



Addis Ababa University  
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***An Assessment of Green Area Development in Addis Ababa with  
Particular reference to Gullele Sub city***

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**COLLEGE OF SOCIAL SCIENCE**

This is to certify that the thesis prepared by Gebeyehu Ayenew entitled: '*Assessment of Urban Green area Development in Addis Ababa with particular reference to Gullele Sub city*' and submitted in partial fulfillment of the requirements for the Degree of Masters of Arts (in Land Resource Management) complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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Internal Examiner \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

External Examiner \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

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**Chairman of Department Graduate Committee**

## **Acronyms**

**AABPCADA**-Addis Ababa Beautification, Parking and Cemetery Administration and Development Agency

**ECA**- Economic Commission for Africa

**MUDHC**-Ministry of Urban Development, Housing and Construction

**OECD** -Organization for Economic Cooperation and Development

**UNEP-United Nations Environmental programme**

**SCBPCDAO**-Sub City Beautification, Parking and Cemetery Administration and Development Office

### **The Place to be when you're Lonely**

*"Parks are delightful places  
They have the sweet smells  
Of laughter, joy, and happiness  
The grass as green as anything  
Trees as big as mountains  
Oh, this place to be when you're lonely,  
You get happy in a flash."*

**-by Noa Mirsch**

London Elementary School, 3<sup>rd</sup> Grade,

As cited in the Cottage Grove City park standard and definitions guideline



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## **Abstract**

*It is obvious that many urban areas are predominantly covered by concretes and nature is becoming less accessible for the existing and the coming generation. The study of this research has focused on the plan, implementation & management and the extent to which residents' utilize green areas, mainly focused on city parks using primary and secondary data.*

*The City Government has planned to develop 40% of the city with greenery at the year 2003. But, till 2014, it is not successful to achieve its plan mainly due to lack of strong enforcement of the Local Development Plan (LDP) and poor land use management. The existing major green area components (forests and city parks) have a total size of 8229.7 hectare (15.24% of city's area) with limited degree of development. The up keeping and management of green areas in general and city parks in particular is limited mainly due to Lack of experienced human resource. Lack of clear legislation & justice, less participation of the community, and lack of sufficient documentation related to green area development has also contributed for the conversion, damage and limited development of green areas.*

*Even though residents are aware of about the importance of green areas, the facility of existing City parks is very poor and their location & size is less accessible. Thus, frequency of visiting parks is limited mainly due to unattractive facility of parks, shortage of time, distance and transport factors.*

*Thus, the city government is expected to create a green frame at watershed level; sufficient and stable man power; strong planning, monitoring and Evaluation system; clear standard and naming; modern documentation and spatial Data (GIS); active community involvement; and sufficient facilities of parks.*

# **Chapter One: Introduction**

## **1.1. Background of the Study**

After the 1992 Rio meeting, understanding the development of a community or a country has changed. To be sustainable, development has to be reasonable across its social, economic and environmental issues. Reconciling the social, economic and environmental pillars of sustainable development requires a clear design and implementation of policy efforts, mainly the environmental one.

Actual green space availability of urban areas and its sustainability depends on the degree of resource planning and implementation as an integrated whole, or system. Whether we are conscious of it or not, humans and their built environment are consistent with the elements of nature like the soil, water, plants, air and animals (Center for Green Infrastructure Design, 2013).

The process of speedy urbanization caused unnatural environment and resulted in its own impact on the physical and mental development of people, who entered into a yearning for natural areas (Bayram et al, 2012). In addition to this, urban resident's demand for green space increases with an increase in their time of leisure, pressure of work, stress and research.

## **1.2. Statement of the problem**

Urban green areas are important to sustain the existence of habitat, biodiversity, infiltration of water, subsurface and underground water, and fresh air and normal noise (Hayal et al, 2011). If the storm water needs to be absorbed by the soil, plants play a pivotal role to slow down the speed of the run off. So that contaminated/toxic surface & rain water can be treated in the soil. This scientific analysis should be indoctrinated in the mind of citizens.

Otherwise it is difficult, not only to develop, but also to expect green space existence, especially in the urban areas. Thus, scientific awareness of the citizens and government is necessary to give attention to urban green space development.

The identification of challenges and opportunities regarding green spaces are clarified by using three main issues; spatial (distribution, land use change) organizational (administration offices) and economic (financial) aspects. These issues are reproduced in the planning, implementing and maintaining of green spaces (Green keys Team, 2008).

Some studies have suggested that from the total urban land areas, 10% of tree cover is necessary to create an ecologically sustainable city (Singh et al. 2010). Addis Ababa has 22,000 hectare(40.74% of the total area of the city) of green space on the former master plan, but only 89 hectares has been developed (MUDHC, 2011). This is 0.94m<sup>2</sup> per individual of the city which is far more below the standard of WorldHealth organization (9m<sup>2</sup>per head).

Having a very good master plan by itself has nothing to do for a society, unless it could not get strong commitment to be implemented on the ground and has no appropriate land management systems. To give a typical example, Maekelawi /Peacock/ park (Bole Sub city) has been seriously misused and converted to other kinds of land use like residential, horticulture, parking, shopping, waste dump and some others were fenced for nothing (Alemakef, 2010). And currently the government has planned to construct a relatively advanced zoo park, Addis Zoo Park, and re-delineated 26.1 hectare of this park.

As a federal planning, monitoring and evaluation expert of the urban sector I have tried to observe the plan and performance report documents of Regional States and the two City Governments. I have also participated in the regular

Semi-annual Evaluation of the urban sector performance. In both cases, I haven't seen detailed and focused plan and report regarding green areas in particular and environment in general. These things initiated me to choose my thesis title and undergone a research on green area development.

Thus, many studies have been conducted in urbanized and industrialized countries concerning the planning, implementing and maintaining of urban open spaces, especially after the 1990s. When we come to Africa, particularly Ethiopia, the study and development of urban green space is very limited. As a result, we do not know the extent to which plans are implemented, what factors contributed to these gaps and to what extent people are using the existing green areas. So, the investigation of this research will focus on these issues, with particular emphasis on the city parks and to some extent roadside greenery and Cemeteries of Addis Ababa.

### **1.3. Objectives of the Study**

The general objective of this study is to assess the extent to which green areas in general and city parks in particular are developed and utilized in the city.

The specific objectives of this study are to:-

1. Examine the extent to which green area development plans are implemented in the city.
2. Assess the salient features of the management of public green areas in the city.
3. Examine the extent to which and the ways in which the residents of the city use public green areas.
4. Identify the key legal, justice, institutional, economic and location factors that constrain the development of green areas in the city.

5. Assess the supply side of green area development and the demand side of recreational areas.
6. Come up with constructive recommendations that could help to improve the quality and usability of public green areas in the city.

#### **1.4. Research Questions**

1. What gaps exist between the plan and implementation of public green areas in Addis Ababa?
2. Do the existing green areas of Addis Ababa receive timely and effective up keep?
3. To what extent and in what way do the residents of Addis Ababa use public green areas?
4. What are the key legal, institutional, social, cultural, economic and location factors that constrain the development of public green areas in Addis Ababa?
5. Is there a gap between the supply side of green area development and the demand side of recreational areas?
6. What are the key measures that need to be taken in order to improve the status of public green areas in Addis Ababa?

#### **1.5. Significance of the Study**

This research can be used as a spring board to study the situation of urban green areas in Addis Ababa in particular and Ethiopia in general in addition to the partial fulfillment of MA degree for the researcher.

#### **1.6. Scope and Limitation of the Study**

The scope of the study is focused on management, legal, justice, implementation, and economic issues at city level and at sub city level (Gullelle). The household data regarding users` awareness, interest, visiting

frequency and factors of visiting parks are collected and analyzed at sub city level.

### **1.7. Limitation of the study**

Different variables of household characteristics like income level, educational level, gender, education and disability have their own influence on the frequency of visiting parks but they were not included due to time and energy constraints. The other limitation of the study is lack of quantified and GIS data of 2003-2010 master plan of the city to enrich the study. Due to this it is difficult to calculate the exact size of the current components of urban green areas. To minimize such limitations the evaluation document of 'The 2003-2010 master development plan implementation' has been used.

### **1.8. Organization of the Paper**

The research was organized by collecting primary and secondary data both from the government (officials and experts and document analysis) and the community through dispatching and collecting questionnaires. Interviews, questionnaires and personal observations were employed to collect the data related to green areas.

## Chapter Two: Literature Review

### 2.1. The Concept of Green Space

Different disciplines have used the term urban green areas with various modifications like; urban green space, Urban Greenland System, Ecological Greenland System, and Green Open Space, urban green Infrastructure, etc. The term urban green areas simply mean `any vegetative space that is found in the area of urban land`. It is also important to see some definitions given by different authors.

Bayram (2012) have defined the term urban green space as follows;

*"Urban Green spaces refer to those land uses and land cover that are covered with natural or man-made vegetation in the city and planning areas".*

Alamrew (2002) has defined green areas as formal and informal;

**Formal green areas include:** *protected public parks, street gardens, play grounds, sport fields, squares, private gardens, and vegetation cover in schools, hospitals, churches, mosques, embassies, cemeteries, parking lots, pedestrian lanes, etc.*

**Informal green areas include:** *forest areas, river valleys, reserved expansion areas, agricultural lands, open leftover spaces, grazing lands, steeper degraded areas, shrub lands, etc.*

Tüzin et al, 2004, in the EU URGE project have also defined it as follows;

*"By urban green spaces we understand public and private open spaces in urban areas, primarily covered by vegetation, which are directly (e.g. active or passive recreation) or indirectly (e.g. positive influence on the urban environment) available for the users".*

It is also important to see definitions of Park and Cemetery since they are major focus areas of this research. They are defined in Webster.com dictionary as follows:

*“Park is A piece of public land in or near a city that is kept free of houses and other buildings and can be used for pleasure and exercise; a large area of public land kept in its natural state to protect plants and animals, sports; a field or stadium where a sport (especially baseball) is played. Cemetery is an area set apart for or containing graves, tombs, or funeral urns, especially one that is not a churchyard; burial ground; graveyard”.*

## **2.2. The Importance of Green Spaces**

City dwellers consume three fourth of the earth`s ecosystem resource, though cities occupy only 2% of the planet (UNEP, 2010). The development of human life and culture, whether urban or rural, is directly or indirectly affected by the existence and diversity of green plants. Thus, the existence of plants on earth is one of the most essential for humans and other animals to exist. The most commonly known importance of Ecosystems/plants include; purifying, detoxifying and mitigating droughts and floods; providing oxygen, food, fibre and fuels; curing human disease as sources of medicine; non-material benefits like aesthetic, spiritual, educational and psychological benefits; public health; and recreational opportunities(UN Habitat, 2012). A number of recent findings have also showed detail benefits of green areas in urban areas as follows.

Green spaces perform as cleanser of the entire environment; they trap floating particles and unsteady organic matter from the atmosphere, their roots alter the organic waste matter into plant nutrients with the help of micro-organisms, and they capture the rain and surface water to move down into the soil and purified water will be available in the form of ground water and stream or river (Hayal et al, 2011). Due to absence of green spaces and permeable soil and dominance of asphalt and concrete land of the cities the rate infiltration is highly reduced. Thus, forests that covered mountain hills assist to accumulate fresh water, revitalize water tables, and minimize wearing down of the soil by retarding overflow (Natura, 2000).

An air temperature released from a park of 1.2km by 1km is noticeable up to 4km away; 5 to 10% heating and cooling cost can be saved by 10% increment of tree cover in the city; cities with sufficient greenery are visually pleasant and attractive for residents and investors; and green areas increase their adjacent property values and financial re-turns for land developers by 5% to 15% (Bayram et al, 2012).

Parks were known as simple contributors of physical and visual quality for the urban locality. But recent findings go beyond the usual view and parks are priceless providers to larger urban policy goals, such as contributing employment opportunities in the community; helping youth to build physical, intellectual, emotional, and social strength; improve public health by offering fresh air and mental relief; reduce obesity and stress; and bringing people together as a social capital (The Urban Institute of America, 2004).

The greenhealth Webb of Washington University (2012) pointed out that, exposure to nature assists the mind; to relax and return from tiredness, to increase concentration, to improve job and school performance, and to be free from stress and illness. Thus, having excellent scenery and plant life in and around the places where people live is a good asset.

## **2.3. Green Space Development**

### **2.3.1. Problems to develop Green spaces**

The Ethiopian Herald, on its January 11/2014 press, has pointed out that Green areas are known to provide quantifiable environmental profits like microclimate betterment, carbon storage and sequestration, reduction/removal of air and sound pollution, water quality maintenance, and Biodiversity conservation. It has also exemplified Mexico City and Sao Paolo as role models in designing and implementing integrated trees and other

vegetation as part of their urban environmental programs, policies, and measures.

OECD (2013) has also its own ecological worries and justified that human health and well-being needs unharmed environment, which is the source of pleasure; improves mental well-being, allows people to recover from the stress and to perform their activity efficiently and effectively. Thus, managing the urban environment in sustainable manner will be one of the major challenges in the future.

Executive Director of UN-Habitat, Anna Tibaijuka, 2009, talked in her speech for the forum: *"The challenge to create green growth is to integrate economic, environmental and social policies to make our cities economically more competitive, ecologically more sustainable, and socially more inclusive and gender responsive"*. She also added that numerous economic, funding, regulatory, institutional and political opportunities are emerging like energy efficient activities, new jobs and carbon trading. This is because many decision makers of the world are being aware of the need to move on the way to a green growth. Of course this may not be exactly true for Africa.

The obstacles to develop green spaces in Africa include: rapid urbanization, low resource base of institutions on green spaces, lack of priority to green spaces, corruption, uncooperative attitudes of the local people and political instability (Collins, 2014). He also added that, to address these problems, combined and dedicated efforts by national governments, city authorities and the local people to protect these areas is vital.

Development of urban green space is a difficult issue to understand, mainly because of the long-term natural processes for the growth and maturation of the living elements; they correspond to communal values; and have significant function for the wellbeing and health of the residents. Thus, to

have better development and management of urban green spaces, they should be categorized based on their typology, function, location, size and importance (Green keys Team, 2008).

To evaluate the makeup of Urban Green Spaces in 24 cities of Europe, Baycan-Levent and his equals (2004), set out five adaptable criteria and ten sub criteria/indicators based on their societal, money-making, environmental or planning aspects and purposes. These were:- *"quantity and availability of urban green spaces, changes in green spaces, planning of urban green spaces, financing of urban green spaces and level of performance"*.

To enhance greening it is necessary to combine and strengthen the connection between recent technologies and public policies (C. Y. Jim, 2013). In addition to these, awareness, norms, customs, regulations, prosperity, authority, institutions, values and traditions are significant elements to be considered in developing urban ecological units (Pickett et al.1997, cited in Nancy B. Grimm and his associates, 2000).

If cities are to keep on existing, they must consider the cautions of ecosystem damage and address problems of purposeful decision making. This is possible by authorizing planning experts to take action fast and successfully in implementing a centralized master plan by the use of appropriate knowledge, infrastructure and good governance (Amin A, 2011, cited in UN habitat 2012).

### **2.3.2. City Park Development and its Users**

According to Peter Harnik (2006), 25 urban and park discussion experts met for concentrated two-days in Houston in October 2001 to talk about an admirable and triumphant city park system, and finally pointed out seven major qualities:

- *A clear expression of purpose*

- *An ongoing planning and community involvement process*
- *Sufficient assets in land, staffing, and equipment to meet the system's goals*
- *Equitable access*
- *User satisfaction*
- *Safety from crime and physical hazards and*
- *Benefits for the city beyond the boundaries of the parks.*

Parks can be underused or misused mainly due to long walking distance (about 0.5 mile or 10 minute walk), unreasonable cost of entrance charges, Poor maintenance and wrongdoings or crimes (Heidi M. Blanck et al, 2012). He also added, *"sufficient information about the parks (location, signs, signals and maps), Programs that push park familiarity (park events, guided walks, organized classes and club meetings), facilities (relaxed seating, radiation, food, water), and safer and more reasonably priced transport are important preconditions for parks to be used, not only by those who are in good physical shape, but also those struggling with severe physical and mental health problems who can profit a lot from parks."*

The reasons that discourage people from using urban green spaces can be individual cases (shortage of time, disability or sickness, working unsocial hours and inclination to visit other spaces) or relating to the urban green space resources (location, accessibility, facilities, ecological excellence or customer knowledge of urban green spaces) (Nigel Dunnett et al, 2002). The latter is a homework that should be solved by planners, designers and managers.

