

# ANALYSIS OF THE POWER, KNOWLEDGE AND INTERESTS OFSTAKEHOLDERS IN URBAN AND PERI-URBAN AGRICULTURE ENGAGEMENT IN ADDIS ABABA, ETHIOPIA

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## **Abstract**

*Stakeholder analysis is a process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy, project or program. From this analysis, four main results were obtained, namely: most important stakeholders; the stakeholders' knowledge level; the stakeholders' position to or against UPA program; the stakeholders' interest towards UPA program; and which stakeholders might form alliances. Among eighteen priority stakeholders identified for leadership and power analysis, nine of them were having high leadership and power, four had leadership and medium power, one stakeholder did not have leadership but had high to medium power, whereas, the other four of the priority stakeholders were with no leadership and power. Based on the level of knowledge, stakeholders were also categorized into two groups: those with the high and medium level of knowledge. This analysis had also indicated that resource availability, rather than the knowledge level, is the most influencing factor in taking a position for or against UPA program. Professional societies seem to be more knowledgeable and were willing to lead the UPA program. However, attributed to resource limitations, they had not engaged in the program so far as expected. Eighty percent of the stakeholders consider the advantage of UPA and thus were supporting the present situation, while the remaining had concerns as UPA is considered the cause of pollution and public health problem in the city.*

**Key words:** Position, alliances, and stakeholders' analysis

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## 1. Introduction

Urban and peri-urban agriculture (UPA), as defined by Baumgartner and Belevi (2001), comprise the production, processing and distribution of diversity of food, including vegetables and animal products within the city (urban) or at the fringe (peri-urban) of a city. Thus the main motivation is food production for consumption or sale and /or income generation. Globally the most frequently cited study about UPA is carried out by UNDP (1996), which estimated about 800 million people are engaged in UPA; of these, 200 million are market producers, employing 150 million people full time (Smitet al, 1996). It is also the source of food for 40 percent of African and 50 percent of Latin American Urban dwellers (Zezza and Tasciotti, 2008).

Urban and peri-urban farming has been well recognized in the developed world for decades, and is getting new momentum in developing countries. In Africa, urban agriculture plays a significant role in both food and nutrition security for urban households (Diana, 2010). Attributed mainly to such factors, as rapid urbanization, ineffective agricultural policies, inefficient food-distribution systems, soaring inflation and rising unemployment, and careless urban land use regulations, urban agriculture has shown significant growth in East Africa since the 1970s (Mireriet *al.*, 2006). Thus, peri-urban and urban agriculture is becoming an important means of response to food insecurity, and is playing significant role in achieving adequate nutrition and livelihood for the poor communities.

Rearing cattle, sheep, and chicken, or growing rain-fed crops such as maize and vegetables on plots found adjacent to their houses and away along river sides are traditional urban and peri-urban farming practices in Addis Abeba

(GebreEgziabher, 1994). Much of the outputs of urban and peri-urban agricultural practices in Addis Ababa are mainly meant for household consumption, with some portions for sale (Degefaet al., 2006).

Although urban and peri-urban agriculture has multifaceted economic, social and environmental benefits, stakeholders also raise issues of human health and environmental hazards because of pathogen contamination (Girma, 2012), bad smell from animal farms and depositions of heavy metals used in the agricultural systems mainly due to intensive use of agrochemicals including heavy metals (Fisseha,1998) and using polluted irrigation water. Moreover, most planners consider agriculture as a practice conducted in country sides and by some slum dwellers in the city. As the result, more emphasis is often given to lease a land for industry and housing in Addis Ababa city.

The Federal Democratic Republic of Ethiopia (FDRE), according to Nigussei (2010), has formulated and implemented various policies and strategies, which had registered significant achievements in the rural agriculture sector in the last fouryears, but with less emphasis to urban and peri-urban agriculture, which led to insufficient consideration in research and extension services. There is also a conflict of interest and mandate among stakeholders concerning the land use situation in the city. The Office of Urban Agriculture in the city has limited role to play in cases of inappropriate land use in the urban and peri-urban areas of the city (Gittleman, 2009).

In order to understand the urban and peri-urban planning process, it is important to know who the stakeholders are and how they manage to have their interests reflected in the plans that are implemented. A major step in this regard, is to carry out a thorough participatory stakeholder analysis,

recognizing the interrelated nature of food, agriculture, health and ecology that deals with food issues.

This study was, therefore, conducted to characterize stakeholders' power, knowledge, interests and leadership capacities for the successful implementation of urban and peri-urban agriculture in Addis Ababa city.

## **2. Methodology and Approaches**

### **2.1 Description of the Study Area**

This study was conducted in Addis Ababa between February and June, 2012. Addis Ababa is the economic and political capital of the Ethiopia. The total population, as per the 2007 population and housing census result, was about 2.7 million. Of these female accounted for 52.4% and male 47.6%. On average the city population is growing at 2.1% annually (CSA, 2007).

According to BoFED (2010), the Addis Ababa population census result indicates that 50% of the total households were living under the poverty line. The city has a total land area of 54,000 hectares (Kumelachewet *al*, 2012), divided into 10 sub-cities (Figure 2.1.1) which consists of 100 'Woredas'. The CSA (2007) data indicates that 10,773 hectares of land was cultivated, while forest and range lands cover 7,900 and 2,943 hectares, respectively (Nigussie, 2010).

