Examining the Urban Land Nexus and Inclusive Urbanisation in Dar es Salaam, Mwanza, and Khartoum

Three City Land Nexus Research Team

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Other outputs from the project
Research Report Investigating the Urban Land Nexus and Inclusive Urbanisation in Dar es Salaam, Mwanza, and Khartoum

Briefing Note 1 The Urban Land Nexus and Inclusive Urbanisation in Dar es Salaam, Mwanza, and Khartoum

Briefing Note 2 The Urban Land Nexus and Inclusive Urbanisation in Dar es Salaam and Mwanza

Briefing Note 3 The Urban Land Nexus and Inclusive Urbanisation in Khartoum

Annexes – The Urban Land Nexus and Inclusive Urbanisation in Dar es Salaam, Mwanza, and Khartoum

The East Africa Research Fund (EARF) is a regional funding mechanism designed to procure and manage a portfolio of research projects under the East Africa Research Hub (EÄR) of the Department for International Development (DFID), located in Nairobi, Kenya. EARF’s reach covers Kenya, Tanzania, Uganda, Rwanda, Ethiopia, Somalia, Sudan, and South Sudan.
1 Introduction and overview

Dar es Salaam, Mwanza, and Khartoum are vastly different East African cities demographically, physically, socially, and in matters of governance. That said, both Dar es Salaam and Khartoum are the primate cities of their countries, and with populations of around six million are both vying to be the fifth largest city in Africa. Mwanza is a second-tier city in Tanzania, subject to the same national laws and land planning systems as Dar es Salaam, but only about a sixth of the size. And all face comparable land nexus challenges, including those of ‘informal’ settlements and their regularisation, expanding sprawl on the peripheries, contested forms of densification in the centre, market and government-led population displacements, conflicts among different land uses, and a chronic lack of formal housing affordable to low-income groups. This synthesis reflects on some of these challenges, and the different ways the cities have responded, in order to inspire new ways of thinking among those concerned with critical land and housing issues in the rapidly growing cities in Africa. It is one of a series of outputs from a project on inclusive urbanisation and the urban land nexus in these three cities, and draws heavily on the mapping and case studies undertaken as part of it. A more detailed account of the research methods can be found in the Research Report. This synthesis is intended for readers interested in looking beyond demographic or economic determinism, understanding why cities in rapidly urbanising countries so often fail to accommodate their growing populations equitably, and supporting more inclusive strategies.

Section 2 provides a stylised summary of some of the key dynamics of city systems and their land nexuses beyond Africa. This includes an exploration of the awkward compromise of informal settlements, which do not serve the interests of their residents or the rest of the city well, but often serve both better than the formal solutions on offer. Understanding informality in its multidimensional complexity remains key to improving the formal systems, which are also often conflicted and contradictory.

Section 3 examines the spatial forms of the three cities and explores some of their key land nexus processes, including: gentrification, regularisation, state-led resettlement, and conflicts amongst residential and commercial land users. For each of these processes, ways to make cities more inclusive are examined, whilst also serving the broader public interest, and some of these are indicated here.

Section 4 compares the contrasting trajectories of affordable housing in the three cities, with an emphasis on comparing the informal settlement expansion and consolidation in the Tanzanian cities with the sites and services system-based expansion in Khartoum. Access to affordable housing is a key challenge to the future of all three cities, but as the political contexts and the roles of the state

1 Both Dar es Salaam and Mwanza are regions as well as cities; but in Dar es Salaam the boundaries are contiguous, whereas in Mwanza most of the area of the region is beyond the boundaries of the two municipalities that make up the city. In this report, the names Dar es Salaam and Mwanza refer to the cities, unless otherwise noted.
have been and will continue to be very different, the best ways of meeting this challenge are also different.

Section 5 summarises a small selection of examples of actionable measures that could be taken to make the development of these cities more inclusive. They include: (1) working with the (very) local officials in the Tanzanian cities who are already central to informal settlement formation, to better align their efforts with both community needs and formal regularisation; (2) supporting the utility and informal hillside communities in Mwanza to adapt the simplified sewer system that the utility has piloted, and improve both living conditions and land security in these currently disadvantaged areas; and (3) reforming the now defunct sites and services system in Khartoum, and overcoming the chronic underinvestment and related spatial isolation to create more reliable and equitable government–community partnerships.

2 The conceptual background: a stylised account of the city system and its land nexus

The city as a system and a place to live. Cities comprise people and their physical and social creations, gathered together and moving around on a small area of urban land, often struggling to secure their ‘place’ in this churning nexus. How the components of city systems are distributed and act across this urban land nexus is inherently political and social, as is who and what is allowed or encouraged to come to the city, and who lives and works in its diverse locations, and has access to its diverse amenities. The configuration of the land nexus matters to the city’s economic success, to the wellbeing of its diverse residents, and to those who become a resident or citizen of the city and how they participate in its politics. There is an important sense in which cities are largely self-organising systems, despite all attempts to plan and regulate them. Where public resources and capacities are lacking, and external pressures are driving rapid change, the gap between what is planned and what is happening on the ground can become unbridgeable. Understanding and engaging with how cities ‘self-organise’ and to what effect is key to making cities at once more inclusive and more economically, socially, and environmentally viable.

The pull of the city and resulting urbanisation. Economists use the term ‘economies of agglomeration’ to refer to the economic advantages that pull people and enterprises together into cities. These agglomeration economies include the possibility of sharing larger and more productive facilities (a physically contingent advantage), learning and innovating more productively by sharing ideas more effectively (more socially contingent), and being able to specialise and secure easier access to ‘thick’ markets (more economically contingent). Agglomeration also has disadvantages, including concentrated pollution and congestion, which can be dealt with to varying degrees by infrastructure (e.g. sewers, piped water systems, and roads) that are costly to build, and regulations (e.g. environmental and building standards) that can be costly and difficult to enforce. Also countering the pull of the city, agriculture
keeps a share of the population away from cities and spread out over the arable landscape, particularly when the agriculture is labour intensive. As national economies grow and the labour force shifts out of agriculture, the pull of agriculture declines and the pull of the city rises, and both people and their physical creations urbanise, increasing contestation for urban land. Rural crises can also drive populations to cities, and particularly when it is not part of a rapid urban growth process, urban authorities generally find it difficult to respond constructively to rapid in-migration.