According to Aziz, N.A.A (2012), the frequency and the time spent by people on parks depends on the nature of urban green space's characteristics (appearances and facilities, size, accessibility, aesthetics, condition, and safety) and user characteristics (age, gender, ethnicity, education and

disability). Thus, urban planners, designers and green space managers have to use GIS to organize and visualize the data related to green areas and these recreational sites must be designed in accessible and attractive manner for the community. To this end Peter Harnik (2006) has put the following points:

*The citizenry must clearly set forth in writing the purpose of the park system and a mandate for the park department. While most park agencies have plans, too often they never reach fruition because key elements are trumped by other agencies or private interests. Big-city park systems range in size from almost 20 percent of a city's area down to 2.5 percent. Despite the saying "If you don't measure, you can't manage," many cities do not have accurate figures on their systems. The excellent city park system is accessible to everyone regardless of residence, physical abilities, or financial resources. By definition, the outstanding city park system is well used. Having high usership is the ultimate validation that it is attractive and that it meets people's needs. High attendance also increases safety because of more "eyes on the park." To be successful, a city park system should be safe, free both of crime and of unreasonable physical hazards—from sidewalk potholes to rotten branches overhead.*

Regarding the definition of parks, there is no nationally agreed up on standard, the community can develop appropriate parks according to its budget and material resources. It is awkward and costly to develop individual standards, but Park types, facilities standards, and location criteria can be used as a baseline for City park planning, attainment, development and upkeep (NRPA, 1996).

#### **2.4. Urban Green areas in Ethiopia**

Standardized urban life is a problem for Addis Ababa dwellers, largely the result of unwise urban development policies and programs (UN-Habitat, 2007). Slum and squatter settlements become more dominant than the

planned ones. The same source also added, paradoxically, the city has practiced very small designed advancement to date, even though it has motivated a number of master plans by well-known professionals. Undone backlogs, Project design and implementation problems are also critical both for the private and government sector. Thus, focusing on the socio-economic and political factors in utilizing resources for development is a priceless idea to have a sustainable prosperity. And there is no doubt that these problems (squatter and slum) have direct and indirect impact on the development of city parks.

In order to develop an urban society, land is a primary resource. Geoffrey Payne and Associates (2011), as a consultant of MUHDC, suggested that the major gaps of urban land management in Ethiopia (particularly Addis Ababa) are land development, land administration, land information and real property registration. This is mainly due to lack of sufficient data, legal framework, regular monitoring system, appropriate technologies and expertise in the field. Thus, without appropriate and implemented land management system for different land use/land cover in the urban areas, it is ideal/imaginary to have a green area component on the ground.

New York City has more than 1000 Parks covering around 102,000 hectare of land, having Central park is the largest and influential with full of facilities. The city of Paris has also more than 140 parks and gardens covering 22km<sup>2</sup> or 1/5<sup>th</sup> of its total area (MUHDC, 2011). Comparatively, the city Addis Ababa has not more than 15 functional parks (about 81 hectare) and they are also with poor facility. Thus, the city needs more green space and more investigation on its green areas.

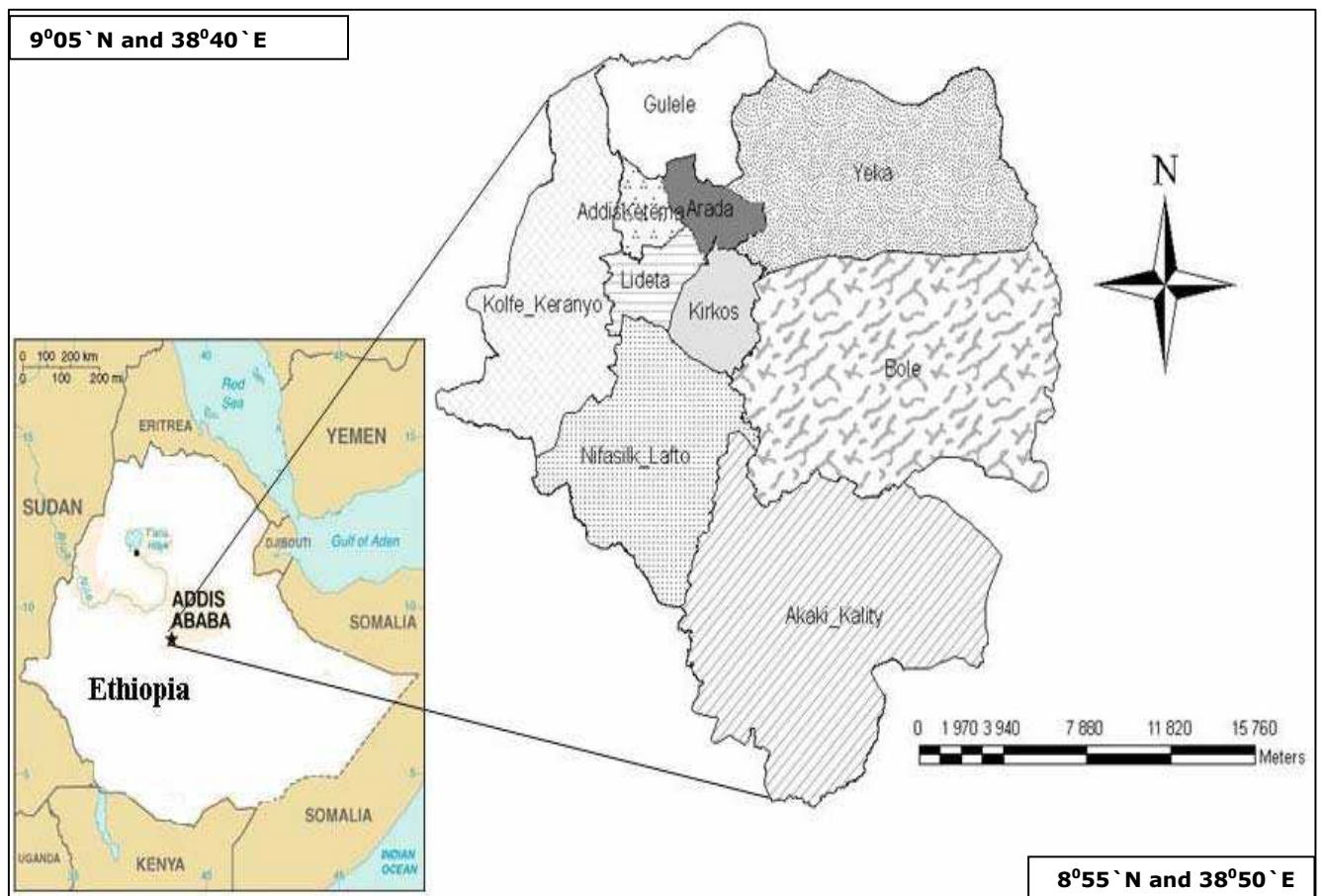
According to urban greenery strategy of MUHDC (2011), the major problems of green space implementation are lack of sense of ownership from the government and the community and gap of judiciary aspects to manage and

maintain green areas in the urban land. Like that of Addis Ababa, similar problems exist in the other towns of Ethiopia i.e. green space per individual for Adama 2.1m<sup>2</sup>, Shashemene 1.9m<sup>2</sup>, Dessie 3.1m<sup>2</sup>, Jigjiga 3.8m<sup>2</sup>, DreDawa 5.6m<sup>2</sup> and Bahir Dar 8.2m<sup>2</sup>.

## Chapter Three: Description of the Study Area

### 3.1. Location

Addis Ababa, the capital of Ethiopia, is located at the geographical center of the country. Its absolute location is between 8°55' and 9°05' North latitude, and 38°40' and 38°50' East longitude. The City was established in 1887 and has shown a great geographical expansion to the area of about 540km<sup>2</sup>. Addis Ababa has an average temperature of 16°C and its altitude ranges from 2,326m.a.s.l (Bole International Airport) having a concave slope to 3,200m.a.s.l (Entoto mountains).



Map 1- Map and location of Addis Ababa in reference to Ethiopia

**Source:** Addis Ababa Beautification, Parking and Cemetery Development and Administration Agency (AABPCADA)

### 3.2. Climate

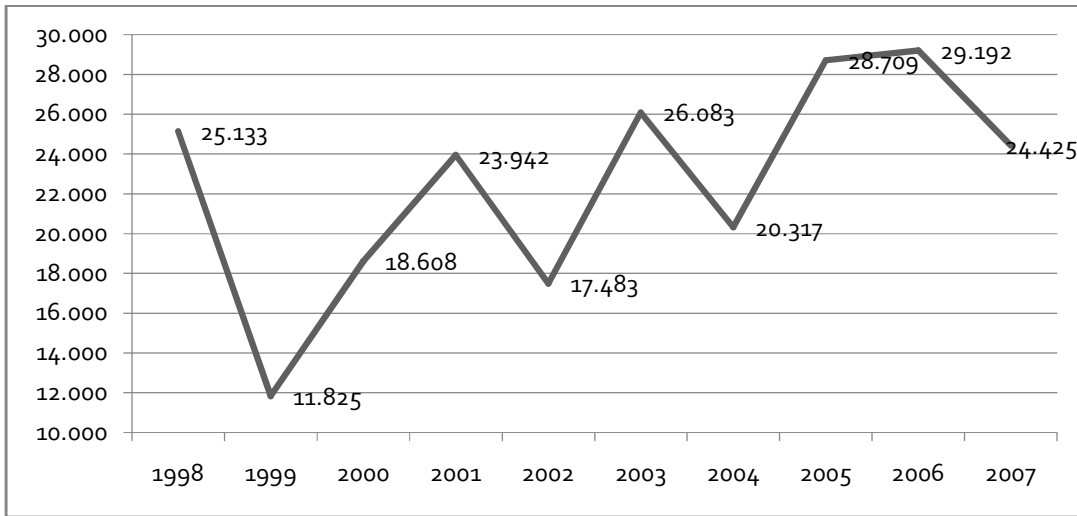
Addis Ababa has a subtropical highland climate (Köppen: Cwb, 2005). The average maximum temperature in the study area varies from 24.3°C in May to 20.3°C in August; the average minimum temperature varies from 11.8°C in May to 7.7°C in December (Muschalla, 2001, cited in Endale, 2013). Generally, the temperature varies less through the year. The city has Mean annual RF of 1200mm, but there is no even distribution during the course of the year as we can see from the table below;

**Table 1: Average monthly rainfall data of Addis Ababa from 1998-2007**

| <b>Year</b>    | <b>J</b>    | <b>F</b>    | <b>M</b>    | <b>A</b>    | <b>M</b>    | <b>J</b>  | <b>JY</b>   | <b>A</b>    | <b>S</b>    | <b>O</b>    | <b>N</b>   | <b>D</b>   | <b>Annual maximum</b> |
|----------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|-------------|------------|------------|-----------------------|
| 1998           | 32.2        | 8.5         | 14.9        | 16.6        | 43.3        | 27        | 27.2        | 28.9        | 24.7        | 78.3        | 0          | 0          | <b>78.3</b>           |
| 1999           | 2.9         | 0.3         | 5.8         | 5.8         | 4.4         | 22        | 27.4        | 37.4        | 20.5        | 15.4        | 0          | 0          | <b>37.4</b>           |
| 2000           | 0           | 0           | 15.2        | 15.3        | 28.5        | 26        | 29.3        | 26.7        | 37.2        | 25.1        | 20         | 0          | <b>37.1</b>           |
| 2001           | 0           | 11.6        | 96.3        | 13.5        | 23.8        | 20        | 42.5        | 41.4        | 33.5        | 4.7         | 0          | 0          | <b>96.3</b>           |
| 2002           | 4.6         | 14.6        | 23.3        | 25.9        | 29.5        | 20        | 29.3        | 25.8        | 25.6        | 0.2         | 0          | 11         | <b>29.3</b>           |
| 2003           | 10.5        | 26.5        | 33.4        | 31.1        | 18.9        | 18        | 46.2        | 31.3        | 40.1        | 0.8         | 1.2        | 55         | <b>54.9</b>           |
| 2004           | 12.7        | 19.7        | 17.1        | 29.6        | 10.5        | 16        | 33.2        | 36.5        | 24.3        | 44.2        | 0          | 0          | <b>44.2</b>           |
| 2005           | 21.4        | 26.2        | 32.8        | 58.6        | 35.6        | 24        | 42.6        | 46.8        | 25.5        | -           | 2.3        | 0          | <b>46.8</b>           |
| 2006           | 0.7         | 5.2         | 70.9        | 16          | 51          | 43        | 40.8        | 30.3        | 61.9        | 27.2        | 0.3        | 3          | <b>70.9</b>           |
| 2007           | 24.8        | 11.9        | 24.4        | 25.2        | 34.1        | 34        | 46.3        | 64          | 16.6        | 11.8        | 0          | 0          | <b>64</b>             |
| <b>Average</b> | <b>10.9</b> | <b>12.4</b> | <b>33.4</b> | <b>23.7</b> | <b>27.9</b> | <b>25</b> | <b>36.4</b> | <b>36.9</b> | <b>30.9</b> | <b>20.7</b> | <b>2.3</b> | <b>6.9</b> | <b>55.9</b>           |

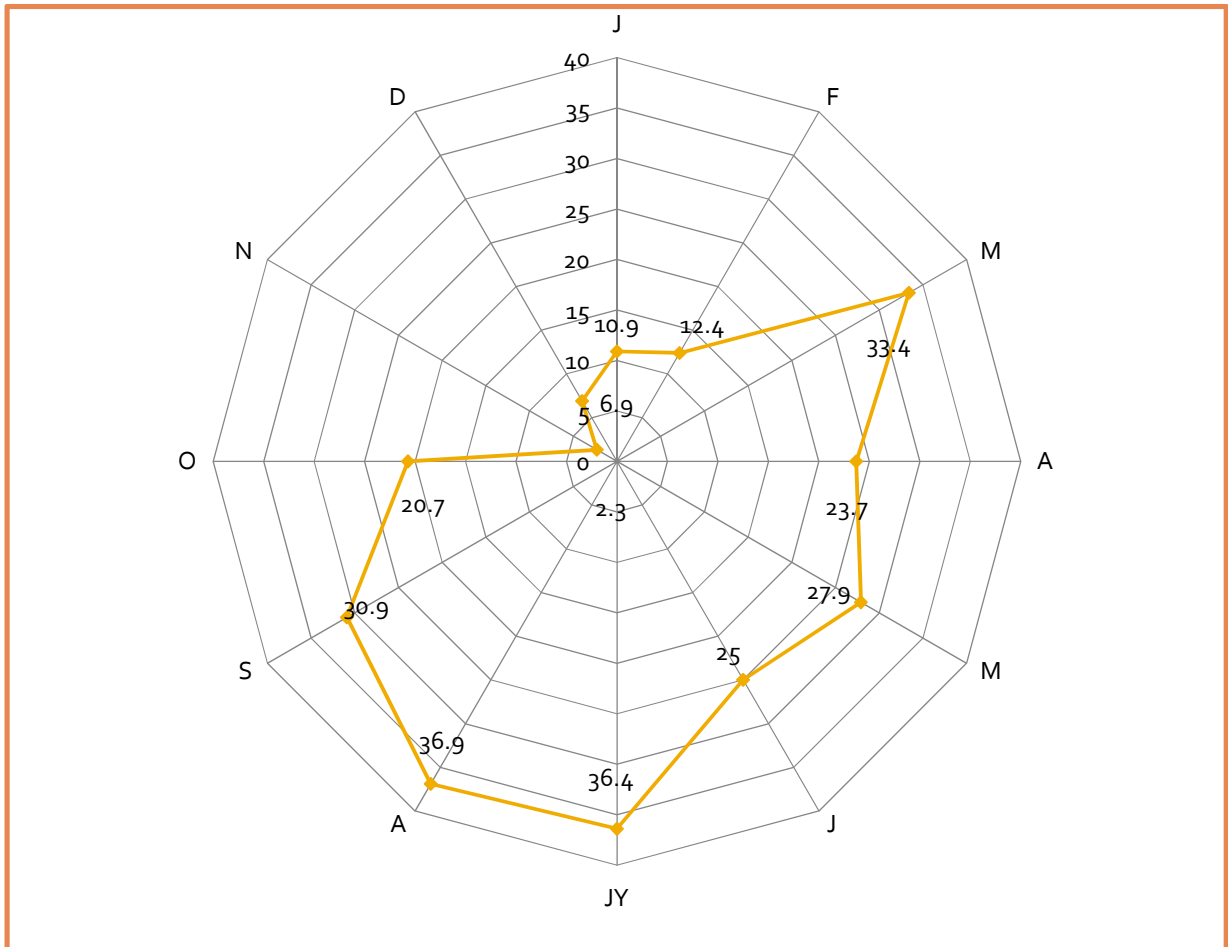
Source: Ethiopian Meteorology Agency, 2009

**Line graph-Ten years average annual average rain fall distribution /1998-2007/**



Source: Source: Ethiopian Meteorology Agency, 2009

**Chart-radar-Ten years average monthly rain fall distribution /1998-2007/**



Source: Ethiopian Meteorology Agency, 2009

### **3.3. Vegetation**

Since Ethiopia has a wide altitudinal range from 120m b.s.l at Dalol to 4,533m b.s.l at Ras Dashen, the country is endowed with diversity of vegetation.