Addis Ababa has a mild climate and is situated at 2408 meters above sea level. Its average daily temperature is about 16°C, mean annual precipitation is about 1180 mms and has unimodal rainfall regime starting from June to September (Duressa, 2007). The city also possesses year round small rivers, suitable soil and altitude for UPA (Figure 2.1.2). These small rivers and streams, as well as the limited sewer line of the city, are tributaries of the

Akaki River (Weldesilassie *et al.*, 2010), which is the source of irrigation water for most vegetable growers in the city.

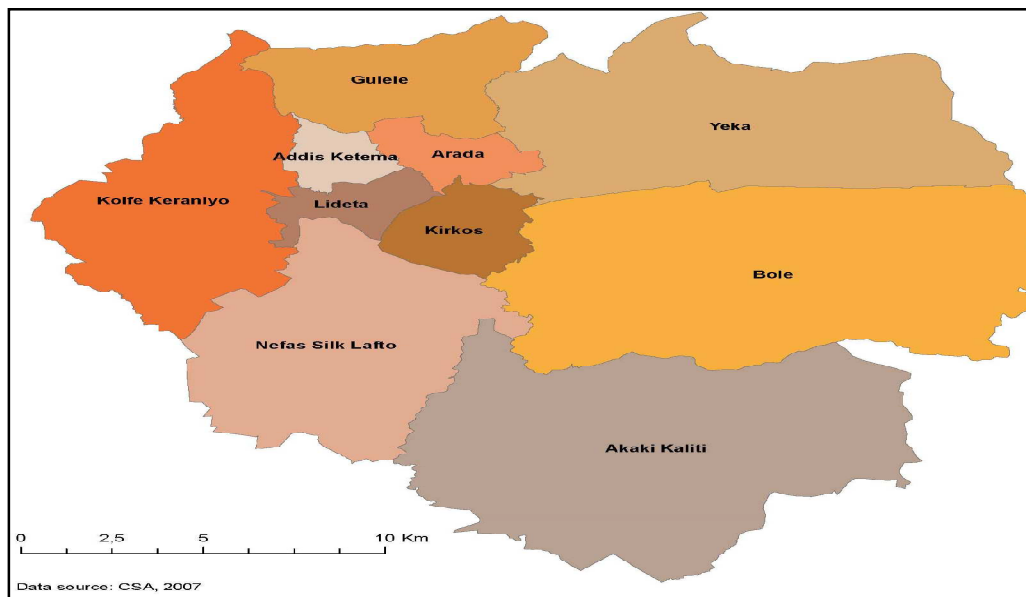


Figure 2.1.1: Addis Ababa administrative division by Sub-city (Nigussie, 2010)

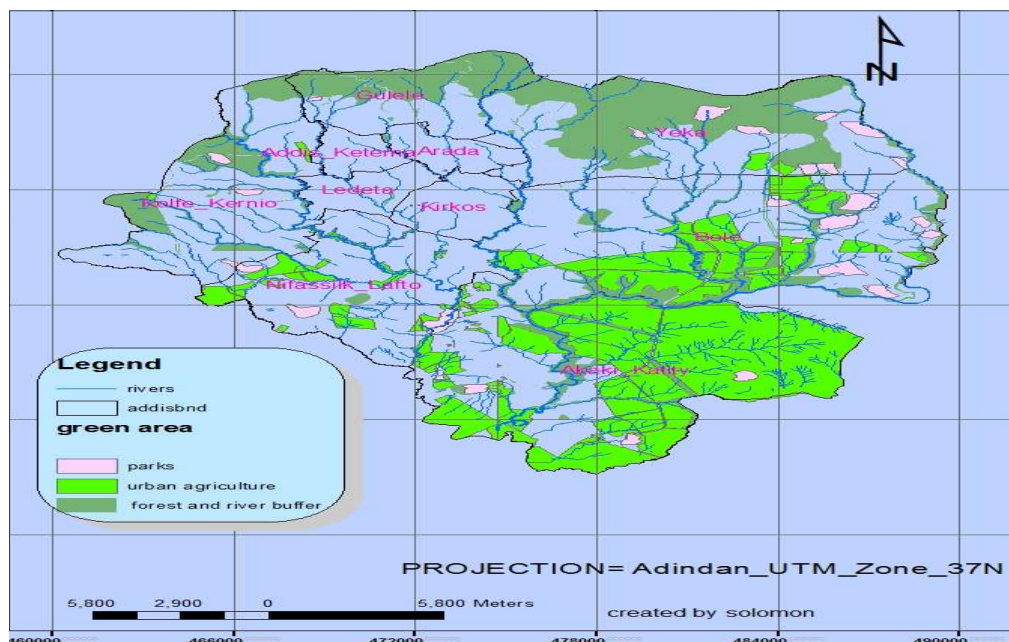


Figure 2.1.2: a Map showing the land use situation in Addis Ababa (AAEPA, 2011)

## **2.2. Sampling and selection of stakeholders**

Stakeholder analysis is a process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy, project or program (Kammi, 1999). Policy makers and managers can use stakeholder analysis to identify those key players; to predict whether they might support or block the implementation and develop strategies to promote supportive actions and decrease opposing actions before attempting to implement major reform at the national, regional, local level (Ibid).

This study followed two stage sampling method to select appropriate stakeholders in UPA. The first step was selection of farmers or farmers' cooperatives (primary stakeholders) that were directly involved in farming. Thus, one representative sub-city administration (AkakiQality) with criteria of both urban and peri-urban agriculture setting was selected purposely to accommodate both urban and peri-urban situation. Then, one representative district (02/04 'Woreda') was selected using the same criteria. Within the 'Woreda', one vegetable cooperative (with 23 women members), one mixed crop-livestock farming cooperative (43 women and men members), three small scale poultry enterprises organized under small and medium enterprises (SMEs), three individual vegetable farmers, three small scale dairy enterprises and one home garden were included in the sampling. In addition, five-individual mixed crop livestock farmers- were selected randomly from the farmers list at the 'Woreda' agriculture development office. A total of 81 urban and peri-urban farmers had participated, either personally or by a representative in the district. Data was collected on crop types, livestock production subsystems, natural resource

management, market chains of major products and environmental or personal health impact encountered by using semi-structured questionnaires.

