

**Dilemmas of urban development: a survey of Addis Ababa residents' opinions on urban agriculture**

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**Abstract**

*Urbanization has historically pushed all forms of agriculture out of the city into the rural areas, considering it is too dirty for the wealth and glory of the city. This study investigated the status of the urban agricultural practices in Addis Ababa. Despite the significant role, urban agriculture could play in household food security, income and job opportunity and general poverty reduction; this activity is facing challenges due to rapid urbanization that is bringing highly competing land use demands. Urban agriculture, however, is a hazard in the development of Addis Ababa City. Urban agriculture contradicts the policy of modernizing African cities. It is associated with the theory of peasant cities thus painting a picture of permanent poverty in the Third World Countries' cities. This descriptive survey research utilized a sample of thirty-one respondents. The general objective was to identify the major challenges and opportunities of urban agriculture in urban development. There is no clearly stated urban agriculture policy in Ethiopia. This study portrays the contradictions between urban agriculture development, competition for land and the need for developing modern cities in Africa. Critical theory alleges that urban agriculture is an outcome of a class struggle. It is a conflict brought about by the structuring of Ethiopian society. Urban agriculture activities are a direct result of poverty from shortage of income and rampant unemployment in the urban centers. Urban legislation like urban by-laws if clearly designed is useful for monitoring and controlling this activity.*

**Key words:** *urban agriculture, development plans and policies, modernization theory, challenges and opportunities*

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**Background and statement of the problem**

Urban development in Africa is a big dilemma. Adam (1995) asserts that in so many ways, the modern city is not the city of the pre-industrial past. The population, the social structure, the political organization, the economy, access to and from the city, and even the concept of the city are quite different. Above all, the citizen is a radically different creature. Modern aspirations and the understanding of citizenship have little similarity with any period in the past. The researchers however note that urban areas are expanding and/or developing at an unprecedented rate that does not necessarily match the available human and material resources to sustain it. There is lagging behind of formulation of rules and regulations that are important in the monitoring of such developments. Many of the municipalities' organs of administration like the urban councils' full council that can be used in the formulation of councils' policies, rules and regulations, budgets and other administrative procedures are very weak. The administrative departments lack adequate, skilled and knowledgeable human resources. It is important to note that many councilors who are supposed to represent different communities' opinions in council are illiterate or semi-literate. They are unable to take communities' views and change them into council policy agendas and ultimately into policies. In addition, some municipalities do not recruit their employees based on competence/capacity or ability but they base everything on patronage, which is a typical corrupt system. These sorts of personnel cannot intelligently advise councilors who are political appointees and temporary in the operations of a municipality. It is thus, a big dilemma in Africa particularly in Ethiopia to expect the illiterate or semi-literate councilors and employees to formulate budgets, debate these budgets systematically and wisely and approve good budgets by the end of the day. There is evidence of lack of "craft competence", that is, lack of capacity for good

planning and lack of “craft literacy” which is lack of capacity to implement agreed policies, plans, programmes and projects. The issue of urban agriculture is sensitive because it is associated with poverty. The economic situation of many African countries is very bad and poverty in urban areas is therefore inevitable. Insecurity and isolation have marred the quality of life; beauty and community are in retreat in urban areas. Adam (1995) asserts, “Utopian ambitions and professional arrogance have left our cities with decay and dereliction, the perfect breeding ground for the alienation and brutality that have undermined community life”. Equally crucial to an understanding of the city is its economic base. Very early cities were fortified villages where people engaged in agriculture outside the walls. A city was a place where wealth free from the pressures of sufficiency could be enjoyed. Outside the city, there was brute existence, the wilderness, the struggle for survival and danger; inside the city, there was order, safety, wealth, and the leisure to pursue the finer things of life. This urban ideal may have been the lot only of some citizens, but it embodies the essential ideas that made the city a civilized place.

UN-Habitat supports the idea urban and peri-urban agriculture provides employment, income, and access to food for urban populations, which together contribute to relieving chronic and emergency food insecurity. Experts argue that urban agriculture plays an important role in making food more affordable and in providing emergency supplies of food. (UN-Habitat, Urban Management Programme and FAO's, Training Publications - [en.wikipedia.org/wiki/urban\\_agriculture](http://en.wikipedia.org/wiki/urban_agriculture)). The poor usually resort to informal activities to supplement food and income and urban agriculture is one of the activities. Besides being increasingly recognized by international organizations like UNCED (Agenda 21), UNCHS (Habitat) and FAO (World food and agricultural organization), (RUAF, 2002), the current rapid urbanization, land speculation, expansion of demands for residential and commercial lands and ultimately planning activities leave inadequate space for urban agricultural activities.

Richardson (1984) explains that in developing countries urbanization has received peripheral focus by most policy-makers hence urbanization and urban development are

regarded as spontaneous phenomena like industrialization, agriculture development, development of transport and so on. It is important to recognize urbanization as a fundamental process of socio-economic change and attempt to influence positively the urbanization processes. The urbanization process cannot be left to the market because market solutions are known to lead to spatial imbalances and inefficient urban system from the point of view of national economic development. Burgess, et al (1994), on the other hand views cities as engines of growth that is, adding value to rural products providing service to regional markets and attracting manufacturing and services investment. Higher-level urbanization is associated with higher level of Gross National Product per capita, higher level of education and skill, higher female participation rate and lower fertility and mortality rates as residents enjoy better health services. The point is that urbanization plays a necessary and crucial role in a country's development and if successfully managed can lead to economic success. Economic success is the major solution to dealing with poverty and poverty eradication reduces the need and the relevance of urban agriculture.

