

13. Land and Planning for Urban Agriculture in Accra: Sustained Urban Agriculture or Sustainable Urbanization?

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13.1 Introduction

The Accra Metropolitan Area (AMA)¹ has undergone rapid and significant changes in recent decades. Liberalization reforms, remittances from abroad and the discovery of oil have caused the real-estate sector to boom, placing a high demand on agricultural land for other purposes. This is not a new story; land in Accra has been contested for generations. The various customary and institutional land tenure systems, the lack of updated urban and spatial planning and poor coordination between planning departments together with weak enforcement have resulted in a situation where market forces have overtaken the land-use planning agenda, favoring real-estate-led development over other land uses such as urban agriculture (Quarcoopome 1992; Larbi 1995; Kasanga et al. 1996; Gough and Yankson 2000; Owusu 2008). This process not only undermines the existence of localized farming systems within the AMA but also and more fundamentally the rights of farmers and the urban poor to the city's land coverage (Allen and Apsan Frediani, 2013).

Another factor influencing the city and its metropolitan region is Accra's recent declaration as a Millennium City by the Earth Institute at Columbia University to aid its progress towards achieving the Millennium Development Goals (MDGs).² Despite the presence of an MDG with a focus on environmental sustainability, current plans for its implementation stipulate that urban agriculture (UA) will be pushed to the outskirts, where competition for land is lower. Furthermore, peripheral land within the AMA is to be acquired not for subsistence agriculture but rather large-scale, export-oriented schemes, with reduced prospects for protecting the role of smallholder UA in supporting local livelihoods and contributing to Accra's food security. In addition, plans to create green areas for organic food production within gated communities are emerging in a small number of large-scale real-estate developments. These initiatives,

¹The AMA is the largest urban agglomeration in Ghana, with an estimated year 2000 population of 1.66 million. The area which comprises the AMA (also referred to as the Accra Metropolis District) and the surrounding districts of Ga East, Ga West and Tema (also denominated as the Greater Accra Metropolitan Area – GAMA), has over 2.7 million inhabitants, and has been growing at a rate of 3.4% per year (Obuobie et al., 2006).

² For more information on this initiative, visit: www.urbandesignlab.columbia.edu/?pid=accra_ghana (last accessed on 6 Oct 2014).

however, appear to be paying lip service to the purported benefits of UA, in that they are unlikely to stop the disappearance of current localized food production systems.

Drawing on the work conducted by the Development Planning Unit (DPU)³ in collaboration with the International Water Management Institute (IWMI) between 2008 and 2012, this chapter explores the room for UA to remain a living practice in the face of the current development of the AMA.

Initiatives to promote more sustainable agriculture in Accra frequently concentrate on farming and irrigation practices (Asomani-Boateng 2005). Refining and evolving such techniques can contribute greatly to the sustainable development of Accra; however as the available land for UA decreases each year, security of land is itself a vital prerequisite to sustain UA into the future. Land and planning issues related to UA have been underrepresented at the policy level, both locally and nationally, with different groups preaching different attitudes towards it. A common vision for it in Accra is still conspicuously absent, despite the establishment of the Accra Working Group on Urban and Peri-urban Agriculture (AWGUPA) in 2005, a roundtable of key government institutions, research organizations and civil society groups. While setting an important precedent in bringing together various key stakeholders to discuss the future viability of UA in Accra, AWGUPA has faded in influence since funding from the Resource Centres on Urban Agriculture and Food Security (RUAF) 'From Seed to Table' program ended at the end of 2011. As a consequence, pressure on governmental ministries and municipal assemblies to acknowledge the potential contribution of this practice towards the sustainability of the city has been muted by comparison.

Agricultural sites in the AMA and surrounding municipalities exist under different circumstances. Analyzing different spaces reveals the variety of planning and land issues conditioning the potential for urban agriculture to contribute towards an environmentally sustainable and just urbanization process. Located on institutional land in proximity to Accra's city business district the sites of Dzorwulu, Roman Ridge and Plant Pool enjoy a certain degree

³Between 2008 and 2012, the authors coordinated the work of four groups of postgraduate students from the DPU MSc in Environment and Sustainable Development, who examined a number of sites where UA is currently being practiced within the AMA and Ashaiman. The research undertaken comprised many individual interviews with farmers and key informants, focus group discussions, transects and mapping. While this chapter summarizes some of the main findings related to land and planning under a number of distinctive scenarios, further details can be found by visiting the full reports produced by the students at: <http://www.bartlett.ucl.ac.uk/dpu/programmes/postgraduate/msc-environment-sustainable-development/in-practice/o-f> or <http://bit.ly/KXPB3B> (last accessed 15 April 2014).

of land tenure security. Here farming practices are tolerated as a means to protect the land from being encroached in areas where planning regulations prohibit the development of permanent structures. Similarly, on several additional sites across the city informal agreements exist between local farmers and institutional landholders, guaranteeing them a degree of – albeit temporary – land security.

Towards the peri-urban fringe, experiences are different. Once rural farmland is now confronted with a wave of urban expansion, making the area dynamic and volatile both spatially and politically. Traditional farming sites in La,⁴ in the east of Accra, are at the center of competing demands. Large tracts of customary land are rapidly entering the real-estate market in the form of gated communities, church and college complexes, and individual structures often built without approval. Signs threatening the latter with demolition pepper the area, but the capacity of the La sub-metropolitan area to enforce local planning regulations is weak. This and other factors helped support the granting of municipal status to the La Dada-Kotpon district in June 2012. It remains to be seen whether greater decentralization of powers will be used to protect agricultural practices or instead further accelerate the commodification of the area and its development as another enclave for luxury housing.

