implications of piecemeal planning in guiding spatial development in Mlandizi and Sirari, which are small towns in Tanzania. Data were obtained through in-depth interviews, field observation and spatial mapping using the Geographical Information System (GIS). Thematic and spatial analyses were conducted to ascertain the practice, process and implication of piecemeal planning. The findings show that Mlandizi and Sirari towns are characterized by rapid informal urbanization, while planning is done piecemeal. Town planners' adoption of piecemeal planning is influenced by local realities evidenced by structural challenges associated with the adoption of neo-liberal planning policies in the context of low institutional capacity on the part of local government authorities. While the approval of piecemeal plans by the governments at the local and central levels legitimises the practice, piecemeal planning has resulted in uncoordinated urban spatial structures and urban sprawl. Thus, it is recommended that regulations be instituted through the preparation of structure plans to provide comprehensive guidance of piecemeal planning.

Keywords: *piecemeal planning, rapid urbanization, small town, spatial development, Tanzania*

1. Introduction

Unplanned urbanization remains a major threat to the growth of African cities and towns as it threatens the development of sustainable human settlements. Urbanization challenges are likely to worsen towards 2050 when developing countries are forecasted to be 80% urbanized (Cobbinah et al., 2015). While this is happening, urban research and planning initiatives will continue to focus on cities, while a considerable portion of the world's population will still be living in small towns in urban hinterlands. Urban planning practices have always been guided by ideologies that determine rationalities and practices (Alexander 1984; Gunder, 2010). Historically, these arguments were grounded on earlier

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narratives that associated planning practices with rationality (Alexander, 2000; Watson, 2003, 2016). According to Harrison and Croese (2022: n.p.n.), "... planning experiences from across the African continent illustrate how master planning was a limited practice under colonialism and emerged more strongly in early post-colonial years, while persisting through a quiet period of planning and proliferating in recent times." Despite the fact that new city master plans are still springing up around Africa's cities (Van Noorloos et al., 2019), many authors have demonstrated that master plans as inherited from colonial rule are completely unfit to guide rapidly changing urban conditions in the global South (see, e.g., Watson, 2009; Todes et al., 2010; Parnell, 2017; De Satge & Watson, 2018; Gumel et al., 2020; Harrison & Croese, 2022). Past experiences of master plan implementation testify to the lack of fiscal capacities to implement the proposals to be the major obstacle. This might have prompted town planners to consider master plans as being irrelevant for managing urban development. Master plans were seen as comprehensive land use plans for guiding urban development and were normally implemented at local level by a series of layout plans.

The rapid urbanization in small towns in Sub-Saharan Africa has influenced planners to adopt piecemeal planning practices (Chigara et al., 2013). The term 'piecemeal planning' is used in the literature to mean an ad-hoc, step-by-step planning process which lacks a holistic view, and which ultimately causes disjointed incrementalism (Chigara et al., 2013; Sawyer, 2014). In this article, the term piecemeal planning is used to mean an urban planning practice of preparing layout plans in the absence of a comprehensive plan that guides the social, economic, environmental and land use development of an entire city or town. Piecemeal urban planning practices can have negative social, economic, political and spatial effects, but this is not well documented in any authoritative literature. The main research question that the article seeks to address, from a Southern perspective, is this knowledge gap. The article looks into how piecemeal planning is practised, and its implications for spatial development in the small towns of Mlandizi and Sirari in Tanzania.

2. Understanding Piecemeal Planning Policies and Practices

As a planning policy and practice, piecemeal planning has been used by various disciplines and professions, including spatial planning (Goodchild, 1990; Chigara et al., 2013; Sawyer, 2014); economics (Blackorby et al., 1991; Witt, 2003; Kocherlakota, 2010), information system planning (Peffer et al., 2003; Gauld, 2007); as well as environmental planning (Briassoulis, 1989; Jabareen, 2013). Piecemeal planning practices have been used in spatial decision-making in urban planning since the early modern times (Goodchild, 1990). Piecemeal practices for urban planning and development have been adopted and practised in various forms, both in developed and developing countries.

Piecemeal land control was adopted to control land use in the USA following the enactment of the small-scale rezoning ordinance in the 1960s (Rose, 1983). This act allowed for the making of piecemeal changes in local land-use regulations, eventually making small land-use adjustments an everyday practice of local land regulations. Likewise, in Sub-Saharan Africa (SSA), piecemeal planning and development practices have been observed in Zimbabwe and Nigeria (Chigara et al., 2013; Sawyer, 2014). Their adoption was mainly caused by the lack of institutional planning capacities of the local planning authorities. Whereas piecemeal practices have been legalized in the USA, the practices are contrary to the planning policies of many countries in SSA (Chigara et al., 2013; Sawyer, 2014).

Despite the differences in the legality of piecemeal planning practices observed in developed and developing countries, piecemeal planning has been regarded as unsustainable due to its short-term focus (Faludi, 1973; Blackorby et al., 1991). In the USA, for example, piecemeal and small-scale rezoning was criticised due to the difficulties involved in controlling them (Rose, 1983). Likewise, in SSA the practices have been found to promote urban sprawl, unfriendly environmental practices, incompatible land-uses and uncoordinated spatial development (Chigara et al., 2013; Sawyer, 2014). The socio-economic implications of piecemeal planning in spatial planning tend to take a long time to become apparent, whereas it takes only a short time for the spatial implication to be felt by the inhabitants of an urban area. Thus, the observed weaknesses of piecemeal practices in spatial planning emanate from the lack of being comprehensive in nature.

