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**Challenges and Opportunities of Access and Mobility in
Addis Ababa: the Case of people with Motor and Visual
Impairments**

By: Misrak Tarekegn



**June, 2006
Addis Ababa**

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**BY
MISRAK TAREKEGN**

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SCHOOL OF GRADUATE STUDIES

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Abstract

Urban areas are places where multitudes of diversified group of people inhabit. Among these groups of people are found people with different impairments. Urban life requires the provision of different kinds of arrangements to satisfy the different needs of these diversified residents. However, when different activities and arrangements are organized in the urban built environment, urban planners often overlook the specialized urban planning needs of people with different impairments making life in the urban built environment challenging for this sector of the urban society. Provisions in terms of accessible buildings, street designs and transport system that facilitate mobility are of fundamental importance to disabled persons in order to enjoy quality life.

The principal aim of this paper is to find out the kind and extent of problems that people with motor and people with visual impairments encounter when trying to use services rendered in different buildings, while moving in the streets for various purposes and while using different modes of public transport. It also tries to find out why different government offices fail to notice disability issues in the areas of buildings and street design and public transport. The paper also aims to provide recommendations that can help different stakeholders to start addressing the problems that people with disability face in the urban built environment.

The study focuses on people with motor impairments and the visually impaired and attempts to find out the specialized needs in the area of urban policies specifically buildings design, street environment and the transport system through a survey research. A total of 200 people with different impairments filled the questionnaires prepared, and focus group discussions were held to supplement the information obtained. Government offices participated in filling the questionnaires and personal observation was undertaken to verify the responses obtained.

The major hurdle that people with motor impairments encounter in their day to day lives was found to be lack of appropriate arrangements in vehicles, followed by lack of accessible arrangements on buildings and lack of appropriate street environment. The major impediment on the day-to-day lives of the visually impaired was found to be lack of appropriate street environment followed by lack of appropriate arrangements in vehicles and lack of information about access and mobility.

It was found out that there is a general lack of awareness regarding disability issues in the different government offices in the areas of buildings design, streets design and transport. The study also discloses lack of legal framework that requires different governmental organizations to consider disability issues in urban works.

Acronyms

ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AFUB	African Union of the Blind
ARI	African Rehabilitation Institute
CBR	Community Based Rehabilitation
CWD	Children with Disabilities
DDA	Disability Discrimination Act
DFID	Department for International Development
DPO	Disabled Peoples' Organization
ENAB	Ethiopian National Association for the Blind
ENAPH	Ethiopian National Association for the Physically Handicapped
GPDD	Global Partnership for Disability and Development
ILO	International Labor Organization
JICA	Japan International Cooperation Agency
MoLSA	Ministry of Labor and Social Affairs
OAU	Organization for African Unity
PAFOD	Pan African Federation of Disabled Persons
WHO	World Health Organization

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Chapter I

1.1. Introduction

As countries develop and grow in various developmental aspects urban spaces are certain to flourish. Economic growth and development entail a definite future towards urbanization. This reason seems to compel Renaud (1987:61) to say, “Urban areas will play an increasing role in absorbing large shares of the world’s population. There will be a marked increase in the level of urbanization over the next twenty years”. This condition calls for designing appropriate policies in terms of planning and service provisions inclusive of all citizens. Urban life necessitates the provision of different services for its dwellers. Thus, effective planning should consider the needs of different sectors of the urban society. This paper deals with the issues of access and mobility in the context of people with disabilities in Addis Ababa. As a group, inaccessible spatial patterns and transportation system pose difficulty in the day-to-day lives of people with disabilities making the realization of their potentials challenging. Although people with disabilities face social, psychological, and other problems, the focus of this paper is on the physical infrastructure or the environmental barriers, which make the day-to-day movement of people with disabilities difficult. The paper specifically deals with the kinds and extent of the problems that lack of specialized arrangements pose in terms of access and mobility, in buildings, streets and transport to people with disabilities.

Disabled persons face several discriminations such as institutional, attitudinal, and environmental discriminations. Institutional discrimination can occur, “where no legal or other provision is made to ensure that children with a disability can attend school” (Department for International Development- DFID, 2000:8). When various institutions fail to incorporate disabled persons, discrimination can take place. Attitudinal discrimination can be “expressed through fear and embarrassment on the part of a non-disabled person when confronted with a person with a disability. Also, low expectations of people with disabilities are discriminatory and undermine the confidence and aspirations of people with disabilities themselves” (DFID, 2000:8). This paper focuses on the physical barriers or the environmental discrimination. “Environmental

discrimination is where a person with a disability is unable to participate due to a physical barrier, such as inaccessible public transport or inappropriately designed buildings” (DFID, 2000:8). The special needs of people with disabilities in terms of accessible planning seem to be overlooked by most urban planners in developing countries, thus this paper will focus on the physical barriers with special reference to accessing spaces such as buildings and streets. It also investigates the situation of the urban transport in Addis Ababa.

1.2. Statement of the Problem

If development refers to the betterment of human beings and change towards achieving human needs it should be inclusive of all citizens. On some occasions development policies seem to overlook the needs of women, children, the elderly and other vulnerable members of the society. None-the-less, the sector of the society that is the most disadvantaged consists of people with disabilities.

Development policies in general and urban development policies in particular, in developing countries seem to put no or very little emphasis on the needs of people with disabilities. As a result of unfavorable urban situations, the majority of these people are unable to realize their potentials and in most cases remain unproductive citizens.

People with disabilities in urban areas need specialized services not only to realize their potentials but also for their day-to-day lives. One of the important things that urban life requires is mobility. The ability to move about from place to place without a barrier can enable one to use the services that are rendered by different service providers and to be a productive citizen by contributing his or her share in the urban economy. This is why Venter et al (2002:1) say, “Transport is an important enabler of strategies to fight poverty through enhancing access to education, employment, and social services.” Access is important to reach services such as education and employment. Mobility and access are important to realize one’s potential in terms of learning, getting a job, entertainment etc. However, people with disabilities face barriers that inhibit them from enjoying the above-mentioned important aspects of urban life.

The World Health Organization's (WHO), estimation shows that people with disabilities account for 10% of every country's population, though the figure might vary from time to time (Jones and Anita, 1997:131). The number of people with disabilities worldwide is estimated to reach 500 million (MoLSA,1999:1).

According to the Population and Housing Census of 1994, of a total population of 53,477,265 there were 988, 849 people with disabilities in Ethiopia, that is, 1.85% of the population (MoLSA, 1999:57). However, this figure is considered very low and hence led to conducting a baseline survey in 1995. The base line survey undertaken by Tirusew et al. shows a 2.95% prevalence out of 50,000,000 population. As the base line survey indicated, the highest incidence of disability was found in Addis Ababa, since 17.7% of the household in Addis Ababa had persons with disabilities. (Tirussew etal, 1995:28). According to the findings of the baseline survey the 10% estimation of WHO does not hold true for Ethiopia, "... the incidence of disability in Ethiopia is by far lower than that of WHO's estimation" (Tirussew et al. 1995:27). However, the base line study admits that the figures obtained in the survey to be "...suspiciously low in a country where there was a long standing civil war, periodic episodes of drought and famine is frequent and poverty is rampant" (Tirussew et al. 1995:27). This is to say the number of people with disabilities might be more than the findings of the survey even if the estimation of WHO is not proven by the base line survey on disabilities in Ethiopia. In the web site of the continental plan of Action for the Africa Decade of person with disabilities, it was estimated that there are over five million children, adults and elderly persons with disabilities in Ethiopia, representing 7.6% of the population. (Continental Plan of Action for the Africa Decade of Persons with disabilities: 1999-2009; February 2002, accessed April 2006)

There might be different reasons for the imprecise number of disabled persons in Ethiopia. A study undertaken by Japan International Cooperation Agency (JICA) on Disability Profile in Ethiopia, states, "In Ethiopia, some associate disability (handicap) with spiritual phenomenon or the evil, and do not let disabled persons to go out in public. This leads to families hiding disabled family members which in turn leads to inaccurate

information and statistics on disabilities” (Country Profile on Disability. Federal Democratic Republic of Ethiopia. JICA, March 2002).