Further afield, the emerging municipality of Ashaiman, some 20 kilometers (km) east from Accra's center, is encountering similar pressures, indicating that it is not just the big city exerting these forces of urban change. The case examined, like La, explores the complex dynamic between different land systems and entitlements, in relation to an area of institutional land that in spite of its status is similarly not immune from the municipality's housing needs and real-estate development pressures. Here a national irrigation scheme constructed in the 1960s is under increasing threat both directly and indirectly from encroachments, while unwarranted developments on a neighboring floodplain, which performs a secondary function as a site for seasonal farming, seemingly puts the municipality as well as the irrigation scheme at risk.

13.2 Farming in the Inner City: Contested Claims and Practices

Irrigated farming within the inner-city area of Accra is practiced mainly on institutional land, where farmers are seen by public authorities as guardians against encroachments from land speculators and/or informal settlements. Details of UA in Accra are presented in chapter 2. The

⁴ The La people are a subgroup of the Ga-Adangbe ethnic group.

Plant Pool, Dzorwulu and Roman Ridge UA sites have often been associated with relatively secure land tenure conditions for farmers, precisely because of their location under high-tension power cables and next to the railway line and stream. Due to this ‘secure’ condition, these sites have played host to planned interventions to promote sustainable practices orchestrated by the Ministry of Food and Agriculture (MoFA), as well as international programs funded through the RUAF and implemented by IWMI. Meanwhile, the pressures of current urban development trends are opening new questions about the long-term security of these areas for UA.

In spite of their proximity these three sites are affected by urban expansion in different ways, and as a result farmers are generating different coping strategies. Plant Pool and Dzorwulu are located under the high-tension power cables, where permanent structures are not permitted (Beckwith et al. 2009; Al-Khalifa et al. 2010). The institutional landholder in both cases is Ghana Grid Company Limited (GRIDCo), which permits UA as a way of controlling construction on the site. However, both sites are experiencing increasing pressures from encroachments, with the incipient mushrooming of new temporary structures such as containers used for commercial activities and mechanics’ workshops (Bindo et al. 2011; Chan et al. 2011; Bains et al. 2012; Bancheva et al. 2012).

Apart from the loss of farming space, the way in which these changes are taking place in Plant Pool illustrates a complex and unjust set of power relations operating within the land-use and planning systems in Accra. As explained by the an assembly representative,⁵ the first containers in the area were allocated with his backing as a response to his electoral supporters. Soon after the opening of a few shops, a member of the local chief’s family argued that permission for construction in the area needed customary approval, and thus started to charge a protection fee from the new shop owners. Farmers of Plant Pool approached the planning department of the AMA arguing that the new constructions in the site were illegal. However, as long as the building material of the constructions falls within the criteria of ‘temporary structures’, the new constructions are not necessarily any less legitimate than farming. Indeed, Public Works, the state department responsible for land-use reinforcement, sent local inspectors to pull down those made from permanent building materials, yet leaving containers and mechanics’ workshops intact. At the time in which the fieldwork was completed in 2012, GRIDCo refused to take an official stand in such contestations. Farmers have occasionally resorted to direct

⁵Interview conducted in Nima, Accra, 5 May 2012.

action, bringing down new structures taken place in farming sites. In short, there is considerable conflict and the land ends up being used by those showing greater strength in direct confrontation on the ground.

Similarly in Dzorwulu, land within buffer zones bordering the stream has been encroached by local speculators with the backing of a nephew of the local chief. However these developments differ from those in Plant Pool insofar as they are larger, more permanent and for residential purposes. The deployment of local bodyguards from a member of the local chief's family (known locally as the 'macho-man'), has been intimidating farmers and local Public Works officials. While public authorities recognize the importance of such buffer zones in assuring the permeability of soil and avoiding flooding, they fail to assign an effective mechanism of law enforcement. This has resulted in insecurity among the farmers, who have been actively looking for alternative sites for UA in less contentious areas.

In Roman Ridge, the encroachment issues are similar to Dzorwulu. The land has been acquired from the Osu traditional authority by the Land Commission and Ghana Railway Authority, but as in the case of GRIDCo, these institutions have been reluctant to recognize farmers, fearing that it could complicate potential land-use changes in the future. While areas next to the stream and railway line have been lost to real-estate developments, the inner area of the site has remained free from encroachments.

The processes of encroachment in the aforesaid sites not only put into question the sustainability of these sites for UA, but also illustrate the challenges faced by the state to pursue land policies that are concerned with a sustainable process of urbanization. The cases highlight how spatial characteristics of the site have also contributed to making some areas vulnerable to land pressures due to their desirable location, while others continued to be safeguarded. Nevertheless, if the various state agencies responsible for protecting institutional land are unable to articulate concerted efforts to protect urban farmland, the future of such sites in the inner-city of Accra looks uncertain.

13.3 Where Customary Agricultural Practices Meet Market-led Urbanization

Real-estate development processes are rapidly transforming the face of the AMA through the commodification of customary peri-urban land. This trend is particularly evident in the indigenous area known as 'La', which extends from La Township in the east to Airport Hills on the northeast of the city (Figure 13.1 and Table 13.1).