Local urban agglomeration economies and diseconomies: from net urban benefits to unequal neighbourhoods and disadvantaged groups. The oft-heralded pull of the city is a net effect: within the city the mix of urban benefits and burdens depends on one’s location in relation to the rest of the land nexus, and how it is configured. Neither conventional markets nor urban plans are efficient or equitable guides to what should go where to do which activities in a city, though both can help. Complex negotiations over related shifts in the land nexus are constantly underway in most cities, some more formal than others. There are serious coordination problems at many scales, newly recreated as the land nexus evolves. Moreover, collective efforts are necessary to address problems of water provision, sanitation, drainage, waste removal, air pollution, and transportation, without which the disadvantages of concentrated pollution and congestion would dominate the benefits of agglomeration. When the collective action and coordination problems are only patchily addressed, spatial inequalities arise. Some people and places end up better situated to secure urban advantages, others more exposed to disadvantages. In this competition for a place in the city, it can be disadvantageous to be living in poverty, a recent migrant, a tenant, a woman, or a member of certain ethnic groups – exactly how disadvantageous will depend not only on social processes, but also on the physical and economic dynamics of the city’s land nexus. Those in several disadvantaged groups are especially vulnerable, while, for example, wealthy and well-connected tenants and migrants may not be disadvantaged at all.

The churn of the urban land nexus and the challenge of securing a place in the city. As the land nexus develops, neighbourhoods change, but the fortunes of the residents do not necessarily change with those of their (original) neighbourhood. In a ‘gentrifying’ neighbourhood, low-income tenants and even owner-occupiers are often pushed out. In a ‘declining’ one, residential investment falls, and wealthy residents typically move out. The ups and downs are often self-reinforcing and persist until the character and demography of the neighbourhood has been transformed. Thus, an infrastructural upgrading, such as the extension of piped water, can attract more affluent residents, who invest more in their properties and are able to lobby more effectively for better services, making the neighbourhood more attractive to the affluent and too expensive for the poor. Markets can facilitate the churning, and some cities churn more rapidly than others, but what drives or inhibits the churn are largely non-market effects and interdependencies (externalities) within and across neighbourhoods that make a place either more or less attractive to live or run an enterprise in.

Three critical housing concerns: location, location, relocation. Real estate agents like to quip that the three most important things affecting the value of a house are ‘location, location, location’, but tend to ignore the costs imposed by
relocation. While moving can be advantageous, it can also be very disruptive, and mean a loss of livelihood and social capital that has been built up locally. When very low-income settlements do maintain or create a place in the city centre, they are often overcrowded and unsanitary, reflecting both the poverty of the residents and a lack of public services. Official planning regulations and standards often prohibit such densities and conditions, and local elites are often particularly averse to centrally located 'slums'. On the other hand, the same social capital and networks that residents create when living and working together in close proximity can provide a basis for resisting displacement (and vice versa). The result can be contested and awkward compromises: settlements that are allowed to persist despite not complying with the regulations, and residents of these same settlements not being treated as full citizens of their city or given support to address their congestion problems.

Informal settlement as an emergent characteristic of certain late twentieth/early twenty-first century city systems. The term ‘informal settlement’ is often used to refer to any deprived settlement, but here it is taken to imply a settlement where residences do not conform to formal regulations or standards. Wealthy groups often flout regulations and building standards and create their own type of ‘informality’. However, the salient feature of the settlements typically labelled ‘informal’ is that many of their residents cannot afford to comply with formal regulations without descending further into poverty. It is not just that regulations are not enforced, but that they are designed for a wealthier city that planners and officials are actually operating in, and poverty cannot be regulated away: the unacceptably poor cannot reasonably be asked to pay for acceptable housing. Rapid city population growth and urbanisation can complicate matters. But it is too easy to blame migrants for the rapid growth of deprived settlements when much of it is the natural growth of the existing population, and the formal housing markets are not catering to low-income residents, regardless of how many there are and where they are from. Informality is a developmental outcome of city systems, not simply the result of population growth outstripping the development of land, housing, and infrastructure. Indeed, blaming population growth and migrants can impede more constructive thinking about how to address the problems that often accompany informality.

Contrasting perspectives on urban displacement: stopping planetary gentrification versus unleashing formal property markets. There are widely divergent views about the merits of informal settlements and the churn of the urban land nexus. Researchers studying ‘planetary gentrification’ tend to present investment-led and market-facilitated displacement of cities’ poorer residents as a global scourge, and argue for people’s right to stay put, including tenants and those in informal settlements. Researchers using the tools of the new urban economics to study urbanisation and housing in Africa are more inclined to argue for clearer property rights and formal land markets as the basis for enabling the necessary movement to allow the cities to secure the agglomeration economies of a well-arranged and connected city. While their conclusions may be contradictory, many of the key insights from both researchers of gentrification and the new urban economics rely on an understanding of non-market interrelations that take place across space (e.g. economic externalities or social neighbourhood effects). Economists point to the importance of clustering and supportive infrastructure
to achieving urban economic advantages. Planetary gentrification scholars point to the excess profits that can be secured if investors can, by fair means or foul, overcome the coordination problems involved in flipping a well-located but run-down and low-income neighbourhood into a ‘better class’ of neighbourhood. Both need to be taken seriously, but not uncritically.

**Increasing the supply of adequate and affordable housing.** Housing, along with access to livelihoods, is key to whether a country’s urbanisation process is inclusive. Adequate housing does not just depend on the quality of the construction, but on the accessibility of income-earning activities and services (location), and the liveability of the neighbourhood (neighbourhood effects). In most African cities, informal housing will continue to play a role, even if regularisation and formal housing delivery play a growing role. Squeezing informal housing when there is no affordable formal housing of similar or better quality risks excluding disadvantaged groups from the city, or just creating more contested informalities. Even if fully regularised, formalised, and well-off settlements are the ultimate goal, the more inclusive route is to help those in informal settlements to align more closely with the formal, supporting improvements but adapting the regulations to what the residents can afford (an approach that is difficult to promote formally). As well as improving conditions in the present, this can make future regularisation and formalisation less costly and disruptive. However, as can be further illustrated with the three cities under study, when it comes to identifying practical measures attention to local specifics is critical.