After the foundation of the City (1886), a number of eucalyptus plantations become dominant around Gullelle and Yeka sub-cities. Eucalyptus tree aggravate surface flow of water for flooding since it doesn't allow undergrowth and insects to exist (Kissa, 2001, cited in Endale 2013).

According to Hayal et al. 2011 and annual reports, currently the city is endowed with 15 parks with a total area of 817,164 meter square, and 8148 hectare of urban forests in the same source the study area, Gullelle sub city, alone has three city parks with a total area of 152,177 meter square and 1120 hectare of urban forest.

### **3.4. Population**

The population of Addis Ababa is currently about 3,434,000 according to the 2014 population projection with annual growth rate of 3.8% (CSA: 2013). The same report shows that 47.4% of the City's populations are males and the rest 52.6% are females. Gullelle Sub city has an area of 32.73km<sup>2</sup> with 335,443 Population size and density of 10,249 persons per km<sup>2</sup>. Based on the same source, the population size of the Sub cities is shown in table 2.

**Table 2; Population Density of Addis Ababa Sub Cities, 2014**

| <b>Sub City</b>           | <b>Population Size</b> | <b>Area in km<sup>2</sup></b> | <b>Population/km<sup>2</sup></b> |
|---------------------------|------------------------|-------------------------------|----------------------------------|
| <b>Addis Ababa Total</b>  | <b>3,434,000</b>       | 540                           | 6,359                            |
| AkakiKaliti-Sub City      | 227,182                | 126.1                         | 1,801                            |
| Nefas Silk-Lafto-Sub City | 396,486                | 63.59                         | 6,235                            |
| KolfeKeraniyo-Sub City    | 537,561                | 65.1                          | 8,257                            |
| Gulele-Sub City           | 335,434                | 32.73                         | 10,249                           |
| Lideta-Sub City           | 252,842                | 12.4                          | 20,390                           |
| Kirkos-Sub City           | 277,346                | 16.26                         | 17,057                           |
| Arada-Sub City            | 265,141                | 11.56                         | 22,936                           |
| Addis Ketema-Sub City     | 320,053                | 8.98                          | 35,641                           |
| Yeka-Sub City             | 434,599                | 82.3                          | 5,281                            |
| Bole-Sub City             | 387,355                | 120.9                         | 3,203                            |

Source CSA: (2007)-The 2014 Population and Housing Census Report, August 2013

## **Chapter Four: Research Methods and Procedures**

### **4.1. Study Design**

The study design of this research is observational including descriptive and analytical methods. For primary data, non-participant observation, interview of core process owners, structured questionnaires and focus group discussions were used. For secondary data, BPR manual, 5 year and annual plan and report documents and literatures were reviewed from hard and soft copies.

### **4.2. Sampling**

To collect data from the government side, 3 Officials were interviewed, one from the Gullelle sub city Beautification Parking Cemetery Administration and Development Office (BPCADO) and two from the Addis Ababa Beautification Parking Cemetery Administration and Development Agency (AABPADA). A total of 10 experts (3 experts from AABPCADA, 2 from the ministry of Urban Development Housing and Construction and 5 from Gullelle sub city offices) were employed to respond questionnaires and 11 City park managers were interviewed with structured questions. Three focus group discussions comprising 9 experts from 3 institutions (AABPCADA, Gullelle sub city Environmental Protection Office and Gullelle sub city Beautification Parking Cemetery Administration and Development office), one group from each, have also been used to collect relevant information.

Gullelle sub city has been selected for its proximity and availability of large size of forests and some city parks with much slum area. This helps to know accessibility, facility of city parks, and existing problems of green areas. The sub city has 10 woredas and purposeful sampling was used to select 3 woredas to collect household data to know the demand, awareness, frequency of visiting, accessibility and facility of city parks. These were

woreda 2 in the area where one city park (Hamle 19) is located, woreda10 at the periphery with no park and woreda 8 at the middle (Sheger Park is located at the boarder). There are also other woredas which has no park, but woreda 10 is selected it is not only because it has no park, but also it is relatively far from other parks in its vicinity.

Based on Robert V. Krejice and Daryle W. Morgan`s (1970) formula  $^1\{s = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}\}$ , 375 subjects are needed to be a respondent for 16,523 households in the 3 sample woredas, but only 209 households are employed to collect the primary data concerning the awareness, frequency of using and accessibility of parks mainly because of time and budget constraints. Of course it has been tried to be balanced by having an in-depth interview with the government officials and few elderly people of woreda 7.

Various factors/variables affect frequency of park visitors and to consider these variables two age groups /youth from 15-29 age and adults from 30+/ were considered. According to 2007 population census of Ethiopia the youth population was 42.43 percent from the total and the researcher has decided that 43% of the respondents from the youth age group and the rest 57% of the respondents were adults by considering that they can represent other age groups as a head of family. In addition to this the researcher has observed that there were many youth park visitors, as a spouse and peer group, and he believed that it is necessary to include more number of youth as a source of data for the research to make the research more representative and valid. The selection was made with proportional size of the total household population from each woreda. Based on this scenario, from Woreda-two 33 adult and 25 youth, subtotal 58; woreda-eight 50 adult and 38 youth,

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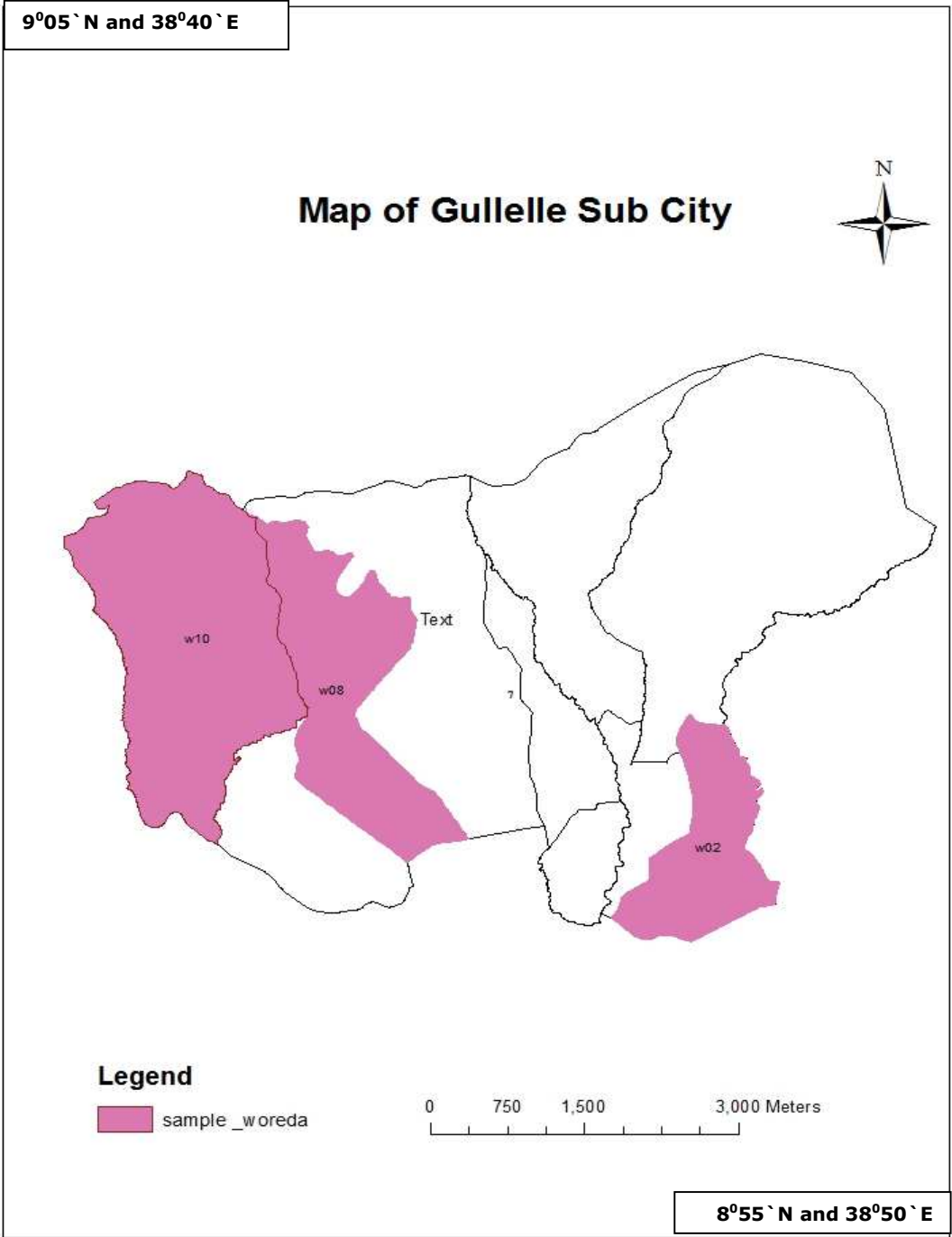
<sup>1</sup> $s$  = required sample size,  $X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level, (3.841),  $N$  = the population size,  $P$  = the population proportion (assumed to be .50 since this would provide the maximum Sample size), and  $d$  = the degree of accuracy expressed as a proportion (.05).

subtotal 88; and woreda-ten 36 adult and 27 youth, subtotal 63 respondents were selected. To this end, questionnaires were dispatched and collected for 90 Youth and 119 adults. The respondents were selected using Systematic (every 6<sup>th</sup> household) sampling technique was used to collect data from adults, and snowball sampling technique /*Ekub* (*traditional saving association*), Government meetings, groceries/ was used to collect data from the elderly with in the category of adults to make the study more sound. Cluster sampling was used to collect data from youth in grade 12 preparatory and level-3 & 4 technical & vocational schools.

**Table 3: Sampling**

| Place Name               | Number of household units | Adult sample | Youth sample | Total sample | City Parks   |
|--------------------------|---------------------------|--------------|--------------|--------------|--------------|
| <b>Gullelle Sub City</b> | <b>58,465</b>             | <b>119</b>   | <b>90</b>    | <b>209</b>   |              |
| Woreda 1                 | 6,843                     |              |              |              |              |
| <i>Woreda 2*</i>         | <i>4,580</i>              | <i>33</i>    | <i>25</i>    | <i>58</i>    | Hamle 19     |
| woreda 3                 | 6,440                     |              |              |              |              |
| Woreda 4                 | 2,877                     |              |              |              | Ethio- Korea |
| Woreda 5                 | 5,196                     |              |              |              |              |
| Woreda 6                 | 5,005                     |              |              |              |              |
| Woreda 7                 | 8,650                     |              |              |              |              |
| <i>Woreda 8*</i>         | <i>6,967</i>              | <i>50</i>    | <i>38</i>    | <i>88</i>    | Sheger       |
| Woreda 9                 | 6,931                     |              |              |              |              |
| <i>Woreda 10*</i>        | <i>4,976</i>              | <i>36</i>    | <i>27</i>    | <i>63</i>    |              |

\*- Woredas where sample households selected



Map2: Map of Gullelle Sub city Woredas

### **4.3. Methods of Data Collection**

The study participants or respondents to collect data of the research were government experts, officials and Gullelle residents. These respondents were used to collect data concerning the supply of green areas (availability, management, performance, development and budget allocation) by the government through the involvement of the community. The experts were employed both in the questionnaire and focus group discussion to collect an in depth data. More of qualitative and some quantitative data were collected from these respondents. Experts and officials under Addis Ababa Beautification, parking and cemetery development and administration agency working at the city, sub city, woreda and park level. To study the demand side of parks data was collected from sample woreda households.

The methods used to collect data were non-participant observations, focal group discussions, structured questionnaires and interviews. Field observation of 14 city parks was done to collect data on the current situation of city park development and to point out possible suggestions to handle the problems in the parks. Three focus groups, one from the Agency and two from Gullelle sub city (Beautification, Parking and Cemetery Administration and Development Office and Environmental Protection Office), were invited to discussion the challenges and opportunities of green area Development in general and city park development in particular.

Structured questionnaires were dispatched for experts who are working in the greenery areas from the agency to the woreda level. Questionnaires were also used to collect household data from sub City dwellers including youths and adults. Structured interviews were also used for government officials and city park managers.

#### **4.4. Methods of Data Analysis**

The collected data were analyzed using descriptive, tabular and analytical methods. Tables, graphs and percentages are used to analyze the collected data. Real pictures that show the current situations of parks and proposed designs of some parks are used to enrich the study. Different maps and a recent Google images are used to describe the current status of green area coverage in Gullelle area.

## **Chapter Five: Data Analysis**

### **5.1. Green area Development plan (2003–2010) of the city and its Implementation**

From the very beginning, as to my observation, the city's green area development plan map of 2003-2010 was not standardized as it is visible below. The problem of green area development begins here and it is difficult to identify the components of urban green areas.

According to Evaluation team (Hayal et al. 2011) of the 2003–2010 green frame development plan of Addis Ababa, to accomplish green frame tasks the city has established different institutions like Environmental Protection Agency (EPA) which is responsible for development and management of forests in the upper catchment areas and Greens along the river banks of the city. City Park development, pedestrian & road strip green area development and management are the responsibility of Beautification, Park and Cemetery Development and Administration core process (after 2010 called agency) and Addis Ababa Road Authority, while Urban Agriculture is the duty of Urban Agriculture Extension core Process under the Bureau of Trade and Industry. There were also Non-governmental institutions like Ethiopian Heritage Trust, Integrated Family Service Organization, Clean and Green Addis Ababa Initiative, Environment and Development Action (ENDA), Amanuel Development organization and Gash Abera Molla.

Using these institutions, for the past 7 to 10 years, the City government has set major goals like relocation of fuel wood plantation, establishment of floral and faunal conservation areas, development of Parks and rehabilitation of river banks, green areas and quarry sites. Based on these targets the evaluation team has put the following conclusions in qualitative manner due to absence of quantitative data in the area.