In Ethiopia, (Worku, 2002:66) the urban population in 1984 was 4.3 million forming 11% of the total population. In 1994, it was 7.4 million, which was 72% increment from that of 1984. Currently the growth rate of urban population is about 5.4% per year. Such rapid growth rate has major implications on a country's ability to provide public services and employment. Worku (2000) further argues, "One of the serious concerns of all urban places in Ethiopia is the extent of urban poverty and unemployment they experience. Though the rural poverty seems to be the dominant type of poverty in the country, urban poverty is also significant and is growing at an alarming rate as it is fueled by rural poverty itself. Estimates show that in 1994, out of a total of 8.1million urban population in the country, about 4.9 million or 60.5 % were below the poverty line. The urban poor in the cities live in very crowded, dilapidated, substandard makeshifts with very poor or non-existing sanitation facilities and undesirable environment. According to Goitom (Worku, 2002), "It's not only the level of urban poverty that is worrying, but also the rate of increase of the number of poor joining the poverty group. The number of the poor in the cities such as Addis Ababa is increasing

at an alarming rate, for example, the number of poor people in Addis Ababa, increased from 45.4% in 1990 to 51.45% in 1991 and to 63% in 1992". Considering this rate of impoverishment, even a sick mind should recognize the dangers of emphasizing urban agriculture as a panacea to redeeming urban poverty. It seems as if the problem of urban poverty is an offshoot of the national problems. It means that if national woes are dealt with successfully, it may lead to sub-national structures or low tier institutions responding in a positive manner to the advantage of local socio-economic developments. The reasons for urban poverty are many. Transfer of the rural poverty to urban areas as the poor keep on migrating to the city in the expectations of better standard of life and the downward mobility of the urban residents as they are hard hit by the tough programs of structural adjustments, administrative reforms, devaluation of currency or inflation and price rises, exacerbate poverty in Ethiopian municipalities.

Egziabher, T.G. (2000), states that Ethiopia currently does not have a comprehensive urbanization policy that guides the development of its urban centres. This is a queer situation if one considers the number of reforms that have been implemented in many other institutions and sectors of the economy. The opinion could also explain the reason(s) why many municipalities in Ethiopia do not have specific laws on urban development and/or agriculture. The problems could be associated with attitudes of the people and lack of commitment on the part of the politicians. Despite these shortcomings, it can be noted that relevant development plans are necessary tools for managing developments and other regular activities in various municipalities.

Richardson (1984) expresses that the objectives of urban and regional policy are societal objectives at large such as economic growth and efficiency, equity and reduction of poverty, stability, integration and preserving environmental quality. Egziabher (2000), on the other hand feels that in the Ethiopian context the urban development objectives could be understood to mean the reversal of the urban challenges of the country. The Ministry of Works and Urban Development (2000) indicate that the urban challenges included unbalanced urban development, weak rural-urban linkages, poor infrastructure capacity, inadequate housing, deteriorating

environmental problems, mounting urban poverty and unemployment. These objectives must be achieved through arranging or establishing tangible strategies that will alleviate urbanites from the bondage of poverty. The researchers opinion is that urban agriculture is far from an acceptable strategy that can bring good succor to the already impoverished groups of society.

Political and financial support to enhance the contribution of urban agriculture to sustainable urban development is necessary (RUAFA, 2002). Ethiopia is a poor country and many people migrate to towns and city of Ethiopia each year without any guarantee of getting jobs there. Even if the jobs are found, at times the wages or salaries are too small for particular groups of people to live decent lives. The number of urban poor and those operating in the informal sector are increasing throughout Africa, and many of them incorporate agriculture as part of their livelihood strategies' (RUAFA, 2008). The Ethiopian Government's Strategic Plan for Accelerated and Sustained Development to End Poverty's (PASDEP) industrial and urban development package (Federal Democratic Republic of Ethiopia, Ministry of Works and Urban Development (Ethiopian Government, 2006) considers urban agriculture as one of the major six sectors in promoting micro and small-scale enterprises (MSE). Thus, urban agriculture is considered as part of the small-scale enterprises. What makes the situation even complicated and ugly is the fact that the Ethiopian cities are poorly planned and generally dirty to the extent that modern and old traditional infrastructure are mixed, for example, traditional 'Abesha' and modern houses are mixed or commonly found existing adjacent to each other. In many suburbs, sewerage lines are not closed and roads are not tarred. During the wet seasons, the roads are muddy and in addition, sewerage drains that are poorly maintained spill sewerage onto the muddy roads. There are no public toilets in almost all busy areas or generally in public places in the cities of Ethiopia. Men and women can urinated or defecate in public without raising eyebrows. This increases the problems of sanitation in Addis Ababa and other cities.

Some theories on urban development express the view that urban agriculture, as a sector should play a significant role in reducing urban poverty and urban

unemployment. In Ethiopia, urban agricultural employment notably contributes to urban employment. The Central Statistical Authority for Ethiopia (CSAE) (1995 to 2000 E.C), states that the average number of households engaged in urban farming in Addis Ababa was about 7,619 which directly support over 38,095 family members. The essence of this study was to investigate the dilemmas of the urban agricultural practices in Addis Ababa. There are currently about 7 619 urban farming households at city level engaged in both urban and peri-urban agriculture. The research focused on the merits and demerits of urban agriculture from an political science/administration point of view. Despite the argument that urban agriculture creates employment and improves food security especially for the poor, literature available indicates that the share of urban agriculture to the regional GDP and its contribution to urban employment in Addis Ababa is insignificant. A recent study by the Ministry of Trade and Industry Development, (MTID, 2006) reveals that the contribution of the urban agriculture outputs to GDP of Addis Ababa is less than 1 %. Further, the employment and unemployment surveys of CSA in the following years 2006, 2007, 2008, and 2009 show that the share of employment from urban agriculture is declining as the urban population increases. The write critical evaluated this scenario and concluded that it was normal. It can be a hypothesis that as the urban development gathers momentum and in addition, as the population increases, the value especially of traditional urban agriculture declines. Traditional urban agriculture utilizes any type of unutilized land. The development of industry, trade and commerce and the expansion of the urban population create competition on available land and thereby reducing the activities of the informal agricultural sector.