This is to say, a substantial number of people in Ethiopia could live with disability even though the official figures do not explicitly show this fact. In fact, “People with disabilities constitute a significant proportion of the poor in developing countries” (Venter et al. 2000:i).

Even though a considerable number of people live with disabilities, development policies seem to overlook the needs of these members of society. Looking at the millennium development goals where there is no explicit mention of people with disabilities in its eight goals, 18 targets, and 48 indicators can manifest this. However, according to the Global Partnership for Disability and Development (GPDD: 2004),

Poverty alleviation in developing countries and genuine progress toward achievement of the Millennium Development Goals requires that disabled people be explicitly taken into account in national and international economic development efforts. The social and environmental obstacles that marginalize and impoverish disabled people cannot be dissolved by any one kind of entity or organization but through the collaborative efforts of diverse stakeholders, including developing countries, bilateral and multilateral donors, UN agencies, national and international NGOs, foundations and other stakeholders.

In line with the above, some countries are trying to address the environmental obstacles that marginalize disabled people. However, “... in most countries, for instance, elevators do not have buttons with Braille for the blind, stairs lack ramps for wheelchair users.” (Bothelo, 2005:29)

The situation is particularly harsh in developing countries such as Ethiopia and in fact, disability issues and the urban built environment are areas that received little attention. This thesis attempts to examine disability issues in relation to urban space in Addis Ababa by way of examining the problems people with disabilities face in the city due to the environmental discriminations: that is, service giving buildings, and the transport system which includes the street environment and vehicle types.

1.3. Scope of the Study

The paper deals with problems that people with visual impairments and people with motor impairments face with respect to access and mobility in the urban built environment specifically buildings, streets and the transport system. It doesn't include people with hearing impairment, intellectual disability, speech and language problems, those with multiple disabilities, and those with chronic health conditions such as epilepsy and leprosy.

The study area of the paper is Addis Ababa where the highest incidence of disability is found among other cities of Ethiopia. According to a base line survey on disabilities in Ethiopia the incidence for Tigray is 13.3%, Amhara 14.4%, Oromia 12.7%, Benishangul 9.0%, Gambela 4.4%, Harare 14.4%, Dire Dawa 8.9% and Southern Peoples 16.8%. As the base line survey indicated 17.7% of the household in Addis Ababa had persons with disabilities (Tirussew et al, 1995:28). This makes the city a researchable study area to identify the physical or structural problems and features as related to the living conditions of people with disabilities.

1.4. Significance

This study is significant in terms of identifying the problems that people with disabilities face due to lack of appropriate physical infrastructure. It is also significant since it pinpoints the special needs of people with disabilities with regards to the urban built environment specifically buildings, streets and the transport system. It underscores the importance of including the needs of this section of the society in urban plans, buildings and streets designs and the urban transport system. It can also attract and direct the attention of different governmental and non-governmental organizations to this particular issue. What is more, it can also be taken as a contribution for the African Decade of Persons with Disabilities (1999-2009).

1.5. Objectives

1.5.1. General Objective

The general objective of this paper is identifying the kinds and extent of problems people with disabilities face in relation to accessing buildings, the street environment and the transport system.

1.5.2. Specific Objectives

The specific objectives of this thesis are:

- To identify the magnitude of buildings that suit the needs of people with disabilities in Addis Ababa
- To point out the extent of the street designs and vehicular types that suit to the needs of the disabled
- To investigate the problems that physical barriers pose to people with disabilities in terms of the design of buildings and in the public transport system
- To find out the existing provisions of urban planning policies and buildings codes and the extent of their implementation with regard to people with disabilities in Addis Ababa.

1.6. Research Questions

1. To what extent buildings have arrangements that suit the needs of people with disabilities in Addis Ababa?
2. What is the extent of street designs and vehicular types that suit the needs of people with disabilities?
3. What is the magnitude of the problems that physical barriers pose to people with disabilities in terms of the design of buildings and in the public transport system?
4. What are the existing provisions of urban planning policies and building codes and the extent of their implementation with regard to people with disabilities in Addis Ababa?

1.7. Methodology

1.7.1. Data Collection Methods

This thesis uses both primary and secondary data, as well as qualitative and quantitative research methods. The secondary sources are books, reports, magazines, and the Internet. In order to obtain primary data survey research, focus group discussions and observation were employed.

1.7.2. Survey Design, Sample Design and Unit of Analysis

The study attempts to find out the problems of accessibility and mobility faced by people with disabilities at present. Hence, it uses a cross-sectional survey design. The sampling frame of the study is two organizations: the Ethiopian National Association of the Physically Handicapped (ENAPH) and The Ethiopian National Association of the Blind (ENAB). The reason for choosing the associations as sample frame is the scattered nature of the sampling units and the difficulty to find them in an aggregated manner at other levels such as sub-cities and Kebeles.

The sampling design of the study is purposive or judgmental sampling technique. Even though there is a list of members in the two organizations, taking a probability sampling turned out to be impractical since members registered are not employees of the organizations and could not be available at the time of the study. As a result, members who visited the two organizations during the period of data collection were asked to participate in the survey research. A total of ten enumerators have participated in the study, five of them are members of ENAPH and the other five are volunteers working in ENAB. The enumerators were taken from the organizations because they can contact whoever comes to the organizations at any time of the day and the situation did not create inconvenience to them since they stay at the organizations all day long.

The unit of analysis of the study is people with disabilities specifically people with motor and visual impairments.

A mini-survey was also undertaken among different governmental offices. These are Federal Urban Planning Institute, the relevant offices at the Addis Ababa city government and federal authorities specifically the Urban Plan Preparation and Supervision Department and the Infrastructure and Construction Authority, Building Construction Design Share Company, Ethiopian Roads Authority, Addis Ababa Roads Authority, Ministry of Transport and Communication, and Ministry of Works and Urban Development.

1.7.3. Sampling Procedure

The Ethiopian National Association of the Physically Handicapped, (ENAPH) has an estimated number of three million members throughout the country except for Gambela. Among these 4000 members are estimated to reside in Addis Ababa. 100 elements were sampled from ENAPH. The Ethiopian National Association of the Blind (ENAB) has an estimated number of 9000 members throughout the country. Among these 3500 are estimated to reside in Addis Ababa. 100 elements were surveyed in the study. A total of 200 people were surveyed in the study.

1.7.4. Focus Group Discussions

The participants of the focus group discussion for the motor impaired came through a local non-governmental organization (NGO) called Handicap National based on willingness to participate in the discussion. A student who is also a member of ENAB coordinated the focus group discussion of the visually impaired group and discussants were selected based on voluntary basis. The focus group

Observation of different buildings that give different services, streets and public transport providers were also visited. These include samples of public houses, (condominiums), hotels, recreational centers, educational institutions, hospitals, the municipality building and the buildings of all government offices that the researcher visited to distribute

questionnaires. More than 40 buildings were observed giving particular focus on their accessibility to the motor and the visually impaired. (see Appendix Vii).

1.7.5. Data Analysis

Data analysis for this study is quantitative and qualitative. Qualitative data analysis was carried out simultaneously with data collection. The quantitative data was arranged and edited. The Statistical Packages for the Social Sciences was employed to analyze the frequency and the relationship among different variables.

1.8. Limitations

The researcher found it difficult to take pictures of the motor and the visually impaired while using different buildings, streets or different modes of transport to illustrate some of the constraints discussed in the thesis. Most of the respondents of the questionnaires had to be convinced to participate in filling out the questionnaires. This is because many had participated in different surveys of this kind on different topics and had never seen their voices heard in different podiums. Some even called the researcher and asked whether the study has some kind of ulterior motive. The researcher had to convince many of the respondents regarding the possible applicability of studies such as this one.

The researcher does not claim that she has visited all service giving private and government organizations, but has tried to visit the prominent ones in Addis Ababa.