### 3 The churning land nexuses of Dar es Salaam, Mwanza, and Khartoum

The more ‘organic’ layout of Dar es Salaam and Mwanza provides a stark contrast to Khartoum’s intensely gridded layout. This different morphology reflects real differences in land nexus governance, and the historical treatment of informal settlements.

That being said, the three cities also have striking similarities in their urban forms: (a) highly accessible radials that connect the centre of each city to the periphery and the region beyond like the spokes of a bicycle wheel; (b) the increasing use of ring roads to connect these radials and contain the outward sprawl of the city; and (c) a highly integrated city centre and peripheral neighbourhoods that are strikingly segregated spatially (Figure 1). The radials, in combination with the ring roads, form the underlying network of high movement potential streets that facilitate the movement of people and things around the cities, though movement along these routes can be highly congested.

Since the 1990s, the United Nations has reported higher population growth rates in the Tanzanian cities (almost 6 per cent a year) than in Khartoum City (less than 3 per cent a year – although the national statistics office estimates are higher). Sudan is further along on both the demographic transition (with lower overall natural growth rates) and the urban transition (with lower net
Figure 1 Space syntax maps showing accessibility and segregation for Dar es Salaam (above left), Khartoum (above right), and Mwanza. Source: Maps generated and coordinated by the Institute of Development Studies.
Figure 2 Population growth in Dar es Salaam: population density 2012 (above left), absolute growth (above right), and percentage population growth (right). Source: Data provided by the National Bureau of Statistics, Tanzania through Ardhi University. Maps generated and coordinated by the Institute of Development Studies.
Figure 3 Population densities at the city centre are low for all three cities: Dar es Salaam (2012) (top left), Khartoum (2018) (top right), and Mwanza (2012) (below right). Source: Data for Tanzanian cities provided by the National Bureau of Statistics through Ardhi University; and maps generated and coordinated by the Institute of Development Studies. Data for Khartoum provided by the Central Bureau of Statistics 2008, with official estimates for 2018, and the Ministries of Planning and Infrastructure of Khartoum State; and maps generated and coordinated by the University of Khartoum.
Figure 4 Population density: Dar es Salaam (2012) (top left), Mwanza (2012) (top right), and Khartoum (2018) (below). Source: Data for Tanzanian cities provided by the National Bureau of Statistics through Ardhi University, and maps generated and coordinated by the Institute of Development Studies. Data for Khartoum provided by the Central Bureau of Statistics 2008, with official estimates for 2018, and the Ministries of Planning and Infrastructure of Khartoum State, and maps generated and coordinated by the University of Khartoum.
rates of rural–urban migration) than Tanzania. However, hundreds of thousands of internally displaced people (IDPs) came to Khartoum in the late 1960s and mid-1980s because of drought and famines, with armed conflicts becoming a major driver of internal displacement to Khartoum in the 1990s and after 2003. Moreover, there have been many international migrants and refugees seeking a safe haven, or temporary respite, in the city. These forced migrations, combined with the out-migration of an ever-growing Sudanese diaspora, have intensified the politics of both migration and of Khartoum’s urban land nexus.

As Figure 2 illustrates, much of the population settlement in Dar es Salaam is near the centre or along the radials, with infill along ring roads. However, population densities are low in the very centre. The densest settlements are slightly further out, the annual increases in population per hectare are highest slightly further out still, and the fastest percentage population growth rates are on the periphery. Closer observation in Dar es Salaam shows that while some of the densest areas are still absorbing large numbers of people (per hectare), this is mixed with areas of no or even declining populations. At a smaller scale, these observations are also likely to hold for Mwanza.

Figure 5 Khartoum land use maps for 1990 (top left), 2000 (top right), 2014 (below left), and 2017 (below right), showing both the growth of the city and the transformation of settlements from informal to formal. Source: Data for Khartoum provided by the Central Bureau of Statistics 2008, with official estimates for 2018, and the Ministries of Planning and Infrastructure of Khartoum State. Maps generated and coordinated by the University of Khartoum.
While similarly high-resolution maps are not available for Khartoum, and recent growth rates have been lower, somewhat similar patterns are evident (Figure 3). The centre that contained most of the population in the colonial period has pockets of high density which are considerably larger than its equivalent in Dar es Salaam. Larger areas of high density in Khartoum are mostly found between the inner and outer ring roads, where there are also areas of (planned) low density, including large industrial areas stretching into the more central area. Some of the fast-growing areas are on the periphery in relatively inaccessible locations, with little public transport, but these are more clustered and densely settled than the peripheral settlements of the Tanzanian cities (Figure 4).

In all three cities, the settlement patterns and where the growth occurs are guided to different degrees by urban planning, including transport and other infrastructure planning. Unplanned urban settlements are often labelled informal on the grounds that they contravene planning regulations. In the Tanzanian cities, the shares of land and population in informal settlements have been growing rapidly. Land use maps and population maps developed for this project indicate that the population share in informal settlements in Dar es Salaam reached about 62 per cent in 2012, with the land share continuing to grow from about 39 per cent in 2012 to 61 per cent in 2018 (with most of the growth in comparatively low-density areas), including unconsolidated informal settlements. For Khartoum, a longer series of lower resolution land use maps was prepared (see Figure 5), illustrating both the growth of the city and the transformation of various settlement types – from informal to more formal.

The population share in informal settlements peaked at between 40 and 60 per cent (estimates vary) in the early 1990s, at which point the culmination of a series of crises and forced migrations into Khartoum made the control of informal settlements a political priority. During the 1990s, a major city regularisation and resettlement – described in more detail in Section 4.2 – cut the share of the city’s population to about 20 per cent by 2005. Squatter or informal settlements were upgraded and re-planned, and new areas were opened up for resettlement in localities beyond the now proposed RR5 or outer ring road (seen in Figure 5).