The research problem is that despite the significant role, urban agriculture could play in household food security, income and job opportunity and general poverty reduction, it is facing challenges due to rapid urbanization that is bringing highly competing land use demands particularly in Addis Ababa. Administratively, urban agriculture is unwanted. It is a both a liability and expense to the municipalities in Ethiopia. This research assessed the challenges or dilemmas faced by urban development because of the element of urban agriculture particularly in Addis Ababa. An administrative rather

than planning perspective will be central in the analysis of the situation in Ethiopian municipalities. The writers acknowledges that a lot work has been published about urban agriculture, but this work appears to be somehow beached on development economics, urban economic theories in particular, theories on poverty, urban planning, urban land use planning and so on. The point of departure is that urban agriculture is a hazard in the development of Addis Ababa City. Urban agriculture contradicts the policy of modernizing African cities. It is associated with the theory of peasant cities. It also paints a picture of permanent poverty in African cities and other cities in the Third World Countries. Urban centres are for industry, trade and commerce even if human settlements are part of the system. The question is, “should municipalities bend rules to carter for people who do not deserve to be were they are?” Should municipalities encourage the poor to migrate to urban areas on the pretext that they will supplement their food by performing urban agriculture? It may be correct that focus must be on industrial, trade and commerce development and expansion to create employment opportunities and wealth that directly and indirectly influence social, economic and political lives of the urbanites. Urban informal and traditional agriculture support is based on a negative principle from the beginning and has ultimately negative implications on those who depend on it in the municipalities in Ethiopia. Apologists attempt to convince urban developers, policy makers and planners that this activity is good. However, an evaluation grounded on political science or public administration could identify some dilemmas associated with urban agriculture.

Zenebe (2010) outlined the following as key policy frameworks of UA/UH in Ethiopia:

- Integration of agriculture in urban development policies,
- Removal of unsubstantiated legal restrictions,
- Integration of UA/UH in urban food security and health,
- Integration of agriculture in urban development planning,
- Improved access to agricultural research, extension and credit services,
- Improved systems for input supply and product distribution,
- Creating awareness of health risks through UA/UH.

An assessment that all these policy titles portray assumptions the urban agriculture is being practiced, useful and must be supported. The question is, “municipalities must support it at what cost?” Who is benefiting in the process? Do governments allow



people to migrate from rural to urban areas only to impoverish them and then support welfare through urban informal activities? It is evident from the above outlined policy titles that in Ethiopia there is no single clearly identified policy on urban agriculture. The multiple segments of regulations focusing on urban agriculture may be a clear testimony of the confusion and non-commitment of stakeholders like the government and municipal politicians and administrators, industry and commerce and the public in general with regards to urban agriculture issues. We suppose the truth is that public institutions like the government and municipalities as organs of state power support this aspect to hide their failure to create adequate jobs and wealth for the deserving citizens. Even the human rights propagandists or advocates who support this activity do not want to be peasant agriculturists in urban setups. It is dehumanizing to say the least especially off-plot agriculture and those who have no alternatives in life perform it.

### **Objectives and significance of the study**

The following objectives guided this study to;

- identify the important stakeholders in the urban agriculture sector.
- identify the major challenges and opportunities in the sector.
- analyze dilemmas of urban agriculture in municipality administration.

This study portrays the contradictions between urban agriculture development, competition for land and the need for developing modern cities in Africa. Thus, it provides relevant information on the dilemmas of land use and land use planning in Addis Ababa. It may influence town planners, administrators, policy-makers and so on to reconsider their priorities when planning, programming, developing projects and allocating funds for development in Addis Ababa. It provides urban agriculture awareness. The research is unique because it applied radical theories like the critical and conflict theories in the analysis of data collected. No known research has utilized the same approach before.

### **Theoretical Framework**

The systems theory was adopted in the discussion of urban agriculture in Ethiopia. A functionalist perspective is useful in the discussion of urban local governments. Urban councils have a function of promoting development of industry, trade and commerce,

social life and creating wealth, democracy and good governance in these areas. In Africa, Latin America and Asia where poverty is rampant; implementation of democracy and good governance at local and national levels has remained a dream. Hungry people do not usually wait to listen to political rhetoric. The emphasis on urban agriculture that is, accepting poverty and planning to live with poverty in urban areas really hampers and influences negatively all strategies available for adoption to institute good governance in these institutions. Municipalities are open systems that relate with their environments. The environment includes industry, commerce and social. Municipalities get money from the public through various taxes. The public funds mobilized are supposed to provide public goods and services. The role of municipalities then is to create an environment that is conducive for investment and support development so that the towns and cities are habitable.