1.9. Organization of the Paper

The thesis attempts to discuss the basic tenets of access and mobility in relation to people with disabilities giving particular attention to Addis Ababa. This is thoroughly discussed in the second chapter of the thesis. In the second chapter theoretical aspects regarding the definition of disability, causes of disability and studies that have been undertaken so far regarding the issues of access and mobility in the context of disability are discussed. What is more, it tries to shed light to international, continental and national approaches to the issue. The thesis chiefly attempts to identify the problems that people with disabilities

face in Addis Ababa through a survey research and two focus group discussions. The results of the survey that is the findings of the surveys and the findings of the focus group discussions including the analysis are the concern of the third chapter. The fourth chapter presents the conclusions of the thesis.

1.10. Conceptual Definitions

The following conceptual definitions are given regarding the major concepts and terms that are employed in this study and it is in the light of these explanations that the paper tries to analyze them.

Environmental Discrimination: any physical barrier, inaccessible public transport, inaccessible streets design and inappropriately designed and inaccessible building

People with disabilities: People with motor and visual impairments

Disabled people: People with motor and visual impairments

Motor Impairment: the condition of facing difficulty in walking, sitting, eating and drinking forced to use aids such as crutches and wheel chairs

Visual impairment: the condition of total blindness or weak sight

Access: Making buildings accessible includes paying special attention to entrances, ramps, interior doors, lifts, elevators, stair lifts, corridors, and adapted toilets

Mobility: the ability to move in the urban street without barrier

Street Environment: the foot way or pavement used by pedestrians, accessible street environment and transport system include bus stops, route numbers, destination signs, audible pedestrian signals and street curbs.

Accessible vehicular design: might embrace wide door openings, wheelchair lifts, wheelchair ramps, grabbers, accessible vehicle floor, and speak devices to give information on bus stops.

Ramp: A walking surface that has a running slope greater than 1:20 (ADAAG)

Curb ramp: A short ramp cutting through a curb or built up to it (ADAAG)

Elevator with Braille: Elevators that have Braille buttons

Chapter II

Review of Literature

2.1. Disability and Causes and Consequences of Disability

2.1.1. Disability

There are no clear-cut definitions for the terms 'disability', 'impairment' and 'handicap'. In fact, the definitions given by various disciplines are subject to debate due to the nature of the implications of different terms. Gleeson (1999:18) in this regard states,

... it is important to acknowledge why disabled people have placed so much emphasis on the definition issue. Disabled people have objected to, and contested, official constructions of their subjectivities by institutions, such as social service providers because these understandings have often been inaccurate and offensive.

As can be understood from the above statement identity and definitional issues are important in the realm of disability studies and it is essential to investigate different definitions in a critical manner. According to Gleeson, there are various explanations of disability such as the medical model, the social model and the historical materialist approach.

The medical model focuses on the individual's 'deficiency' when compared to other people who are considered 'normal'. This emphasizes the personal incapacities of people to differentiate the disabled from the 'normal' people. This is evident in the definition of 'impairment', 'disability', and 'handicap' rendered by the World Health Organization (WHO).

Impairment indicates any loss or abnormality of psychological, physiological, or anatomical structure or function. This means non-functional hand, paralyzed leg etc. Disability indicates any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being. Handicap indicates a disadvantage for a given individual resulting from an impairment or disability that limits or prevents, the fulfillment of a role that is normal, depending on age, sex, social and cultural factors, for that individual (in MoLSA Manual, 1999:3).

As can be seen the medical model compares activities that are considered 'normal' and tries to give the definition of disability in this sphere.

The other approach, which is contrasted with the medical model, is what is called the 'social model'. According to Gleeson (1999:19) this model emphasizes the fact that so-called 'normal' human activities are people made and these are constructed by and in the interests of non-impaired people. In other words disability is a social creation. However, Gleeson (1999:20) shows the danger of taking this definition in its entirety since everybody has his or her own peculiar set of capabilities and limitations that informs the social experience of the individual. Individuals encounter different and unique social realities based on what they are capable to do; therefore, we should realize that society can create different barriers to all people disabled and non-disabled alike.

The other branch of the social model definition places the emphasis on the personhood and deals with disability in less dehumanizing terms. According to Neufeldt and Albright (1998:XIV) there is an argument that maintains the term 'person with disability' is the most person sensitive because it gives emphasis to the person and put the disability in the second place. As Neufeldt and Albright state, this terminology is accepted as appropriate by a sizeable number of organizations of and for disabled persons in North America, as well as by governments, journal editors and others.

Even if the term 'people with disabilities' becomes popular as explained above, there are opponents of the term. Gleeson (1999:20-21) mentions that some disabled people are not ready to accept the displacement of the adjective 'disabled' until disabled people are actually permitted to experience social life 'in fully human ways'. In other words the change of terminology does not change the fact that disabled persons are denied of their rights to enjoy quality life.

As Neufeldt and Albright (1998:XV) further elaborate Disabled peoples' organizations prefer the term 'disabled persons'. There seems to be a widespread assent regarding the term impairment, which refers to a particular limitation of function a person may have

compared to other people who are considered normal. Disability is not an inherent state but a resultant experience on encountering social or physical barriers that don't give consideration to the impairment that people have. Thus, according to the proponents of the term 'disabled persons' it is illogical to say people with disability, since the disability occurs because society gives no or little attention for the special needs of people with different impairments.

The historical materialists approach considers disability to be a form of oppression. To this school of thought disability is a social experience which arises from the specific ways in which society organizes its fundamental activities such as work, transport, leisure, education, and domestic life (Gleeson:1999:25). Thus, for historical materialists (or Marxists), disability is a state imposed by society to exclude people with different physical impairments. This imposition is expected to be accepted by people with different impairments as 'natural'. In deed, the acceptance of this imposition might force people with different impairments to view themselves as society view them and to believe that the way they lead their lives in the society is 'natural'.

The definition that can be taken as employment model is given by International Labor Organization (ILO). The ILO convention No. 159 states, "The term 'disabled person' means an individual whose prospects of securing, retaining and advancing in suitable employment are substantially reduced as a result of a duly recognized physical or mental impairment" (Technical Consultation Report, 2002:35). The definition of ILO is somehow similar to the medical model since it gives emphasis to the inability of 'securing retaining and advancing a suitable job' due to the 'duly recognized physical or mental impairment.' However, as elaborated above all people have different kinds of limitations and perform different things within their reach. This fact should not be forgotten when labeling a person 'disabled' due to inability to 'secure, retain and advance' in any kind of suitable job. If the work environment is made suitable to the disabled person, he or she can perform anything within his or her reach.

The explanation rendered by the UN distinguishes disability from handicap and gives the definition as follows,

The term 'disability' summarizes a great number of different functional limitations occurring in any population in any country of the world. People may be disabled by physical, intellectual or sensory impairment, medical conditions or mental illness. Such impairments, conditions or illnesses may be permanent or transitory in nature. The term 'handicap' means the loss or limitation of opportunities to take part in the life of the community on an equal level with others. It describes the encounter between the person with a disability and the environment" (UN,2006: 1).

As the above discussion shows there is no clear universal consent as to the definition of disability. In the above definition 'handicap' is used to refer to the lack of opportunities to take part in one's community in a meaningful way. The definition of Department for International Development (DFID) defines disability as, "...long term impairment leading to social and economic disadvantages, denial of rights and limited opportunities to play an equal part in the life of the community" (DFID,2000:2). As can be seen from the two definitions, disability is a complex concept, which should be viewed from several directions, and the different implications should be critically analyzed. As to using the appropriate terminology Power (2001:2) points out that it is preferable to use the word disabled rather than impairment or handicapped, since the latter two words suggest inherent biological limitations and individual abnormalities. The use of the term 'people with disabilities' is popular as has been explained (Neufeldt and Albright, 1998:XIV) and the term 'disabled persons' seems to be favored by many disabled people's associations (Neufeldt and Albright,1998: XV) in talking about people with different impairments.