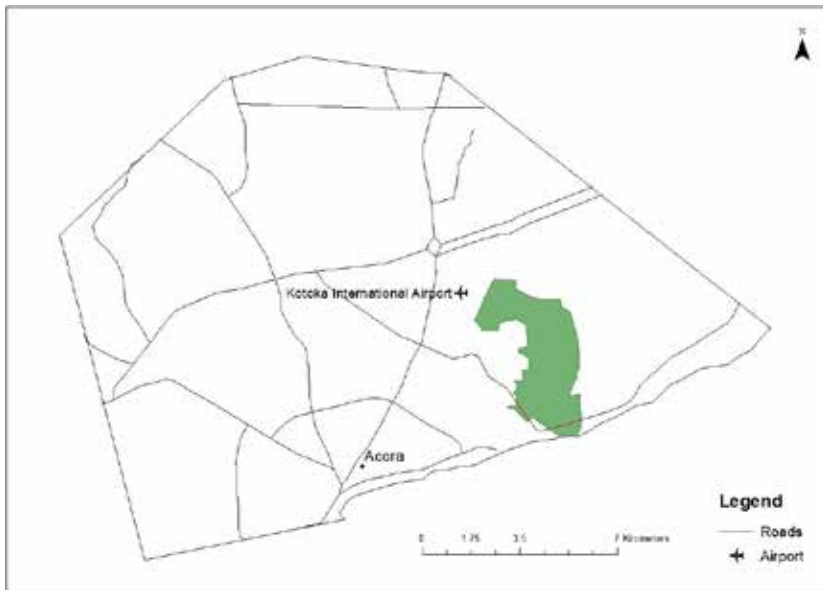


FIGURE 13.1. Location of the La site in Accra (see also chapter 2).

Source: Christina Semasinghe, IWMI

TABLE 13.1. Basic information on agricultural sites in La.

Criteria	La Urban Farming Area
Numbers and organization	About 200 farmers in 2012, revealing a sharp decrease from previous years. Organized into a Farming Association, most originally from Ga.
Farming practices	Okro, pepper, cassava, maize and watermelon. Irrigation practices are sourced from rainfall, wastewater and stream water by using water pumping machines.
Site	300 to 350 acres (121 to 142 hectares [ha]) under cultivation in 2010, strong seasonality and generally decreasing rapidly.
Tenure status	Land largely controlled by the East Dadekotopon Development Trust, the Burma Military camp and individual traditional families
Challenges	As farming land decreases, farmers shift to more distant areas to the detriment of women, who cannot afford longer distances to travel and the additional costs incurred to prepare the land and to access water for irrigation.

La was once the largest and most prosperous UA site within the AMA, functioning as a significant source of perishable vegetables for the city, and as one of the largest concentrations of urban farmers within Accra, many of them women (Allen et al. 2009). However the past decade has seen the scope for UA dramatically reduced by market forces, which instead favor

a fast process of land conversion led by real-estate development gains (Abiyeva et al. 2010; Bacon et al. 2011; Caradonna et al. 2012).

Urban development in La occurs at various scales and rates, with diverse purposes and common economic motives unifying the drivers behind land-use changes. These range from the development of upmarket gated communities, to the mushrooming of structures built up by individual families, often through slow processes of capitalization fuelled by the remittances sent from Ghanaians living abroad. Grant (2009) describes the former process as the “globalising of Accra from above”, a process by which foreign investors are rapidly penetrating the local real-estate development market. This trend has been fuelled by the restructuring of foreign direct investment, the expansion of international lending and mortgage programs and of ‘global’ residential aspirations and outlooks. In 2004, about 23 gated communities were at varying stages of development in the city, representing an investment of almost USD435 million, but only about 3% of Accra’s total housing stock (ibid).

In the north of the area under study, international companies such as Finali Ltd secured land in 2008, developing over 400 acres of land into a large-scale ‘luxury housing’ compound, Airport Hills. Exclusive developments like this have proliferated towards the northeast of Accra forming a new boundary around one of the sites where farmers have relocated their practices in the last five years, as the land around their traditional farming areas has become encroached by unfinished structures. The latter has been an ongoing trend for more than a decade, driven by what Grant defines as the “globalising in between” forces presently shaping Accra’s development.⁶ In the case of La, these forces are partly constituted by returnees and remittance senders who together with numerous traditional families in the area are claiming the land back by building individual houses for their own use, sale or rent. The ‘rush to build’ is indeed characteristic of most areas where land is held under customary rights in Accra and fuelled by multiple attempts to capture land gains before others do so. Figure 13.2 shows the signs populating the area, threatening the demolition of these structures.

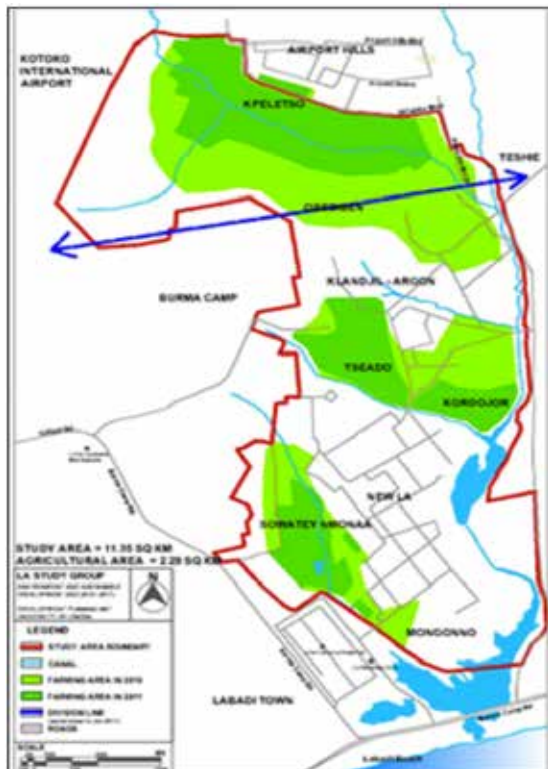
Disputes over land led, in recent years, to the creation of the East Dadekotopon Trust (EDDT), a body composed of the main traditional landholding families within La. This is an innovation in the land context, whereby customary rights are being transformed into a new channel to enter