Urban and peri-urban agriculture provides employment, income, and access to food for urban populations ([wikipedia.org/wiki/Urban\\_agriculture](http://wikipedia.org/wiki/Urban_agriculture)). It is noticeable that some of migrants to urban areas do not have education, skill and so on. It is very difficult for a municipality to plan for this type of migrant. In many cases these uneducated and unskilled poor urban dwellers do not even comprehend the need to have clean cities. In Africa, poor women are mainly active in urban agricultural production and their aim is to improve diets for their families and to get additional incomes. Urban agriculture thus, provides an attractive and flexible alternative to badly paid wage labor (RUAF, UA, Magazine No -7, 2002). The Food and Agriculture Organization of the United Nations (FAO, 2006), argues that urban agriculture is, “An industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city, or metropolis”. The urban agriculturalists especially those who have properties like housing and business stands are applying intensive production methods, using and reusing natural resources and urban wastes to yield a diversity of crops and livestock. In Zimbabwe (Mbiba, 1995) urban farming has been defined as the production of crops and livestock on land which was administratively and legally zoned for urban use. Dirwai, et al(2009) argue that in Zimbabwe before independence urban agriculture was found predominantly in the peri-urban areas

especially designed for blacks and these had to sell their horticultural produce to urban markets. Thus, before 1980 (year of independence) urban agriculture had racist and colonial connotation. This allegation and the arguments expressed by many planners seem to indicate that urban agriculture is designed to support a specific group of people who cannot be salvaged and redeemed from poverty through other means.

In the Zimbabwe Journal of Education Research (2009), the World Commission on Environment and Development (WCED, 1997) emphasizes the potential role of urban agriculture in alleviating poverty. WCED thus, stressed that all governments in the developing world must consider supporting it. Urban agriculture is also important in that it utilizes spare and unused land available in the cities (Hussein, 1990; Rogerson, 1996). The opinion portrayed by WCED indicates that urban agriculture is useful to individuals who have permanent work somewhere else. It is a supplementary activity. The arguments put forward seem to be designed for Third World Countries because that is where the poverty is wide spread both in the urban and rural areas. Ethiopia has both on-plot and off-plot activities. However, the off-plot activities have many dilemmas. In the developed world, agricultural activities are supported mainly when they are done on plot. They have the mechanisms of doing the activities without harming the environment and the welfare of the people concerned. It is important to emphasize that in the first world countries if urban agriculture is permitted it is legalized and properly planned, monitored and integrated with other systems that is social economic and political life. However, this approach does not take aboard Europe and America as if there are no poor individuals and communities. Europe, America and even Japan have specific activities that are permitted and strictly monitored to avoid harm and infringement of freedoms of individuals in urban areas. It has been expressed earlier that the current arguments about traditional urban agriculture do not facilitate development of clean cities in Africa and other developing countries. It is important to resist theories that facilitate the building of peasant cities in Africa and particularly Addis Ababa. There is need to change our vision for the future in term of the type of modern cities that we want and then support ideas that are attuned to modernity.

Urban agriculture can be divided into two, that is, on-plots and off-plots (Rogerson, 1996). On-plots (residential) urban agriculture focuses on small gardens found near the homesteads mainly in the high-density suburbs. The activities are can be regulated through by-laws because the houses are located within planned areas. The activities are not random and are confined to specific radius. Much bigger farming is found behind the yards as ‘green house horticultural farming’, mainly in the low-density suburbs. However, agricultural dilemmas are rampant to off-plots farms. This agriculture is performed in public areas, sometimes not planned for such activities or not suitable for it and it becomes a hazard in those areas. The farms are found mainly amongst high-density dwellers that did not necessarily stay near their plots (Dirwai, et al (2009). It is stated (Ibid) that for a long time, urban councils managers have viewed off-plot crop farming as illegal activity, hence, the urban poor from the high-density suburbs were often found in running battles with the city authorities during the farming season in Zimbabwe. In South Africa, urban farmers have often been fined for illegally cultivating on land belonging to white farmers. This punitive action emanated from the fact that urban free spaces the world over have been spared for developmental projects and not for farming per se.

Magadza (Dirwai, et al, 2009) argues that at times inorganic urban farming has been blamed for water and land pollution, making it expensive to provide clean water to the urban dwellers. In this case, therefore, poor urban agriculture has been associated with negative impact on the environment and the decline in aesthetic quality of urban space. It has been argued already that traditionally urban landscape has been only designated for residential, industrial, commercial and recreational purposes and yet there are schools of thought that reservedly view urban farming as having the capacity to reduce the vulnerability of women and children to food security (Mudimu, 1996; Zundel and Kilcher, 2007). Further opinions stress that the increased use of open spaces in urban areas for agriculture dictates that town planners and policy-makers should find ways of harmonizing the farming activities with conventional urban land use systems, (Dirwai, et al, 2009). Mbiba (1995) is of the opinion that urban residents increasingly resort to off-plot cropping and this pose serious challenges to town planners and administrators.

In Zimbabwe, town administrators used to destroy, specifically maize grown in illegal areas and this caused political backlashes and loss of lives or property. Thugs wanting hiding places use these plots and therefore it can be insinuated that urban agriculture positively influencing criminal activities in some urban areas.