Drawing on the economic principle, it is necessary to understand the extent to which piecemeal planning has optimised socio-economic development in small towns. As an adaptive planning policy, Witt (2003) and Kocherlakota (2010) found that piecemeal planning ignores some economic variables, which may result in computational limitations. Indeed, this renders piecemeal policy inappropriate for providing a broad-based and comprehensive understanding of economic conditions. The piecemeal policy and planning approach has been shown to be inappropriate for providing the bigger picture of long-term planning. The weaknesses manifest themselves in the tendency of the approach to ignore variables and aspects essential to sustainable development. Notwithstanding this, however, piecemeal plans have been found to advance some sustainability principles. For example, Berke and Conroy (2000) have shown how a piecemeal approach achieved harmony with nature, a liveable built environment, a place-based economy, equity, a polluter pays policy and responsible regionalism.

Piecemeal planning resonates with postmodern ideologies. As a method, the piecemeal approach represents a "...revolt against the too-rigid conventions of existing methods and practices" (Dear, 2000:36). Piecemeal planning practices act against the marginalization of the independence of non-conforming urban

design and new urbanism practices. As a result, piecemeal planning only draws on the idea of urban design and new urbanism for layout planning. Similarly, the preparation of layout plans in piecemeal planning practices uses urban design principles drawn from architecture and civil engineering. However, while piecemeal planning practices are contrary to the urban planning policies of countries that have adopted the master planning approach, layout plans are acceptable if they are prepared as subsets of a master plan (United Republic of Tanzania, 2007; Gunder, 2010). In fact, master planning reduces urban design from being a planning practice of its own. Piecemeal planning is discouraged from being used independently because it can result in uncoordinated urban spatial structures (Halla, 2007; Chigara et al., 2013).

Apart from relying on postmodernist rationalities, piecemeal planning practices also draw insights from neoliberal and collaborative rationalities. The involvement of stakeholders in postmodernist and neoliberal planning practices has created planning encounters with the complex politics of decision-making (Dear, 2000; Roo, 2010). Such encounters of professional town planners quite likely raise their consciousness of the contextual realities in which they perform their activities, thereby inspiring them to adopt more realistic and practical approaches in urban planning. These planning encounters relate to political, socio-cultural and economic factors (Dear, 2000). Some of the planning encounters of planners in the global South are with local politics (Birkland, 2015), financial and professional capacities (UN-Habitat, 2009; United Cities and Local Governments, 2010) and land administration challenges (African Planning Association & UN-Habitat, 2013; Anafo & Inkoom, 2016). Others are rapid population growth, the proliferation of informal settlements (Fernandes, 2011; Braathen et al., 2016; UN-Habitat, 2016), and the privatization and commodification of urban planning services (African Planning Association & UN-Habitat, 2013; Kasala & Burra, 2016). In this neoliberal and postmodernist era, these encounters can be explained by what Dear (2000) regards as a revolt against rigid methods and practices. This argument coincides with the criticism of master plans for their rigidity, which they draw from modernist scientific rationality.

It is important to remember that urban planning approaches are not static: they evolve with changes in the socio-economic dynamics of society. However, this discussion has raised an important issue that is worth exploring. The shift from master planning to strategic planning was necessitated by the observation that urbanization problems could not be addressed using the master planning approach (Kasala, 2015). This means that scientific rationalities were not supposed to form the only ideology guiding planning practices. Notwithstanding this assertion, however, after more than two decades, the master planning approach is still the dominant approach, especially in developing countries (Hameed & Nadeem, 2008; Qian & Wong, 2012; Kasala, 2015).

Having discussed the relationships between the dominant ideologies and rationalities, and their associated planning practices, it is vital to examine the ideologies and rationalities that determine piecemeal planning practices. The essence of these ideologies and rationalities can best be elicited from the conscious minds of street-level bureaucrats themselves: in this case, town planners.

3. Study Context and Methods

This study was conducted in Mlandizi and Sirari small towns, which are located in east and north-west Tanzania (Figure 1). The towns fall under the broader Tarime District Council (TDC) and Kibaha District Council (KDC). The urban landscape in Tanzania is numerically dominated by small towns. Mlandizi and Sirari small towns were considered appropriate for this study because they are declared as urban planning areas, the existence of piecemeal planning practices and demonstration of growth potentials. The population of the two towns stood at 38,827 and 15,917, respectively; while the average annual population increase stood at 6.5% and 8.5% for Mlandizi and Sirari, respectively, over a 34-year period from 1978 to 2012. The historical development of the two towns can be traced from the villagization process that was implemented by the Tanzanian government in the 1970s. The urbanization process in Mlandizi is influenced by its location along the main transportation corridor and proximity to Dar es Salaam, the largest city. On the other hand, Sirari serves as a border town between Tanzania and Kenya (Figure 1).

Three data collection methods were used for this study, namely: interviews, spatial mapping, and field observation. Qualitative data was collected using 10 in-depth interviews with town planners (2), economic planning officers (2), a principal urban planning officer in the Ministry of Lands, Housing and Human Settlement Development (1), a senior urban planning officer in the Ministry of Regional Administration and Local Government (1), and two councillors each from Kibaha and Tarime District Councils (2). Also, two (2) officials from private planning companies were interviewed. The interviewees were selected on the basis of their roles in the planning and approval processes, local politics and decision-making regarding resource allocation.