The more confrontational approach to informal settlements in Khartoum is probably both cause and consequence of most unplanned settlement being deemed illegal (such unplanned settlement is often described as squatting), while in the Tanzanian cities it is mostly legal. In both Sudan and Tanzania, the state is the ultimate owner of all land, although in Sudan an exception is made for small areas of land held freehold since the colonial period. In both cities, customary tenure systems confer some use rights, and can be an (at least temporary) exception to the rule that unplanned or unregularised settlement is illegal. However, in Khartoum such rights have been tightly delimited and contained, and largely restricted to old settlements or historical villages. In the Tanzanian cities, local processes and officials (at the mtaa/sub-ward and ward levels) have been allowed, with little or no documentation, to informally transform customary agricultural land claims into informally held private urban residential plots conferring long-term use rights, and giving those holding these plots considerable security even in the absence of land titles. This has become the basis for large-scale informal ownership.
As all of these cities have grown, what were once peripheral and inaccessible residential settlements have become better located in relation to the cities’ markets and amenities. They have experienced complex combinations of densification, shifts to more commercial land uses, and existing residents being displaced, often to make way for those of a higher socioeconomic status, but sometimes the reverse. Outlines of some of the more specific land nexus processes that are affecting how and where people live in these cities follow.

**Incremental gentrification,** involving investments in upgrading and residents of higher socioeconomic status displacing those of lower status, is evident in all three cities. In some early accounts which are critical of gentrification, this has been presented as a process of cumulative causation, with investments making the gentrifying neighbourhood more attractive for wealthier people to live in, and these newer and wealthier people investing still more when they move in, making the neighbourhood even more attractive to wealthier residents and businesses serving such residences, until the entire neighbourhood is transformed. While no simple version of this sort of gentrification was documented in any of the cities, its components are consistent with what has occurred in all of them. Particularly in the Tanzanian cities where renting is a major source of affordable housing, low-income tenants are among the most vulnerable to gentrification linked to upgrading – indeed, one of the challenges of reaching the poorest households is that, unless undertaken with care, housing and services improvements risk causing rental increases that force the poorest tenants out, rather than lifting them up. In Khartoum, one of the central case studies (Burri) was chosen as an example of gentrification: it involved a third class (planned for low-income) neighbourhood. However, a bridge and a waterfront scheme (that included the Nile Avenue) were initiated, leading to physical transformations and functional changes in land use as many embassies, company headquarters, and luxury villas were built on land that had been sold by the owners who had then crossed the river to Gerief East. In another case study area (Al-Jereif West), increasing rents led to a shift of some of the largest tenant groups (migrants and refugees from Eritrea and Ethiopia) to cheaper areas, although in this situation it may have actually reduced investment in the building stock. And in Al-Shohada, there was a complex form of counter-gentrification.
as the negative impacts of commercial land uses led to the displacement of comparatively well-off households, and an influx of market workers.

**Regularisation.** In all three cities, state authorities have been working for decades, with varying approaches and levels of intensity, to transform or remove their informal settlements so that the use of land aligns sufficiently with the physical and ownership requirements to eventually allow them to become a formally accepted part of the urban fabric. There is currently an ambitious regularisation programme in Tanzania, with the formalisation of property rights at its centre, but it is still not keeping up with the expansion and densification of informal settlements in either Dar es Salaam or Mwanza. There has been considerable variation in how it has been implemented in different neighbourhoods, and generally regularisation has been offered to, rather than forced upon, neighbourhoods. Alignment with regulations has sometimes been facilitated by adapting or easing the regulations rather than simply applying the strict planning standards officially required of planned housing. Thus, for example, the smallest plot size accepted in the regularisation guidelines is 90 square metres, while the smallest plot size in planned areas (a high-density plot) is 300 square metres. In Khartoum, there are very different sorts of regularisation. In the regularisation taking place in all three cities, some households have also been displaced as part of road widening and reblocking. However, unlike the Tanzanian cities, larger-scale government-led displacement and resettlement have been central to regularisation in Khartoum, and in this brief summary of land nexus processes they are best considered together.

**Government-led displacement and resettlement.** There are also situations where the state officially obliges people to move whole neighbourhoods or large parts thereof, to make way for development projects held to be in the public interest, or to prevent people from living in hazardous, illegal, or otherwise inappropriate locations. Resettlement programmes were initiated in Khartoum at least as far back as the 1980s, when IDPs were fleeing drought and conflict, and Khartoum was declared a national capital open to all in the nation, with a view to resettling those in the IDP camps to less segregated and conflict-ridden locations. In the 1990s, when further conflicts were rocking the country, camps only held a small share of the 1.5 million or so IDPs, and the growing encroachment of informal settlements inhabited by migrants seemed to be bringing the national crisis to the centre of the capital. As indicated above, the resulting regularisation and resettlement approximately halved the share of residents in the more visible informal settlements of Khartoum. The resettlement moved people to sites and services plots. Those in IDP camps were moved to Dar Al Salam areas, while others were moved to peripheral settlements like Al-Fateh, one of the project case study areas. On being resettled, people received a plot, but the services were rarely provided as planned. (For more on the sites and services schemes, see Section 4.2.)

Preventing squatting and other informal encroachments in the central areas had long been an ambition of segments of the elite and the authorities, but it required an existential crisis to create the political pressure to implement large-scale resettlement, and the funds for providing basic and essential services could not be secured. In more recent years, there has been a resurgence of informal settlement, although resettlement policies continue at a lower rate. Resettlement
sites remain poorly serviced and comparatively isolated from the city centre, and there are concerns that people are squatting in areas expected to be designated for resettlement, as a strategy to secure a plot of land in a resettlement area in the future. In Al-Fateh, a resettlement destination established in 2003 and still under expansion (see map of Khartoum, Figure 1), it was found that living conditions and livelihood opportunities were extremely poor. In effect, a population that had been struggling to get by in informal but central locations was moved to formal but comparatively inaccessible locations (see syntax map in Figure 1), where they had a stronger claim to the land but less capacity to secure livelihoods and access other benefits of more central urban living (including basic services).