Urban Agriculture (urban and peri-urban agriculture) expands the economic base of the city through production, processing, packaging, and marketing of consumable products. This results in an increase in entrepreneurial activities and the creation of job opportunities, as well as in food costs reduction and production of goods of better quality. Men and women involved become part of the informal economy of a city. It provides employment, income, and access to food for urban populations, which together contributes to reducing chronic and emergency food insecurity. In addition, it plays an important role in making food more affordable and in providing emergency supplies of food, (UN-Habitat, Urban Management Programme and FAO's, Training Publications, [en.wikipedia.org/wiki/Urban\\_agriculture](http://en.wikipedia.org/wiki/Urban_agriculture)). Urban agriculture includes growing plants, medicinal and aromatic herbs, and fruit trees, and raising livestock and these are either for household use or to sell to neighbors. In Dar Es Salaam (Tanzania), urban agriculture forms at least 60 % of the informal sector and urban agriculture is the second largest urban employer (RUAF, 2004). Full time production of certain vegetables or keeping a few dairy cattle and garden contributes an income of US \$60 per month, that is, 30 % greater than the average salary (ETC, 2005). In Nairobi (RUAF, 2004), agriculture provided the highest self-employment earnings among small-scale enterprises and the third highest earning in all of urban Kenya. Nairobi derives very high benefits from urban farming because at least 50 % of food consumed is derived from the farmer own production. In Ouagadougou (Burkina Faso), 44 % of the urban population is engaged in agriculture. In Accra, poor farmers find it difficult to get unpolluted water sources around the city for irrigation. In addition, in Hanoi (Vietnam), it is estimated that 80 % of fresh vegetables, 50 % of pork and poultry and fresh water fish as well as 40 % of eggs to the urban markets originates from urban and peri-urban areas (RUAF 2003). In Mexico City, production of swine brings in 10 to 40 % of household earnings and in sub and peri-urban areas maize, vegetable and legume production constitute even up to 80 % of the household income (Pablo Torres, 2000). In

Havana, urban agriculture has improved the supply of fresh produce and ensured greater stability and availability of leafy vegetables (ETC, 2005). It is important however, to notice that all the cities mentioned above are struggling to modernize. There is untold filth in these cities.

Urban agriculture directly changes urban ecosystems such as forest ecosystems by fragmenting or removing forest cover. Sprawl often removes highly productive agricultural farmland and systems. It affects other ecosystems by modifying hydrology, altering nutrient cycling, introducing non-indigenous species, and changing atmospheric conditions. These physical changes are interrelated and affect land use management, water resource management, storm water management, soil erosion and sediment control, waste management, forestry resource management, urban forestry, and green space preservation ([apps.caes.uga.edu/urbanag/Impact.cfm](http://apps.caes.uga.edu/urbanag/Impact.cfm)). This problem leads to low investment in urban agriculture and therefore poor productivity.

Though not the focus of this study the characteristics of a modern city can be mentioned in passing. Through a discussion of these and many other questions about urban thought, Donald (1999) demonstrates how artists and social critics have seen the city as the locus not just of vanity, squalor, and injustice, but also of civilized society's highest aspirations. The book, *Imagining the Modern City* (1999) argues that modern cities have to create public spaces, sculpture, and architecture--art forms that help determine our ideas about our place in the urban environment. The idea is that modern cities planning need to integrate aspects that increase the beautifications of such urban areas. The modern city provides both a culturally resonant imagined space and a physical place for the everyday life of its residents. Adam (1995) further argues that the modern city is the wilderness, the urban jungle. The inner city is a dangerous place where brute existence is dominated by the struggle for survival. Anyone with sufficient wealth leaves the public city for a private place where there is safety, order, and the enjoyment of leisure. [http://www.city-journal.org/html/5\\_4\\_urbanities-tradition.html](http://www.city-journal.org/html/5_4_urbanities-tradition.html)

### **Methodological framework**

The researchers adopted descriptive survey research approach. The researchers employed observations, detailed interviews and a questionnaire in data collection. The techniques collected adequate data that was triangulated and this cross-validation of results maintained validity and liability of the study. The target population involved included government officials composed of land use administrators, urban planners,

urban agricultural officers, and urban environmental protection officers at federal, city and sub-city levels and councillors. A multistage sampling technique was adopted. Government officials and farmers association members were purposively selected. Councillors and academic professionals were randomly selected. The structure of the final sample was 4 Central Government and 6 Municipality administration officers, 6 members of farmers association, 10 councillors and 5 academic professionals. The final sample was thirty-one respondents. Secondary data collection was critical to this study and data were gathered from the municipality and government documents and Ethiopian Central Statistical Authority.

### ***Benefits urban agriculture to Addis Ababa communities***

Addis Ababa portrays two extreme lives existing side-by-side, that is, modern and traditional. Land is scarce in many urban areas of many countries. There is anarchy in the competition to get available land. The major actors competing for available vacant space include; the government especially the municipality slams dwellers, farmers, industrialists, animals and so on. This anarchy like situation has destroyed the environment through pollution of water bodies, silting, urban agriculture, and animals grazing. In Ethiopia, urban agriculture can be perceived from two viewpoints, that is, from permanent city/town dwellers and from the perspective of rural traders who spend days in the urban areas selling their products specifically animals. They do not own property. In these circumstances, they carry out urban agriculture on land in transitional use and their rights are at stake. Cows, sheep, chickens, maize, teff and a variety of vegetables are common in the urban environment. Ethiopians generally consume few vegetables because of their high cost and restricted availability ([Canada,archive.idrc.ca/books/reports/V213/ethiopia.html](http://Canada.archive.idrc.ca/books/reports/V213/ethiopia.html),).

In Akaki Kality, for example, 62.5 % of urban farming household heads depended on urban farming while 37.5 % engaged additionally in some off-farm activities to subsidize the low level of urban agricultural income. A small number of respondents (7.5 %) were employed such as guards and office security agents.