Also, spatial mapping involved collecting layout plans (118 in total) for Mlandizi and Sirari from the Ministry of Land, Housing and Human Settlement Development, and analysing them using GIS (ArcGIS 10.5). To do the spatial analysis, the layout plans were digitised and converted into digital maps. The analysis involved turning layouts for each case study into a town-specific mosaic. Using the mosaics, the analyses that were conducted to establish land-use compatibility, proposed locations of various services, and the connectivity of proposed linear infrastructure networks. Finally, field observations were made to confirm the results obtained from the analysis and mapping.

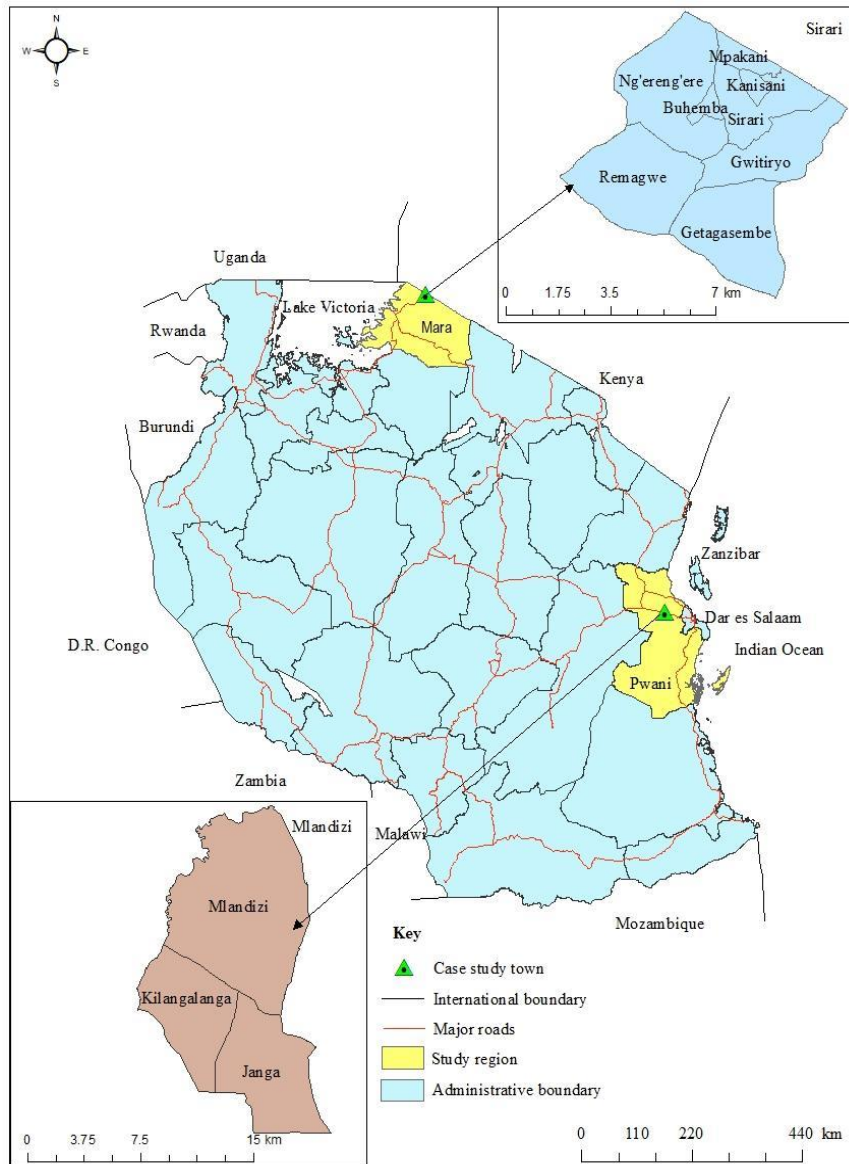


Figure 1: Map of Tanzania with Inserts Indicating the Study Towns
 Source: Author - Based on Tanzania Ward Map

5. Results

5.1 Urban Planning Practices in Mlandizi

The current urban governance structure in Tanzania entrusts the responsibility of urban planning to local government authorities (LGAs). In this case, Kibaha District Council is the responsible planning authority for Mlandizi small town.

Since being declared an urban planning area in 2001, Mlandizi has been planned piecemeal. Until 2017, when the fieldwork for this study was done, 120 layout plans had been prepared for different parts of Mlandizi. Of these, 109 (91% of Mlandizi layout plans) were obtained for analysis. The layout plans covered 5,135ha (31.6%) of the township area (16271ha), while the remaining 11,136 hectares (68.4%) were unplanned (Table 1).

Table 1: Layout Plans Prepared in Mlandizi from 2009 to 2017

Year	Layout Plan	Total No. of Plots	Average No. Plots per Plan	Total Area (ha) of Plans	Average Area (ha) of Plans
2009	2	1236	618	176	88.0
2010	7	2506	358	428	85.6
2011	24	7378	321	819	68.3
2012	13	5363	413	514	54.1
2013	13	4269	388	348	43.5
2014	13	6168	474	924	71.1
2015	10	3138	314	392	43.6
2016	24	4485	236	1303	76.6
2017	3	671	224	231	77.0
Total	109	35 214	323	5135	47.0

Source: Authors' summary of layout plans

Most of the unplanned patches, particularly those in the town centre, have been developed informally. According to the available layout plans, piecemeal urban planning practices started in 2009, that is, eight years after it was declared an urban planning area (in 2001), and five years after it was transformed into a township authority (in 2004). Delays in starting planning probably indicate the lack of interest on the part of the government to plan small towns. A town planner for Mlandizi informed that no plan had been prepared since the town was declared an urban planning area. However, the declaration steered rapid urbanization: the first two layout plans were prepared in 2009 to provide planned land that was needed by various institutions (Personal interview with Mlandizi Town Planner 1, February 2017).