⁶For a detailed analysis of the interplay between real-estate and remittances in Accra, see Buckley and Mathema (2007).

the real-estate development game. The EDDT developed a plan to build a mini-gated housing community for approximately 180,000 people. Although the initial plan included a green belt to be dedicated to farming, the area earmarked for this purpose has been almost fully encroached by individual structures, thus making the prospects of sustaining UA fairly slim.⁷



FIGURE 13.2. Demolition threats on unfinished structures peppering the La site (photos courtesy A. Allen).



As a result of these forces, the land under cultivation in the La area has drastically decreased (Figure 13.3) and as result, the number of farmers has declined. Between 2010 and 2011, about 47% of the land under cultivation was lost to residential purposes.

FIGURE 13.3. Cultivated land lost to residential purposes in La between 2010 (light green) and 2011 (dark green).

Source: Bacon et al. (2011).

⁷The East Dadekotopon Development Trust, made up of the Stool and two landholding families, has been entrusted with about 80% of the land in La. Its community plan originally earmarked approximately 100 acres for farmland, approved by Town and Country Planning. There is the perception among farmers, however, that land encroachment will continue until most land is used for building purposes, especially as the green belt continues to be developed.

Farmers in the area have lost 3 to 4 acres on average over the last five years with those who can afford to do so dispersing to available land in the north of the site (Table 13.2). However, farmers' movements, especially for women, are restricted in terms of access to water, distance and increased amount of time and money towards land clearing and preparation, thus forcing many women to withdraw from UA. Whereas farming for men is either a part-time or full-time livelihood, it is a primary source of income and activity for women.

TABLE 13.2. Average loss of land for farmers in La.

Farmers	Full-time/part-time	Average /loss of land
Men (21)	15/6	3-4 acres lost on average over five years
Women (35)	28/7	

Source: Adapted from Caradonna et al. (2012), page 22.

The uncertainty of land use has also seen fewer members of the younger generation practicing farming, opening a few casual work opportunities for migrant laborers. The La Farmers Association (FA) has been weakened in recent years due to the contentious politics underlying this process: while the FA leaders have focused their action on securing land for UA within current developments, they have not been heard. This has eroded the hope and collective action of associated farmers, thus reducing the number of active associated farmers.

An additional dimension to be considered in the case of La is the role that farming plays as a place and identity-making practice. Figure 13.4 shows the multiple meanings of the land for the Ga community and the close links between the local classifications of the area and its value as a place for farming, social, spiritual and religious practices. Fighting for the recognition of such values embodied in the land, a local civil society organization – the La Citizens Network – is lobbying for the creation of a green belt in the area of Kordojo (50 acres) – mainly for agricultural purposes – in order to preserve Ga heritage and culture (Caradonna et al. 2012).

La tells us a story of an agrarian society, where the statutory and customary systems coexist side by side; where confusion prevails as to who owns and controls the land; where farming is being engulfed through hazardous development and land speculation, pushing UA to less fertile lands; and where farmers face increasing vulnerability. La helps us to appreciate the spatial and social transformations fuelled by neoliberal policies which brought forth rapid economic

growth and pressing urban development. The phasing out of UA not only impacts many people's livelihoods, but also reduces the likelihood that Accra can be a self-sufficient, resilient or sustainable city that ensures food sovereignty for its people.



FIGURE 13.4. Place-naming and identity-making in La.

Source: Adapted from Caradonna et al. (2012), page 26.

13.4 Putting Unsuitable Land to Productive Use

Lying originally on the outskirts of Tema, approximately 20 km east from Accra's center, Ashaiman is today part of the urban complex of the GAMA and was granted municipal status in 2008. Two of the farming sites on the western edge of Ashaiman, situated on institutional land (managed by the Ghana Irrigation Development Authority, GIDA), are technically protected by local planning regulations and agreements. In spite of this, they too encounter increasing pressures as once rural farming plots contend with the threat of encroachment onto unscrupulously sold plots of land steadily creeping outwards from the municipality.

Conflict arises due to the confused nature of landownership and tenureship in the area. Family members of the Ashaiman Stool⁸ still act as freehold owners of the land, often actively selling portions of land to developers for profit, in spite of leasehold agreements made many years ago with state institutions. A brief summary of the land agreements can help to better understand how these tensions have emerged.

⁸ The term 'Stool' refers to a customary landholding group or kinship. Customary tenure is a legally recognized form of tenure in Ghana according to the National Land Policy of 1999 and the Land Title Registration Law (PNDCL 152) (Flynn-Dapaah 2002).

In 1952 the Tema Development Corporation (TDC), a governmental body responsible for overseeing the transformation and development of Tema into the country's predominant industrial hub, signed a 126-year leasehold agreement with numerous local Stools in the region, the traditional custodians of the land, for 69 square miles of land to the East of Accra (Boakye 2008). The fledging municipality of Ashaiman (then part of the Tema Municipality) is located within this boundary. One reason for continued disagreement and disregard of formal statutory planning regulations by members of the Stools is remarked upon as being down to whether or not all of the traditional councils were adequately compensated in this process, a recurrent contestation over institutional land to be found throughout the AMA and surrounding municipalities.