Results indicated the majority 95% of those who engage in urban agriculture were the urban poor. These are individuals who are not employed or whose salary is too little to sustain their lives. The majority of them are misfits to live urban lives. They took advantage of deferred land (planned for particular projects but not developed) and open space (not planned for any particular use). The rich use part of their properties like housing stands to practice agriculture. In general, 80% of the respondents indicated that the major factors determining urban agriculture include both economical and social reasons, which range from being unemployed in the formal sector, lack of education and trainings and migrations from rural areas, wars, government changes and retirements that are devoid of secure pensions. The results indicate that urban agriculture is a result of unmet needs. The driving forces are external to the individual.

About 100% of the respondents stated that urban agriculture provides food security. Table 1 below depicts 11,191 tons of cereals, pulses and oil seed crops produced per annum. Wheat and teff together constitute more than 80 % of total cereal production because arguably both are the main staple food.

**Table 1: Major crops produced in the peri-urban area of Akaki-Kality sub city and annual estimated output**

Types of crops	Annual estimated production (ton)	% Share of production
1. Wheat	6,755	60.3
2. Teff	2,652	23.6
3. Barelly	68	0.6
4. Sorghum	90	0.8
5. Maize	80	0.7
<b>Sub total cereals</b>	<b>9,645</b>	<b>86.15</b>
6. Vetch	579	5.17
7. Chickpea	482	4.3
8. Horsebean	176	1.6
9. Cow pea	144	1.2
10. Lentils	66	0.58
11. Haricot bean	14	0.12
<b>Sub total pulses</b>	<b>1,461</b>	<b>13</b>
12. Fenugreek	50	0.45
13. Flax	15	0.13
14. Noug	10	0.09
15. Safflower	10	0.09
<b>Sub total</b>	<b>85</b>	<b>0.76</b>
<b>Grand total</b>	<b>11,191</b>	<b>100</b>

Source: Akaki -Kality sub city urban agricultural office (2008)



The table below indicates the importance but declining role of urban agriculture as an employer in Addis Ababa. The number of those employed in urban agricultural activities declined between 2002 and 2007 from 14 632 to 7 397. The declining trend of the urban farmers corresponds with decline in urban agricultural land. This decline is an indication of the vicious competition for land happening in the city. This completion could be a result of the expansion of the urban population, industry and commercial sectors.

**Table 2: Households engaged in urban agricultural activities in Addis Ababa.**

Number	Fiscal year	Urban farming households
1	2002	14,632
2	2003	6,573
3	2004	5,262
4	2005	5,903
5	2006	5,948
6	2007	7,397

Source: An Evaluation of the Impact of Urban Agriculture on Urban Socioeconomic Development: A case of Akaki –Kality sub city, Addis Ababa (2009)

In Addis Ababa, especially Akaki-Kality and Yeka Sub-Cities the larger part of the production (70%) is traded to get money for to spend on other social activities. Cereal and pulse products were directly supplied to local markets where farmers themselves sold to consumers and traders, whereas, most of the vegetable products were sold at farm gates to intermediaries. Milk on the other hand has multiple destinations. The large part of milk produced was supplied to agro-processing industries. Other significant portions of the milk were sold to local consumers at farm gates and some supplied to small bars, hotels and tearooms (Elias Gashaw Manekuleh, 2009). Respondents (60%) indicated that 40 % of the urban farming households sell their farm products at the farm gates to traders. This includes most of vegetable and milk produces. About 50% of the households supplied to the local markets, this includes most of the cereal and pulse products and 23.5% of households sold at farm gates their products mainly milk and vegetable products to consumers.

## **The dilemmas of urban agriculture**

The critical theory explains the issue of urban agriculture as an outcome of class struggles in urban areas. The theory portrays an image that the poor are not benefiting from urban agriculture process, advocacy or activities. It is the middle class and the elite who are benefiting from this process. It is a conflict brought about by the structuring of Ethiopian society. The Ethiopian society is divided into two clear classes, that is, the rich and the poor. The politically and economically powerless (those who do not have the means of production), especially the poor are engaged in urban agriculture to have some form of livelihood because they are being exploited by both the bourgeois and the political elites (ruling African comprador petit bourgeois). According to the conflict and change management theories, urban agriculture is a result of conflicts between classes, that is, the rich (those who own the means of production) and the poor (workers and rural peasants). The rich buy the land available and the poor are relegated to riverbanks and swampy areas, that is, areas that are not suitable for any habitation, construction works or even for the agriculture. The areas occupied by the poor are expensive to construct any standard structures. In most cases, the poor create slums (shelter constructed from cheap substandard materials like plastics, mud, rusty iron sheets, grass, etc). Respondents (60%) indicated that the salaries given to some of the people living in these areas range from 100 to 300 birr. It is too little to sustain any decent life. The point is that urbanites engage in peri-urban agriculture as a reaction to the exploitative environment (The environment is external to them.). It is therefore important for the urban planners to re-examine the essence of urban agriculture and its value to the modern city. Planners are responding to a symptom of the problem, that is, the issue of inadequate compensation and poor creation of wealth by the state. In any case, if urban agriculture is meant to supplement meager salaries and shortage of food, how then can city planners and developers plan for the same communities to change for the better? The question is that, "Does urban agriculture facilitate development or it facilitates change?" Urban planners must understand the philosophies of change and development and then critically analyze the situation in Ethiopian urban areas before they can come up with enhancement decisions. The writers are convinced that in Ethiopia urban areas focus must be on development rather than change. All development is

positive change but change is not always positive. The current arguments for urban development advocate for change, which can be short-lived, inadequate and exploitative to say the least. However, strategic urban development plans and /or sector plans can be drafted on the bases of ideas or opinions that fight to ultimately do away with slums, urban agriculture and poverty. Urban agriculture according to the respondents (40%) makes poverty permanent in urban areas. Thus, policies, plans, programmes, projects and management tools all can be designed in such a way that they target at eradication of poverty and its extenuating circumstances than perpetuate it through corrupt or indecent projects like urban farming. Some of these projects are according to the respondents (10%) are funded, for example, by the Ethiopian Environmental Protection Authority (EEPA) and donor agencies. The EEPA like in Yeka Sub-City, to protect river catchments and banks from agriculturalists do some consultancy works and then give the plots-owners money (500 00 -2 000 000 birr) for improving their peri-urban agriculture.