Hence, in this study the terms people with impairment, people with disability and disabled people will be used interchangeably.

The different impairments that disabled people have are illustrated in the following definition of people with disabilities.

According to the International Classification of Diseases and Injuries there are at least seven different groups of handicapped persons which

include the visually (the blind and the weak sighted), the Aurally (the deaf and the hard of hearing), the Intellectually (mild, moderate and profound retardation), the Motorically (neurological, musculoskeletal and crippling chronic health conditions), the Lingually (oral and/or graphic), Behavioral (emotional and social), as well as the multiple handicap (In Tirussew, 1993:69).

As elaborated above, the term disabled people also includes those that have unnoticeable impairment and gives us detailed explanation regarding situations we should consider impairments.

As can be concluded from the definitions above there are various types of impairments. However, this paper will focus only on the visually and motor impaired. These people account for the largest number among people with disabilities in Ethiopia. According to the base- line survey conducted by Tirussew et al (1995:25), the prevalence of disability by type and degree of impairment can be shown as follows:

Table 1. Types of Disability in Ethiopia

Type of Disability	%
1. Visual Impairment	30.4
Total blind	14.4
Weak sighted	12.9
Unidentified	3.1
2. Hearing Impairment	14.9
Completely deaf	6.5
Hard-of-hearing	7.2
Unidentified	1.2
3. Mobility/Motor/Disorder	30.9
Walking	2.4
Sitting	22.9
Eating and drinking	0.9
Unidentified	4.7
4. Intellectual Disability	6.5
Mild	0.7
Moderate	2.1
Profound	2.2
Unidentified	1.5
5. Behavioral Problems	2.2
Hyperactive	1.3
Hypoactive	0.8

Unidentified	0.1
6. Speech and Language Problems	2.4
Talking	2.0
Writing	0.1
Unidentified	0.3
7. Multiple disability	2.4
Deaf and blind	0.3
Others	2.1
8. Chronic Health Conditions	10.3
Epilepsy	2.3
Leprosy	3.2
Diabetics	0.3
Asthma	1.7
Liver problems	0.4
Others	2.4
Total	100.0

According to the above table, people who are visually impaired account for 30.4% and people who have motor or mobility disorder account for 30.9%. The result shows people with motor disorders to be the major disability group in Ethiopia followed by the visually impaired (Tirussew et al. 1995:25-27).

2.1.2. Causes and Consequences of Disability

Disability can be caused by many factors, one of which is poverty. According to DFID, “Poverty is both a cause and consequence of disability, poverty and disability reinforce each other, contributing to increased vulnerability and exclusion” (DFID, 2000:2). The significant role that poverty plays as a cause of disability can be shown by examining the following figures of causes of disability given by UNESCO, DAA in March 1995.

Table 2. Causes of Disability in the World

Causes of Disability in the world	Percentage
Malnutrition:	20%
Accident/Trauma/war:	16%
Infectious diseases:	11%
Non-infectious diseases:	20%
Congenital diseases:	20%
Others including ageing	13%

(in DFID, 2000:3)

As the above figure shows most of the disability can be prevented. However, lack of health care and access to medical facilities seem to exacerbate the situations that are nothing but legacies of poverty. As a result, more and more people are being impaired because of poverty. Again because of their impairments people with disability might be forced to lead their lives in poverty. This seems the reason that compels Neufeldt (1998:8) to say, "A very high proportion of disabled people, as compared to others, live their lives in poverty in most countries of the world." According to O'Toole and McConkey (1995:7), "Disability and poverty are almost synonymous the world-over although the welfare-benefit systems of the rich countries protect their disabled citizens from hunger and homelessness." Poverty is rampant among people with disabilities, given their lack of access to education and other important urban provisions. As O'Toole and McConkey's observation illustrates the situation is especially tense in developing countries since there is no support of any kind and people with disabilities are left on their own.

The report given by the World Health Organization (WHO) regarding causes of impairment says "About six hundred million people live with disabilities of various types and the number is increasing due to the rise of chronic diseases, injuries, car crashes, falls, violence and other causes such as ageing." (WHO, Community Based Rehabilitation :2006)

According to the manual prepared by Ministry of Labor and Social Affairs (1995:5), the major causes of disability in Ethiopia are malnutrition, lack of environmental hygiene, complications associated with prenatal, during natal and post natal period, natural and man-made calamities, alcohol and drug addiction, accidents that occur at home and at work place, communicable diseases, harmful traditional practices and the like. Most of the causes of impairments in developing countries can be preventable as can be inferred from the explanation above. This view is further consolidated by Tirussew,

In Ethiopia, the presence of diversified pre-, peri -, and post – natal disabling factors, like the health of prospective mothers, difficulties related to delivery, childhood infectious diseases, lack of proper child management, traditional

harmful practices, under- nutrition, malnutrition, civil strife and periodic episodes of draught and famine and the absence of early primary and secondary preventive services in the country at large has brought a phenomenal increase in the incidence of disability. The problem still remains a serious challenge to the country (Tirussew Tefera, 2005:1).

The challenges that cause tremendous impairments especially in urban areas seem to be man-made calamities. Among the man made calamities that can cause different kinds of impairments we can mention traffic accidents as causes for different kinds of impairments. According to the data obtained from the Addis Ababa traffic police office for consecutive three years (1995, 1996, 1997 E.C) yearly more than 2800 people face accidents. The data shows death, heavy injury and light injury and doesn't give details about how many people lost parts of their bodies by traffic accidents. It is the different hospitals that receive the injured that might know how many people become impaired due to traffic accidents. However, getting such data turns out to be difficult. Here, it is suffice to say that traffic accidents in Addis Ababa have the potential to cause disability of different kinds owing to the fact that more than 2800 people get injured annually (Addis Ababa Traffic Police Office, Accidents Record:2006).

2.2. Access and Mobility in a City

The issues of access and mobility are important aspects of urban planning. In fact, the ultimate goal for urban planning is to improve the conditions of life in cities by providing accessible situations for a better standard of living especially for those who are marginalized. According to Devas (1993:94)

A key issue in the discussion about urban planning and management concerns the impact of these activities on the urban poor. Whether the debate is about the urban economy, about shelter, or about service provision, a central question is how the position of the urban poor can be improved.

Improving conditions of life as elaborated above can be explained in terms of improving standards of living, distribution and equity, fundamental rights, freedom and personal needs and the ability to implement such goals. An inclusive urban planning embraces providing equal opportunity with no barriers or discrimination. No barriers denote free access and mobility and that all individuals in the city will be beneficiaries of urban

planning despite their physical conditions. As Jones and Payne (1998:134) point out, “Cities are physical spaces where people interact with the built environment. Accessibility is therefore a vital key in such interaction.” An accessible environment helps all especially, people with disabilities focus on their abilities; if the built environment is not accessible then it further disables people with different impairments.

The fact that cities are homes for diversified groups of people necessitates planning for diversity that comprises of people with disabilities. The United Nations (UN) standard rules on the Equalization of Opportunities for people with Disabilities can be mentioned as a significant document in this regard. The definition reads, “The term equalization of opportunities means the process through which the various systems of society and environment such as services, activities, information and documentation are made available to all particularly to persons with disabilities” (UN Standard Rules on the Equalization of Opportunities for Persons with Disabilities: 1992).

The document has 22 rules with target areas and implementation measures. Among these the fifth rule concerns with accessibility, as shown below.

Rule 5. Accessibility

States should recognize the overall importance of accessibility in the process of the equalization of opportunities in all spheres of society. For persons with disabilities of any kind, States should (a) introduce programmes of action to make the physical environment accessible; and (b) undertake measures to provide access to information and communication.

- Access to the physical environment
 - States should initiate measures to remove the obstacles to participation in the physical environment. Such measures should be to develop standards and guidelines and to consider enacting legislation to ensure accessibility to various areas in society, such as housing, buildings, public transport services and other means of transportation, streets and other outdoor environments.
 - States should ensure that architects, construction engineers and others who are professionally involved in the design and construction of the physical environment have access to

adequate information on disability policy and measures to achieve accessibility.