The second step was identification of secondary stakeholders who in one way or another were participating in the planning and implementation of UPA. Eighteen (18) Stakeholders' from different sectors, including public entities, professional societies and NGOs were selected from the city, sub-city and 'Woreda' administration level purposely based on their importance (Annex I). This was carried out through discussion with key informants (Experts in the office of agriculture in Addis Ababa). Then, appropriate personnel were identified for interviewing.

### **2.3. Analysis of the stakeholders' characteristics regarding UPA**

Stakeholder analysis guideline developed by Kammi (1999), John and Catherine (2004) was used to characterize stakeholders' knowledge, interest, position, alliance and importance related to the situation. According to Kammi (1999), stakeholders' analysis involve eight steps, including the planning of the process, selecting and defining a program to study, identifying key stakeholders, adapting the tools, collecting and recording the information, filling in the stakeholder table, analyzing information in the stakeholder table and generating information.

The stakeholder characteristics such as knowledge on UPA program, interests related to the program, position for or against the program, potential alliances with other stakeholders, and ability to affect the process (through their decision power and leadership) were analyzed (Annex I).

In order to identify these characteristics, the exact stakeholders' information should be defined first. Therefore, characteristics such as: each stakeholders

name, position and organization, internal/external to the organization, knowledge, position, interest, alliances, resources, power, and leadership terms are defined (**Annex II**). Once the terms have been defined, the interview responses had been entered to stakeholder analysis table (**Annex III**). Stakeholders table was created in a word processing application (formatted landscape) with a list of stakeholder characteristics across the top row. By utilizing the analysis table the following information was generated:

### **2.3.1. Importance of stakeholders**

The power of a stakeholder was calculated from a combined measure of the amount of resources a stakeholder own (H1, annex III, in stakeholders table) and his or her ability to mobilize resources (H2), then, the two resource scores averaged, resulting in a power index between 3 and 1, where. 3- high power, 2- medium power, and 1- minimal power. While leadership considers the willingness by the stakeholders to initiate, begin or lead an action for or against a program (Webster 1984, cited in Kammi 1999). Thus, the stakeholders either possess or lack this characteristic. This is represented with “yes” or “no (**Annex III**).

### **2.3.2. Stakeholders’ knowledge on UPA program**

The stakeholders’ level of knowledge related to a policy or a program also is often of interest to policy makers and managers. The level of knowledge can be presented as a general conclusion, especially if it is similar for the majority of the stakeholders, or the stakeholders can be divided by their level of knowledge: 3, 2, or 1 (Kammi 1999).



### **2.3.3. Stakeholders' interest in UPA program**

These analyses include: identifying total number of supporters/opponents, importance of supporters/opponents, knowledge of supporters/opponents, advantages and disadvantages of UPA program implementation to the supporters/opponents, whether these supporters/opponents are internal (I) or external (E) to the organization leading the program.

### **2.3.4. Ability of stakeholders to form alliances**

According to Kammi (1999), possible stakeholder alliances can be identified from the stakeholders table (**Annex III**) in two ways: first, by referring to the stakeholder table to see if stakeholders mentioned organizations can work with to demonstrate for or against the program; second, by referring to the position "clusters" (the stakeholders with similar positions). In addition, when the alliance information cross referenced with the position data, it can help to identify those alliances that may be potential sources of support, as well as those that may work together to oppose.

## **3. Results**

### **3.1. Stakeholders' Power and leadership analysis**

Power refers to quantity of resources (financial, material or natural) the stakeholder owns and the ability to mobilize those resources for or against UPA program. Based on these characteristics, all the priority UPA stakeholders were divided into four groups (Table 3.1).

Table 3.1: Stakeholders' power and leadership analysis with interest grid

Groups	Selected stakeholders	Interest analysis or advantage/disadvantage
<b>Group 1:</b> Those with good leadership and high power (level above 2 or 3)	Environmental Development Action (ENDA) Ethiopia	Food security & income for poor family
	USAID Urban Garden Program	Food security, & income for poor family
	Office of Agriculture in Addis Ababa City	Food security, resource use, green area & urban life
	Emanuel Development Association	Food security & income for poor family
	Regional and District SMEs offices	Employment, income & food security
	Addis Ababa Environmental Protection Authority	Economic & social benefit but UPA is the cause of pollution and inappropriate land use, especially in riverside, buffer areas. Animal production also is the source of Methane and odour.
	City Plan and Information Agency	Important for employment and food security but priority is given for industry and housing. UPA has less comparative advantage than industry and housing except agro processing.
	District Land Administration and authorization Office	Important for employment and food security but priority is given for industry and housing. UPA has less comparative advantage than industry and housing except agro processing
<b>Group 2:</b> Those with good leadership and medium power (level 2)	Woreda Council	Employment creation & income generation
	Sub city and Woreda Agricultural Offices	Food security, resource use, green area & urban life
	District health Office	Has a role to supply balanced food, but is the cause of public health problem in inner city especially riverside vegetable production and inner city dairy production
	Addis Ababa Water and Sewerage Authority	Green area, food & conservation but no priority
<b>Group 3:</b> those who do not have good leadership but assume high to medium power (level 2 or 3)	Sanitation and Beautification Authority	Income, catchment protection and food
	Federal Ministry of Agriculture	Food security & poverty alleviation, but health & traffic problem
<b>Group 4:</b> those with no good leadership and minimal power (level 1)	Ethiopian Society of Animal Production	Economic & ecological benefit but has pollution
	Ethiopian Forestry Society	Economic & ecological benefit but has pollution
	Horticultural Society of Ethiopia	Economic & ecological benefit but has pollution
	Ethiopian Veterinary Associations	Economic & ecological benefit but has pollution