The delays in starting planning in Mlandizi are contrary to the 2001 declaration notice. The 109 available layout plans were prepared between 2009 and 2017. Although the number of proposed plots in some layouts plans was not countable, a total of 35,214 plots were designated for different uses. Some of the plots have been surveyed and developed, while many have not yet been developed.

The annual number of layout plans prepared for Mlandizi and the average area covered by the plans have varied over the nine-year period. For 2017, only the layout plans that had been prepared by March were obtained; which explains the significant variation in the number of layout plans between 2017

and preceding years. During this period, the annual average area planned piecemeal was 570.6ha. At this rate, it will take 19 years to prepare layout plans for the remaining part of the township. But considering the current urbanization rate in Mlandizi, this pace of piecemeal planning is unlikely to meet the housing demand of the increasing population. Thus, this rate of planning cannot prevent the development of informal settlements. A town planner in Mlandizi pointed out that "... contribution of piecemeal plans to reducing development of informal settlements is constrained by prices: plots in these areas are sold at relatively higher prices, rendering them unaffordable to low income earners" (Personal interview 2 February 2017). Hence, to reduce the growth of informal settlements in the area, a planning strategy is needed that must also concentrate on making plots affordable to low-income inhabitants. Making plots affordable will promote formal land acquisition and the development of plots in the private sector-led piecemeal planned areas.

The layout plans have been prepared for different parts of the town. Generally, many of the plans are uncoordinated (Figure 2). The planning practices in the town have caused planning layouts to occur in patches with unplanned spaces between them. Some unplanned spaces between the piecemeal-planned areas were continuously filled with informal developments. These unstructured patterns block the connectivity of the proposed linear infrastructure, and affects the compatibility of land uses. Consequently, most of the proposed land uses in the adjoining layout plans are not compatible with each other. This is mainly attributed to the ad-hoc, reactive and demand-driven nature of the demand-driven practices that are dominated by private-sector actors (at 95%). These practices make piecemeal plans reactionary in the way they respond to immediate market needs. In the process, private-sector actors tend to designate land uses according to their preferences, which, inevitably, favour land uses with commercial value.

It was found that the preparation of layout plans in Mlandizi was not integrated with sectoral plans to provide social services. As a result, some of the piecemeal planned areas in the remote suburbs of Vikuruti Mjini, Mkazi Mapya, Matuga, Kisabi and Kimara lack basic social services, where neither the private sector nor the local government has delivered such services. In addition, there have been speculative moves in the piecemeal-planned areas: many plots are not developed for three years, the period prescribed by regulations.

In Mlandizi, piecemeal planning and land delivery take place in two ways. First, it takes place through public-private partnerships (PPP). Private sector actors would enter into partnership with the local government to compile layout plans, and also to do the surveying of plots. The plans are done within the guidelines of the local authority. Upon completion of such projects, the local authority receives 10% of the gross profit.