The Ashaiman scheme, otherwise known as the Adjei Kojo Mobi Irrigation Scheme (AKMIS), was launched in 1968 by the Ghana Irrigation Development Agency (GIDA), who obtained a 90-year leasehold from the TDC in order to construct the dam and irrigation infrastructure feeding the site (Figure 13.5) (Adams et al. 2009; Abatemi-Usman 2010; Iino et al. 2011).

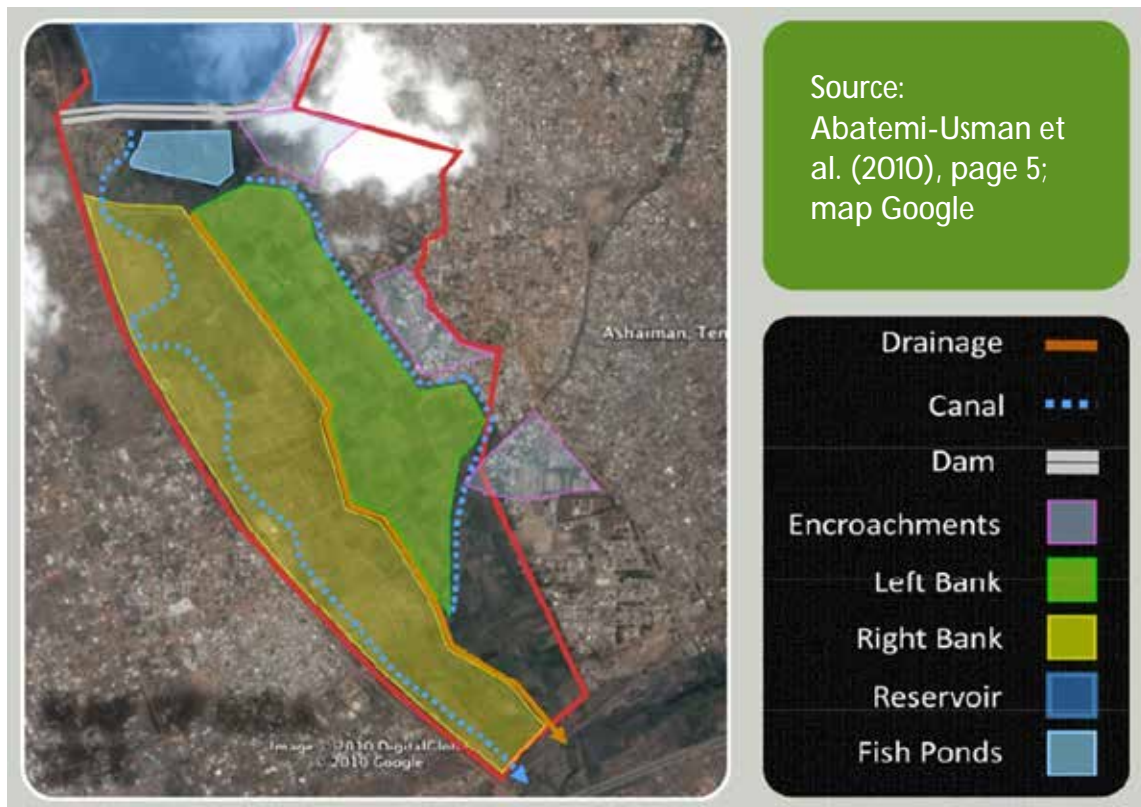


FIGURE 13.5. Ashaiman Irrigation Scheme site with the dam and reservoir in the upper part of the map.

Coupled with the creation of the Irrigation Development Centre (IDC), the purpose of the scheme was to provide a place for agricultural innovation and experimentation that could potentially be scaled up to larger commercial farms. The present condition of formalized agriculture owes its existence to the Japanese International Cooperation Agency (JICA), who conceived a pilot scheme in the late 1990s to revive the ailing scheme which lay neglected following budget and personnel cuts to GIDA during the Structural Adjustment Programme of the 1980s (JICA 2006).

This farmland receives different volumes of water depending on the season; crucial to its functionality therefore, is a second farming site immediately to the south called Roman Down, also on GIDA land. There has been no infrastructural investment on this site, though the farmers do have informal usufruct⁹ rights and form an organized unit through their cooperative. Water is received from the comparatively uncontaminated drain flowing downstream through the irrigation scheme as an alternative to extracting wastewater from the municipality's drainage channel on the western edge of the site, which is frequently clogged with plastic waste (Doron et al. 2010; Belkow et al. 2011). The irrigation scheme similarly benefits from its proximity to Roman Down, which serves as a natural buffer zone to contain flooding and prevent it backwashing upstream and swamping the irrigation scheme or putting nearby homes further downstream at risk (see Table 13.3 for basic information on the two sites).

Constructions spreading outwards from Ashaiman have been identified as being predominantly driven by individual middle-class families, often through local entrepreneurs acting as brokers between the buyers and members of the Ashaiman Stool. These encroachments are occurring in three distinct places and affecting the sites in different ways.

First, constructions on the banks of the reservoir are adding to levels of pollution of solid and liquid waste, negatively impacting the quality of water received from the dam. Evidence for this is anecdotal: farmers have remarked how the color and consistency of the water has changed over the years.

Second, debris in the water coming from the reservoir and resultant siltation and blockages have rendered ineffective the irrigation channel serving the western half of the irrigation site, known locally as the 'right bank'. This channel was made of earth instead of concrete and around 99 ha of productive land have been rendered unworkable.

⁹ The legal right of using and enjoying the fruits or profits of something belonging to another as long as the property is not damaged or destroyed.