### 3.2. Stakeholders knowledge analysis

Stakeholders were categorized into two groups on the basis of knowledge level; those with the highest knowledge level (3) and those with medium

level (2). In contradiction to Kammi (1999), no stakeholder was identified at the lowest knowledge level (Table 3.2).

When knowledge level data was examined in correspondence with power/leadership analysis, in order to evaluate the influence of knowledge level on leadership capacity of stakeholders, knowledge seemed to have low effect on leadership capacity in UPA. As an example, professional societies are more knowledgeable but categorized under no leadership and minimum power group. Though professional societies are knowledgeable and are able to lead the UPA program, they were not assuming the leadership role due to resource limitations.

Table 3.2: Stakeholders knowledge analysis

Name of stakeholders	Importance of stakeholders	Knowledge
ENDA Ethiopia	Group 1	level 3
USAID Urban Garden Program	Group 1	level 3
Office of Agriculture in Addis Ababa City	Group 1	level 3
Emanuel Development Association	Group 1	level 2
Regional and District SMEs	Group 1	level 2
District Council	Group 1	level 2
Sub city and District Agricultural Offices	Group 2	level 3
Sanitation and Beautification Authority	Group 2	level 2
Ministry of Agriculture	Group 3	level 2
Ethiopian society of Animal Production	Group 4	level 3
Ethiopian Forestry Society	Group 4	level 2
Ethiopian Horticultural science Society	Group 4	level 3
Ethiopian Veterinary Associations	Group 4	level 2
Addis Ababa Environmental Protection Authority (AAEPA)	Group 1	Level 3
City Plan and Information Agency	Group 1	Level 2
District Land Administration and Authorization Office	Group 1	Level 2
District Health Office	Group 2	Level 2
Addis Ababa Water and Sewerage Authority	Group 2	Level 2

The knowledge data was also cross-referenced with the position of the stakeholders in order to check those opposed to the UPA program had consistently low level of knowledge. But, in contrast to belief, the data show

that those in the opposing group were equipped with medium to higher level of knowledge (**Annex III**). Stakeholders, such as, Addis Ababa EPA, City Plan and Information Agency, District Land Administration and Authorization office, District Health office and Addis Ababa Water and Sewerage Authority (AAWSA) can be mentioned in this category.

### 3.3.Supporters and opponents of UPA

Based upon this analysis, two groups of stakeholders were identified: those who support UPA, because of its advantage to food security, poverty alleviation, income generation, employment creation and efficient resource utilization and those who oppose the UPA program because of more concern to public health, air pollution and inefficiency of the sector as compared to other businesses like industry and housing. After analyzing the interest and position of stakeholders,thirteen of the eighteen stakeholders lie under supporters group, while five of them were categorized under opponent group as tabulated below (Table 3.3.1).

Table 3.3.1 Interest and position analysis of supporters of UPA program

Name of supporters	Importance of supporters	Knowledge	interest analysis or advantage/disadvantage	I/E
ENDA Ethiopia	Group 1	level 3	Food security & income for poor family	E
USAID Urban Garden Program	Group 1	level 3	Food security,& income for poor family	E
Office of Agriculture in Addis Ababa City	Group 1	level 3	Food security, resource use, green area & urban life	I
Emanuel Development Association	Group 1	level 2	Food security & income for poor family	E
Regional and District SMEs	Group 1	level 2	Employment, income & food security	E
District Council	Group 1	level 2	Employment & income creation	E
Sub city and District Agricultural Offices	Group 2	level 3	Food security, resource use, green area & urban life	I
Sanitation and Beautification Authority	Group 2	level 2	Income, catchment protection and food	E
Federal Ministry of A Agriculture	Group 3	level 2	Food security & poverty alleviation, but health & traffic	I

Name of supporters	Importance of supporters	Knowledge	interest analysis or advantage/disadvantage	I/E
			problem	
Ethiopian society of Animal Production	Group 4	level 3	Economic & ecological benefit but has pollution	E
Ethiopian Forestry Society	Group 4	level 2	Economic & ecological benefit but has pollution	E
Ethiopian Horticultural science Society	Group 4	level 3	Economic & ecological benefit but has pollution	E
Ethiopian Veterinary Associations	Group 4	level 2	Economic & ecological benefit but has pollution	E

Table 3.3.2: Interest and position analysis of opponents of UPA program

Name of Opponents	Importance of Opponents	Knowledge	Interest Analysis or Advantage/Disadvantage	
Addis Ababa Environmental Protection Authority (AAEPA)	Group 1	Level 3	Economic & social benefit but UPA is the cause of pollution and inappropriate land use in especially riverside buffer areas. Animal production also is the source of Methane and odour.	E
City Plan and Information Agency	Group 1	Level 2	Important for employment and food security but priority is given for industry and housing. UPA has less comparative advantage than industry and housing except agro processing.	E
District Land Administration and Authorization Office	Group 1	Level 2	Important for employment and food security but priority is given for industry and housing. UPA has less comparative advantage than industry and housing except agro processing	E
District Health Office	Group 2	Level 2	Has a role to supply balanced food, but is the cause of public health problem in inner city especially riverside vegetable production and inner city dairy production	E
Addis Ababa Water and Sewerage Authority	Group 2	Level 2	Green area, food & conservation but no priority	E

### 3.4. Alliances to UPA

Identification of supportive alliances can reinforce the UPA program and help to devise a strategy that separates a potentially threatening alliance in order to convert them to supportive alliance. Supporting alliances with stakeholders’ expectations are listed on table 3.4.1, while the potentially threatening alliances are listed on table 3.4.2 below.