Neither Dar es Salaam nor Mwanza has engaged in similarly scaled resettlement schemes, in part because informal settlements house a large fraction of the middle class (not just low-income households); informal settlement is also not generally considered illegal, and schemes to develop surveyed plots have been far less ambitious than in the case of Khartoum. There have been communities in hazardous locations, or in areas designated for public interest projects, that have been resettled and face similar challenges as in the case of Khartoum. For example, people moved from Mabatini-Mashineni to Nyamuongolo in Mwanza due to flood hazards, and from Magomeni Suna to Mabwepande in Dar es Salaam to make way for a new port development. In both cases, they were resettled from central to peripheral and relatively inaccessible locations, and faced severe difficulties (see case study labels in Figure 1). There are many people moving successfully out from the centre of Dar es Salaam and Mwanza to relatively isolated locations on the periphery, but these tend to be middle-class households with relatively secure livelihoods and sufficient resources to cope with the absence of conventional urban amenities.

**Conflicts between commercial and residential land uses.** While multiple uses of land can coexist to positive effect in a single neighbourhood, this typically requires mediation among different land users. Without mediation, serious conflicts amongst different land users arise. In all three cities, there were case studies involving new commercial land uses undermining pre-existing residential neighbourhoods. However, in at least one central case study area in each city, the residents being displaced were not among the poorest. New and quite powerful land users, through putting the land to new commercial uses, were making the neighbourhoods less habitable for existing residents. However, those displaced included quite well-off and long-standing residents. In one of the Khartoum case study areas (Al-Shohada), an old and once well-off neighbourhood was being encroached upon by an expanding market and its supporting infrastructures, leading to a reverse gentrification, with crowded worker housing becoming more common, and the old ‘gentry’ leaving to resettle more peripherally (by contrast, in another case – Kalakala Gatiya – the market led to a residential boom in the settlement). In one of the Dar es Salaam case studies (Manzese), commercial land users were driving out previous residents, particularly near the main road, and while the local officials who conventionally oversee property transactions could not handle the process, the relevant central authorities were also disengaged. In a parallel Mwanza case study (Mirongo), the land use conflicts were less severe but here too, higher land prices reflected a rise in wealthy commercial establishments rather than upmarket residential development. Such processes
can be contentious, potentially disruptive, and difficult to manage, particularly when they occur with little official guidance or resident engagement. While informality can complicate their management, related disputes are not rooted in ambiguous land ownership, but disagreements over what owning the land gives one the right to do, particularly when it has consequences for other landowners and users in the vicinity.

4 Contrasting trajectories of affordable housing in Dar es Salaam, Mwanza, and Khartoum

Inclusive urbanisation depends heavily on the supply, accessibility, and location of affordable housing in the urban land nexus. There are vastly different processes driving the creation and loss of affordable housing in Dar es Salaam and Khartoum, though the challenges are surprisingly similar, and major improvements in both cities are unlikely without better relations and understandings between public actors and residents. As a considerably smaller city, the contestation for land and location is less acute in Mwanza, but the land nexus processes that provide most of the affordable housing are similar to those in Dar es Salaam, with a few important exceptions.

4.1 Dar es Salaam and Mwanza

Most of the affordable housing in Dar es Salaam and Mwanza is in unplanned areas. This informal settlement has its problems, but as things stand formal housing is too scarce and costly for most residents, and with populations growing at almost 6 per cent a year this has meant a declining share of people in both cities living in formal housing. The new informal housing is mostly provided by entrepreneurial self-builders who finance (largely from savings and family support, with comparatively few loans), commission, organise and oversee, and may participate in building their own houses, and housing for renting as well. Development led by self-builders often starts in spatially segregated locations on the cities’ periphery, before much in the way of formal services are available, but where land tenure has already been shifting out of customary tenure. Over time, as settlements consolidate, owner-occupiers build and rent out additional houses or rooms, either on their original plots or nearby. With decades of infilling and crowding, the density of consolidated informal settlements is considerably higher than in planned settlements, though particularly in the early stages it takes the form of sprawl, and even in highly consolidated settlements in accessible locations there is comparably little vertical development – an issue that deserves more attention.

Residents of informal settlements often experience serious problems, ranging from deficient services and environmental hazards to risks of displacement. Generally, the risk for owner-occupiers of displacement by government is low, except where there are environmental hazards – for example, where they live in areas prone to flooding. Low-income tenants are particularly vulnerable
to displacement and are rarely compensated (although compensation is required for World Bank-funded projects). Women are particularly vulnerable to service deficiencies, as these often increase their unpaid work burden and related hazards. Services (e.g., piped water) are often lacking, particularly on the periphery. Early structures and roads are often built in ways that are hard to change, and make future upgrading more difficult, although this has been less evident in recent informal settlement. With greater vehicle ownership and awareness of regularisation, self-builders and their leaders are often more concerned with securing adequate space for roads that are trafficable by cars and buses. Still, the roads are often very rough and unimproved at the time of subdivision, and in their early stages many informal settlements remain spatially isolated from networked trunk infrastructure and from the more central job opportunities and markets, putting job seekers at a disadvantage. As the settlements are consolidating, residents are likely to secure some service upgrades, but once the point is reached when crowding sets in, with little in the way of sewers, sanitary burdens increase. As the populations increase and the land nexus changes, densification rises, creating crowding and congestion, with little vertical expansion. Especially in more central locations, old informal settlements compete for land with new, more formal, commercial and residential developments, and this is rarely a smooth or equitable contestation.

However, many of the deficiencies are the result of the economic poverty of the residents, rather than of the informality of the settlements. In any case, the costs and regulations of formal housing systems are not well suited to residents facing severe income poverty, and those designing formal housing still have much to learn from the informal settlement patterns – in terms of what can go right as well as what can go wrong. While there are ongoing programmes of regularisation and formalisation, based in part on ambitious claims by economists about the benefits of formalising property rights, take-up has been less than anticipated. The process itself is unaffordable to some, and its effects on the affordable rental market are poorly understood. The overall impact can be negative for disadvantaged groups, partly because regularisation focuses on the protection of private land rights, with little attention to public land rights, or the rights of the landless. Also, with their current emphasis on tenure and land titling, such programmes undervalue the importance of public spaces and land uses, and of local organising and cooperation to coordinate collective improvements. Moreover, while the competition between a settlement’s residents and other aspiring users of the land can be compounded by informality, clear land rights and regulatory compliance do not in themselves mediate such competition smoothly or fairly – that requires other levels of land use planning, governance, and negotiation.