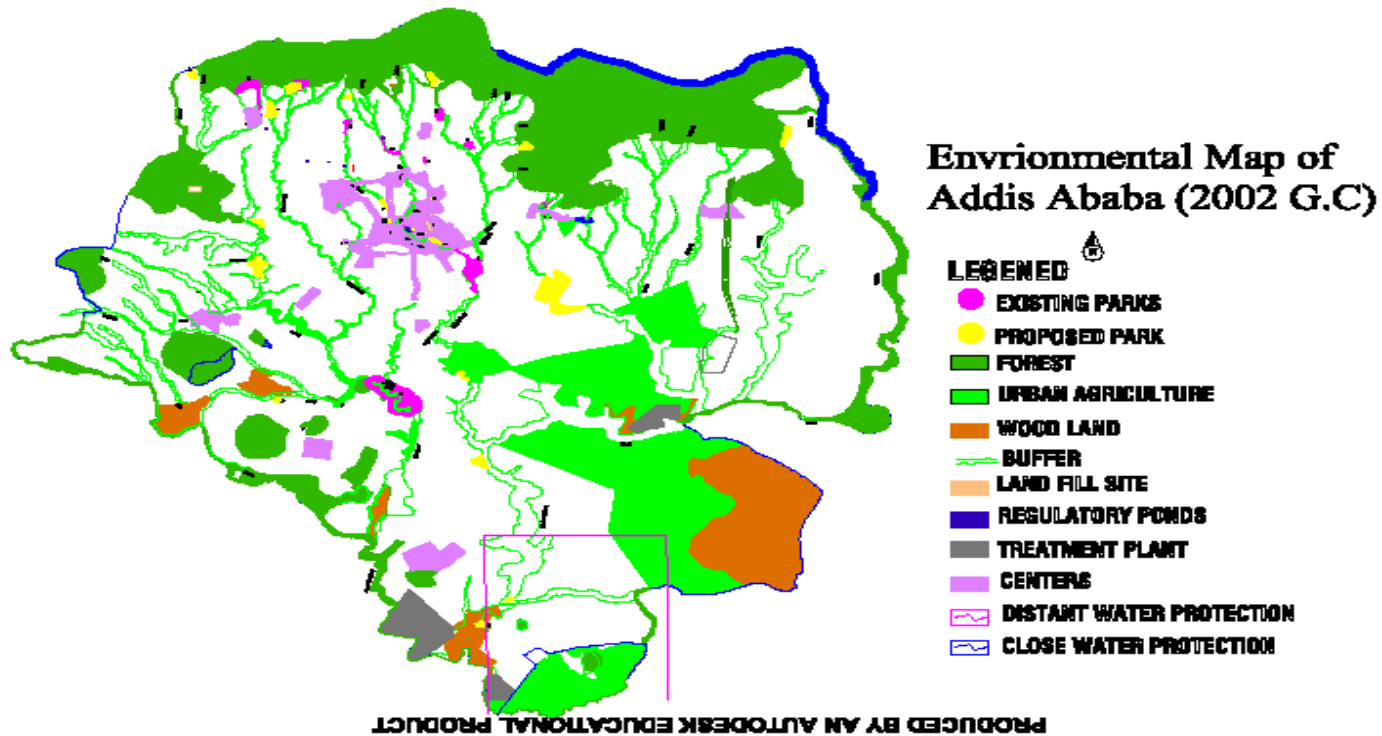
To mention some activities that were done; the Rehabilitation activities, soil & water conservation and planting of more than 5 million tree seedlings has been performed at the top catchment of the city (about 8000 hectare) extending from Entoto to Kotebe. To prevent land degradation due to quarrying the binding law obliges the client to have a feasibility study before a mining license is issued and money in closed account to rehabilitate by the land at the end of the quarrying, like Gerji quarry site. When the client wants to take away the money in his closed account it should be approved by EPA whether s/he has rehabilitated the land based on the agreed up on agreement and so that a written statement is issued for the Bank.

In order to conserve the flora and fauna, EPA and AAU have jointly established a Gullelle botanical garden which is administered by a project office. It covers 710 hectare of land in Gullelle and Kolfe-Keraniyo sub-cities. A medicinal and ornamental plant garden has also been demarcated 1,300 hectare of land at the top hill of Yeka sub-city.

Regarding the transfer of Entoto fuel wood plantation to the flat area south of Bole international airport, it was undone and the replacement of eucalyptus tree by indigenous species has begun. The first reason was that the Entoto land has long been affected by degradation and before indigenous trees are replaced the land has to be rehabilitated by fitting soil and water management actions. The second reason was that the proposed land for future fuel wood plantation is not decided for EPA to relocate the fuel wood plantation.

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Map3: Environmental Map of Addis Ababa master plan from 2003-2010

Source: Addis Ababa City administration urban Planning Institute

Even though there are seven main rivers, six intermediate and 75 little branches and streams in the city, they are highly abused for settlement and polluted with waste. According to EPA experts, it is estimated that around 92,000 residents are settled in the buffer zones. Therefore, the planning of river bank development has to be seriously revised.

In relation to Park Development, a new city park has been established at abandoned quarry site of Gerji. Re-establishment of Zoological Garden within the central park (peacock) has begun in cooperation with Leipzig (Germany). Upgrading existing parks, park roads, fencing, greenery design/redesign, planting has been done in some parks here and there. But much of it has not been done due to lack of site plan.

There was also a plan to establish a linear park and river bank improvement from Estifanos to Ethio-Cuba Friendship monument, but was not accomplished due to lack of man power capacity. Street tree planting took place in some part of the new and existing roads, and integration of cemeteries with green areas and parks has been done in very limited amount.

In general, according to the evaluation team of green frame sub-component Development Plan of Addis Ababa and available secondary sources of Addis Ababa Beautification Parking and Cemetery administration and Development Agency in terms of the size and management of green area in the city, the performance of green frame was meager.

On the other hand the current unverified master plan (2014-2024) is also planned to developed 26,169.27 hectare green area, 48.46% of the city (See the map in the appendix). New sites in the renewal and peripheral areas like Adwa park (Bole Sub city), Lideta, Bashawolde, etc are also proposed and under going on the process of green area development, but as

to my opinion I have big doubt to make these plans practical with the current pace of green area development.

## 5.2. Availability of Urban Green Areas

When we talk about availability of green spaces, we should consider the area coverage and their per capita, biodiversity, location and accessibility of city parks and other green area components. Thus, even though the areal size of green area components are not clearly quantified by the master plan of 2003-2010, the city has 8,148 hectare of forests and from these more than 20 percent of the total is found in Gullelle sub city (Hayal et al, 2011). In addition to this, according to personal observations and Addis Ababa Beautification, Parking and Cemetery Administration and Development Agency (AABPCADA), there are 15 functional parks having an area of 81.7 hectare, which is less than the MUHDC, 2012 data (89 hectare). As it has been in the table below, the total area of existing forests and city parks is 8,229.7 hectare, which is 15.24% of the total area of Addis Ababa (54,000 hectare). Of course this size will increase if we add the other components of green areas that are found in pocket areas of the city like road medians, residential and institutional gardens, buffer zones, churches, private gardens, etc.

**Table 4: Location and size of urban forest in Addis Ababa**

| No.          | Name of the place                         | Sub-city         | Area (ha)    |
|--------------|---|------------------|--------------|
| 1            | Asko, Gojam Ber, Raguel, Kuskuam          | Gullelle         | 1120         |
| 2            | Entoto, Mariam, Ankorcha Yeka Kersa, Kara | Gullelle & Yeka  | 4344         |
| 3            | Bole Arabsa, Bole Bulbula                 | Bole             | 248          |
| 4            | Tuludimtu, Salo Medhanealem               | Akaki-Kality     | 280          |
| 5            | Lebu, Dertu, Gedowasha                    | Nefas Silk-Lafto | 726          |
| 6            | Repi, Jemo, Fildero                       | Kolfe-Keranyo    | 1430         |
| <b>total</b> |   |                  | <b>8,148</b> |

Source: Hayal Desta, Kumelachew Yeshitela, Wondwossen Abera (2011) Evaluation of the 2003 – 2010 Development Plan of Addis Ababa City

**Table 5: List of major City parks in Addis Ababa**

| No           | Name of the park         | Sub city location | Total Area in meter square |
|--------------|--------------------------|-------------------|----------------------------|
| 1            | Hamle 19 Park            | Gullelle          | 67,968                     |
| 2            | Yekoreazem/memorial park | Gullelle          | 30,209                     |
| 3            | Sheger Park              | Gullelle          | 54,000                     |
| 4            | Anbesa Gibi Park         | Arada             | 12,000                     |
| 5            | Ferencay Park            | Yeka              | 48,575                     |
| 6            | Yeka Park                | Yeka              | 22,000                     |
| 7            | Golla Mikael Park        | Lideta            | 9,625                      |
| 8            | Ethio-Cuba Park          | Lideta            | 29,803                     |
| 9            | Teklehaymanot Park       | Lideta            | 4,371                      |
| 10           | Ambasader Park           | Arada             | 9,393                      |
| 11           | Africa Park              | Kirkos            | 45,702                     |
| 12           | Akaki Park               | AkakiKaliti       | 62,518                     |
| 13           | Bihere-tsigie Park       | Nifas Silk Lafto  | 140,000                    |
| 14           | Kolfemenafesha           | KolfeKeraniyo     | 20,000                     |
| 15           | Maekelawi (peacock)Park* | Bole              | 261,000                    |
| <b>Total</b> |                          |                   | <b>817,164</b>             |

\* Now renamed as Addis Zoo Park

Source: AABPCADA Bulletin and personal Observation



Picture 1: Photo taken from Bihere-tsigie Park, 3-20-2014

The government has assigned and designed 7 new parks for the city with a total area of 20.6 hectare (see table below). Though the City Government is allocating sufficient budget from year to year (as we can see in the next sections) the performance of this projects is very sluggish.

**Table 6: List of Newly Assigned City parks in Addis Ababa**

| No           | Newly assigned and proposed parks | Sub city location | Total Area in m <sup>2</sup> |
|--------------|-----------------------------------|-------------------|------------------------------|
| 1            | Lideta renewal park               | Lideta            | 20,000                       |
| 2            | ECA nearby Park                   | Kirkos            | 52,419                       |
| 3            | Basha wolde chilot Park           | Arada             | 11,704                       |
| 4            | Gedame Eyesus Park                | Addis Ketema      | 4,436                        |
| 5            | Mayor W/tsadik park               | Nifas Silk Lafto  | 29,456                       |
| 6            | Biher Bihereseboch Adebabay       | Nifas Silk Lafto  | 32,000                       |
| 7            | Holland Embassy nearby Park       | KolfeKeraniyo     | 56,000                       |
| <b>Total</b> |                                   |                   | <b>206,015</b>               |

Source: AABPCADA Bulletin and personal Observation

According to sub city urban planning experts and different written reports, Gullelle sub city has 1,520 hectare of an urban forest in the North, 3 parks (with a total area of 152, 177 square meters, one open public green area (*Dibab*) of 1,655m<sup>2</sup>, in front of Sidist kilo campus and one cemetery (*Kechene*) of having an area of 111,479 m<sup>2</sup>. It has a total of 1,546 hectare of green area coverage nearly half (47%) of the sub city.

As I have tried to observe, in addition to the above mentioned green area components, the city has many green space areas in embassies, churches, some residential compounds, nurseries, roadsides, Government organization compounds, etc. But they are developed in inconsistent and irregular manner since there is no strict regulation. The city is dominated by slum houses and it lacks well developed and planned green areas (see also picture below).



Picture 2: Congested area of Addis Ababa (cited in UN Habitat 2007)

Though under developed, one major plan of AABPCADA is to develop cemeteries in green and attractive manner and there are about 10 Cemeteries having an area of 1,581,218 m<sup>2</sup> (see tables below). The city has also many median strips, small open spaces covered by grass and trees and private green areas which are not clearly known by size. The biodiversity components of majority of green areas are dominated by exotic species like eucalyptus trees, though the Environmental protection agency is trying to replace them with indigenous plants.

**Table 7: Cemeteries of Addis Ababa City**

| SN           | Name of cemeteries           | Area in m2       |
|--------------|------------------------------|------------------|
| 1            | Protestant-Catholic Cemetery | 39,400           |
| 2            | KecheneCemetery              | 111,479          |
| 3            | BalewoldCemetery             | 140,000          |
| 4            | Sallo-Gora Cemetery          | 150,000          |
| 5            | YosephCemetery               | 170,000          |
| 6            | MekanisaCemetery             | 190,000          |
| 7            | JemoCemetery                 | 113,844          |
| 8            | GuraraCemetery               | 54,162           |
| 9            | FiliposCemetery              | 261,169          |
| 10           | Bole Cemetery                | 351,164          |
| 11           | Kolfemuslim Cemetery         | 80400            |
| 12           | ShegoleCemetery              | 30194            |
| 13           | SilaseCathederalCemetery     | -                |
| 14           | EnkulalFabrika Cemetery      | -                |
| 15           | KotebegebrialCemetery        | 39976            |
| 16           | PetrosWopawlos Cemetery      | 15000            |
| 17           | Bole New Cemetery            | 333738           |
| <b>Total</b> |                              | <b>1,581,218</b> |

Source: AABPCADA Five year report 2001-2004E.C.

It is generally true that availability of green areas in a given environment can be primary or secondary and human interference is expected much higher in urban areas than that of rural. For example, in cities having higher rate of urbanization, like Addis Ababa, the demand of land for different purposes, especially residential, is far more beyond its supply (Land management Bureau of Addis Ababa, 2013). Due to this reason the dwellers (in-migrants and natives of the city) try to use any alternative to satisfy their demand of land, either legally or illegally. If the legal way of owning a land is narrowed down or closed, the dominance of slum and squatter settlements is inevitable. This phenomenon directly challenges the existence and sustainability of city parks and other green areas, especially this is common if there is policy gap and institutional weakness. Because of these challenges the city could have meager, according to UN

Habitat2007( $0.66\text{m}^2$ ) or MUDHC 2011( $0.94\text{m}^2$ ), amount of green area coverage (including urban forests, parks, street trees, cemeteries, etc) per individual compared to the global standard ( $9\text{m}^2$ ).

Based on the data collected from the agency, the researcher has also tried to calculate the Percentage of parks from the total area of each sub city and the percapita of parks in meter square including the newly developing parks. Based on this, relative to their total area, kirkos, Lideta and Gullelle have higher proportion of parks 0.60%, 0.51% and 0.46%, respectively. Relative to the total area of Addis Ababa, the land use assigned for parks is only 0.19%. In relation to this, the share of parks for an individual of Addis Ababa citizen is only  $0.37\text{m}^2$  where Bole- $0.85\text{m}^2$ , Nifas Silk Lafto- $0.64\text{m}^2$  and Gullelle- $0.57\text{m}^2$  have relatively higher percapita (see table below).