Table 3.4.1 Potentially supportive alliances to UPA

<b>Potential sources of supportive alliances</b>	<b>Stakeholders’ expectations in relation to the UPA process</b>	<b>Suggestions for implementation of sustainable UPA practices</b>
<ul style="list-style-type: none"> <li>• ENDA Ethiopia</li> <li>• USAID Urban Garden Program</li> <li>• Office of Agriculture in Addis Ababa City</li> <li>• Emanuel Development Association</li> <li>• Regional and District SMEs</li> <li>• District Council</li> <li>• Sub City and District Agriculture Offices</li> <li>• Sanitation and Beautification Authority</li> <li>• Ministry of Agriculture (medium supporters)</li> <li>• Ethiopian Society of Animal Production</li> <li>• Ethiopian Forestry Society</li> <li>• Horticultural Society of Ethiopia</li> <li>• Ethiopian Veterinary Associations</li> </ul>	<ul style="list-style-type: none"> <li>• sustainable UPA</li> <li>• implementation of UPA policy</li> <li>• efficient land and water use</li> <li>• increase the productivity of UPA to play its role as income, food and other social functions using improved technology</li> </ul>	<p>All stakeholders participation</p> <p>The city master plan that considers UPA and green areas as part of the city plan should be respected by planners and land implementers</p>

## 3.4.2 Potentially threatening alliances to UPA

<b>Potential sources of opposing alliances</b>	<b>Stakeholders' concerns in relation to UPA process</b>	<b>Suggestions for implementation of sustainable UPA practices</b>
<ul style="list-style-type: none"> <li>• Addis Ababa Environmental Protection Authority</li> <li>• City plan and Information Agency</li> <li>• District Land Administration and Authorization Office</li> <li>• District Health Office</li> <li>• Addis Ababa Water and Sewerage Authority</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental pollution due to improper waste use</li> <li>• Public health problem due to unhealthy UPA practices</li> <li>• Costly to use potable water for UPA</li> </ul>	<ul style="list-style-type: none"> <li>• proper UPA practice and city land use</li> <li>• land zoning for different sectors of activities</li> <li>• avoiding pollution</li> <li>• care for public health and water use</li> </ul>

#### 4. Discussion

Power and leadership are important characteristics that determine stakeholders' ability in the implementation of a policy or a program, thus, becomes the basis for stakeholders' analysis. Prioritization for selecting stakeholders was based on actual data whereby the city focuses resources on addressing the concerns to the most important of the priority stakeholders. Stakeholders with medium to high power and with better interests in this analysis are considered as decision makers and/or governmental institutions, or NGOs who have been investing more on UPA. Therefore, it is important to fully engage and bring them on board in trying to change the situation of UPA in the city. On the other hand, those stakeholders with high power but low interest or leadership should be kept satisfied and ideally brought around as patrons or supporters for the proposed policy change. In this analysis, stakeholders identified as those who do not have leadership role but had high to medium power, need some change in strategy to provide support for appropriate UPA implementation. Identifying stakeholders based on their knowledge level is important in order to devise a communication strategy to

those with the low knowledge level (Kammi, 1999). Once stakeholders' importance and interests have been identified, there is a need to evaluate their degree of participation and the information they require (De vivero, 2007). Therefore, the city office of agriculture should design a strategy in order to work with stakeholders based on their importance, knowledge level and interest. The strategy should be able to help supporters to become active in implementing UPA programs and neutralizing opponents in addressing the concerns of stakeholders.

## **5. Conclusion**

Through stakeholder analysis, the importance, knowledge, interest, position and possible alliances among the stakeholders on UPA were identified. Thus, power and leadership are the characteristics that determine stakeholders' ability to affect or block the implementation of UPA program. Based on their level of knowledge, stakeholders were also analyzed into two groups: stakeholders in the first category were those with the highest level of knowledge, while those of the second category were with medium level knowledge. Eighty percent of the stakeholders consider the advantage of UPA and thus are supporting the present situation and their interest lies on the advantage of UPA to food security, employment creation, income diversification, efficient resources utilization, poverty alleviations, and for better urban life situations in the city.

Most of the opposition groups also agree on the advantage of UPA stated above, but with some concerns. According to the latter, UPA is the cause of pollution and public health problem. Especially, vegetable production in riverside buffer areas and animal production in inner city areas were considered inappropriate land use systems. Moreover, some of the



opposition groups (city plan and land administration offices) believe that UPA has less comparative advantage as compared to industry and housing sectors.

Possible stakeholder alliances were identified. Thirteen organizations are found to lie in supporting alliances and the remaining five in opposing alliances.

According to the findings of this study, the following are some of the key questions that require further research. Different cases of agricultural practices should be studied in order to understand farming practices that are best suited and feasible to each part of the city. Stakeholders' analysis should be conducted by including many stakeholders to obtain a more comprehensive result. As in most countries, urban farmers in Addis Ababa are not well organized and, therefore, do not have full power; and women farmers had also other interests and approaches than the male counterparts. The relatively recent master plan and land zoning system in Addis Ababa considers UPA as part of environmental municipal planning. Thus, it needs a system that makes use of stakeholders initiated lobbying of policy makers and planners in order to implement the envisaged master plan.