TABLE 13.3. Basic information on agricultural sites immediately west of Ashaiman Municipality.

Sites	Ashaiman Irrigation Scheme	Roman Down
Numbers and organization	94 farmers approximately, organized into a cooperative	About 40 farmers, almost all members of the farmers' cooperative
Farming practices	Maize, rice, okro, onion, tomato, pepper	Maize, okro, tomato
Site	155 ha	22 ha
Tenure status	Land is owned by GIDA, which recognizes the farmers rights to the land.	Land is owned by GIDA, the farmers are not formally recognized but have informal permission to farm the land.
Challenges	The Right Bank is inactive after the irrigation channel became blocked by debris from the reservoir. The other (concrete) drainage channels face similar problems with siltation. Water quality has worsened over time.	Encroachment is occurring in the northern part of the site, and some farming plots have been destroyed. Siltation and solid waste in the drainage channels that feed the site are increasing the frequency of flooding.

Third, the Roman Down site has been experiencing the knock-on effects of this and similarly suffers from siltation in the drainage channels and diminished water quality. The Ashaiman drain is heavily polluted with plastic waste from the municipality; encroaching buildings constructed on the very edge of the drain have been blamed for this contamination, and many were bulldozed at the behest of the Ashaiman Municipal Assembly in early 2010. Nevertheless the problem has persisted, indicating that the municipality's solid waste management services are not yet doing enough to cater for the behavior of local residents.

The two farming sites share a high degree of interdependency. Figure 13.6 illustrates the spatiality of pressures concerning land, water and waste. As the carrying capacities of the channels are reduced, floodwater can be backed up by debris in the waste stream and lifted on to the farmland, in turn pushing it towards the municipality, increasing the flood risk. Encroaching houses in the northern portion of the site closest to the municipality are reducing the ability of the area to perform its role in the local ecosystem.

Recent legislation on buffer zones produced by the Water Resources Commission outlines clear restrictions on the proximity of buildings to waterbodies, though this appears to be less frequently applied in an urban context. The key question in Ashaiman is one of enforcement, or a lack thereof; with regards to planning regulations, a common vision for the land is currently absent.

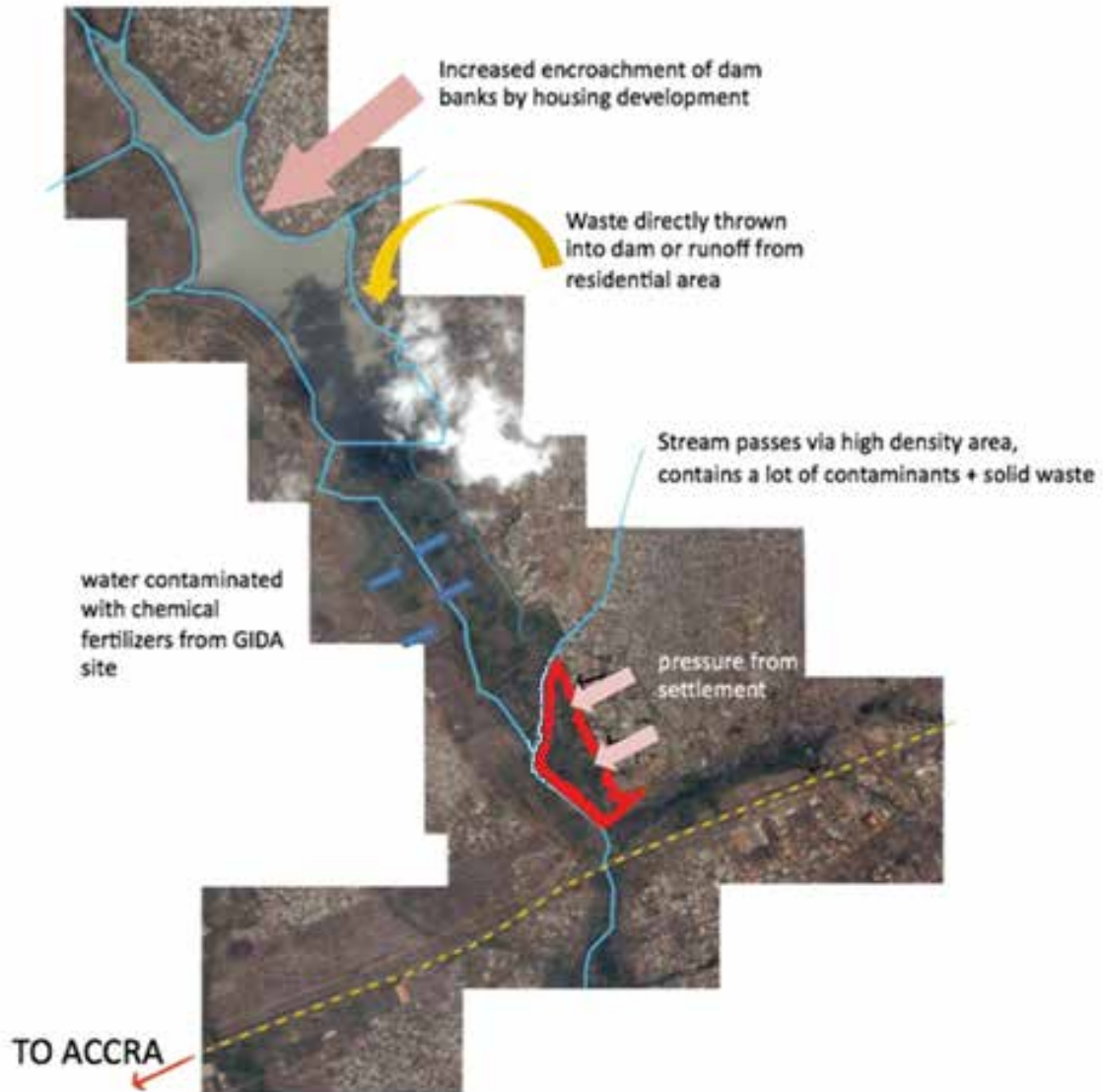


FIGURE 13.6. Encroachment and wastewater flows affecting water quality in Roman Down (red area). Source: Doron et al. (2010, appendix 5).