All land in Tanzania is ultimately owned by the government. Even those with formal land titles do not have full ownership rights. However, those with informal land claims have usufruct rights. The Tanzanian government has historically been more tolerant of informal/unplanned development than most, in part because the system is comparatively orderly and comparable to a very simple and decentralised formal system. *Mtaa* and ward officials play an important role in land transactions, and while informal transactions are not registered centrally, and do not provide owners with titles, they do provide owners with evidence of their right to the land, and generally expect this to go uncontested.
The Urban Planning Act No. 8 of 2007 and the Land Act No. 4 of 1999 provide for the recognition of informal settlements, along with the broad outlines of an approach for their regularisation and formalisation, provided they are located in habitable areas. The government has been less tolerant of squatter settlements, involving the occupation of land without permission of existing claimants, but such settlements are generally few in Tanzania. This may be in part because other informal settlement opportunities are available.

The informal system overseen by local officials has its own problems. Local officials are unlikely to take city-wide issues into account. For example, they may benefit from encouraging settlement in their localities, even when it is leading to groundwater depletion and other locations would be easier to extend water services to; sometimes they fail to prevent the emergence of multiple land claims; and in some cases, they become involved in corrupt transactions. As densities arise, the local officials can do little about excessive congestion and are not in a position to mediate between local residents and large commercial land users or property developers if and when the settlements become more strategically located and attract such competition. Informal settlement is nonetheless an important source of affordable housing, particularly for the urban poor. Without it, their housing conditions would be far worse, at least in the absence of major changes in the formal systems.

4.2 Khartoum

In Khartoum, sites and services (S&S) schemes have been the major source of new housing. S&S schemes were first initiated in the late 1950s, and it has been estimated that by 2012 former S&S plots (including S&S projects and related housing schemes) housed about three quarters of the formally housed population, or about half of Khartoum's total population. As described in Section 3, informal settlement had accounted for between 40 and 60 per cent of the population at the end the 1980s (estimates vary), but fell to more like 20 per cent through the regularisation and resettlement programmes of the 1990s. The intention was to continue using S&S schemes to guide the residential expansion of the city, while taking stronger measures to curb new informal settlements. Though it has risen considerably since, informal settlement remains a very awkward compromise. It is important to find better ways of engaging with informality, but unlike in Mwanza and Dar es Salaam, there is currently little political scope for creating positive synergies between informal development and formal processes of regularisation. Thus, despite the S&S schemes having been renounced for over a decade, they remain an important source of lessons for what can and cannot be achieved in terms of affordable housing in the future.

Internationally, S&S schemes became popular in the 1970s as a means of tapping people's ability to build their own homes (often incrementally), while steering them to formally plotted land, in appropriate locations, and with essential services. The hope was that this approach would be implementable on a much larger scale than subsidised public housing, and provide better located, planned, and serviced housing than informal housing. S&S schemes did not fully succeed in either, with replication being limited in both scale and quality, and potential residents finding the locations isolated and the services inadequate. However, while such schemes went out of favour with organisations like the World Bank in
the 1990s, recent revisits suggest that many schemes dismissed as abject failures for lack of takers did provide the basis for successful settlement years later. This has some parallels with Khartoum’s experience: with the churn of the urban land nexus, locations that were once too isolated and underserviced have become successfully incorporated into the urban fabric, though not necessarily to the benefit of the initial recipients.

In the typical S&S scheme in Khartoum, the state was responsible for providing the plot and essential services (e.g. water and flood control) at a fraction (e.g. 15–20 per cent) of their cost, while those allocated the plot (on a long leasehold basis) were responsible for paying for all the building construction and most (e.g. 80 per cent) other basic services (e.g. electricity and rubbish disposal). The presumed trajectory was that the plots would be surveyed and provided with the essential services under the auspices of the state, and those allocated the plots would then build and inhabit their homes, with the other services provided by the time they moved in. The standard S&S schemes were allocated on a points system, favouring households whose heads were born in Khartoum, those with large families, and current tenants. There were special allocations for government officials and professionals, for the needy (e.g. where household heads are widowed or have disabilities), and for investors buying at market prices. The schemes were only for nationals, although in the resettlement of some camps and informal settlements, international migrants were nationalised.

Ideally, these schemes would provide orderly settlement, keeping costs low but guaranteeing essential services, and not exclude vulnerable groups. In practice, they have been far less orderly and inclusive than originally intended. People resettled on urban peripheries often find the move extremely difficult as they lose the easy access to more central amenities and livelihood opportunities; however, if there are more adequate and affordable services where they are moved to, this offers at least partial compensation. Those moving voluntarily through the informal development processes in Dar es Salaam and Mwanza choose their locations and undertake the moves carefully and incrementally, and often in the full knowledge that most formal services will be a long time coming. In Khartoum’s S&S schemes, the plots are allocated by government authorities and in some cases the moves are forced, but the services are meant to be there from the start. In practice, a significant share of plots are still not built up, most are without services or only partially serviced, with a large overlap in these two shares (the share with services is much higher in informal areas that have been upgraded and regularised).

Many problems undoubtedly arise from bureaucratic mismanagement and corruption, and the failure to provide the funding necessary to install the infrastructure for essential and other basic services to the plots that need it. But there are also neighbourhood-scaled agglomeration economies at work, and they can create coordination challenges, particularly if not all plots are already serviced when they are allocated, and not everyone wants to move into their plots even if they believe they will be serviced. Given the choice, aspiring residents have little incentive to build and move into a house on a plot that will not be serviced (and for distant settlements, this includes transport services). On the other hand, if the goal is to provide for those in need, there is little sense in providing services to plots that people are not going to move into. It is most economical
to provide services to adjoining clusters of plots, in areas where people can be expected to move to, and service providers are said to be hesitant to connect up neighbourhoods with less than 30 per cent of the plots built up. Groups of neighbouring local owners can demonstrate their desire to move in by starting to build, as well as informal lobbying. This can reinforce incremental building, which is often a preferred strategy of households with low- and unreliable income streams. It can also lead to unnecessary stop-start construction, wasted resources, and slow housing development, and it can result in speculation and attempts to use political or economic clout to influence service provision.