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## Appendices

### Annex I: Sample General List of Stakeholders

The following table illustrates general information on priority stakeholders interviewed, and participated at different steps in the data collection process with a justification for each group's inclusion in the analysis for the stakeholders' analysis as well as the district urban agriculture situation analysis.

Sector	Sub-sector and its questionnaires code	Internal/external to office of agriculture in Addis Ababa	Interviewed	Reason chosen/relation to UPA
Regional/political org.	Code 01	External	1	Council representatives have significant effects on urban policy design and implementations. Those interviewed are involved in the issues related to the topic. Consider UPA as employment and income generation activity
	District Council-Manager			
Public entities: MoA& office of agriculture in Addis Ababa	Code 02	Internal	1	At national level and its subsidiaries' Federal Ministry of Agriculture (MoA) will be expected for planning and implementation of UPA practices and projects. But at this time there is limited activity in UPA except participation in city UPA policy development and training for some interested groups. However, they believe, it has contribution to food security and poverty alleviation programs in city
	MoA (Federal Ministry of Agriculture) – development partner linkage expert			
	Code 03	Internal	2	They are responsible for designing and implementation of urban agricultural practices in the city. Providing monitoring and evaluation, input and technical. support services for farmers and subsequent UPA officers in sub city and district. To produce more in small area with improved technology
	Regional UA office-crop and livestock experts			
	Code 04			Implement the existing UPA practices. Give day to day technical

Sector	Sub-sector and its questionnaires code	Internal/external to office of agriculture in Addis Ababa	Interviewed	Reason chosen/relation to UPA
	Sub city and District UA officers		2	support to individual farmers and cooperatives
Public entities other than MoA& office of agriculture in Addis Ababa city	Code 05	External	1	Responsible for issues related to pollution or public health hazard due to UPA practices. Promote small scale UA for micro nutrient supplementation in public diet. However, they have opposition concerning animal agriculture in the urban center due to public health risk. For them UPA is small scale agriculture useful for balanced diet and waste removal
	Ministry of health (MoH)/district health office (health extension supervisor)			
	Code 06	External	2	Responsible for issues related to sustainable urban land development and use. They are also responsible for implementing the city master plan, but give priority to industry and service sector development than UPA
	City plan & Information agency (deputy head and expert)			
	Code 07	External	1	Responsible for issues related to sustainable urban land development and use system (acquisition, availability and accessibility) at district level. Moreover, issues related to urban land market and property rights.
	District land administration and authorization office head			
	Code 08	External	1	Responsible for quality and sustainable urban water development and use including production, distribution and quality control. They believe that using water for UPA is uneconomical and not faire at present city water situation, but promote farmers to dig their own wells 500m away from drinking water wells
	Water & Sewerage Authority: (production and distribution head)			
	Code 09	External	1	Responsible for beautification and managing open spaces and green areas development in the city. They are working in partnership with UPA office, AAEPa, and dry waste administration agency for urban waste utilization. UPA small scale agriculture for income generation, employment creation, food security
	Sanitation and Beautification Agency (research and design officer)			

Sector	Sub-sector and its questionnaires code	Internal/external to office of agriculture in Addis Ababa	Interviewed	Reason chosen/relation to UPA
	Code 10 Addis Ababa Environmental Protection Authority (AAEPA)-researchers	External	3	They are working in research concerning biodiversity and ecological problems. They are also concerned about green infrastructures like parks, riverside plantations. Moreover, they recommend appropriate species for parks riversides. They believe urban agriculture can fit in urban planning, but they have reservation the present UPA situation especially animal agriculture in the city center due to high methane emission and vegetable production by polluted river water.
	Code 11 Ethiopian Society of Animal Production (Chairman)	External	1	They deliver information related to its profession and networking. Produce technical input for policy makers about sustainable animal production and use.
	Code 12 Ethiopian Society of Veterinary Sciences (coordinator)	External	1	They deliver information related to its profession and networking. Produce technical input for policy makers about sustainable horticultural production and use.
	Code 13 Ethiopian Society of Veterinary Sciences (coordinator)	External	1	They deliver information related to its profession and networking. Produce input for policy makers about animal disease and related public health.
	Code 14 Ethiopian Forestry Society-Chairman	External	1	They deliver information related to its profession and networking. Produce technical input for policy makers about sustainable forest plantations and natural resources use.
	Code 15 Micro & small enterprise agency	External	2	Organize small scale urban agriculture practitioners in different agricultural practices like vegetable production, chicken farming and beekeeping enterprises. Promote UPA for the purpose of

Sector	Sub-sector and its questionnaires code	Internal/external to office of agriculture in Addis Ababa	Interviewed	Reason chosen/relation to UPA
	(officer at regional and district SMEs office)			employment creation and facilitate open land for agriculture on temporary bases. Work on capacity practitioners capacity building
NGOs	Code 16	External	1	Promote household agriculture for nutrition supplement. They give technical, financial and material support to small scale urban farmers, focusing on marginalized group (women, PLWHAS) at family level
	Environmental Development Action (ENDA Ethiopia)-coordinator			
	Code 17	External	1	Promote small scale UPA on land and above land techniques to supplement nutrient and income of families. Focus on orphan and vulnerable children and families. They provide technical support to families working on urban agriculture, based on no external input or organic principle. They also give technical, financial and material support to those government and nongovernment organization working in UPA sector. Moreover, they fully supported city UPA policy development. Oppose practices that do not conform with their organization no external input principle.
	USAID Urban Garden Program (expert)			
	Code 18	External	1	Promote UA among the livelihood programs. They give technical, financial and material support to small scale urban farmers, focusing on marginalized group (women, PLWHAS, poor) at family level through integrated, community based, sustainable development program. Material support includes seed, equipment, beehive, cows and water pumps.
	Emanuel Development Association (EDA)-coordinator			