- Accessibility requirements should be included in the design and construction of the physical environment from the beginning of the designing process.
- Organizations of persons with disabilities should be consulted when standards and norms for accessibility are being developed. They should also be involved locally from the initial planning stage when public construction projects are being designed, thus ensuring maximum accessibility. (UN, 1992:4)

The rules have also mentioned the need to mainstream disability issues in all relevant policy making and national planning.

The UN standard rules are in line with what is called responsive planning. Responsive planning, as Rakodi (1993:218) elaborates is based on participation of stakeholders, and the stakeholders in this case are people with disabilities. However, “Urban planning and policy making have often been based on the use of official statistics, thus biasing its policies...” The fact that urban planning and policies are biased towards official statistics further marginalizes poor residents of cities especially people with disabilities. As discussed earlier in this paper, statistics on the prevalence of disability is scanty and difficult to get. As a result, urban planners and architects often overlook the specialized needs of disabled persons in the urban built environment. This poses barriers in terms of interaction with the built environment to people with disabilities. As Jones and Payne (1998:134) assert, “Disabled people in urban environments face considerable discrimination regarding mobility and accessing infrastructure and services.”

According to Lynch (1964:1), a city can serve as one’s identity; this is so because every body has had long memories with the city that he or she grew up. In other words the memories and the meanings attached to a certain city give a mental image to its dwellers. Lynch (1964:3) gives the term legibility to this phenomenon which is the

ease with which its (the city’s) parts can be recognized and can be organized into a coherent pattern. So a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern.

What Lynch discusses here emphasizes the very aim of urban planning that is creating comfortable environment to live in. If the city's environment is 'legible' then, one can easily associate the structure of the city and create a mental picture. This picture allows him/her to move easily from one part of the city to the other. This is further strengthened by Lynch (1964:92), "Above all, if the environment is visibly organized and sharply identified, then the citizen can inform it with his own meanings and connections". This fact shows the strong link between people and the physical environment, or the role that spatial processes play in people's lives. This ability of having a mental picture of one's surrounding is important for all of us and especially to people with disabilities. This is so because "Space, and related issues such as mobility and accessibility are profoundly important to disabled people's everyday lives...." (Gleeson, 1999:1). The knowledge of distinguishing spatial features very well according to Lynch (1964:124) "...allows mobility which may make possible a better standard of living." Creating conditions for easy mobility and providing accessible situations in an urban space again, go with the very aim of urban planning which is improving the quality of life in cities.

One of the few studies undertaken in relation to urban space and people with disabilities in the settings of developing countries is an unpublished report by the German Agency for Technical Co-operation (GTZ). This study underscores the importance of being inclusive in planning. According to the study, the "...complexity and costs of managing disability have usually been over estimated" (Wiman and Sandhu, 2004:12). The study shows the experiences of some western countries in relation to improving access and mobility for their citizens with disabilities.

...similarly, in developing countries improving basic accessibility of the urban environment can be done at low cost by improving planning and design of streets, other public spaces and buildings (Wiman and Sandhu, 2004:12).

As the study points out providing accessible environment at the beginning of the planning stage is not costly. Access among other things, should be regarded as a chain, "Accessible transport, includes accessible stations, bus stops, buses/mini-buses, taxis, accessible information, conducive attitudes and affordability for disabled people" (Wiman and Sandhu, 2004:13).

Similar to GTZ's study Venter et al, (2000) have studied accessibility for people with disabilities who live in urban areas taking Malawi, South Africa, Mozambique, India and Mexico as cases in point. This study points out several physical barriers to people with disabilities in urban areas giving special focus to structural barriers in transport. The study focuses on bus stops, plat forms, vehicle designs, route numbers, destination signs, pedestrian environment, curbs and unkempt vegetation. Among the problems it identifies are found road works left open without warning, vehicles parked on footways and vendors encroaching foot ways. In fact, Venter et al(2000:14) state, "...several access barriers experienced by people with disabilities related to the planning of public transport networks and services to medical care or education."

As the above discussion has pointed out, having an all-inclusive plan is essential to make the city a comfortable place to live in. People with disabilities require specialized services and once these are put in place it would be easy to form a mental picture of it, thus making the city 'legible'.

2.3. A Brief Overview of Urban Space in Addis Ababa

As Jones and Payne (1998:130) elaborate, historically, urban and state planning have tended to reflect the interests of the politically powerful interest groups marginalizing the weak and especially disabled people. This fact is also true for the city of Addis Ababa. It is a century old and according to Wubshet (1990:239) was established mainly based on the 'sefer' system which was "... an established order of settlement typology in Medieval Ethiopia where chieftains with their retinue used to settle around the Emperor's compound." Thus, the city was not established based on a comprehensive plan. From there it has expanded mainly based on gradual natural development. It was during the Italian occupation that the city came to have various master plans. Wubshet has mentioned the 1938 and 1939 Italian master plans. The 1946 British plan masterminded by Sir Patrick Abercrombie and the 1965 plan of the French team and explained that all the plans were not based on local input. He stresses the need for an appropriate model in planning urban spaces that considers local situations. Wubshet (2002) has also discussed

the different plans of Addis Ababa in detail, pre 1975, 1975-1991, and post 1991. As to the various master plans of Addis Ababa Wubshet (1990:243) states, "...most of the master plans which were prepared for Addis Ababa up to now could be referred to as simple wishes of the groups who sponsored the projects. None of the master plans did get a statute status...this is why Addis Ababa shows a quasi-planned urban form even in its recently developed quarters."

The minimal effect of the different master plans on the structure of the city seems to necessitate a change of approach in this regard. Urban planning approach shifted from one of master planning to that of strategic planning. The types of urban plans that have gained momentum presently are city wide structure plan and local development plan.

According to the Draft Proclamation to Provide for Urban Plans, (2005:4-5) a city wide structure plan should indicate the magnitude and direction of growth of the urban center, principal land use classes, housing development , the layout and organization of major physical and social infrastructure, urban redevelopment intervention areas of the urban center, environmental aspects and industry zone

Local development plan among other things should state: Zoning of use type, building height and density; Local streets and layout of basic infrastructure, Organization of transport system, housing typology and neighborhood organization, urban renewal, upgrading and reallocation intervention areas, Green areas, open spaces, water bodies and the like, and any other locally relevant planning issues (Draft Document to Provide for Urban Plans, 2005:5)

As stated above in a detailed manner, the approach of urban planning in Addis Ababa is shifted from the traditional master plans to strategic urban planning. However, the city wide structure and the local development plans that are discussed here do not point out the needs of people who have specialized needs such as those with disabilities in an explicit manner. Their issues might be included as one of the locally relevant planning

issues; still the planning approaches show lack of attention on the part of urban planners towards people with special needs in the planning of the city.

The other relevant document in relation to design of buildings is the National Building Proclamation. Part ten which is entitled Miscellaneous Provision article 62 states,

1. In any public building, there shall be a means of access suitable for use by physically impaired persons, including those who are obliged to use a wheelchair or who are able to walk but unable to negotiate steps.
2. Where toilet facilities are required in any building, an adequate number of such facilities shall be suitable for use by physically impaired persons and shall be accessible to such persons.

The above draft document shows that there is a room for taking the issues of people with disabilities under consideration when urban plans are prepared, buildings are designed and construction permit is delivered. However, the draft is vague and lacks detailed accessible guidelines, technical requirements and specific building codes regarding appropriate arrangements for people with disability.

2.4. Access and Mobility in the built-environment – Experience from Other Countries

Physical barriers reduce the opportunities of disabled persons to enjoy life 'in fully human ways'. However, disabled people who live in developed countries had long started to raise their voices for an accessible environment and as a result, in the countries of the North considerable attention has rendered to disability issues. Disability issues have gained momentum in several developed countries and countries have taken several measures to improve the qualities of the lives of their citizens with different impairments. In this regard the Americans with Disability Act of 1990 (ADA) and the UK Disability Discrimination Act of 1995 (DDA) can be mentioned.