**Table 8: Percentage of park area and per capita of parks in Addis Ababa Sub cities (2006 E.C)**

| No                 | Sub cities       | Total Area of parks in m2 | Population Size  | Sub cities Area in m <sup>2</sup> | Percentage of park area | Percapita of parks in m2 | Parks   |
|--------------------|------------------|---------------------------|------------------|-----------------------------------|-------------------------|--------------------------|---|
| 1                  | Gullelle         | 152177                    | 335434           | 32730000                          | 0.46                    | 0.45                     | Hamle 19, Yekoreazem/m etasbiya and Sheger              |
| 2                  | Yeka             | 70575                     | 434599           | 82310000                          | 0.09                    | 0.16                     | Ferencyay and Yeka                                      |
| 3                  | Lideta           | 63799                     | 252842           | 12400000                          | 0.51                    | 0.25                     | Golla Mikael, Ethio-Cuba, Teklehaymanot, Lideta renewal |
| 4                  | Arada            | 33097                     | 265,141          | 11560000                          | 0.29                    | 0.12                     | Ambasader, AnbesaGibi and Bashawoldechilot              |
| 5                  | Kirkos           | 98121                     | 277346           | 16260000                          | 0.60                    | 0.35                     | Africa and ECA nearby                                   |
| 6                  | AkakiKaliti      | 62518                     | 227182           | 126130000                         | 0.05                    | 0.28                     | Akaki   |
| 7                  | K/Keraniyo       | 76000                     | 537561           | 65110000                          | 0.12                    | 0.14                     | Kolfe and Holland Ebassy nearby                         |
| 8                  | Bole             | 261000                    | 387355           | 120930000                         | 0.22                    | 0.67                     | Maekelawi (peacock)Park                                 |
| 9                  | Addis Ketema     | 4436                      | 320053           | 8980000                           | 0.05                    | 0.01                     | GedameEyesus Park                                       |
| 10                 | Nifas Silk Lafto | 201456                    | 396486           | 63590000                          | 0.32                    | 0.51                     | Mayor W/tsadik, BiherBihereseboch and Biheretsigie      |
| <b>Addis ababa</b> |                  | <b>1,023,179</b>          | <b>3,433,999</b> | <b>540,000,000</b>                | <b>0.19</b>             | <b>0.30</b>              |   |

Source; Review of the AABPCADA 2006 E.C Bulletin.

According to the writer`s observation and respondents, the location and distribution of City Parks is not even, rather far apart here and there. From

the establishment of the city and even in the modern government system of military junta-*Derg*, many parks were not planned for the purpose of green area development since there was little concept about urban greenery at the time. As a result, their accessibility is very limited, as we can see in the next topics. To give examples, Hamle 19 was a guest House for the emperor. Ferencay Park becomes a park after the resident was forced to deliver for the junta government. Others like Biheretsige and Mayor W/tsadik Park were given for the city government with the interest of residents. All these three parks were residential places of Emperor Haile silasse`s Officials.

### **5.3. Conversion of City park Land Use**

According to the focus group discussion participants, the urban green areas are converted and abused both legally and illegally. Legally, the government converts parks in to other kinds of land use for different purposes as it has been discussed before. According to personal observations and AABPCADA, green areas particularly city parks are converted to other types of land use like government office building, residence, youth center, entrepreneurs, investors etc. To give typical example, inside the parks of Central/peacock, Biheretsige, Hamle 19 and Sheger the writer of this paper has observed in person about the conversion of the land, see table below.

When we come to Gullele in particular, since the sub city is one of the expansion and peripheral part of the city having about 48 percent green area coverage, the focus group discussion participants agree that land use conversion was a serious problem. Of course the rate of deforestation has now significantly decreased. But when we come to city parks, new office building in Sheger Park, youth center in Hamle 19 Park, residents in Korea Zemachoch Memorial park and 3 Enterprises in Dibab open public space with contractual basis is clearly observable. In woreda 10 enterprise shade is constructed in an open green area around Anbesa Garage. Addis Ababa

Water and sanitation agency, Road Authority, and Ethio-Telecom do also abuse greenways in the course of their activities. Here we can say that the chief consumer of city parks is the city government and this clearly shows that green areas are considered as secondary or tertiary focuses of development.

As I have participated in different conferences, trainings (Policy and strategies of urban sector given by the MUHDC march/2011) and federal level evaluations, it is commonly said that the government of Ethiopia has identified 3 sectors which are more exposed for corruption. These are Customs and Revenue, Land management and Administration and Government purchasing areas in ranking order of magnitude. From this it is easy to understand that the urban land, especially `the common tragedies` like public green areas, are highly exposed for abuse.

As to my opinion, it is true that the illegal way of changing urban land/parks in to other types of Land use occurs when there is lack of responsible citizen and concerned government workforce and political instability. As focus group discussion participants explained, open spaces and peripheral areas of the city are highly exposed for abuse. Here it is believed that irresponsible experts, officials, brokers and the nearby community at large participated in the misuse of open spaces.

According to Gullele sub city and AABPCADA experts, street children and beggars for shelter, illegal traders, shoe shiners, car accidents and pedestrians affect green areas seriously. They remove, break or crush seedlings and grasses, defecate and play games inside green ways. This needs awareness creation and strict rule to penalize.

**Table 9: Main problems of City parks in Addis Ababa**

| No | Name of the park         | Sub city location | Main problems faced currently |         |                   |        | Direct Responsible Body |
|----|--------------------------|-------------------|-------------------------------|---------|-------------------|--------|-------------------------|
|    |                          |                   | land useproblems in the parks | Fencing | Title certificate | Design |                         |
| 1  | Hamle 19 Park            | Gullelle          | youth center                  | partial | it has            | No     | SCBPCDAO                |
| 2  | Yekoreazem/Memorial park | Gullelle          | residents                     | partial | it has            | No     | SCBPCDAO                |
| 3  | Sheger Park              | Gullelle          | office building               | partial | it has            | No     | SCBPCDAO                |
| 4  | AnbesaGibi Park          | Arada             | thieving                      | it has  | it has            | it has | AACGMO, Board           |
| 5  | Ferencyay Park           | Yeka              | Residents                     | it has  | it has            | it has | SCBPCDAO                |
| 6  | Yeka Park                | Yeka              | office inside                 | partial | it has            | No     | SCBPCDAO                |
| 7  | Golla Mikael Park        | Lideta            | ownership claim               | it has  | it has            | No     | SCBPCDAO                |
| 8  | Ethio-Cuba Park          | Lideta            | Hospital Building             | partial | it has            | it has | SCBPCDAO                |
| 9  | Teklehaymanot Park       | Lideta            | thieving                      | "       | it has            | No     | SCBPCDAO                |
| 10 | Ambasader Park           | Kirkos            | -                             | it has  | it has            | it has | AABPADA                 |
| 11 | Africa Park              | Kirkos            | -                             | it has  | it has            | it has | SCBPCDAO                |
| 12 | Akaki Park               | AkakiKaliti       | -                             | No      | it has            | it has | SCBPCDAO                |
| 13 | Bihere-tsigie Park       | Nifas Silk Lafto  | residents                     | it has  | it has            | it has | AABPADA                 |
| 14 | Kolfemenafesha           | KolfeKeraniyo     | sewerage and bad smell        | "       | No                | No     | SCBPCDAO                |
| 15 | Maekelawi (peacock)Park  | Bole              | residents, enterprises        | partial | it has            | it has | AACGMO, Board           |

Source: Interview of officials, Park managers and personal Observation

To reverse the conversion of green areas, the city government has planned to develop and compensate the diminishing City parks by including them in the neighborhood design of renewal sites. To mention some, Lideta renewal site Park, BashawoldeChilot (around Arat kilo), and ECA nearby parks are already under construction. Till January 2014, only about 21 existing and newly proposed city parks could have title certificate (the paper that signifies the purpose of land use, its neighbourhood, area and ownership). Experts and officials of AABPCADA believe that still there are converted green areas which are unclearly known where they are located and to whom they

belonged. Thus, the Agency is pushing Sub cities to bring back to the government and grant title certificate, even though it is very challenging to get it done.

#### **5.4. The management of city parks and other Green areas**

Management deals with planning, staffing, leading & directing, controlling and evaluation of an organization/institution or a project. When we roughly look at the focus of the current government of Ethiopia, before 2005 it aimed at poverty reduction in the rural area with a policy `agricultural development led Industrialization`/ADLI/ and the attention for the urban areas was lesser. But, through time the government has increased its attention for urban development. In the Ethiopian context, urban environmental concern included as a policy for the first time in the plan of Sustained Development and Poverty Reduction Program/SDPRP I/ by 1996 (UN Habitat 2007), but was not fully institutionalized with clear vision and mission until 2008.

Based on this the ministry of urban Development Housing and construction has been established and reorganized after 2009 with 9 pillar areas of focus. These include;

- i. Urban Leadership Development,
- ii. Micro and Small Enterprise,
- iii. Urban Good Governance and,
- iv. Urban Land Management, Urban Planning and Cadastre,
- v. Urban Housing Development,
- vi. Urban Integrated Infrastructure
- vii. Construction Industry,
- viii. Urban Environmental protection and rehabilitation, and
- ix. Urban Inclusiveness and security.

These pillar areas are performed with an institution called Bureaus, and each Bureau has Departments called *Memria*, equivalent to Directorates. All the regional states and cities have customized and established their urban institutions based on the aforementioned activities, though there is some modification according to their realities and mandates. Currently, the ministry plans, monitors and evaluates the performance of the urban sector five year Growth and transformation plan (GTP) of 9 regional states and 2 city Administrations, every 6 month of each budget year.

Almost all the above pillar activities of the urban sector have at least draft policy and strategy documents. Among these the urban greenery policy and strategy final document is not yet ratified and send to regional states and cities by the ministry of Urban development Housing and Construction due to lack of specialized experts in the field. Because of this and other reasons awareness of the issue is still limited among the politicians, experts and the urban community at large.

When we come to Addis Ababa all the pillars are implemented, though the institutional structure is not one and the same or parallel. The responsibility of managing and developing city parks, roadside greeneries, Cemeteries, buffer zones and other small size open spaces in the city is mandated AABPCDA while managing forests is the responsibility of EPA. For the time being buffer zones are monitored by EPA since there is lack of man power in AABPCDA.

According to the agency officials, Addis Ababa`s Beautification Parking Cemetery Administration and Development Agency (AABPCADA) was established as an independent institution by 2010, to be immediately supervised by the mayor. Before this time the agency`s activities were performed by one core process under sanitation and beautification agency, and its manpower, plan, finance and performances were very limited.

As we have seen above, the years 2003-2010 green development performance evaluation of City Parks and other green area were very poor. After 2010, the agency has been established and increased its inputs including the human resource and widening its volume of work. The major goals of the agency were to manage, beautify, develop and upgrade parks, cemeteries, road ways, squares and other public open spaces.

According to the 2002-2005 E.C performance report experts of the agency, among the major components of green areas, financial allocation of roadside performances is well accomplished than cemeteries and parks. According to experts of the agency, almost all project activities (more than 95%) are affected by delay (unable to deliver project outputs on the expected and agreed up on time, cost, quantity and quality). The major factor for the delay of park projects is absence of skilled human resource (contractors, officials and the experts) in the field and lack of project management experiences in areas like planning, implementing, monitoring and decision making.

According to the agency officials and experts, lack of skillful contractors, experts and officials in the field in the field of green area development is a serious problem and thus, to design parks in scientific and artistic basis, accomplish projects based on the agreed up on schedule and monitor the performance of projects are chronic problems for green area development.

**Table 10: Five year performance of the agency**

| Target  | unit of measurement | Plan      | performance | Execution in percent |
|---|---------------------|-----------|-------------|----------------------|
| Upgrading, planting, grassing Existing parks.   | square meter        | 197,968   | 188,365     | 95                   |
| Develop green cemeteries.                       | square meter        | 72,407    | 53,375      | 74                   |
| Road side greenery developed by the government. | square meter        | 1,141,444 | 1,486,912   | 130                  |
| Road side greenery developed by the community.  | square meter        | 1,228,599 | 1,112,026   | 87                   |
| Creating Model green areas.                     | square meter        | 16,888    | 13,235      | 78                   |
| Job opportunity in greenery.                    | Enterprises         | 129       | 114         | 88                   |
| Giving park service.                            | number of visitors  | 1,458,484 | 1,266,019   | 87                   |

Source; AABPADA 2001-2005 E.C. five year performance report document

It is clear that human resource is the first and most important resource that can make things meaningful. Regarding this, the agency had planned in its Business Processing Re-engineering/BPR/ document to hire on 1394 job positions up to the lowest administration level, *Woreda*. Till now only 789 employees are employed and the rest 605(43.4%) positions are vacant. According to the human resource department, this is mainly due to budget deficit, work delay, and lack of appropriate expert in the labor market. Because of this, for the agency, still it is a big deal to develop and manage all the components of green areas, according to officials and experts of the agency. This is mainly due to lack of adequate, skillful and knowledgeable expertise in the field. To give a typical example, lack of Landscape design experts is a critical problem to perform plans on time and at country level it is only in the South Campus of AAU that graduates of this field are available. Shortage of these experts meant absence of appropriate design of parks with perfect specification both on paper and the ground which can result successful procurement processes and fruitful establishment of parks. Even

the graduates of the field, Landscape design, are very new for the practical work, and due to this many projects of park development are, at least delayed and/or interrupted after contractual agreement. Salary of employees is also another area of complaint to hire and saturate vacant positions, and due to this the job release of workers is very high.

**Table 11: Performance of city park development projects and other Construction projects**

| <b>No</b> | <b>Project</b>                      | <b>2006 E.C. plan and performance in percentage</b> |                    |
|-----------|-------------------------------------|---|--------------------|
|           |                                     | <b>plan</b>   | <b>performance</b> |
| 1         | Yeka Sub city Office                | 100   | 80                 |
| 2         | Akaki Sub city Office               | 80  | 48.5               |
| 3         | Gullelle Sub city Office            | 55  | 51.5               |
| 4         | Bole Sub city Office                | 55  | 50                 |
| 5         | Addis ketema Subcity Office         | 43  | 34.8               |
| 6         | Vital Registration                  | 100   | 100                |
| 7         | Waste Recycling Project Office      | 100   | 54                 |
| 8         | Ras Hailu Gymnasium                 | 100   | 100                |
| 9         | EPA Building(G +7)                  | 86  | 48.3               |
| 10        | Youth and Children Theatre House    | 40  | 8.5                |
| 11        | Ras Desta hospital Maintenance      | 100   | 79.85              |
| 12        | Ktebe Teachers Collage one Building | 94  | 66.5               |
| 13        | Lideta Renewal park                 | 100   | 96.5               |
| 14        | Lions Zoo(Peacock)                  | 94  | 50.75              |
| 15        | Bashawoldechilot Park               | 43  | 2.5                |
| 16        | Nations and Nationalities Park      | 45  | 31.5               |
| 17        | ECA nearby park                     | 43  | 13.5               |
| 18        | Holland Embassy nearby Park         | 35  | 0                  |
| 19        | Ethio- Cuba park                    | 45  | 36.5               |
| 20        | Akaki Park                          | 43  | 11.75              |

Source: Addis Ababa Construction Bureau 2006 budget year 9 month report

It is obvious that financial resources are critical problems in developing countries to run projects due to meager capital accumulation and poor saving culture. With regard to finance, the city government of Addis Ababa has promised to allocate in incremental manner from year to year based on the performance of agency. According to the planning department of the

agency, the budget allocated for the four consecutive Ethiopian budget years is incremental, more than 90% for capital project and the rest 10% is for recurrent budgets. It was birr 61,971,576 by the budget year 2004; birr 109,888,639 by the budget year 2005; birr 166,570,517 by the budget year 2006 and for the next 2007 budget year From the total annual budget of the city (26.3 billion birr) 0.71% (187,860,000 birr) is allocated for greenery.

**Table 12: Budget allocation by the city Government for four consecutive years**

| Ethiopian Budget year | allocated annual budget in birr |
|-----------------------|---------------------------------|
| 2004                  | 61,971,576                      |
| 2005                  | 109,888,639                     |
| 2006                  | 166,570,517                     |
| 2007                  | 187,860,000                     |

Source: AABPCADA annual and 9 month reports

Allocating much finance is not an end by itself to develop green areas in the city. According to the Agency`s planning department, until the end of January 2006 Ethiopian budget year, the finance paid for contractors from the allocated budget is only 13%.This indicates that the performance of physical activities is also meager. According to the experts of AABPCADA, the performance of green area development is very poor mainly due to lack of adequate and skillful man power. Though there is sufficient budget allocation at the city level for green area development, as Gullelle sub city experts explained, there is budget deficit and lack of training at the sub cities.