Three different scenarios appear in juxtaposition: the value of the land in producing food for the city, and as a space for innovation and experimentation; empty land which can be developed to meet the municipality's housing demands; and the natural function of the land as a floodplain and a crucial part of the local ecosystem. Urban agriculture can play an important role in preserving this as a passive space, putting it (seasonally) to productive use in service of the city

and allowing it to serve its natural purpose as a floodplain. Farmers serving as stewards of the land in this way are able to activate through their usufruct rights, their right to the city and sustain their livelihood needs.

A further question might be asked about how such pressures on land and tensions between stakeholders are symptomatic of ‘emerging municipalities’. In Ashaiman, municipal status has given greater authority to local power structures as the statutory has met with the customary, the national with the local and rural with the urban, leading to uncertainty and complex institutional relationships. At the beginning of 2012, GIDA paid the Ghanaian military to patrol the area on several weekends, to the displeasure of the local authorities. However this move succeeded in drawing national media and political attention to the perils of building on floodplains, which appears to have been overlooked somewhat by the municipality and traditional landholders. The interplay between local- and national-level institutions and their attitudes towards enforcement and land rights is a key area of tension. As discussed in the previous section, La is likely to face similar challenges as it effectively becomes a new independent municipality. The question remains as to whether newly formed municipal assemblies will actively engage in preserving buffer zones serving the dual purposes of supporting the local ecosystems and hosting harmonious urban farming practices.

13.5 Pathways for Change

The different cases researched have illustrated a series of common issues across agricultural sites in the GAMA, as well as suggesting that there is room for maneuver in pursuit of a series of pathways for change, briefly outlined below.

Locking Vacant Land through Existing Planning Mechanisms

In describing the multiplicity of threats facing UA sites in AMA and Ashaiman it may be deduced that the systems of land management and planning are not conducive to a city with urban farming at its core. This might be true; farming is generally seen by city planners and municipal assemblies as an outdated use of land gradually being phased out, with attention focused more heavily on the rural hinterlands providing for the city. Nevertheless there are certain niches within local planning structures that can be used by planners and farmers to make productive use of land upon which restrictions have been imposed in order to protect it from development. In the cases of farming sites in the inner city and emerging municipality, formally designating portions of land unsuitable for construction as buffer zones can aid this process. Areas of land serving as floodplains, for example, can concurrently offer fertile soil for farming,

whereas the protected corridors along the main municipal wastewater drains could make productive use of these open spaces and take advantage of the close proximity to water sources. Another example is better use of the protected land beneath high tension electricity cables.

Precedents exist where land agreements have included guarantees to preserve green space as a wedge or greenbelt, or designating it specifically for agricultural purposes. An example of this is found in Tema, where the TDC's initial agreement included setting aside 9 km² of land for agriculture (Boakye 2008). Similarly in La, the EDDT-approved masterplan initially designated some areas for urban farming and therefore as a greenbelt which existing farmers could relocate to as a partial compensation for the loss of their livelihood sources. However, this area has been encroached by structures rendering this compensatory measure ineffective in practice.

While existing land-use planning mechanisms do not explicitly cater for the designation of land for UA, they do make a useful distinction between 'active' and 'passive' spaces or land uses. The former defines areas that can be built upon, whereas the latter can potentially 'lock' certain areas away from development, regardless of the tenure status of the land in question. Through this, it is possible for different stakeholders to request the reclassification of specific tracts of land as passive areas. Though it is less likely that those with vested interests in the commodification of land would activate this process, it is possible for the city authorities and institutional landholders to redesignate those areas deemed unsuitable for residential or commercial development, hence preserving vital ecosystem services for the city. In short, without effecting changes in complex land-titling procedures, it is possible to form a 'land bank' of passive spaces, whereby land unsuitable for development could be protected and used for farming.

Activating Land Usufruct Security

Farmers have been appropriating land for agricultural purposes for many years and as such can justly assume that permission to do so has been tacitly granted. Nevertheless this is not enough. Through self-organization and strong cooperative structures they are able to restrict, manage and incorporate newcomers into the farming systems operating on particular sites, but they are powerless in the face of physical encroachments onto farmland. Even when land is deliberately ring-fenced as unsuitable for development farmers must rely on institutional support to enforce land laws. As illegal encroachments and attempts to take over land usually occur at night, crops and entire plots can still be lost.

Institutional land without a specified purpose provides a way in which farmers can be guaranteed a basic level of land tenure security. Redefining land in this way could provide mutual benefits for farmers and landowners. Some institutions in the more heavily built up inner city area of Accra are happy to permit and actively encourage farmers to turn parts of their surrounding land to productive use (two examples are the farming sites at the Council for Scientific and Industrial Research and at the National Broadcast Centre) (Bancheva et al. 2012). The presence of farmers on their land serves as a means of protecting and policing the land against physical encroachment or development. The cultivation of the land performs a pragmatic function in keeping the area managed and tidy and preventing it from becoming overgrown.