The American Disability Act (ADA) is an enactment that urges all parties to have accessible and universal design, so that disabled persons can have free access and mobility in the built environment.

Congress has responded to the need for access and opportunity for individuals with disability by passing landmark legislation in a range of areas, education, employment, tax policy, transportation and assistive technology (The ADA and Access and Opportunity for Individuals with Disabilities: 2005).

As mentioned above, ADA prohibits discrimination of any kind against disabled people in the areas of employment, public services, transportation, public accommodation and telecommunications. The ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) gives detailed instructions under the title of Accessible Elements and Spaces: Scope and Technical Requirements. According to the Guideline,

These scoping and technical requirements are to be applied during the design, construction, and alteration of buildings and facilities ... to the extent required by regulations issued by Federal agencies, including the Department of Justice and the Department of Transportation, under the ADA (ADA Accessibility Guidelines for Buildings and Facilities: 2002).

According to Thomas (2004:14) the UK Disability Discrimination Act (DDA) first entered the statutes in 1995 but it is only in October 2004 that all its provisions became legally binding ... it gives rights in the areas of employment, education, access to goods, facilities and services and buying and renting land and property.

People with Disabilities Australia, is an organization that leads the mobilization of the United Nations Convention on the human rights of people with disability. The Australian government is called upon to support the development of the convention. This draft convention gives detailed human rights issues including access and mobility in a thorough manner. (Report on national consultations with people with disability in relation to the proposed United Nations Convention on Human Rights and Disability:2006).

It is not only countries in the North that are trying to improve the qualities of lives of disabled persons. Some countries in the South have also different arrangements for their disabled citizens. South Africa, Zimbabwe, Uganda, the Philippines, Brazil, Peru, Colombia and other southern countries are also trying to take disability issues to heart. The different improvements in different countries in terms of access and mobility can be

found in the bi-monthly web-zine of international disability news and views. (Disability World Web-zine 2005-2006).

2.5. Issues of Disability in International, Continental and National Agenda and Improving Access and Mobility

2.5.1. International Agenda

The issue of people with disabilities is one of the issues that have drawn global concern. The UN Global Program on Disability Division for Social Policy and Development: Focal point on Disability can be mentioned as a significant step in this regard. It deals with promotion, monitoring and evaluating the implementation of the World Program of Action and UN Standard rules. (UN Standard Rules on the Equalization of Opportunities for Persons with Disabilities:1992).

The United Nations had dedicated a decade for people with disability from 1983 to1992 that was known as, The United Nations Decade of Disabled Persons. The Asian and Pacific Decade of Disabled Persons fell from 1993 to 2002. The African Decade of Persons with Disabilities is still underway programmed from 1999 to 2009. Different resolutions, conventions and regulations have been issued such as the December, 1971, Declaration of the Mentally Disabled Rights, the May 6, 1975, Resolution passed to prevent disabilities and expand rehabilitation services, the December 9, 1975 Declaration of the Rights of Persons with Disabilities, the July 1980 Women's Decade Conference which enables to improve women with disabilities in all age groups, the International year of persons with disabilities which is 1981, the December 1982 world program of action concerning disabled persons, the June 1983 Adoption of convention No. 159 and Recommendation No.168 by ILO regarding vocational rehabilitation and employment of persons with disabilities, and the December 20, 1993 adoption of the Equalization of Opportunities for Persons with Disabilities at the 48th Session of The General Assembly of the United Nations (MoLSA,1999:7-8).

In 2004 a Global Partnership for Disability and Development was formed with a two years work plan to coordinate the task force for disability issues. (Global Partnership for Disability and Development: 2004)

In January 2006, an International partnerships' meeting was held in Addis Ababa from September 21-22 as a component of the African Disability Decade. The meeting selected Ethiopia, Rwanda, Mozambique, Senegal and Kenya as pilot countries for the decade. (Disability World Web-zine 2005-2006)

The employment opportunities of people with disabilities are high on the agenda of ILO and it has acted in different ways. For instance, it has prepared several manuals, conferences and workshops that relate to employment opportunities for people with disabilities. Several international organizations including the World Bank, WHO and others also include disability issues in their programs. Most of the approaches present ways of helping people with disabilities based on what WHO has formulated as Community Based Rehabilitation (CBR).

The Technical Consultation workshop which was held in Addis Ababa from May 20-22, 2002, for instance had addressed the impact of legislation on the employment situation of people with disabilities. It underscored the need to remove "...social barriers- in the built environment, in laws and policies, in the way activities are organized, in the assumptions people make" (Technical Consultation Report, 2002:7). Employment in general necessitates movement and this calls for avoiding physical obstacles. However, physical barriers are hindering people with disabilities from using their abilities and talents. ILO's manual on selective placement stresses the situation when it states, "... Architectural and other barriers, however, still present a major obstacle to the full integration of disabled persons into active socio-economic life" (ILO,1984: 43).

2.5.2. Continental Agenda

The decade from 1999 -2009 as mentioned above is the African Decade of Persons with Disabilities. The Declaration of the African Decade of Persons with disabilities (1999-2009) was adopted by the 23rd session of the Labor and Social Affairs Commission in Algiers, Algeria in April 2000 and endorsed by the 72nd session of the OAU Council of Ministers and 36th Assembly of Heads of State and Government respectively, in Lome, Togo in July 2000. Regarding access and mobility the declaration states,

The built environment throughout Africa has been designed without due consideration for the special needs of persons with disabilities. Physical obstacles and social barriers prevent citizens with disabilities from participating in community and national life. The various impediments to participation and equality are especially formidable for girls and women with disabilities. With positive attitudes, increased awareness and much care, we can build social and physical environments that are accessible for all, i.e we must work towards a society for all. (Continental Plan of Action for the Africa Decade of Persons with disabilities: 1999-2009. February 2002, Proclamation number 4).

According to Article 16 of the continental plan of action for the African Decade of Persons with Disabilities, the goal of the decade is the full participation, equality and empowerment of people with disabilities in Africa. Objective Six further discusses the goal by saying “to ensure and improve access to rehabilitation, education, training, employment, sports, the cultural and physical environment.” The body responsible for organizing the decade is the African Rehabilitation Institute (ARI) which was established as a specialized agency of the OAU in response to the United Nations Decade of Disabled Persons. Its headquarters is in Zimbabwe, Harare, with regional offices in Dakar and Brazzaville. It aims to bring about change in collaboration with Disabled People’s Organizations (DPO) specifically The Pan African Federation of Disabled Persons (PAFOD) and The African Union of the Blind (AFUB). More over, governments and other organizations are also among the partners mentioned in the plan of action.

2.5.3. National Agenda

In June 1999 the Ministry of Labor and Social Affairs in Ethiopia, (MoLSA) prepared a national program of action for the purpose of rehabilitating people with disabilities. It had prepared conventions, recommendations, directives and the development of social welfare policy (Technical consultation report, 2002:24). However, there is a lack of information regarding the implementation of the national program of action.

According to a local non-governmental organization called Handicap National, different workshops have been carried out to pinpoint problems of people living with disabilities in Ethiopia one of which is physical barriers. The document prepared by the organization underlines the need to consider physical barriers by stating,

when buildings are planned, entrances, gates, lifts at work places entertainment areas and service providing quarters at large must see to it that the possibility to access CWDs (children with disabilities) should be considered (2005:32-33).

However, consultation of people with disabilities concerning the kinds of building codes or regulations that are going to be in place has not been carried out and the problems that are mentioned in relation to physical barriers linger.

Chapter III

Findings and Analysis

This chapter presents the key findings from the survey research, focus group discussions and observation.

People with motor and visual impairments represent the largest number of people with disabilities in Ethiopia. In this study a total of 200 disabled persons: 100 visually impaired and 100 motor impaired were participated in the survey research.

A one session focus group discussion was held with each group in order to complement the responses obtained through the survey research.

The motor impaired survey respondents were all taken from The Ethiopian National Association of the Physically Handicapped. The sample was taken only from the members of the association because it was possible to find people with motor impairments of different status at the association.