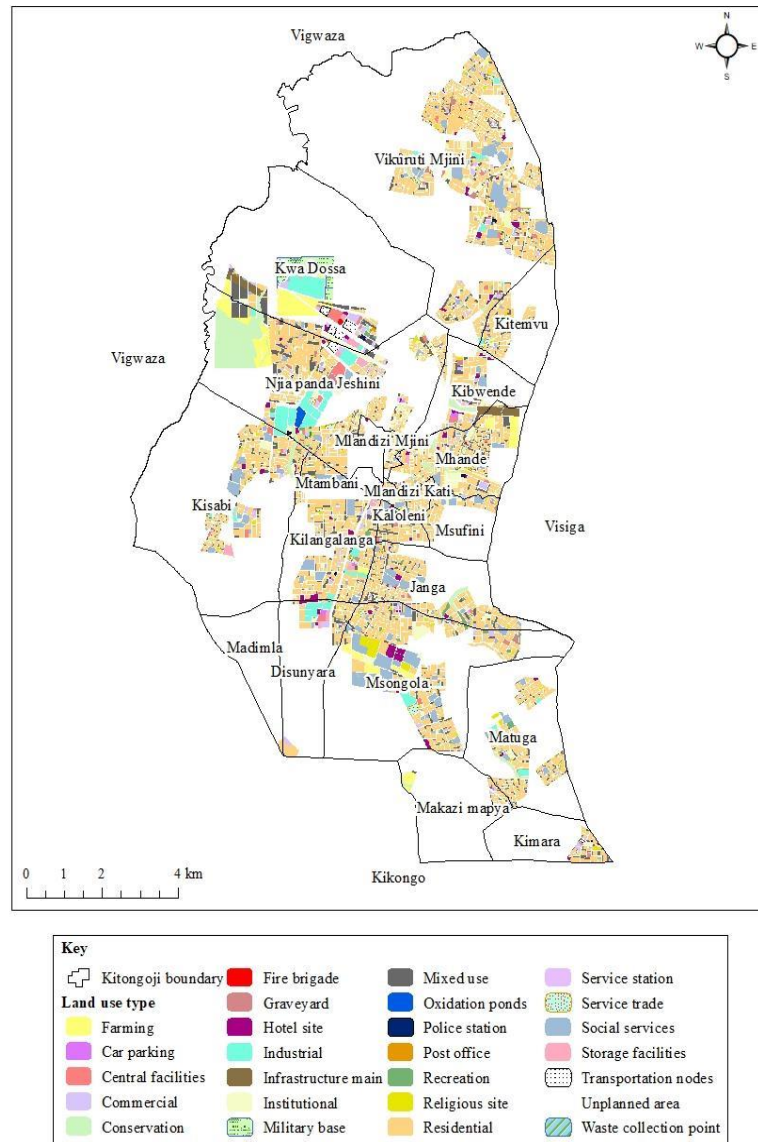


Figure 2: Distribution of Layout Plans in Mlandizi

Source: Authors' analysis of layout plans

Secondly, private sector actors can prepare layout plans and submits them to a municipal town planner for scrutiny. In some cases like this, municipal town planners are compromised by being hired by the private sector to prepare the very plans that are submitted to the municipality: they are, therefore, both the referee and the player. Their ability to appropriately advise the private-sector actors who

intend to invest in remote areas is hereby compromised. Therefore, the areas planned piecemeal remain undeveloped, thereby complicating the urbanization challenges facing Mlandizi town. If developed piecemeal, a planned area would proportionately contribute to reducing the development of informal settlements in the town. Land uses proposed by piecemeal-made plans are presented in different colours in Figure 2: the white spaces represent unplanned areas. Existence of unplanned areas between the planned areas block the connectivity of proposed linear infrastructure and the compatibility of land uses.

5.2 Planning Practices in Sirari

Sirari was declared an urban planning area in 2001. From 2010 to 2017 only nine layout plans were prepared. The layout plans cover different parts of the township, but mainly the town centre, which is close to the border post with Kenya. By 2017, piecemeal planning had covered 461ha (9.6%) of the total township area (4788 ha), while the remaining 4327ha (90.4%) were unplanned. Details of the layout plans prepared in Sirari are shown in Table 3.

Table 3: Layout Plans Prepared in Sirari from 2010 to 2017

Year	Layout Plans	Total No. of Plots	Average No. of Plots per Plan	Total Area (ha) of Plans	Average Area (ha) of Plans
2010	1	122	122	28	28.0
2011	1	286	286	30	30.0
2012	0	0	0	0	0.0
2013	0	0	0	0	0.0
2014	5	2833	567	344	68.8
2015	2	609	305	59	29.5
2016	0	0	0	0	0.0
2017	0	0	0	0	0.0
Total	9	3850	428	461	51.2

Source: Authors' summary layout plans

Compared to Mlandizi's planning rate (12 plans a year), Sirari has a very low planning rate (1 per year). The annual average area planned piecemeal is 57.6ha. At this rate of planning, it will take 66 years to plan the remaining part of the township. Also, this rate of planning is likely to perpetuate the development of informal settlements in the small town. Like those of Mlandizi, many of Sirari's layout plans were financed by private-sector actors.

Commercial motives in the town have always been behind private-sector planning and land use. Out of Sirari's 9 layout plans, only one was prepared with government funds, namely that of Ng'ereng'ere, where the government wanted to construct a weighbridge and open a bus stop. During an interview with the town planner at the head office of Tarime District Council (Sirari small town is located in this district) in March 2017, the planner said that as a council they had

prepared one layout plan, whose planning need originated from the Tanzania National Roads Agency (TANROADS), which intended to construct a weighbridge at Ng'ereng'ere. Apart from clarifying the genesis of planning needs and ideas of the local government, the planner's statement also shows the role TANROADS played in determining the planning site. Certainly, the LGA had no alternative but to prepare the layout plan for the area earmarked by TANROADS.

The current distribution of layout plans in Sirari has produced three uncoordinated urban centres, that is, the main town centre, which encompasses the villages of Mpakani, Kanisani and Sokoni. Other sub-centres are Ng'ereng'ere and Remagwe, which are located some distance from the main centre (Figure 3).