The benefit to the institutions is therefore both in the protection and beautification of the area. Farmers may have a formal registration with the institution whose land they are farming, but this only translates as informal usufruct rights, as they are not formally registered with the MoFA or the Department of Cooperatives. They still only possess a degree of land security for as long as the landholding institution is willing to grant it. Nevertheless this allows farmers to plan year-to-year in the knowledge that they will not be threatened with immediate eviction. In this way institutions and farmers are working towards a mutually beneficial end, even if a long-term vision is absent. In spite of these opportunities a key challenge remains: enforcing planning regulations which are frequently flaunted by encroaching structures not only threatening the livelihoods of farmers, but potentially resulting in unsafe use of land.

It is imperative therefore that the informal agreements with landholders that prevail across numerous agricultural sites in Accra are developed into formal recognition of the right of the farmers to work on the land. Usufruct rights can be secured without the need to transfer land titles and ownership, which might be considered by some landholders as a barrier to granting more stability to urban farmers.

Socializing Benefits through Zoning and Land Value Capture

Internationally there are currently many initiatives enhancing the state's ability to intervene in urban land markets to protect land from speculation and/or to ensure that the benefits brought about by market-led interventions are socially captured and distributed. The first step consists of recognizing the social value of land, which implies that urban land must not be seen merely as a commodity, but as a right where the state has a crucial role in assuring that any benefits accruing from it are distributed equitably (du Plessis 2005). As illustrated in the case of the AMA and Ashaiman, the market itself cannot ensure that the use of land will

automatically generate sustainable and equitable outcomes. Urban agriculture can potentially be recognized and protected due to its social and environmental contribution to the city, even though it might not involve the most profitable use of land. Various mechanisms have been designed to support governments in intervening in land markets and contestations. For example, the Brazilian Ministry of Cities has passed a law which allows informal settlements to be designated as areas of special social and economic interest (Allen and You 2002). Such law has allowed tenure regularization to take place in ways that have protected the rights of dwellers to remain in such locations, avoiding forced eviction or gentrification.

The second set of instruments is concerned with the distribution of the benefits brought about by land speculation. Land value capture is one such instrument that focuses on activating the ability of the state to capture part of the benefits on land value generated by state-led interventions (Gregory and Hong 2012). If the state changes the zoning regulations of a particular area which ends up making properties and land more desirable, it is argued that such benefits should not be absorbed only by private land and property owners, but also captured by the state to be distributed to the rest of society. It is important to reflect on such international experiences to assess their potential to be implemented in the context of the AMA, Ashaiman and elsewhere as a means to enhance the state's ability to interfere in land markets, not merely as an enabler or facilitator, but rather as a distributor of benefits and protector of rights.

13.6 Conclusions

The processes examined in this chapter are not confined to Accra and its wider metropolitan area but are indeed characteristic of most large cities in Sub-Saharan Africa, where urban change is being shaped by burgeoning market forces and abetted by outdated planning mechanisms, weak enforcement and contested land tenure systems. Unless the land question is tackled, the future of urban farming systems remains dynamic and uncertain.

A no-change scenario will see UA increasingly evicted (at least in current locations) from the urban fabric in the medium to long term and with it many opportunities and potential benefits that urban farming offers for the environmentally sustainable and just urbanization of the region will be lost. Such benefits have been discussed in previous chapters and include its capacity to break the vicious cycle of perpetuated malnutrition and poverty. Whether for self-consumption or for marketing aims, UA can play a vital role in enhancing food security. In the context of particularly marginalized groups, including migrants, UA can also contribute to long-term

livelihood diversification and to supporting the right to farm in the city, thus increasing the resilience of such groups to cope with shocks and to strengthening their voice.

Urban agriculture can also bring major environmental benefits not just for the areas in which it is practiced but also the wider city environment (Vázquez et al. 2002; Lee-Smith 2010). Nutrient cycles can potentially be closed through the use of organic solid and liquid waste as an input into farming practices and can reduce the amount of urban waste that needs to be disposed. There are additional benefits in locating farming sites within the urban fabric. By producing food close to where it is consumed the food footprint can be reduced substantially. This is particularly important in the context of the peak oil crisis and the efforts to combat climate change. Moreover, cities require green open spaces, not only to regulate temperature and reduce water runoff but also to contribute to the well-being of citizens. Urban agriculture can play a role in all of these crucial functions.

A second scenario might lead to the preservation of some of the above benefits at the expense of others. This is likely to be the case if land is preserved for agricultural purposes but at the cost of excluding urban farmers and also of providing prime quality vegetables only for those who can afford them.

A third scenario requires pursuing environmental and socioeconomic benefits in tandem with each other and not just for a few but for the well-being of all citizens, in particular those for whom UA constitutes a full-time livelihood or income-complementary activity, a place-making and deeply engrained cultural practice and a food security safeguard. Farming in the city is not a new or occasional activity. Over the years women and men in the GAMA have adapted their farming practices to respond to the limitations and opportunities of the urban context. Their experiences constitute a rich and diverse reservoir that should be recognized and supported through the consolidation and cross-fertilization of their knowledge, practices and collective action across farming associations and other typically disenfranchised communities. Despite the perception that there is no available land in the AMA and surrounding municipalities, over 20% of the area remains vacant. A combination of the strategies discussed above could still make a substantial difference in sustaining UA as a means of promoting sustainable urbanization.

The documentary related to this chapter can be found on the CD attached to this book or on this Youtube link in the internet: <http://youtu.be/m-6EURne8RU>