According to the public relations officer at the association, the national association was established in 1986 E.C and the Addis Ababa association in 1988 E.C. The association has an estimated number of three million members around the country in all regions except for Gambela. In Addis Ababa there are an estimated number of 4000 members from all walks of life. The main objectives of the association are to safeguard the rights of the motor impaired, to fight for educational opportunities, job opportunities, environmental opportunities and raising the awareness of the community and the motor impaired regarding the rights of people with physical impairments. Among the members 100 people were sampled to participate in this study.

Focus group participants were not members of the association and came through a national non-governmental organization for disabled persons- 'Handicap National'. The focus group participants were ten and they were all students ranging from primary up to

10+1 diploma program. Half of them were females, and the participants' age is found between 13 and 20 years. Most of the focus group participants came from Lideta Sub-city where 'Handicap National' is found based on willingness to participate. (See appendix VI for profile of focus group discussants)

The visually impaired respondents were all taken from The Ethiopian National Association for the Blind.

According to the public relations officer of the association, ENAB was established in 1952 E.C. It has 30 branches in the country with an estimated number of about 9000 members. From these, an estimated number of 3500 are found in Addis Ababa and they came from all walks of life. The major objectives of the association are to safeguard the rights of the visually impaired, promoting their humanity and preventing discrimination, awareness raising to the visually impaired and to the public at large, attempting to make the visually impaired economically independent, to bring the visually impaired together in the form of an association, and doing preventive work towards causes of blindness. 100 people were sampled for this study from among the members.

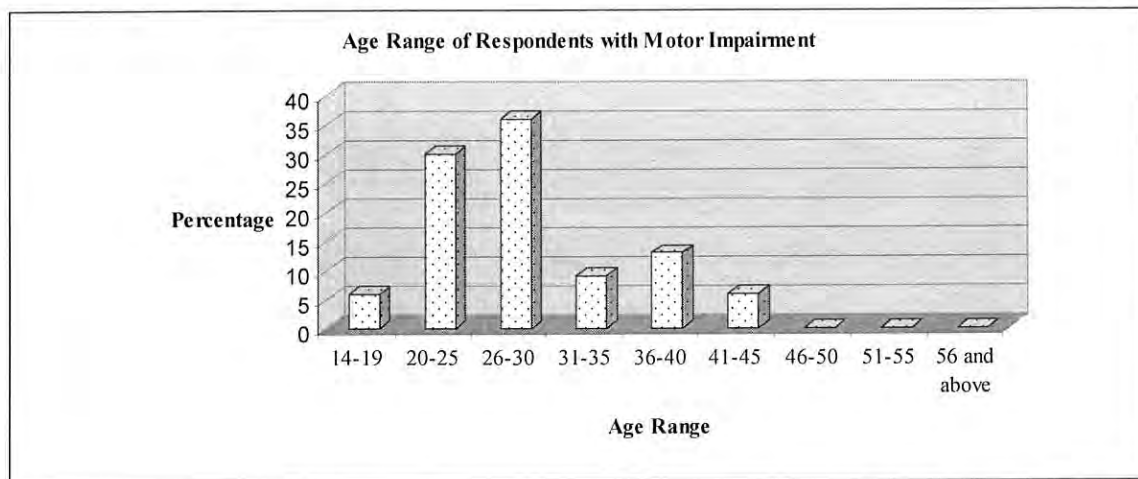
The focus group discussants were nine and they were all college students and similar to the motor impaired group they came to the discussion based on willingness. Four of them were females. The participants mostly came from Arada sub-city and their ages range from 23 to 32. (see Appendix VI for detailed profile of focus group discussants)

This section also discloses the findings of the mini-survey that was undertaken among some eight governmental offices that are directly or indirectly related with the issue at hand.

3.1. Sample Description of People with Motor Impairment

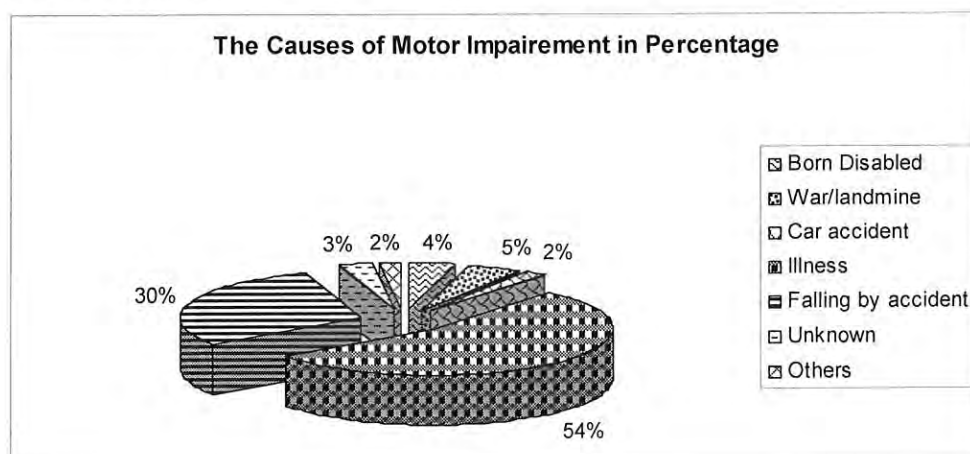
The sample size taken for the group, of the motor impaired, was 100. Both sexes were fairly represented with 46% female and 54% male respondents. The majority of the respondents (73%) were single; this might indicate the societal discrimination against disabled people, which hampered their participation in the different aspects of social life one of which is marriage. The respondents were found within the age range of 18-48 with an average of 28 years as illustrated below.

Figure 3. Age Range of Respondents with Motor Impairment



The major cause for the motor impairment among respondents was found out to be illness, specifically Polio followed by accidents as illustrated below.

Figure 4. Causes of Motor Impairment in percentage



The majority of the respondents have completed secondary school. From these some had received diploma and degree from higher institutions and most of the respondents have got the chance to pursue their education in private as well as government institutions at different levels as illustrated in the table below.

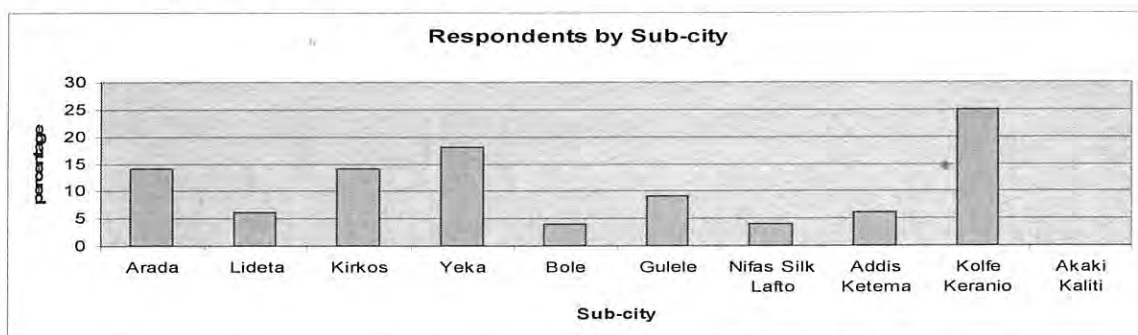
Table 5. Educational Statuses of Respondents with Motor Impairment

Training	Percentage	Number
Certificate student in private college	7.5	4
Certificate student in government institution	9.4	5
Diploma Student in Private College	15.1	8
Diploma Student in Government Institution	5.7	3
Degree Student in private college	7.5	4
Certificate holder	17.0	9
Diploma holder	20.8	11
Degree holder	13.2	7
Total	100	51

Almost half of the respondents were employed and a considerable number of the respondents answered that they live alone helping themselves. Among the employed, civil servants account only for 6% and most of them work in Non-governmental self-help organizations.