## **Annex II: Descriptions of stakeholders' characteristics (adapted from Kammi 1999)**

**A. I.D. No:** given for the stakeholder on the questionnaire and sample general list of stakeholders in (Annex 1)

**B. Position and organization:** Position for the stakeholder in the organization that he/she works for.

**C. Internal/External:** (I) Internal —stakeholders that work within the organization that is promoting or implementing the program; all other stakeholders are considered external (E).

**D. Knowledge of UA program:** This column is divided into two parts. The first part, D1, is the level of accurate knowledge the stakeholder has regarding the program under analysis. This knowledge should be rated from 3 to 1: 3 – a lot; 2 – some; 1 – none. Final rankings should be reviewed to ensure consistent scoring among all of the stakeholders. The second part of the column, D2, is to record how each stakeholder defines the program in question. The information gathered in question #3 of the questionnaire should be noted here in the stakeholder's own words.

**E. Position: Supports/Opposes/Neutral:** Position refers to the stakeholder's status as a supporter or opponent of the program. The position of the stakeholder can be obtained by gathering information directly from the stakeholder (i.e., self-reporting); and through information gathered indirectly from other stakeholders or secondary information (i.e., others' perceptions). Thus, the reporting in this column represents the self-reported classification (column E1), the classification by others (column E2), and a final classification considering both (column E3). The position of the stakeholder should be reported from this final classification (column E3). Stakeholders who agree with the implementation of the UA program are considered supporters (S); those who disagree with the UA program are considered opponents (O); and those who do not have a clear opinion, or whose opinion could not be discerned, are considered neutral (N). Those who express some agreement, but not total agreement with the UA program should be classified as moderate supporters (MS). Finally those who express some, but not total, opposition to the UA program should be classified as moderate opponents (MO). Thus, in column E1, the position of the stakeholder as they state it in the interview should be entered (S, MS, N, MO, or O). In column E2, the

position of the stakeholder as perceived by other stakeholders and/or from secondary information should be entered with a reference to the ID number of the person who stated that opinion. For example, S --19 would mean that stakeholder number 19 stated in his or her interview that the stakeholder under analysis would support UA program. In column E2, the position of the stakeholder as others perceive it should be entered (S, MS, N, MO, or O) with the ID number for each opinion. Lastly, in column E3, the final determination for the position of the stakeholder should be entered (after entering data from all interviews). This position should take into account the self-reported position as well as other stakeholders' opinions. S, MS, N, MO, and O can be entered in this column.

**F. Interest:** This refers to the stakeholder's interest in the UA program—or the advantages and disadvantages that the implementation of the UA program, may bring to him or her or his or her organization. Advantages and disadvantages mentioned by each of the stakeholders should be entered into this column in as much detail as possible, since the information will be used primarily in developing conclusions and strategies for dealing with the stakeholders' concerns.

**G. Alliances:** “a union or relationship” (Webster, 1984). Alliances are formed when two or more organizations collaborate to meet the same objective, in this case to support or oppose program

Any organizations that are mentioned by the stakeholder in the questions related to this item should be entered in this column.

**H. Resources:** “a source of support or aid” (Webster, 1984). Resources can be of many types—human, financial, technological, political, and other. Thus it is considered the stakeholder's access to all of these resources. The resource category is divided into two parts: the quantity of resources that a stakeholder has within his or her organization or area, and the ability to mobilize those resources. The quantity of resources used as 3 – many, 2 – some, 1 – few and inserted into column H1 of the stakeholder table. Since this score is relative, final rankings should be reviewed to ensure consistent scoring among all stakeholders. The ability of the stakeholder to mobilize resources should be quantified in terms of 3 – the stakeholder can make decisions regarding the use of the resources in his or her organization or area; 2 – the stakeholder is one of several persons that makes decisions regarding the use of resources; 1 – the stakeholder cannot make decisions regarding the use of the resources. This score should be inserted into column H2. For

example, if the stakeholder has personnel that work for him or her, it can be concluded that the stakeholder has the ability to mobilize these resources because he or she has direct influence over them.

**I. Power:** “the capacity or ability to accomplish something...strength, force or might” (Webster, 1984). Here, power refers to the ability of the stakeholder to affect the implementation of UA program due to the strength or force he or she possesses. Since “power” is defined here as the combined measure of the amount of resources a stakeholder has and his or her capacity to mobilize them, the two resource scores implied should be averaged, resulting in a power index between 3 and 1: 3 – high power, 2 – medium power, and 1 – little power. The final rankings should be reviewed to ensure consistent scoring among all stakeholders.

**J. Leadership:** “to direct the activity...to start, begin...front, foremost” (Webster, 1984). Leadership is specifically defined here as the willingness and ability to initiate, convoke, or lead an action for or against the UA program. The stakeholder either has or lacks this characteristic. This is represented with “yes” or “no.”