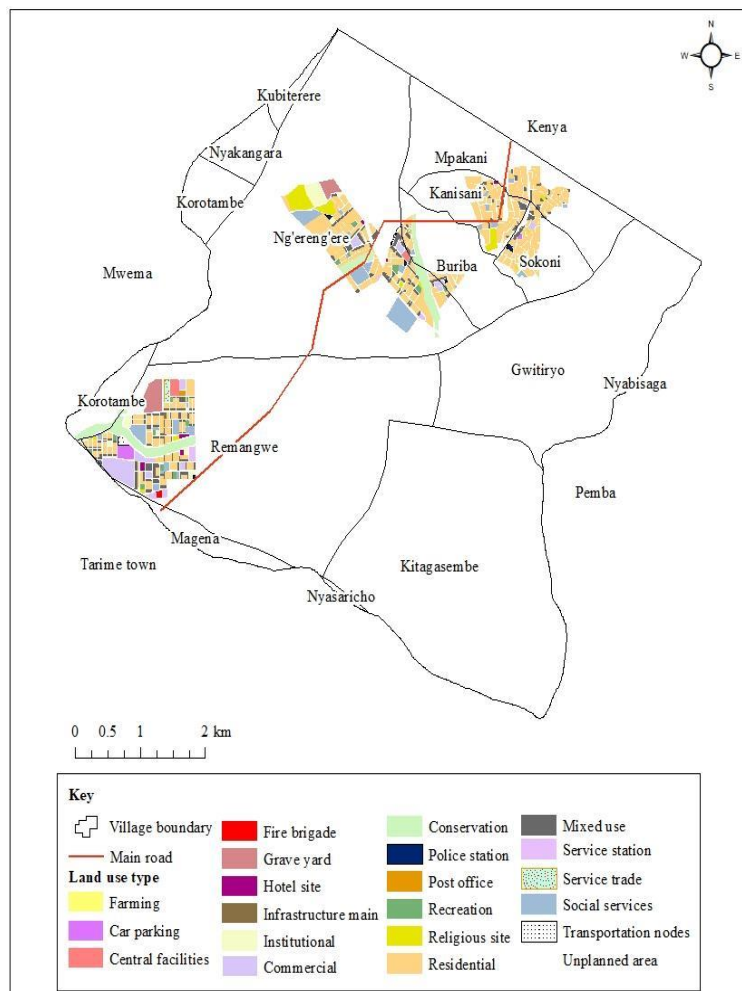


Figure 3: Distribution of Layout Plans in Sirari

Source: Authors' analysis of layout plans

These sub-centres offer different facilities and services, which are not coordinated. A common feature of all three sub-centres is that they are all located along the highway that connects Tanzania with Kenya. The urban services in the three emerging urban centres in Sirari are neither related nor connected. Since the growth of towns goes hand in hand with the demand for infrastructure services, planning approaches should anticipate and provide land uses that will make it possible to provide services in future. However, the urban planning practices that have been adopted in Sirari cannot help to improve the viability of the town or maintain its vitality. Apart from the main road linking the three urban centres in Sirari, the proposed land uses are neither diverse nor related. If not addressed, structural issues associated with piecemeal planning, particularly the development of sub-centres in Sirari, can result in spatial organizational problems.

5.3 Factors for the Adoption of Piecemeal Planning

The capacity needs assessment for Kibaha District Council (KDC) and Tarime District Council (TDC) indicate a shortage of human resources in their respective planning departments. Each department had about one-third to nearly three-quarters of the planning personnel they needed. However, the incapacities are mainly attributed to the lack of master planning skills and experience among the town planners in both councils. The town planners themselves noted that the lack of appropriate master planning skills and experience were the reasons for the inefficient delivery of planning services.

In addition, the town planners in Mlandizi and Sirari confirmed that the shortage of financial resources also constrained the preparation of master plans. Unlike the activities done by other departments, urban planning is not a government priority, and thus it does not receive the required funding for planning activities, thereby undermining the ability to outsource. Urban planning does not feature in the priorities for locally generated revenues either. Master planning costs that town planners include in respective council budgets are pushed into local revenue budgets (council's own sources). Proportionately, it is only a very low percentage of this budget that is released; so, the planned activities are not implemented because of insufficient funds.

The release of funds has sometimes been politically influenced, particularly in the years when proportionately higher percentages of funds were released. During an interview in March 2017, the Tarime's town planner asserted:

"This time we have received TZS38,900,000. However, the release of the funds has been politically motivated, directing the funds to village land-use planning. There is an investor who has shown interest in establishing a sugar plantation. As a prerequisite for land acquisition all the villages participating in the project must prepare land-use plans before they can allocate land for investment. Land-use plans will establish current and future land requirements, determine carrying capacities, as well as designate land for different uses."

The financial problems of KDC and TDC were created by the lack of political will and a misconception of the usefulness of urban planning in promoting the socio-economic development of Mlandizi and Sirari small towns. If there had been a political will, and if the councillors had understood the merits of urban planning, they would have facilitated financial allocation for the preparation of master plans in the two towns.

5.4 Spatial Implications of Piecemeal Planning

Piecemeal urban planning practices have affected the spatial organization of land uses in Mlandizi and Sirari. The reactive nature of piecemeal planning practices has often been in response to the needs of the private-sector actors in the two towns, thus causing an imbalanced distribution of land uses as shown in Table 4.

Table 4: Distribution of Proposed Piecemeal Land Uses in Mlandizi and Sirari

Land use	Mlandizi		Sirari	
	Area (ha)	%	Area (ha)	%
Residential	2481	48.3	219	47.5
Social services	441	8.6	41	8.9
Mixed use	401	7.8	43	9.3
Institutional	299	5.8	13	2.8
Conservation	246	4.8	48.9	10.6
Industrial	227	4.4	0	0
Farming	221	4.3	0	0
Commercial	126	2.5	23	5.0
Hotel site	93	1.8	6	1.3
Religious services	90	1.8	20	4.3
Central facilities	78	1.5	4	0.9
Military base	79	1.5	0	0
Service trade	73	1.4	3	0.7
Infrastructure	50	1.0	0	0
Graveyard	48	0.9	16	3.5
Recreation	42	0.8	9	2.0
Storage facilities	39	0.8	0	0
Transport nodes	28	0.5	2	0.4
Service station	23	0.4	4	0.9
Oxidation ponds	15	0.3	0	0
Car parking	14	0.3	5	1.1
Police station	8	0.2	2	0.4
Waste collection point	8	0.2	0	0
Fire brigade	4	0.1	1	0.2
Post office	1	0.0	1	0.2
Total	5135	100	461	100

Source: Author, from the analysis of layout plans

Table 4 shows that the planning practices have concentrated on the provision of shelter, and ignored other land-use types necessary for socio-economic development. There are only about 48% and 47.5% of layout plans for the areas planned for residential development in Mlandizi and Sirari, respectively. Less than 5% of land was set aside for industrial use in Mlandizi, and no land was designated for industrial development in Sirari between 2009 and 2017.