The other major dilemma of urban agriculture is the availability or non-availability of laws like by-laws to regulate the activity. About 90% of the respondents were not aware of any regulations on urban agriculture. The policies and regulations are not available or are not clear to the citizens. A visit to the City Council did not produce results. Councillors (100%) contacted portrayed evidence of confusion on the issue of urban agriculture. They were not aware of the policies and by-laws. They could not express clearly availability of by-laws on urban agriculture. The writers concluded that issues of urban agriculture seem to be peripheral to the operations of Addis Ababa Municipality. The respondents (45%) further doubted the availability of political and administrative commitment to regulate the activity. Considering the fact that the 'full council' is the major forum where policies or resolutions are generated and that no regular meetings on urban agriculture are held, it is difficult to imagine a valid reason that will push urban planners in Addis Ababa to integrate the activity in their conventional plans. In Addis Ababa, if craft competence (ability to develop urban agriculture plans and regulations) were there, then there is serious need to check craft literacy, that is, the ability to implement the designed plans on the part of both

municipality employees and councillors. Councillors' political commitment is important because they own the council, they are the politicians who originate debate, approve and implement council policy. The 'full council' is the basis of all planning and administrative procedures. The institution creates a municipality's vision, mission, and goals.

Government attitudes and policies (in Ethiopia) actually discourage the activity. Urban agriculture has been seriously under-estimated by government officials. Despite its proven benefits to the poor, citizens (95%) consider urban agriculture as a temporary, part-time activity. Residents have trouble getting government authorization to use state land, owing largely to bureaucratic indifference. There is lots of public land: schoolyards, roadsides, along highways, even parks that can be used for UA activities. Another associated problem people face is access to credit. Borrowing start-up money to launch farming activities, or even to buy tools, is a tremendous challenge ([Canada.archive.idrc.ca/books/reports/V213/ethiopia.html](http://Canada.archive.idrc.ca/books/reports/V213/ethiopia.html)). Money is a vital resource that is needed to buy equipment and inputs for agriculture. It is difficult to imagine how the impoverished communities can all of a sudden benefit from urban agriculture if they do not have resources. At times, the soils are too leached to produce any good harvest. It is like the poor communities performing poor agriculture. At Meri (East of Ethiopia) that is only 10kms from 'Magananya' farmers grow teff but observation shows that the plants suffer always from lack of nutrients. The implication is that the poor (of-plot) urban farmers always do not get the food security suggested by some theorists.

About 32% of the respondents raised the issue of inadequate extension work. The fact that agricultural activities are being performed on any unused pieces land might mean the government and the municipality have to intensify extension work to bring awareness of better cropping and animal husbandry techniques. The extension workers as professionals can further identify other important experts to deal with specific problems/issues in the small plots. The activities of extension workers was acknowledged by interviewees who that it could avert leaching of soils, degradation of

land, silting of rivers, pollution of water sources and can improve sanitation and health through control of use of polluted water in growing vegetables and other food items.

The general characteristics of the urban farmers included low levels of education, skills and training for alternative employment opportunities.

**Table 3: Urban agricultural land decreasing trend in Addis Ababa**

<b>Fiscal years</b>	<b>Urban agricultural land in hectare</b>
2002	23,899
2003	23,270
2004	10,106
2005	12,987
2006	10,773
2007	13,599

Source: CSA agricultural sample survey between 2002 and 2007 E.C

Table3 show that there was a sharp decline of urban agricultural land between 2002 and 20007. About 27.5 % of the households explained that they feared eviction, and were uncertainty on their land holding. About 25 % complained of shortage of land in general saying they could not expand pieces of land they currently possessed. Besides decline of pieces of land owned by farmers, uncertainty about land ownership has exacerbated decline of produce. Despite this decline, CSA (2007) states that the share of agricultural land in Addis Ababa city administration was 13,599 hectares in 20007 from a total land area of 54,000 hectares previously and these accounts for one quarter or 25 % of the total land area of the city administration. Of this land, Akaki-Kality sub city was estimated to have 4,380 hectares in 2007, out of the total area of 12,500 hectares (35 % of the total land area of the sub city).

The main reason for general decline of urban agricultural land is the growing urbanization, expansion of residential, and investment land demands that were clearly observed in the city in the last few years. Ethiopia's economic growth rate was pegged at 11% making it the fastest developing country in African. In general, Ethiopia lacks clear policy on urban development and this is a limitation to finding alternative

solutions to reconcile different competing demands such as residential and industrial land demands. Furthermore non-land related problems such as lack of authorized market premises, shortage of livestock feed, lack of financial capacity to expand irrigation system, etc. threaten and challenge the performance of the sector.