**Annex III: Sample Stakeholders Analysis Table**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>		<b>E</b>				<b>F</b>	<b>G</b>	<b>H</b>		<b>I</b>	<b>J</b>
ID	Position & Organization	Internal or External	Knowledge		Position				Interest	Alliances	Resources		Power	Leadership
No		I	D1	D2	E1. Self	E2. Others		E3. Final	Advantage & Disadvantage	Organization mentioned	H1. Quantity	H2. Ability to mobilize	Resources average	yes
		E	Level	Definition	S, MS,	S, MS	ID	S, MS,			3,2,1	3,2,1	3,2,1	No
			3, 2, 1		N, MO, O	N,MO, O	No	N, MO, O						
<b>01</b>	District Council manager	E	2	Annex 1	S	-	-	S	Employment & income creation	03,04,07, 18	3	2	2.5	yes
<b>02</b>	MOA development linkage expert	I	2	”	MS	-	-	MS	Food security & poverty alleviation, but health & traffic problem	10 & 17 Others SNV, LANDO Lakes	3	2	2.5	no
<b>03</b>	City’s Office of agriculture experts	I	3	”	S	S	all	S	Food security, resource use, green area & urban life	01, 04, 09, 15, 16, 17 &Others PICDO	3	2	2.5	yes
<b>04</b>	Sub city and district UA officers	I	3	”	S	S	01030718	S	Food security, resource use, green area & urban life	01,03, 15, 19 &Others ESCO, ACDI/VOC A	2	2	2	yes

**Annex III: Conti.,**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>		<b>E</b>			<b>F</b>	<b>G</b>	<b>H</b>		<b>I</b>	<b>J</b>	
ID No	Position & Organization	Internal or External	Knowledge		Position			Interest	Alliances	Resources		Power	Leadership	
		I	D1	D2	E1. self	E2. others		E3. final	Advantage/ disadvantage	Organization mentioned 3,2,1	H1. Quantity	H2. Ability to mobilize	Resources average	yes
		E	level	definition	S, MS,	S, MS	I.D	S, MS,			3,2,1	3,2,1	3,2,1	no
			1,2,3		N, MO, O	N,MO, O	No	N, MO, O						
<b>05</b>	District health extension supervisor	E	2	Annex 1	MO	MO	03,04 11,12 16,18	MO	Balanced food, but public health problem in inner city	17	2	2	2	yes
<b>06</b>	City Plan Information Agency (deputy head)	E	2	”	MO	MO	04, 07	MO	Employment and food security but no priority to UA	07,17	3	2	2.5	yes
07	District Land Administration & Authorization Agency-head	E	2	”	MO	MO	04, 07	MO	Employment and food security but no priority	01,04, 06	3	2	2.5	yes
<b>08</b>	AAWSA	E	2	”	MO	MO	03,04 11,12 16, 8	MO	Green area, food & conservation but no priority	16,17,	2	2	2	yes

**Annex III: Conti.,**

A ID No	B Position & Organization	C Internal or External	D Knowledge		E Position			F Interest	G Alliances	H Resources		I Power	J Leadership				
			I	D1	D2	E1. self	E2. others			E3. final	H1. Quantity			H2. Ability to mobilize	Resources average	yes	
		E	level	definition	S, MS,	S, MS	I.D	S, MS,	Advantage/ disadvantage	Organization mentioned 3,2,1	3,2,1	3,2,1	no				
			1,2,3		N, MO, O	N,MO, O	No	N, MO, O									
<b>09</b>	Sanitation & Beatification Agency- research officer	E	3	Annex 1	S	-	-	S					Income, catchment protection and food	03, 10 & Others Dry Waste Management Agency	2	2	2
<b>10</b>	(AAEPA- researchers	E	3	"	MO	MO	03,11 14, 16	MO	Economic & social benefit but pollution	03 Others EPA	3	2	2.5	yes			
<b>11</b>	Ethiopian Society of Animal Production	E	3	"	S	S	03	S	Economic & ecological benefit but pollution	03,17	1	1	1	no			
<b>12</b>	Ethiopian Horticultural Science Society	E	3	"	S	-	-	S	Economic & ecological benefit but pollution	03,16,17 Others Jimma University	1	1	1	no			
<b>13</b>	Ethiopian Veterinary Association	E	2	"	S	-	-	S	Economic & ecological benefit but pollution	03,17, Others FAO, CDC	1	1	1	no			

**Annex III: Conti.,**

A ID No	B Position & Organization	C Internal or External	D Knowledge		E Position			F Interest	G Alliances	H Resources		I Power	J Leadership		
			I	D1	D2	E1. self	E2. others			E3. final	H1. Quantity			H2. Ability to mobilize	Resources average
			E	level	definition	S, MS,	S, MS	I.D	S, MS,	Organization mentioned 3,2,1	3,2,1	3,2,1	3,2,1	no	
				1,2,3		N, MO, O	N, MO,O	No	N, MO, O						
<b>14</b>	Ethiopian Forestry Society	E	2	Annex 1	S	-	-	S	Economic &ecological benefit but has pollution		03, Others EPA, MoWR	1	1	1	no
<b>15</b>	SMEs regional & district officers	E	2	”	S	S	03,11	S	Employment, income & food security	03,11,18	3	2	2.5	yes	
<b>16</b>	ENDA Ethiopia - coordinator	E	3	”	S	S	03, 17	S	Food security & income for poor family	03, 17 Others FAO, RUAF	3	3	3	yes	
<b>17</b>	USAID Urban Garden program- expert	E	3	”	S	S	03,04, 05,11, 16, 18	S	Food security,& income for poor family	03,04,16 Others WFP, Pact JECCDO	3	2	2.5	yes	
<b>18</b>	EDA- coordinator	E	2	”	S	S	04,17	S	Food security & income	04,15, ECI-Africa	3	2	2.5	yes	