Apart from this imbalanced distribution of land uses, piecemeal planning has resulted in overlapping land uses between the adjoining layout plans (Figure 4A and B). This means that, in areas where layout plans overlap, each plan has proposed a different land use. If the plans are implemented unchanged, land-use conflicts and disputes will surely arise. A pertinent incongruity is the presence of connecting roads with different sizes proposed by the adjoining layout plans for Mlandizi. A comprehensive plan could have solved this problem by proposing a town-wide road network, and an infrastructure plan that could be observed in the layout planning process. The harmonization of the road network and sizes is not now possible unless, where the plan has already been implemented, demolition orders be sought to expand the road reserves to the required standards. This will be an inefficient and expensive exercise because the government will have to use funds which could be allocated to other socio-economic development investments to compensate affected developers.

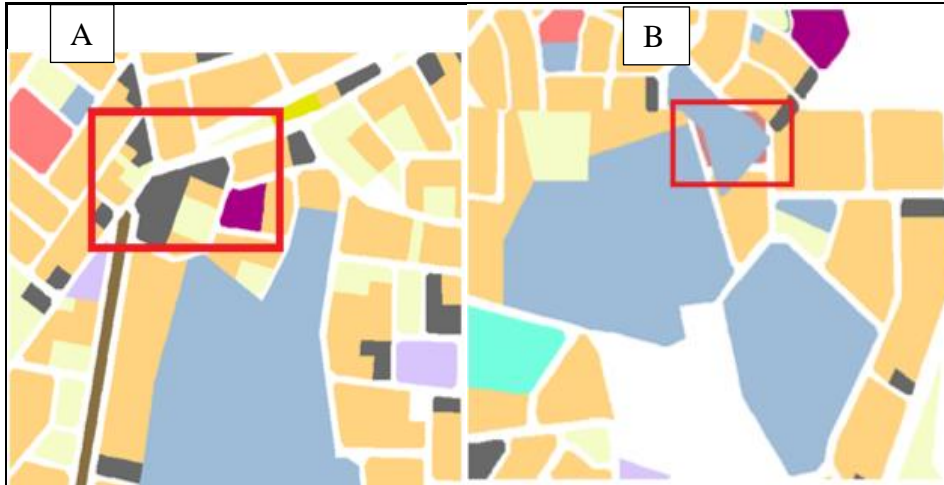


Figure 4: Disjointed Roads (A) and Land Use Overlaps (B) in Mlandizi
Source: Generated by Author based on the analysis of layout plans

The practice also results in unplanned pockets of land surrounded by planned areas. Where the plans have been implemented, some pockets of land have been informally marketed and developed into informal settlements. Moreover, incompatible land uses like residential areas abut industrial and

urban agricultural areas, each of which is provided by an adjoining layout plan. Figure 4A is a window of intersecting roads of different sizes. The window in Figure 4B shows land-use overlaps, in which one layout plan shows that a certain area is a graveyard, and another shows that it is for the provision of social services. In addition, some layout plans for Kimara and Makazi Mapya in Mlandizi, and Remagwe in Sirari, extend beyond the towns' boundaries. In these cases, urban planning was extended to areas that had not been declared planning areas. These practices, apart from illegally converting village land to general land, also disregard urban planning regulations.

Piecemeal planning on the margins of a township's boundaries results in areas of urban sprawl where it is expensive to provide infrastructure and basic services. Goetz (2013) reminds that urban sprawl has both short- and long-term costs to a planning authority and urban residents. The costs include high costs of supplying energy to an area, traffic congestion and the need for additional infrastructure and social services. Evidently, piecemeal urban planning results in uncoordinated urban structures. The urban planning practices and growth trajectories of Mlandizi and Sirari will soon put them beyond their optimal growth limits. In addition, these layout concentrations cannot qualify to be urban centres because of the imbalanced land-use distribution and the absence of central facilities in them. Unless appropriate integrated solutions are sought, the two towns are likely to grow beyond the optimal limits for service delivery.

5. Discussion

Mlandizi and Sirari small town are rapidly urbanizing. Census records indicate that from 1978 to 2012 the average annual population growth stood at 6.5% and 8.5% for Mlandizi and Sirari, respectively (URT, 2013). This population growth, which occurred in the context of a low planning pace, led to the development of informal settlements, where over 90% of the residents live. The urban planning in Mlandizi and Sirari were found to be affected, among others, by a low institutional capacity to plan. Section 7(1) of the Urban Planning Act No. 8 of 2007 vests the powers to plan small towns with town councils or township authorities. If a township authority has not been established, as is the case for Sirari, the provisions of Land Use Planning Act No. 7 of 2007 apply. Thus, in Sirari the planning responsibility is vested with the Tarime District Council.

The two planning authorities for Mlandizi and Sirari were found to lack human and financial resources needed for effective planning. This was partly influenced by the local political climate as manifested by power relations and resource allocation. In addition, the existence of customary land tenure created a conducive business environment for the private sector influence land-use planning: in the two small towns, over 90% of piecemeal planning is done by the private sector.

The case studies of Sirari and Mlandizi has shown that the absence of master planning in these towns is both a beauty and a beast. In its absence, plans get approved and houses get built, although uncoordinated and without consideration to the broader urban system. In this regard, MirafTAB (2016: 4) states the following:

... as insurgent planning de-centres the role of representation and pays attention to direct action as means of inclusion, it also shifts the subject of its theorization from planner to planning. In the conceptual architecture of insurgent planning, professional planners are but one actor among a range of actors that shape the contested field of action known as planning. The core concern is therefore with practices not with their actors.