It has been estimated that currently about 56 per cent of Khartoum’s S&S plots remain undeveloped, and most of these are largely unserviced and relatively isolated. The problem is not just one of disadvantaged households not being able to afford homes. Indeed, some more recent middle-class schemes have fared worse than earlier low-income S&S schemes. This is partly because of recent economic difficulties both within the country and the agencies responsible for service provision to these particular schemes. These difficulties have been compounded by falling revenues from land sales (which once contributed to such schemes) and the increased cost of services and infrastructure. However, the desirability of schemes that require this level of subsidised land transfers is doubtful. Hopefully, finances will improve and higher priority will be given to policies in support of affordable housing. Regardless, the S&S schemes need to be revisited and reworked. Alternative approaches that are currently being tried out, with developers ensuring that the plots (and sometimes finished houses) are serviced before reselling them, are not affordable to many middle-income residents, let alone low-income residents moving out of informal settlements.

Ultimately, S&S settlement in Khartoum is more similar to informal settlement in Dar es Salaam and Mwanza than it may appear at first glance. Khartoum also still has both old and new settlements that are informal. Some are squatter settlements, symptomatic of forced migration (including people returning from South Sudan, but without homes or the right to own them as they are considered foreigners), while others are offshoots of traditional settlements, following similar settlement patterns. The development of new S&S schemes has officially been halted since 2008, partly on the grounds that they were creating urban sprawl – one of the same criticisms levelled at informal settlement in Dar es Salaam and Mwanza. However, while private developers are still allowed to develop and subdivide land, there is still a need for new approaches to residential development, and in effect some variant on the S&S schemes.

5 Acting to achieve more inclusive land nexus processes in Dar es Salaam, Mwanza, and Khartoum

Under the project, one area for each city where acting strategically with the land nexus processes has the scope for making housing provision more inclusive was selected. This is just a sampling, and the examples were not selected just for their
individual importance, but as illustrations of the relevance of seeing systems as systems and acting through the urban land nexus and its political economy, if more inclusive urbanisation is to be achieved. This project aimed at achieving benefits for those living in poverty, and particularly disadvantaged tenants, women, and migrants (including rural-urban migrants). The choice of housing provision reflects this focus, but equally important is attention to affordability and giving voice to the concerns of the disadvantaged groups.

5.1 Building capacity among ward and mtta officials for the equitable settlement and regularisation of informal land in Dar es Salaam

Informal settlements in Dar es Salaam have many problems, but also provide the majority of housing in the city, at a surprisingly low cost, and in a manner more responsive to the needs of the residents than most formal housing. Looking forward, it is important to build on their successes, as well as overcome their failures. As described above, the local officials at the ward and mtta levels have played a key role in making the process of informal settlement operate as smoothly as it has (although the mtta committee and chair are elected and have no paid positions, unlike the ward officials). The local officials have done little to control the loss of agricultural land, or prevent excessive abstraction of water by boreholes, on the periphery of the city. They have not managed the conflicts between residential and other uses of land, or prevented overcrowding, as informal settlements consolidate and become contested parts of the city centre. They have, however, helped to keep the number of conflicting informal land claims under control, and some have demonstrated the capacity to work closely with grass-roots groups in their communities, including in processes of land regularisation.

Ongoing processes of regularisation are slow, patchy, have been overly oriented towards the formalisation of private property rights (to the neglect of securing public land for critical local needs), and risk becoming unaffordable, particularly for those in the poorest settlements. Ward and mtta officials have been involved in some of the more concerted regularisation efforts, including several with high levels of popular participation. As long as there is local interest in regularisation, ward and mtta officials (with some technical support) are well placed to help organise the process. However, their roles tend to be undervalued in the policy circles, and there are areas where their capacities are lacking.

Local officials would greatly benefit from capacity building: in the logistics of regularisation; on lessons from recent successes; and on how to create fair and meaningful participation by all residents, avoiding conflicts and exclusionary tendencies. Capacity building is particularly critical in areas where there is an expressed or suppressed demand for regularisation, but could be tailored to be relevant even if regulation is delayed – much of the training would be relevant even if the formalisation of formal titles is only pursued by a minority. A capacity-building programme could include inputs from: planners familiar with the aims and principles of regularisation, as well as its practicalities; community activists with experience in successful examples of regularisation; and qualified surveyors who have been involved in local regularisation. It could combine class work and fieldwork in areas already starting to regularise and be developed to follow through on the process of regularisation. Evidence needed to monitor the process
of regularisation could also be collected alongside the capacity building. For this and other reasons, capacity building could be justified in some settlements where the demand for the legal formalisation of property rights may not be appropriate.

This capacity development process could be pioneered in Dar es Salaam, but equally so in Mwanza, as there have been some innovative local efforts in both cities. In both cases, it should be noted that the level of inclusion achieved in regularisation processes will depend on how the formal processes are operationalised, not just on the capacity building described here. However, the capacity building would also need to be designed to recognise the particular problems that tenants face during processes of regularisation, the importance of including the voices of vulnerable groups such as women, tenants, and migrants in the regularisation process, as well as the importance of affordability.

5.2 Developing co-production models for extending simplified sewers in Mwanza

The lack of sanitation in the more central informal settlements in Mwanza is a threat to the health and wellbeing of their residents. It also threatens their downstream neighbours and is part of the reason why these settlements pose an awkward challenge for planners wanting to avoid exclusionary policies. Simplified sewers could, if scaled up to reach a large share of existing residents in these informal settlements, provide the basis for meeting this challenge halfway; it could also help in avoiding the costs of either moving towards the displacement of the disadvantaged groups living in these settlements, or ignoring the problems their conditions impose both on themselves and others. The number of people potentially affected is large, even ignoring the downstream effect: maps of Mwanza’s population and its informal settlements indicate that in 2012 about half of the city’s population of 685,000 were living in identified informal settlements (the approach taken to identify informal settlements in Mwanza could contribute to its informal settlement population share being lower than in Dar es Salaam). About 60 per cent of these people (or 30 per cent of Mwanza’s overall population) were living in hilly informal settlements with densities of over 100 people per hectare, within 5km of the city centre.