**Table 1: Major challenges confronting urban farmer households (N=31)**

Challenges	Frequency	Percent
Scarcity of land	28	90.32
Insufficient skills and knowledge to penetrate the market (s)	10	32.26
Cost of animal feed	10	32.26
Lack of access to adequate water for irrigation	20	64.52
High cost of Fertilizer	5	16.13
Lack knowledge or available opportunities to access needed finance	26	83.87
Inadequate extension work	12	41.94
Lack of modern farming equipment	3	9.68
Lack of awareness of the urban bye-laws	23	74.19
Total	40	100

Source: Fieldwork 2011

Despite the advantages cited by many experts about urban agriculture, Adam (1995), convincingly argues that if it is our desire to reconcile the ideal of the traditional or historical city with the realities of modern life, we must realize that we will not be re-creating the past but creating something new. In doing so, we must first look beyond any superficial resemblance to the essential and desirable characteristics of the historical city that are missing from the modern city and then seek a mechanism for their introduction into a modern context. Urban agriculture is remnant of a poor developing city and it needs closer monitoring to reduce it hazardous effects. According to Adam (1995:1), "If we are to improve life in the city, it is these things that we must restore, but—and I cannot emphasize this enough—we will not do so if we try to recreate an idealized past that will not fit with the important changes in living that have taken place in the last two centuries. The benefits of the traditional and historical city must be reconciled with modern life".

## **Conclusions and recommendations**

Traditionally urban planning practice in Addis Ababa recognized urban agriculture as one of the land use system. The existing master plan, revised between 1999 and 2001, proposed substantial lands for urban agriculture in the peri-urban and inner urban mixed land zoning. The master plan delineated about 4,625 hectares for urban agriculture in Akaki-Kality sub city. Data collected however indicates that before 1999 there was no planning regulation that enforced formal and official integration and incorporation of urban agriculture in the urban land use system. The current urban planning law of the country did not explained details of urban land use functions even though planning manuals that are not legally binding continue to consider urban agriculture under the broad land zone classification called open spaces (MWUD, 2006). Thus, there are no laws to enforce recognition or prohibition of urban agriculture in the urban land use system. Urban agriculture is a nuisance element in many policies that target urban development. The availability or non-availability of effective rules and regulations targeting urban agriculture is dependent on the commitments of the government, the municipality and the local politicians (councillors) who can labour to create a modern clean city. It is a function of the attitudes of municipality officials, managers and citizens. Creation of a modern city is an outcome of the vision and strategic plans emanating from the leaders and their communities.

The writers do not dispute the argument portrayed by many gurus on the subject that urban agriculture promotes food availability or security. The opinion of the writers is that Africa and Ethiopia per se do not suffer major land shortages problems. Ethiopia has a major agricultural development programme. It is assumed that with meticulous and astute planning the currently demarcated agricultural area must provide adequate agricultural products to urban centres. It is not shrewd for African cities like Addis Ababa to base their urban development planning on outdated ideas that ignore issues of clean environment, clean water, good health, good leisure parks, good roads, cities that do not have unnecessary man made obstructing objects and good sewerage drainage and treatment systems. Modern cities planners are encouraging cities beautification that included environmentally friendly activities, whereas the reverse is true for Africa where the environment is in fact being destroyed in the name of reducing poverty or

supplementing available resources. The point is that the urban centres must focus on developing industrial and commercial activities. As observed in most of urban planning practices in Ethiopia, inclusion or exclusion of urban agriculture was planner or expert driven and dependent on the existing or prevailing situation of the land under study. Hence, absence of clear regulation to incorporate urban agriculture in land use system and even in the planning manual gives the impression that urban agriculture is not a serious activity that warrants administrative and political commitments. Urban agriculture thus is a temporary activity and this transition land is converted to other land use whenever demanded. Therefore, this opinion bring conclusions that the activity is a hazard to development of modern cities. Respondents in addition indicated that urban agricultural land were converted to other uses, as there was no legal backing or regulation to protect the land use practice. Further, despite the economic, social and environmental problems that confront us as we approach the millennium, the citizens of Ethiopia today are in a better position to influence the development of their city than they have ever been.

Urban agriculture could be adopted as a strategy of alleviating urban poverty; however, planning is needed to prevent misuse of land, silting of rivers and dams, pollution of water sources by fertilizers and other chemicals, etc. Land suitable for cultivation need to be identified and then incorporated in the municipality Master Plan. This land could be allocated to deserving people systematically. The opinion is to avoid a haphazard approach that increased problems of municipality administration, monitoring and control costs. The approach could also afford the government and the municipality to deploy extension workers to facilitate good and ethical agricultural activities in these designated areas.

There is need for municipality by-laws on urban agriculture. These rules and regulations would integrate urban agriculture in urban plans legitimately. This approach could encourage commitment on the part of municipality politicians and employees in terms of the need to promote urban agriculture. Currently many of the politicians are not aware of the hazards of urban agriculture in developing Addis Ababa City. Clearly



designed urban by-laws could facilitate demarcation and indicate various land uses. The by-laws can be use by the municipality as legal instruments that are capitalized on during any time of crisis. Thus, the violation of these laws could be taken seriously to the extent that criminal procedures are taken against culprits.

Another recommendation is to consider urban agriculture especially off-plot performance as an illegal activity. This means that all individuals practicing this activity must be stop or otherwise arrested and fined some amount of money. This approach will encourage environmental protection and beautification of the city. It will in addition, reduce pollution especially of the water bodies. The number of animals used for different purposes in Addis Ababa could be reduced and thereby reduce associated hazards like cow dung, bones from killed animals, dirty from thrown away casings that most of the Ethiopians do not eat and damage to the roads. The banning of urban agriculture is to prevent the issues of filthy and squalor all over a city that is trying to assume desirable modern characteristics. The municipal police could be used to enforce the by-laws.

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