Despite the implementation obstacles, master plans are still legally required to guide spatial development in urban centres, large and small towns. For instance, the Dar es Salaam Master Plan of 1979 still kept layout plans as its implementation strategy at all scales. This planning approach is supposed to be practised in the country's cities and small towns.

Notwithstanding the manifold planning realities, piecemeal planning is considered to be a practical and suitable tool for planning. The practicality of piecemeal planning emanates from its pragmatic nature, as layout plans are prepared amid a complex socio-spatial, planning and political realities. This planning practice has also provided a minimum planning solution, particularly in Mlandizi, where just over 30% of the area is planned piecemeal. Thus, piecemeal planning helps to control the development of informal settlements in Mlandizi. Piecemeal planning practices attest to the discrepancies existing between planning policy and contextual realities in small towns. The realities and their interrelations form the challenges experienced by planners, which influence the adoption of piecemeal plans.

Piecemeal plans are adopted because master plans have not been prepared in small towns, thus some kind of a plan is needed to cater for planning needs and address challenges requiring planning attention. The legitimization of piecemeal plans by local councils and the central government confirms the role of institutional expediency in influencing discretionary actions by street-level bureaucrats, such as town planners. As a result, if realities in the planning environments of small towns remain constant, then in practice the planning policy will change from master planning to piecemeal. The adoption of piecemeal planning means that town planners have substantial discretion on the local-level policy process. As said earlier, the planning policy is implemented differently in Mlandizi and Sirari. Layout plans however are the main frameworks guiding the making of land-use decisions. The fact that the layout plans made in a piecemeal way were approved at the local and central government levels legitimizes the practice. The existence of a complex local realities in small towns makes it clear that the government has, by implication,

accepted piecemeal planning as a practice that provides minimum planning solutions in small towns.

Layout plans that are made piecemeal occur in patches and have produced uncoordinated urban spatial structures in both towns, which may be costly due to long commuting distance to access services located in different centres. According to Camagni and Salone (1993), spatial interaction between urban centres is enhanced by economic activities and people. Without these, urban centres cannot act as central places where socio-economic growth is expected to occur. Because urban centres are vitally important for urban development, they need to have a diversity of land uses such as retailing, housing, entertainment, and civic, administrative and professional services (Balsas, 2004). Thus, structure plans would be used to guide piecemeal planning to produce a more coordinated spatial structure and to control urban sprawl.

The shift from government to governance resulted in two different planning routes. Piecemeal planning can be done by either LGAs or private-sector actors. The planning needs of LGAs originated from other government departments that needed planning so that they can implement their sectoral plans. In Mlandizi and Sirari, planning needs also originated from the private sector. Private-sector ambitions explain the differences in planning processes in the two towns. Despite the different planning processes, the layout plans were eventually approved by the respective councils. After being prepared by the private sector, the plans were submitted to the two councils through the planning departments for approval. After being scrutinized and approved by the councils, the plans were forwarded to the MLHSD for final approval. A copy of the approved layout plans was returned to the councils for implementation. The process of approving layout plans has always been coordinated by council planners. Whether the plans are prepared by a council or the private sector, the role of town planners has condoned the adoption of piecemeal planning. Indeed, upon considering the two planning processes, it becomes evident that piecemeal planning has been adopted by town planners, and their use of discretion is legitimised by their respective LGAs.

To improve the contribution of piecemeal planning, urban authorities must regulate planning and land delivery by non-state actors. Currently, a larger proportion of layout plans are being prepared by non-state actors, which is evidence for the influence of neo-liberal policies in shaping urban governance. Apart from that, piecemeal planning has short-, medium- and long-term implications. The practice impacts on social, economic, spatial and environmental spheres of urban development. Given their severity, some of the effects cannot be observed now, but as towns grow and expand, the situation will worsen and might go out of control. Additionally, prices of land delivered by non-state actors are considered unaffordable to low-income earners. There have also been speculative moves that caused a larger proportion of plots in piecemeal planned areas to remain undeveloped.

6. Conclusion

Piecemeal practices are adopted in contexts where the planning process acknowledges the realities and challenges encountered by town planners. Certainly, piecemeal planning became apparent from the routines invented by town planners in local governments to cope with multi-faceted challenges in their urban planning environments. This article has examined the implication of piecemeal planning practices on spatial development in Mlandizi and Sirari small towns. The discussion has elaborated on the piecemeal planning process, the influencing factors, actors and outcomes. The findings show that the implementation of urban planning policy in local governments by town planners is influenced by the realities around which they perform their duties. The complexity of these realities reflects the truth of the principal town planner's observation that piecemeal planning is more practical than theoretical. Thus, the dilemmas in the working environment caused town planners to implement urban planning policy by adopting piecemeal planning, which is different from master planning.

The realities in Mlandizi and Sirari are complex and multifaceted as demonstrated by rapid informal urbanization, low institutional capacities, local politics, the existence of customary land tenure, and the influence of the private sector. In both Mlandizi and Sirari piecemeal planning trajectories have resulted in the development of uncoordinated urban structures and urban sprawl. The urban centres result from the concentration of layout plans in areas with private sector interests. However, apart from being interconnected by main roads, the emerging urban centres in Sirari lack a spatial interaction of economic activities. The article recommends the preparation of structure plans to guide the making of piecemeal plans. In addition, the role of non-state actors and the prices of land should be regulated so as to ensure land is affordable to the majority of urbanites in the two small towns. Otherwise, the contribution of piecemeal plans will be minimal and informal settlements are likely to continue to develop.

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