Another worth mentioning point in green area management is that an integrated approach of different institutions in the city is very poor, though there has begun a common agreement of workers and institutions for common tasks, the so called *Team Charter* .Land management, construction and other Infrastructure focused institutions should have intimate relation to

narrow down the gaps of performance. Unless and otherwise, one builds and the other damages, the vicious circle of inefficiency continues, and retards the durability and sustainability of city assets.

**Table 13: Allocated Budget for city parks, Cemeteries and roadside greenery development between for 2006 Ethiopian budget year**

| SN | Name                            | Allocated Budget in Birr in 2006 E.C. | current remarks  |
|----|---------------------------------|---------------------------------------|--|
| 1  | Lideta renewal park *           | 11,000,000                            | Nearly completed   |
|    | Lideta renewal 5 Open spaces*   |                                       |  |
| 2  | ECA Nearby Park*                | 22,000,000                            | Construction is on going   |
| 3  | Bashawoldechilot*               | 21,317,941                            | In the process of procurement to identify the contractor           |
| 4  | Holland Ebassy nearby park      | 5,454,201                             | procurement completed to identify the contractor                   |
| 5  | BiherBiheresebochAdebabay*      | 27,146,488                            | Construction is on going   |
| 6  | Meskel Square                   | 5,000,000                             | international procurement is on air to prepare standardized design |
| 7  | Ethio-Cuba Park                 | 6,605,590                             | on the way to completed  |
| 8  | Akaki Park                      | 18,300,000                            | Construction is on going   |
| 9  | Ambasader Park                  | 350,000                               | completed  |
| 10 | Yekoreazem/metasbiya park       | 1,000,000                             | upgrading has been completed                                       |
| 11 | Hamle 19 Park                   | 700,000                               | upgrading is on going  |
| 12 | Bihere-tsigie Park              | 3,000,000                             | to upgrade   |
| 13 | Mayor W/tsadik Public space     | 500,000                               | upgrading is on going  |
| 14 | Kolfe Park                      | 1,000,000                             | Design   |
| 15 | Ferencay Park                   | 2,000,000                             | completed  |
| 16 | Maekelawi (peacock)Park         |                                       | Construction is on going   |
| 17 | Kebena and Bulbula Nursery      | 4,000,000                             | On going   |
| 18 | Road sides, divides and squares | 7,000,000                             | on going   |
| 19 | Protestant-Catholic Cemetery    | 600,000                               | Fencing, retaining, office, Reusing, planting seedlings            |
| 20 | KecheneCemetery                 | 1,500,000                             |  |
| 21 | BalewoldCemetery                | 200,000                               |  |
| 23 | YosephCemetery                  | 2,000,000                             |  |
| 24 | MekanisaCemetery                | 1,500,000                             |  |
| 25 | JemoCemetery                    | 3,284,000                             |  |
| 26 | GuraraCemetery                  | 1,000,000                             |  |
| 27 | FiliposCemetery                 | 500,000                               |  |
| 28 | Bole Cemetery                   | 7,000,000                             |  |
| 29 | Sallo-Gora Cemetery             | 3,655,000                             |  |
|    | <b>Total</b>                    | <b>157,613,220</b>                    |  |

Source: Addis Ababa Beautification, Parking and Cemetery Administration and Development Agency

**Table 14: Allocated Budget to develop road median strips between 2002-2004 Ethiopian budget years**

| SN | Road median strip                      | Sub City     | Area in m <sup>2</sup> | Allocated Budget for Development in Birr |
|----|--|--------------|------------------------|--|
| 1  | Urael church to Nock Oil Depo          | Kirkos       | 5208                   | 3,172,167                                |
| 2  | Betemengist to Filwuha                 | Kirkos       | 4157                   |  |
| 3  | Leghar to Nock                         | Kirkos       | 3905                   |  |
| 4  | Urael to -gabriel- Mesalemiya          | Kirkos       | 2114                   |  |
| 5  | Harambe to Gandi Hospital              | Kirkos       | 925                    |  |
| 6  | Zerihun Building to Atlas Hotel        | Bole         | 1222                   | 1,427,309                                |
| 7  | Semen Mezegaja to AddisuGebeyea        | Gullelle     | 915                    | 320,000                                  |
| 8  | Gomakuteba to Metreology               | Lideta       | 300                    | 300,000                                  |
| 9  | Gomakuteba to ChefeMeda                | Lideta       | 2000                   | 900,000                                  |
| 10 | Metreology To T/Haimanot Church        | Lideta       | 700                    | 340,000                                  |
| 11 | BerbereBerenda to 5th police station   | Lideta       | 1500                   | 400,000                                  |
| 12 | 6 kilo to Minilik hospital (2002 E.C.) | Arada        | 2416                   | 441,486                                  |
| 13 | 6 kilo to Minilik hospital (2003 E.C.) | Arada        | 2416                   | 497,325                                  |
| 14 | Semen Hotel Nearby                     | Arada        | 1140                   | 399,775                                  |
| 15 | AbunePetros Monument To Atikilttera    | Arada        | 460                    | 139,533                                  |
| 16 | St. George church to Semen Hotel       | Arada        | 2136                   | 624821.4                                 |
| 17 | T/Haimanot Church to Sumalitera        | Addis Ketema | 345                    | 684,934.25                               |
| 18 | Mi`erab bank to SebategnaMebrat        | Addis Ketema | 235                    |  |
| 19 | Anwar Mosque to H/giorgis Bridge       | Addis Ketema | 123                    |  |
| 20 | American Gibi Nearby                   | Addis Ketema | 232                    |  |
|    | <b>Total</b>                           |              | <b>31,514</b>          | <b>8,962,416</b>                         |

Source: Addis Ababa Beautification, Parking and Cemetery Administration and Development Agency, five year performance report (2002-2004 E.C)

For the years 2006–2010 E.C., the agency has planned;

- to prepare 22 model landscape designs
- Developing green areas and Cemeteries (see tables below),
- Grant title certificates for 396 parks (including roadside open spaces)
- Standardize fences and paintings in the city
- Development of nurseries
- up keeping parks,

- Involving community in the development of green areas
- Creating job opportunity for entrepreneurs
- Upgrading the existing and opening new parks and
- Rendering services for 2,038,400 visitors.

These plans are somewhat stretched compared to the 2001-2005 E.C plans and the available human resource base. But in relation to the demand of the residents still it is inadequate. In planning green areas lack of exact data, appropriate naming and standard for different components of green areas and specific places of these components are main problems encountered doing this research(see list of parks and plans above). Without up-to-date data, naming and standards it is difficult to plan, measure, evaluate, estimating costs, addressing and so on. In addition to these, the plans/goals lack to fulfill the criteria of SMARTER (Specific, Measurable, Achievable, Realistic, Time bounded, Extending and Rewarding).

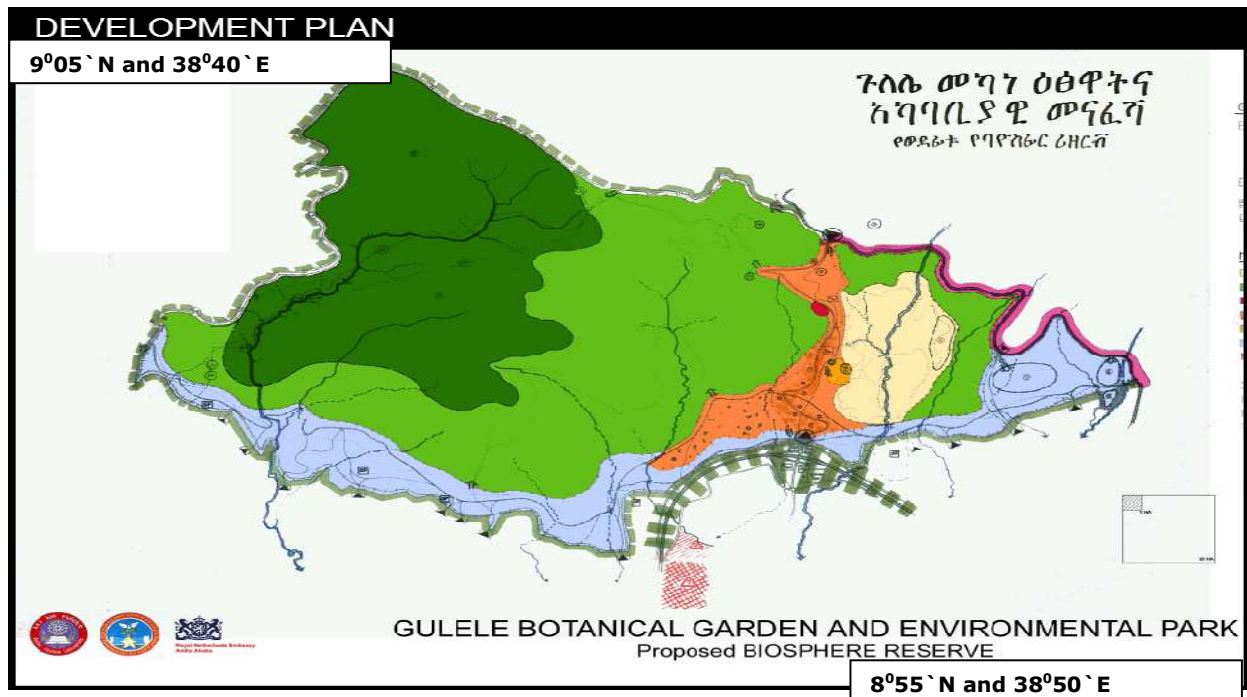
**Table 15: The 2014-2024 Green development plan of Addis Ababa**

| Green area components                | Area in hectare | Percentage from total area of the city |
|--------------------------------------|-----------------|--|
| Forests                              | 15,430          | 28.57                                  |
| City Parks                           | 4,410           | 8.17                                   |
| River buffer                         | 4,170           | 7.72                                   |
| Urban Agriculture                    | 2,115           | 3.92                                   |
| Woreda Park*                         | 44              | 0.08                                   |
| Total                                | 26,169.27       | 48.46                                  |
| Total area of Addis Ababa in hectare | 54,000          |  |

\*Woreda Park refers to parks having less than 10 hectare area.

Source: Integrated project office of Addis Ababa and Oromiya, 2014-2020 plan

The Gullelle Botanic Garden, having an area of 710 hectares of land, is an undergoing project in collaboration with the Addis Ababa University. It is expected to be a home for many wild animals, provide ecological functions and serve as research, educational, and recreational values.



Map 4: Map of Gullele Botanic garden, Source: AABPCADA, October 2010

### 5.5. Legal and Justice Aspects of Green areas

When we look at the historical background of environmental law in Ethiopia it starts from the era of Emperor Menilik II. In his *`fethanegest`* (rule of kings) the first cabinet of ministers were appointed and the minister of agriculture was responsible to monitor farm and grazing lands, forests, and each nobles` spoiled lands (Girma, 2000). The same source also indicated that under this law cutting trees and forests was taxed, planting many trees was rewarding, cutting small growing trees was forbidden, etc. Mengesha forest, west of Addis Ababa, was also protected starting from that time onwards.

During the time of Emperor Haile Silasse I and the junta *Derg* there were laws that encourage environmental protection and conservation. Under the current constitution article 92 states that every individual has the right to live in a clean and healthy environment, any project shall not damage the

environment, and the right of citizens to consult and participate in environmental issues. All these focus on the rural environment.

Still the country has no ratified and detailed proclamation regarding urban greenery, though urban population is increasing. Both the MUDHC proclamation and Addis Ababa`s regulation and standard of Urban greenery preparation are at their ongoing process. According to the building license department of Gullele sub city, there is 30/70 rule that requests citizens to leave an area of 30% for green area and percolation and the rest 70% for building. There are also standards in the BPR to make the peripheries of individual parcels (20 meter for residence and 50 meter for industries) green. According to the draft regulation there will be a rule that guides citizens to implement one tree for one plot. If this rule is strictly implemented, the sum total of the result will have a significant contribution for green area coverage of the city. But they are not well implemented since there is no strict rule to do so.

Regarding the justice of green areas, almost it is possible to say that there is no serious controlling mechanism when someone has damaged or abused green areas. According to experts of the kirkos sub city, trees are seriously damaged by street children and even by car accident and nobody has compensated any damage since there is no clear legal penalty. So the agency is more focused on prevention and awareness creation using community meetings and Mass Medias than accusing the criminal.

## **5.6. Economic Importance**

According to park managers, officials, experts and personal observations, parks have economic benefits through employment and service charge. Within 2 years and half (2004, 2005 and first half of 2006 Ethiopian Budget years) the amount of income generated only from the entrance fee was birr 3,049,337 i.e. Anbesa Gibi birr 1836000, Sheger park birr 705707, Korea

Zemachoch Memorial park birr 357034, and Hamle 19 birr 150596(see table below). In Dibab open Public Park3 enterprises comprising more than 65 entrepreneurs are working their own business in a contractual agreement with the Sub city. And as I could get some information from one enterprise, they are very much beneficial.

**Table 16: Number of visitors and income collected from fee**

| Green area components/parks   | Year E.C.    | number of visitors | Collected fee in Birr | Current fee in birr |
|-------------------------------|--------------|--------------------|-----------------------|---------------------|
| Korea Zemachoch memorial park | 9 month 2006 | 31250              | 69241                 | 2.00                |
|                               | 2005         | 69,095             | 94497                 |                     |
|                               | 2004         | 138,783            | 193296                |                     |
| Hamle 19 park                 | 6 month 2006 | 35419              | 70838                 | 2.00                |
|                               | 2005         | 39690              | 45423                 |                     |
|                               | 2004         | 34335              | 34335                 |                     |
| Shegere park                  | 6 month 2006 | 11033              | 55163                 | 5.00                |
|                               | 2005         | 108440             | 542200                |                     |
|                               | 2004         | 54172              | 108344                |                     |
| AnbesaGibi park               | per year     | 918000             | 1,836,000             | 2.00                |

Source: Annual reports of listed park offices

There are also income sources for many parks that are on service and currently collected like weddings, different celebrities, Camera and video charges, hall rents (Biheretsige and Hamle 19), outsourced food and drink services (Anbessa gibi Park, Yeka, Sheger, Korea zemachoch, Hamle 19, Ambassador). According to park manager, in outsourcing some services of parks, corruption is common. To give typical example, according to the manager, in Anbesa gibi Park, an Ice-cream selling house in the park was rented with only 15,000 birr per month before the new managers appointed and after their arrival house could be rented about 60,000 birr per month.

In terms of employment, within 10 parks (see table below) 539 workforces are already employed. There are also many wage earners employed by contractors who are upgrading the existing parks and building the new ones. This number is of course not as such bigger. But, as to my observation and

opinion, there is no doubt that if the facility of parks improved, the number of employees will increase by 2 or 3 fold. So is the other economic aspect of parks.

**Table 17: Job opportunities of some parks**

| <b>Name of parks</b>             | <b>Employed</b> |
|----------------------------------|-----------------|
| Hamle 19 Park                    | 71              |
| Yekoreazem/metasbiya park        | 39              |
| Sheger Park                      | 48              |
| AnbesaGibi Park and peacock Park | 91              |
| Ferencay Park                    | 32              |
| Yeka Park                        | 18              |
| Teklehaymanot Park               | 32              |
| Ambasader Park                   | 50              |
| Akaki Park                       | 31              |
| Bihere-tsigie Park               | 62              |
| Dibab Open space                 | 65              |

Source: Managers of listed parks

### **5.7. Community involvement**

Public participation is one of the characteristics of a democratic government. For the tragedy of the commons like green areas the ownership must be clearly identified and given officially to the concerned body i.e. the community. The necessary awareness and mobilization should also be accomplished continuously. In doing so, the sustainability of these resources can be guaranteed.

In the case of Addis Ababa, community participation for greenery is at its infancy stage. According to the five year performance report of the agency, between the years 2002-2005 E.C. 1,170 business men have contributed 115,887,004 birr and developed 817,982m<sup>2</sup>roadsides and open spaces (see table below). Including the ordinary dwellers a total of 1,325809m<sup>2</sup>green area components have been developed by the community within five years plan. Through this they created a job opportunity for 3,946 entrepreneurs. What should not be forgotten is that many Embassies in Addis Ababa,

particularly the earliest ones like Embassy of France, England and Italy have wider and greener compound and other institutions should learn something from this.