With conventional technologies, it is hard to see how these settlements can be sufficiently upgraded to be officially accepted as locations for habitation without incurring costs likely to drive out existing residents. This applies particularly to tenants; there is a formal obligation to compensate informal owner-occupiers, but not tenants, and generally the consequences that policies might have on tenants are not taken as seriously in the policy arena. On the other hand, not only are such levels of displacement and resettlement politically unacceptable, but attracting the private investment needed to secure sufficient improvement in more than a few of these settlements at a time would require unrealistic levels of gentrification (i.e. the private demand is unlikely to be there). In effect, most of these settlements are likely to remain informal for the foreseeable future, with both upgrading and gentrification occurring at the margins. However, as long as there are public health hazards associated with these settlements, it will be hard even for inclusion-oriented local authorities to justify supporting intermediate improvements, achieving some but not all of the positive aspirations of regularisation.
Simplified sewers are a lower-cost alternative to conventional sewers but are still likely to be unaffordable to many residents of Mwanza's informal settlements, unless local residents become actively involved in their development and management (or they are subsidised). They have been widely promoted internationally, and their past successes and challenges in cities in Brazil and Pakistan are well documented. The sewer systems of Karachi, developed under the Orangi Pilot Project, are probably the best-known example, and involve street residents contributing to build and operate low-cost sewers, initially built to replace drainage channels in the hills of Orangi. The local utility in Mwanza (MWAUWASA) has piloted a version of simplified sewers in three informal hill settlements in Mwanza, which has been sufficiently successful to secure funding for introducing simplified sewers in six more informal settlements. If this could be achieved at scale, it could greatly improve the likelihood of these hilly settlement residents by upgrading incrementally, and avoiding both the dislocation of exclusionary regularisations, and the growing hazards likely to emerge if no improvements are instituted. To achieve scale, costs need to be reduced.

One option for cost reduction has been explored by the local NGO, the Centre for Community Initiatives (CCI), which has worked with a more community-based approach to simplified sanitation in Dar es Salaam and collaborated with the Orangi Pilot Project: to combine its community-based approach rooted in women’s savings groups with the utility’s sewer technology (other options also need to be pursued, but are beyond the scope of this report). Working with help from MWAUWASA, CCI estimated that a community-based approach could result in savings of up to 40 per cent, and it could be considerably more if the community engagement helped to increase the share of households in the serviced areas that are using the technology. This would reduce the costs per person to between US$100 and US$200 for putting in the system, which would still be too expensive for many households to bear, but is moving closer to what is manageable, particularly if financed through a progressive tariff. These are just hypothetical estimates, and more grounded figures would require the actual implementation of such a community–utility co-produced system. Assuming the savings of the community system would be passed on to users, who would in return be making in-kind contributions, the likelihood of tenants being able to retain occupancy of their rental homes would be increased, and the dynamics of Mwanza’s land nexus could be made more inclusive than it would otherwise be.

5.3 Reinvigorated and better coordinated plot-based partnerships for affordable housing in Khartoum

As outlined above, the past sites and services (S&S) schemes still account for most of Khartoum’s formal housing, and informal housing remains a minority share of the overall housing market. However, this S&S housing and its many undeveloped plots were allocated based on largely unfulfilled partnerships. The development costs to be born by the state and the plot-holders were specified in the early versions of the S&S schemes, with the plot-holders primarily responsible for the buildings and paying for selected services, and the state responsible for covering most of the costs of the land and extending basic services. However, in practice both sides lacked a basic understanding of the actual priorities and investment intentions of the other. A closer partnership is needed for this sort of co-produced housing to be achieved effectively and equitably.
The often isolated locations and the chronically low investment supporting the schemes – relative to that entailed in the co-production agreement – exacerbated the problems inherent in the S&S schemes. It should not be assumed that such schemes should be on large plots in the distant periphery, adding to urban sprawl; those seeking affordable housing may prefer small plots and higher densities in more central locations. Also, the schemes lacked adequate mechanisms to give security to the parties that if they met their commitments (e.g. building their homes or constructing service-related infrastructure) the other parties would also be meeting theirs, thereby turning the vacant plots into a functioning community. For middle-class households, alternative schemes that have been tested out suggest that the state can step back from its role as subsidised land provider to that of a facilitator and regulator, with private developers and finance providers helping to coordinate home construction with service extension. Such schemes are unlikely to provide affordable housing to low-income households at scale, however, unless low-income housing is given a far higher political priority and there is more financing to back it up.

In the absence of much greater political and economic support for affordable housing, there will remain a need for state-sponsored schemes that open up affordable housing plots, which occupiers can build up incrementally while pursuing their livelihoods – reducing pressure towards informal settlement generally and squatting in particular. When aspiring occupiers are allocated a plot, they need to know when and under what conditions services will be made available. Similarly, the agencies expected to invest in service infrastructure (public or private) need to know when and under what conditions people will be moving in and demanding (and paying for) those services. Realistic financial commitments and expectations from both the state and the plot-holders are important if these expectations are to be fulfilled; the lack of investment in one area (e.g. in buildings or key infrastructures) devalues other investments, and building a scheme on the basis of levels of investment that will not be forthcoming is worse than building on the basis of lower but more realistic levels. Giving aspiring plot-holders a voice in where they are going to live through different choices of places and partnerships being offered, and more direct participation in the planning process, could also help to coordinate the various actors. In addition, it could help avoid situations where people end up having to choose between a place to live and a reliable source of income (or potentially to choose to accept the plot but try to live somewhere closer to work). Finally, if such a scheme is to be successful, it will be critical to minimise rent-seeking behaviour within or outside of government, with any land value increases not legitimately secured by plot-holders kept within the scheme to facilitate expansion.