**Table 18: Businessmen involvement in green area development**

| <b>SN</b> | <b>Budget year E.C.</b> | <b>Number of Businessmen</b> | <b>Developed green areas in M<sup>2</sup></b> | <b>Contribution of Birr</b> | <b>Job opportunity for entrepreneurs</b> |
|-----------|-------------------------|------------------------------|---|-----------------------------|--|
| 1         | 2002                    | 246                          | 169,958                                       | 16,414,504                  | 654                                      |
| 2         | 2003                    | 381                          | 338,363                                       | 55,675,922                  | 1606                                     |
| 3         | 2004                    | 313                          | 201,477                                       | 18,796,578                  | 858                                      |
| 4         | 2005                    | 230                          | 108,184                                       | 25,000,000                  | 828                                      |
|           | <b>Total</b>            | <b>1,170</b>                 | <b>817,982</b>                                | <b>115,887,004</b>          | <b>3,946</b>                             |

Source; Addis Ababa Beautification, Parking and Cemetery Administration and Development Agency, five year performance report (2002-2005E.C)

In Gullele sub city by the 2006 Ethiopian budget year Embassy of Poland has contributed birr 72,000 for street trees from between Semen Mezegaja and Addisu Gebeya. Roto and Pawe Radiator private limited companies have also contributed birr 48,000 for greenways around chilotMaddihanialem. Sub city experts added that, though there is high opportunity of community participation, almost it is untouched advantage. It is also possible to initiate governmental institutions to make their compounds green. As an Example, Sidist kilo campus of AAU should beautify its fence with green cover, though the inner is better.

In general, performance of community involvement is very low and it does not show an incremental trend as well. As justified from the report, the reason for this was to consider that lobbying people for participation in greenery as begging something for one's own self and employees become restrained. Since the location of the city is almost at the very heart of the country, many businessmen and other in-migrants are attracted towards the city, almost from every corner of the nation. This is a good opportunity and

potential for the city administration to involve in green area development and other activities.

### **5.8. Visitors` utilization and accessibility of city parks**

Usually people move from place to place to achieve their needs, be it physiological, material or spiritual need. Thus, city parks should be established in the way that they can attract their users and as much as possible in the nearest distance for visitors. Their development should be demand driven to satisfy the needs of citizens. Based on this principle, the result of household data collected from sample woredas is presented as follows.

According to the household data result, awareness of citizens about the importance of green area availability is moderate. Most of them respond that availability of green areas is important for climate regulation and recreation like fresh air, beauty, and relaxation. More than 81% adults and 69% youth respondents think that there is no sufficient green area in the city, Addis Ababa. This shows that the accessibility and facility of green areas in general and city parks in particular is very limited and the government has big backlogs to develop green areas based on the demand of the community.

It is natural that the choice of people to relax themselves is not the same. It varies depending on environmental and individual factors. According to the household data, 75% of youth and 66.67% of adults like to spend their leisure time in the parks, and 54.5% of youth and 57% of adults like weddings to be celebrated in the parks. But in frequency of visiting it is very rare that people visit parks. As we have seen in the above sections, on one hand the performance of green area development of the city is poor and this section shows that the demand of green areas by the community is higher.

**Table 19: Awareness and interest of residents towards Green areas**

| Questions  | Answers                 | Percentage of respondents |       | Percentage from total |
|--|-------------------------|---------------------------|-------|-----------------------|
|  |                         | Youth                     | Adult |                       |
| Do you think that there are sufficient green spaces in the city? | Yes                     | 31.03                     | 18.5  | 23.79                 |
|  | No                      | 68.97                     | 81.5  | 76.21                 |
| Do you like to have a recreation site during leisure time?       | Yes                     | 100                       | 100   | 100                   |
|  | No                      | 0                         | 0     | 0                     |
| Where do you like to recreate during leisure time?               | Alcohol Drinking places | 10.23                     | 8.55  | 9.27                  |
|  | Green areas/Parks       | 75                        | 66.7  | 70.24                 |
|  | Games                   | 7.95                      | 12.8  | 10.73                 |
|  | Other                   | 6.82                      | 12    | 9.76                  |
| Parks should have entrance fees. Do you agree?                   | Yes                     | 70.79                     | 11.9  | 75.36                 |
|  | No                      | 29.21                     | 78.8  | 24.64                 |
| Where shall be weddings celebrated?                              | Hotels                  | 17.05                     | 15.1  | 15.94                 |
|  | Parks                   | 54.55                     | 57.1  | 56.04                 |
|  | Worshiping places       | 23.86                     | 19.3  | 21.26                 |
|  | Home/residence          | 4.55                      | 8.4   | 6.76                  |
| With whom you visit the parks?                                   | Family                  | 23.33                     | 32.8  | 28.71                 |
|  | Spouse                  | 21.11                     | 14.3  | 17.22                 |
|  | Peer group              | 100                       | 46.2  | 70.81                 |
|  | Alone                   | 25.56                     | 17.7  | 21.05                 |

Source: Field Survey of households, March 2014

More than 84% of respondents know two and more than two parks at least by name, but more than 65% do not go to parks at least in a monthly basis. Here we can compare that about 3/4<sup>th</sup> of the respondent would like to spend their leisure time in the parks but much of them go to parks rarely. Many of them went to parks in a manner that can be counted in fingers within a year. Youth visit parks more frequently than adults and it is also true according to

park managers. This is mainly to make their relation thicker, to discuss freely, to be close for body contact and to be free from disturbance. As to my observation, many elderly people, most of them above 60 years age, spent their leisure time in honey beer houses, groceries and hotels which affects their health and meager income. It is very rare to see them in the parks or walk ways.

About 77% of the respondents have reasons for not to visit parks i.e. shortage of time is an obstacle to visit parks for 25.87% of respondents, unattractive facility of parks is a reason for 25.87% of the respondents, distance and transport is a factor for the rest 23.3% and fee is insignificant to be an obstacle to visit parks which is less than 2%. This clearly shows that location/accessibility and facility of parks are the major constraints for visitors not to visit frequently. About 75% of the subjects respond that entrance fee of parks is necessary. Most of the parks that are currently on service have very low entrance charge, except for Africa Park.

**Table 20: Accessibility and frequency of visiting**

|   |                             |       |      |       |
|---|-----------------------------|-------|------|-------|
| How many minutes you spent to reach at the nearest park on foot?  | <15 minutes                 | 8.05  | 14.9 | 11.94 |
|   | 15-20 minutes               | 13.79 | 15.8 | 14.93 |
|   | >20 minutes                 | 78.16 | 69.3 | 73.13 |
| How many green areas do you know in the city, Addis Ababa?        | 0                           | 8.24  | 9.82 | 9.14  |
|   | 1                           | 4.71  | 8.04 | 6.6   |
|   | 2&3                         | 43.53 | 31.3 | 36.55 |
|   | 4&5                         | 32.94 | 29.5 | 30.96 |
|   | ≥6                          | 10.59 | 21.4 | 16.75 |
| How frequently you visited parks in average?                      | Weekly                      | 14.61 | 6.72 | 10.1  |
|   | Monthly                     | 23.6  | 25.2 | 24.52 |
|   | Annually                    | 44.94 | 52.1 | 49.04 |
|   | Not at all                  | 16.85 | 16   | 16.35 |
| Was there any reason that inhibited you to recreate in the parks? | Yes                         | 77.01 | 77.2 | 77.11 |
|   | No                          | 22.99 | 22.8 | 22.89 |
| If yes for the above question, what was the reason/factor?        | Shortage of time            | 20.69 | 29.8 | 25.87 |
|   | Fee amount                  | 3.45  | 0.88 | 1.99  |
|   | Distance and transport cost | 22.99 | 23.7 | 23.38 |
|   | Poor facility of parks      | 29.89 | 22.8 | 25.87 |

Source: Field Survey of households, March 2014

From the total respondents 28% visit parks with their family, 21% alone and 17% with their spouse, and all youth and 55% adult subjects went to parks with their peer groups for weddings, recreation and other ceremonies. According to all park managers, among the visitors youth rank first and adults next, followed by children and the elderly people. And as to my observation, many visitors are paired/spouse youth and this is mainly due to freedom of disturbance and to give better attention to each other in a silent place.

**Table 21: Average number of visitors and fee amount of some parks**

| Name of parks                 | Year E.C.    | number of visitors | average visitors per day | Current fee in birr |
|-------------------------------|--------------|--------------------|--------------------------|---------------------|
| Korea Zemachoch memorial park | 9 month 2006 | 31250              | 115                      | 2.00                |
|                               | 2005         | 69,095             | 189                      |                     |
|                               | 2004         | 138,783            | 381                      |                     |
| Hamle 19 park                 | 6 month 2006 | 35419              | 194                      | 2.00                |
|                               | 2005         | 39690              | 109                      |                     |
|                               | 2004         | 34335              | 94                       |                     |
| Sheger park                   | 6 month 2006 | 11033              | 60                       | 5.00                |
|                               | 2005         | 108440             | 297                      |                     |
|                               | 2004         | 54172              | 148                      |                     |
| AnbesaGibi park               | per year     | 918000             | 2550                     | 2.00                |
| BihereTsigie                  |              |                    | 300-400                  | 2.00                |
| Ferencay                      |              |                    | 15-70                    | 2.00                |
| Yeka                          |              |                    | 300-700*                 | 2.00                |

*\*There are customers, who are coming for Vital Registration Certificate*

Source: Managers of listed parks

According to park managers, previously wrong doings were very common in the parks which inhibit visitors like stealing, chewing chat, defecation inside parks, rape, etc. But now it is very rare to see such things, even the forests are well protected by employed guards. For example, Entoto forest in Gullele has 40 guards with permanent basis, though not yet sufficient numbers of guards are assigned in relation to the size of the forest.

### **5.9. Current status of some parks**

According to experts and households, lack of rich facility and long distance of city parks are the main reasons to be visited less frequently by citizens and some explained that the sanitation of parks is also a factor that affects visitors to visit frequently. As to my observation many parks are rendering not only limited services but also poor services (see table below).

Among the on service parks **Africa Park** is relatively better developed than others. It is located on the way between the Prime Minister Office (commonly called New Palace) and Meskel square. It was built by the

MIDROC construction Company contractor with a cost to 45 million 10 years ago. After its completion, the administration and management of the park was also given to the contractor in a contractual basis since there was no institution that can manage it by the time, according to the agency. But, currently, the park is not in a full service because of two reasons; fee amount (30 birr for children and 60 birr for youth and adults) and its location encircled by ECA, Prime minister and Ministry of Foreign affairs offices of Ethiopia. The latter reason is hypothesized by agency officials that people's perception for strict security in the area around and thus, the agency is discussing with the stakeholders as to how to attract and increase the number of parks.

**Hamle 19 Park** is a relatively well developed park in the Sub city. It was established during the time of Emperor Haile Silasse I for Guest house. It has walking ways, cafeteria called *Etege Yemigib Adarash* (Queen`s dining hall), well planted trees, etc. But still the visitors are very limited, even lesser than Sheger Park. This is mainly because of its location, at the north-eastern periphery of the city, according to the park manager.

**Table 22: Service types and facility of major city parks**

| No           | Name of the park           | Sub city      | Area in meter square | On service | Main facilities and services |       |               |                   |                 |   |         | rendering service amount |
|--------------|----------------------------|---------------|----------------------|------------|------------------------------|-------|---------------|-------------------|-----------------|---|---------|--------------------------|
|              |                            |               |                      |            | walk ways                    | Seats | Games         | Physical Exercise | food and drinks | Ceremonies (weddings, birthdays and associations) | Bathing |                          |
| 1            | Hamle 19 Park              | Gullelle      | 67,968               | yes        | yes                          | yes   | No            | No                | No              | yes   | No      | 3                        |
| 2            | Yekoreazem/meta sbiya park | Gullelle      | 30,209               | yes        | yes                          | yes   | No            | No                | yes             | yes   | No      | 4                        |
| 3            | Sheger Park                | Gullelle      | 54,000               | yes        | yes                          | yes   | Ground Tennis | No                | yes             | yes   | No      | 5                        |
| 4            | AnbesaGibi Zoo Park        | Arada         | 12,000               | yes        | yes                          | yes   | yes           | No                | yes             | Birth days  | No      | 5                        |
| 5            | Ferencay Park              | Yeka          | 48,575               | yes        | yes                          | yes   | No            | No                | No              | yes   | No      | 3                        |
| 6            | Yeka Park                  | Yeka          | 22,000               | yes        | yes                          | yes   | children      | No                | yes             | yes   | yes     | 6                        |
| 7            | Golla Mikael Park          | Lideta        | 9,625                | yes        | yes                          | yes   | No            | No                | No              | yes   | No      | 3                        |
| 8            | Ethio-Cuba Park            | Lideta        | 29,803               | No         | No                           | No    | No            | No                | No              | No  | No      | 0                        |
| 9            | Teklehaymanot Park         | Lideta        | 4,371                | yes        | yes                          | yes   | No            | No                | yes             | Birth days  | No      | 4                        |
| 10           | Ambasader Park             | Kirkos        | 9,393                | yes        | yes                          | yes   | yes           | No                | yes             | yes   | No      | 4                        |
| 11           | Africa Park                | Kirkos        | 45,702               | partially  | yes                          | yes   | yes           | No                | yes             | yes   | No      | 5                        |
| 12           | AkakiZig Park              | Ak/Kaliti     | 62,518               | No         | No                           | No    | No            | No                | No              | No  | No      | 0                        |
| 13           | Bihere-tsigie Park         | Ni/Silk Lafto | 140,000              | yes        | yes                          | yes   | yes           | yes               | No              | yes   | yes     | 6                        |
| 14           | Maekelawi (peacock)Park*   | Bole          | 261,000              | yes        | yes                          | yes   | yes           | No                | yes             | yes   | No      | 5                        |
| <b>Total</b> |                            |               | 817,164              |            |                              |       |               |                   |                 |   |         |                          |

Source: personal Observation and AABPCADA



Picture 3: Photo of Hamle19 gate way and walk way inside

**Sheger Park** is located nearly at the northern periphery of the city. It is still under the management of vital registration office like that of Yeka Park. But now it is on the process to be transferred to the Gullele sub city Beautification, parking, Cemetery administration and Development office. Currently, its entrance charge is five birr for working days and 10 birr for weekends. The cafeteria is at the roadside of the park, it has no food and

drink service inside. Its visitors are mainly wedding and local meeting participants. Still it has very limited facilities.

**YekoreaZemachoch** memorial park, near to the Embassy of Nigeria, was established and named for the commemoration of the peace keepers who participated in the Korea war for the independence of South Korea. It contains small monuments of soldiers and plants with walking ways. Though its size is small (3hectare) it gives recreational, cafeteria and wedding services.

**AnbessaGibi** is one of the most frequently visited parks in the city. According to the vice manager, about 2250 people (2000adults and youth, 200 children and 50 foreigners) visit the park per day. According to park managers and guards, the critical problems observed here were the theft by children who mostly come around TekleHaymanot village and mischief of outsourcing related services (like ice cream houses, cafeterias and children games). At some time by last year the inspection team who come from the Parliament suggested to appoint more qualified managers for the park, and the newly appointed managers (One doctor of veterinary medicine and one PhD) are working hard with the support of the Mayor`s office and the Park is on the way to be more upgraded. Based on this the animals will be relocated in to Ma`ekelawi Park (peacock) with a new name called Addis Zoo Park.

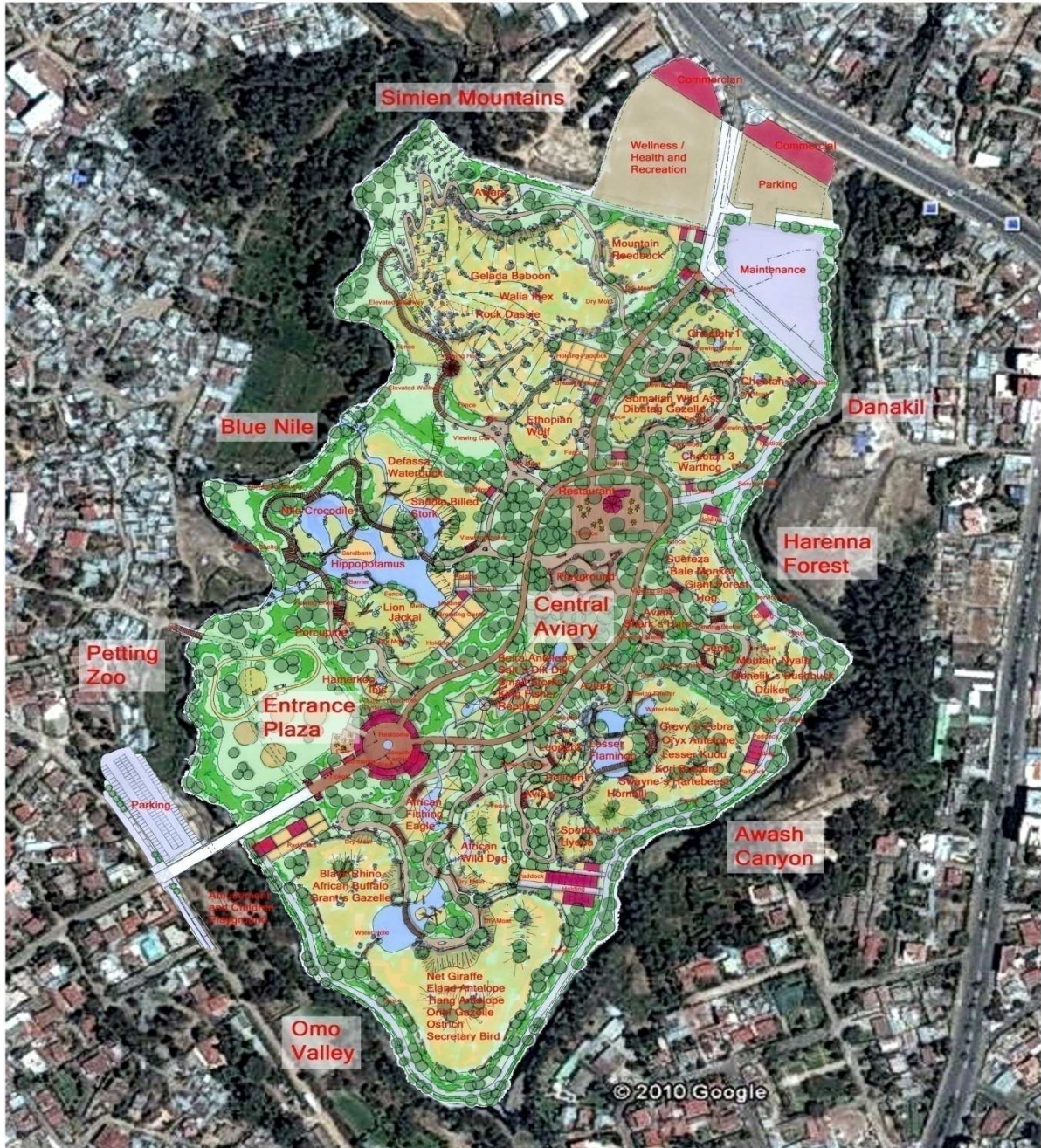
**Ma`ekelawi park** is one of the largest existing parks in the city. It has been seriously affected by a misuse of the land for different purposes like residence, horticulture, production center of construction inputs, etc.



Picture 4: Residents and Precast beam inside Ma`ekelawithe park

The plan of this project (**Addis Zoo Park**) is very ambitious. It is designed in the way to represent the country's major natural heritages like Semen mountains, Awash Canyon, Blue Nile, Harena forest, Omo valley, Central aviary, Entrance plaza Danakil and petting zoo. It is going to be realized with the cooperation of the Government of Germany (Zoo Leipzig). Currently Maekelwi Park is one of the most severely abused green areas in the city. Many residents and enterprises (horticulture practitioners and small food and drink sellers) are living and running their business. Even though its construction has been delayed; the City Government has already studied the socio-economic aspect of the park and planned to make it free from any other kind of land use other than parking.

# Masterplan Zoo of the Future Addis Ababa Masterplan Final Phase



Masterplan Workshop Addis Ababa March 2010  
 Addis Ababa City Government Ethiopian Wildlife Conservation Authority City of Leipzig Zoo Leipzig  
 Muhidin Abdulaziz Prof. Dr. Klaus Eulenberger Torben Heinemann Dr. Jörg Junhold Lars Loebner Frank Oberwemmer Peter Rasbach  
 Yednekachew Sahlu Hailesellassie Sebhatu Messay Tefera Metsihet Tefera Kassahun Tiliku Kummera Waqjira Liku Workalemahu

Scale 1:1000

supported by GTZ IS Addis Abeba

Map 5: Arial and GIS map of the future Addis Zoo Park

## **Chapter Six: Conclusion and recommendation**

### **6.1. Conclusion**

According to the evaluation team of 2003-2010 master plan, even though the City Government had put ambitious plan (to develop 22,000 hectare of green area) the performance was very poor. The existing major green area components of the city are urban forests (8148 hectare) and City Parks (81.7 hectare), having a total of 8229.7 hectare with different degree of development. In terms of area coverage, this much size of green areas is equivalent to 15.24% of the total area of the city. In terms of green area development based on importance, greening, design and facilities, they are very poor; and these problems become more serious as we look at city parks in particular with their location and accessibility. The city has also different size open spaces and road side areas which are not clearly known in size by now and likely to increase the areal coverage of urban green areas. Their bio diversities are mainly dominated by exotic species like eucalyptus tree.

Green area development on the paper and the real existence on the ground are different mainly due to lack of law enforcement of the Local Development Plan (LDP) and the master plan, poor land use management and obsolete documentation. The conversion of green areas to other kinds of land use was critical and still existing. Green areas, as communal resources, considered as secondary focus and decisions are easier to convert them in to other kinds of land use to respond the demand of governmental and non-governmental interests like speculators, office building, residence, youth center, enterprises, investors etc.

The up keeping and management of green areas in general and city parks in particular is limited, though there are improvements from year to year. The city government has established an institution particular to green areas and

allocating incremental budget, though not efficiently and effectively performing. The human resource elements, like experts and contractors related to green area development and management are not matured technically and practically to manage and accomplish projects. As a result, the delay of green area development projects is a serious problem to develop city parks and other green area components in a specified time, quality, quantity and cost.

Green area development of the city is lag behind the demand of it by the community due to different unfulfilled requirements like legislation, justice, community involvement, and making as a source of income. Having legislation and enforcement is an important aspect for the safety and sustainability of city parks and other elements of green areas. Even though there are environmental laws emanating from the 1995 Ethiopian constitution, urban green areas are not specifically insured by rules and regulations. There is no clear justice that seriously penalizes the individual or a group who abuse green area components. The current income and job opportunity of city parks and other green area components is attractive and their economic value varies depending on the type of service they give, location, management and facility. For the future green area development seems a promising area for job opportunity and income earning. Community involvement in green area development is still limited but has good potential. To make green area development activities economically beneficial, legalized and participatory is a good means and guarantee for their sustainability.

According to the household data result, awareness of citizens about the importance of green area availability is moderate, depending on their maturity and knowledge level. Most of them reported that availability of green areas is important for climate regulation and recreation like fresh air, beauty, and relaxation. Most of the respondents think that there is no sufficient green area

in the city and many youth and adults like to celebrate weddings in the parks. Thus, it is possible to generalize that the demand side of the community from green areas benefit is far greater than that of the supply side of delivering satisfactory service. Most of the respondents know two or more than two ( $\geq 2$ ) parks but much of them do not go to parks at least in a monthly basis and the frequency of visiting is very rare. Youth visit parks more frequently than adults followed by children and the elderly. Most youth and adults like to spend their leisure time in the parks but different reasons inhibit them to visit parks frequently like shortage of time, unattractive facility of parks, distance and transport. Most of the respondents think that entrance fee of parks is currently fair and it is necessary. Respondents visit parks with their family, alone and with their spouse for weddings, recreation and other ceremonies.

Regarding the appropriate use of the city parks, wrongdoings were very common in the parks previously which inhibit visitors like stealing, chewing chat, defecation inside parks, rape, etc. But now it is very rare to see such things, even the forests are protected better by their own employed guards.

## **6.2. Recommendation**

- Green area development should not be considered as a secondary activity in city plan implementation; that is why many parks are converted by the government for other kinds of land use. I also strongly support the recommendation forwarded by the Evaluation team that green frame is necessary for the city at water shed level.
- A mechanism should be studied and implemented to create sufficient and stable man power in green frame development and special emphasis should be given for the field of Landscape Design in order to develop standardized city parks.

- Clear and up-to-date land use Information system and title certificate of City parks and the whole green frame is an urgent to prevent them from abuse.
- Clear regulation of green area development associated with construction rules (Building codes) and strict enforcement of rules is highly expected from the City Government.
- Standard, Naming and Quantified (GIS) Data like area or size, map and distance for City Parks (Green Areas) should be soon established at the City and National level.
- There should be continuous and strong Planning, Monitoring and Evaluation system for successful implementation of park projects that are redesigned and newly developed.
- Community involvement and making city parks rich in facilities could attract visitors more, create job opportunities, and make green areas sustainable. This should be a target towards.
- Awareness of the community should be improved through schools and media. Media should introduce in entertaining and educational manner about the importance and development of parks and the way how visitors should use city parks and other green areas.

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## **Appendix**

**A. Questionnaires for officials and Experts working on Greenery**

Is there difference of green space for the city between the map and on the ground?

- What factors made the difference? -----  
-----  
-----
- What solutions do you recommend? -----  
-----  
-----
- How far city parks are accessible and affordable for the community? -----  
-----  
-----

**Importance of green space:**

- What is the importance of green space availability in the city? City parks or urban vegetation -----  
-----  
-----
- What are the current real functions rendered from green areas in the city for the dwellers? City parks, urban vegetation -----  
-----  
-----

**Ownership and stakeholder**

- Which institution/s is/are responsible for planning and management of the city's green spaces? -----  
-----  
-----
- Is the number and skill of the working staff structure workable enough? -----  
-----  
-----
- Which of the following groups are involved in green space planning and management: 1) businessmen/companies; 2) NGOs; 3) community; 4) other? Please specify. -----  
-----  
-----

- What mechanisms are used to involve stakeholders (meeting and discussion, sponsoring, give and take, legal obligations...)? -----  
-----  
-----

**Legislation**

- Are there national legislations and local regulations for green areas?
- How far implemented? -----  
-----

**-----Planning & management:**

- Can you describe the current planning and Monitoring situation of green spaces?  
-----  
-----
- Can you show/mention the formal documents of these activities? -----  
-----  
-----
- Youth are becoming new for nature and the city surface is going to be filled by concrete. What solutions are needed and taken by officials and experts? -----  
-----  
-----
- Do really people use parks? A. yes B. NO
- What is the potential of this area for job opportunity? How many people are employed in relation to green area development and management? -----  
-----  
-----

**B. Questionnaires for employs working on City Parks**

- How far city parks are affordable for the community? -----  
-----  
-----

**Importance of green space:**

- What is the importance of green space availability in the city? City parks, urban Vegetation -----  
-----
- What are the current real functions rendered from green spaces in the city for the dwellers? City parks, urban forests -----  
---
- How many people visited the park/s?
- Who use parks more frequently? Please write ranks on the terms;
  - Children, youth, adult and elderly( 1<sup>st</sup> , 2<sup>nd</sup> , 3<sup>rd</sup> , 4<sup>th</sup> )
  - Retired and jobless ( 1<sup>st</sup> , 2<sup>nd</sup>)
  - Male and female( 1<sup>st</sup> , 2<sup>nd</sup>)
- How people use parks? Please underline.
  - Over used,
  - Under used or
  - Misused, please mention in brief (crime, drug abuse...) -----  
-----  
-----

**Ownership and stakeholder**

- Which institution/s is/are responsible for planning and management of the city's green spaces? -----  
-----
- How is the working staff structured? -----  
-----  
-----

**Legislation**

- Are there local regulations and national legislations for green space?
- To what extent enforced they are? -----  
-----  
-----

**Planning & management:**

- Can you describe the current planning and Monitoring situation of green spaces?  
-----  
-----
- Can you show/mention the formal documents of these activities? -----  
-----  
-----
- Youth are becoming new for nature and the city surface is going to be filled by concrete. What solutions are needed and taken by experts? -----  
-----  
-----
- Do really people use parks? A. yes B. NO
- If yes, A. in the past B. presently. For what purpose? Please thick mark on the table.

| purpose                                       | thick mark✓ |
|---|-------------|
| Jogging(physical Exercise)                    |             |
| Walking                                       |             |
| Just sitting in the park for silence          |             |
| Being with and feeling good with a friend     |             |
| For social occasion(weeding, party)           |             |
| Game  |             |
| Celebration of public holidays                |             |
| For misuse (crime, wrong doings, drug use...) |             |

What is the potential of this area for job opportunity? How many people are employed in relation to green area development and management? -----  
-----

**C. Beautification agency officials interview questions**

- Urban green space availability- Current total area, per individual, Quantified Data? Standard & Naming of parks
- 1. Legislation and Implementation
- 2. How many city parks are available?

How many of them have site plan, GIS map and design? Tourist map?

What is their current total area?

3. Budgeting for newly developed and maintenance for old ones?
4. Community and stakeholder involvement data?
5. Trend of diminishing or expansion? 10 new parks?
6. How many customers visited parks in the last 5 years?
7. Green space Audit & Monitoring?
8. Who is consuming green areas, especially city parks?
9. Planning and implementation/level of performance/?
10. Integrated approach?

**D. Questions for Dwellers/citizens**

1. Please mention the importance of green spaces/parks existence for our life?  
-----

2. Do you think that there are sufficient green spaces in the city? Yes, No

3. Do you like to have a recreation site during leisure time? Yes, No

4. Where do you advise people to recreate during leisure time? Alcohol  
drinking places, Green areas/Parks, Games, Other

5. Parks should have entrance fees. Do you agree? Yes, No

6. Where shall be weddings celebrated? Hotels, Parks, Worshipping places,  
Home/residence

7. How many minutes you spent to reach at the nearest park on foot? <15  
minutes, 15-20 minutes, >20 minutes

8. How many green areas do you know in the city, Addis Ababa? ----

9. How frequently you visited parks in average? Weekly, Monthly, Annually, Not  
at all

10. With whom you visit the parks? Thick mark.

|             |  |
|-------------|--|
| Family,     |  |
| Spouse,     |  |
| Peer group, |  |
| Alone       |  |

11. Was there any reason that inhibits you to recreate in the parks? Yes, No

12.If yes for the above question, what was the reason/factor? Shortage of time,  
Fee amount, Distance and transport cost, Poor facility of parks

**E. Focus group Discussion issues**

- Urban green space availability
- Legislation and Implementation
- Planning and implementation/level of performance
- Budgeting for newly developed and maintenance for old ones
- Community and stakeholder involvement data
- Who is consuming green areas, especially city parks
- Integrated approach of different institutions

## DECLARATION

I, the under signed, declare that this thesis is my original work and has not been presented for a degree in any other university and that all sources of materials used for the study have been duly acknowledged.

**Name Gebeyehu Ayenew**

Signature: \_\_\_\_\_

Date: June 9/2014

This thesis has been submitted for examination with my approval as university advisor.

Name: Solomon Mulugeta (PhD)

Signature: \_\_\_\_\_