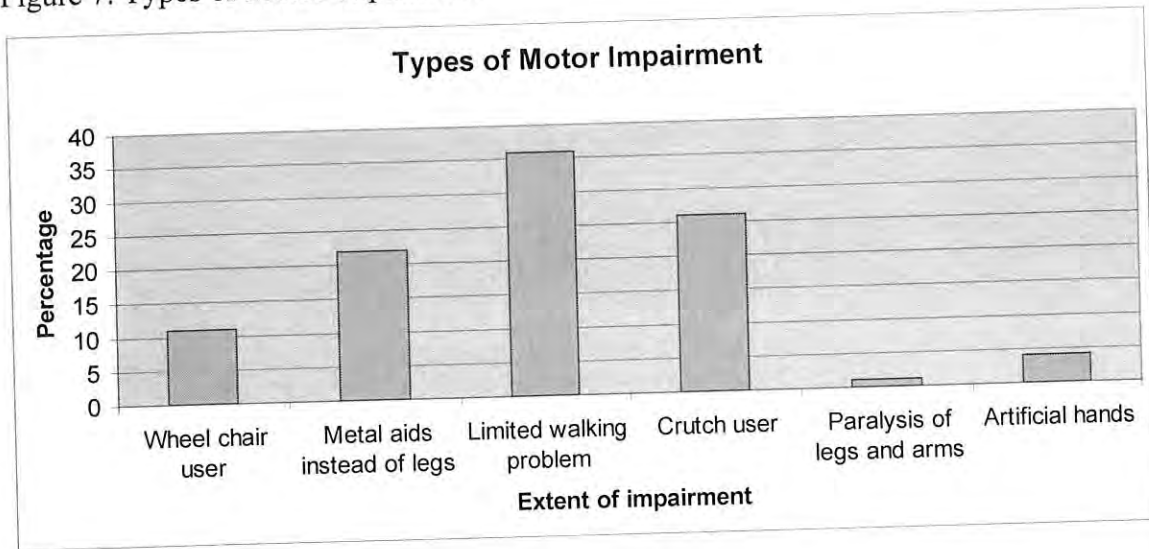
Slightly more than half of the respondents came from other regions of the country, in search of a better life in the capital city of the country. 47% of the respondents said that they were born and brought up in Addis Ababa. All sub-cities were represented by the survey respondents except Akaki/Kaliti as shown below.

Figure 6. Respondents by Sub-City



There are different kinds of motor impairment and the majority of respondents use different aids in order to move from place to place. The following is an illustration of the types of motor impairments among respondents.

Figure 7. Types of Motor Impairment



3.1.1. Buildings and Accessibility to the Motor Impaired

Buildings are prominent features of the urban built environment. The design of buildings affects the day-to-day lives of the motor impaired while trying to reach the services rendered in different buildings. The questions that are prepared to find out the constraints that design of buildings pose focus on entrances, corridors, and other inside features of buildings. Particular focus is given to the existence of ramps, specialized elevators, and specialized toilets.

More than half (54%) of survey respondents have never seen a ramp or a specialized elevator in buildings that they have visited in Addis Ababa. Those with limited walking problem said that they don't have to use ramps so they haven't noticed whether it existed or not. The existence of ramps in hospitals was mentioned by some of (11%) the survey respondents but still according to these respondents, the existing ones are prepared for stretchers and not for wheel chairs. Lack of ramps in buildings hinder the motor impaired especially those who use wheel chairs to move about. All wheel chair users explained

that they cannot enter buildings by themselves, so they always call for help, or they always travel with an escort who can carry them enter. Those with limited walking problem, crutch users and those who have metal aids in their legs explained that they enter buildings with stairs in difficulty although the extent of the problems they encounter differ according to the types of the motor impairment.

Focus group discussants have also mentioned narrow corridors that cannot accommodate crutch and wheel chair users as hurdles in many buildings.

The fact that inaccessible buildings or those that have no special designs for disabled persons pose difficulty to whomever wants to use the services given in them was also stressed by focus group discussants. In this regard the focus group discussants have pointed out lack of ramps in every building they visit. As they expounded, when they face buildings with stairs, those who use crutches enter the building with so much difficulty. Those with limited walking problem face different problems based on the extent of their impairments but in general the difficulty they face is minimal. However, focus group discussants unanimously agreed that such buildings totally excluded people using wheel chairs.

Wheel chair users are excluded from using different services in buildings since there are no mechanisms to enter and move about in the buildings freely. As a result, all wheel chair users responded that they have never seen elevators especially prepared for the motor impaired. In fact, most of (61%) the survey respondents confirmed the lack of elevators that are especially prepared for wheel chair users. Some (19%) survey respondents with limited walking problem and crutch users disclosed that they use existing elevators mostly when they go to hospitals. Concerning the accessibility of the buildings that they currently use as employees, as students or as residents more than half (55%) of the respondents explained that they are not accessible. Since, buildings that render different services close their doors to the motor impaired especially to wheel chair users they don't know whether these buildings have special toilets prepared to cater the

needs of the motor impaired. In fact, most of (76%) the respondents said that they use shared pit latrine at their homes, work places or schools.

The few survey respondents who live in rehabilitation centers have revealed the existence of a modified toilet, which is a kind of chair put on the top of the pit latrine. Apart from this, all survey respondents face problems of toilet since they share the pit latrine that is prepared for non-disabled people at schools, work places or their homes.

Focus group discussants confirmed lack of specialized toilet as the greatest problem to the physically impaired. All of the girls who use crutches, wheel chairs and artificial leg explained that they have never used toilets out of their homes. As the participants explained most toilets are pit latrines and not suitable, since these necessitate the stretching and bending of legs. A discussant who uses crutches said,

If the toilets could be built by adding additional seat it would be more suitable, but the existing ones in my school are not suitable for me at all. Sometimes I thought that architects think that arranging things for disabled persons might spoil the designs of their buildings.

The questions on buildings have also included the use of public toilets and most of (61%) the survey respondents responded negatively. The reasons given were unsuitability for the physical impairment and lack of public toilets. All wheel chair users responded that they did not use public toilets at all.

Regarding special problems in relation to using buildings at night, almost half (45%) said that they don't use buildings at night. Some (32%) respondents disclosed problems at night and some (23%) said they face no problems. Those who said there are problems at night explained the problems as closed doors that they used for entrance in the daytime, lack of adequate electric light to identify places and lack of people who can render support in case of an emergency.

The majority (80%) of the survey respondents disclosed changes in terms of buildings in their locality. However, as elucidated all the changes did not consider the needs of disabled people and there are no arrangements in the new buildings and streets of Addis Ababa. All of (99%) the survey respondents said that the recent trend of the government towards building schools with stairs and stories discourage the schooling of students with disabilities. According to the respondents this is so, since there are no special arrangements on the buildings at all.

The community workers of Handicap National also added problems they face when they escort the physically impaired to different buildings. One of the community workers who organized the focus group discussion said,

Wheelchair users cannot use services given in the Municipality building, it is so difficult to reach the different offices, many people with disabilities went there to use services but returned without using it since the whole architectural design is not accessible. New buildings also don't include accessible situations making it difficult to people with disabilities use different services.

One of the focus group discussants who uses wheelchair to move about said that all buildings including her house are not easily accessible. She explained that she has to crawl eight stairs to enter her house. As to the physical hurdle she faces at her school she said,

The fact that schools classes are found upstairs creates problems for me. When exams are given in the 3rd or 4th story building I usually cry and after my sob the teachers usually arrange for me to take the exam at the ground floor. Once I went to the parliament to present disability issues. But I couldn't enter since there was no ramp, so I just returned home without saying anything.

A girl, whom the researcher found by going to her home and who cannot climb stairs has applied to the school administration and they have accepted her quest to be assigned to classes downstairs on the ground. But she has suggested the need for building ramps, so that she can climb up stairs without difficulty. She said that schools are becoming multi-storey and the needs of students with disability are not considered. The toilets are found

upstairs and since she cannot climb up the stairs she doesn't use toilets in her school compound.

The researcher has tried to visit different service giving buildings. (see appendix VII) The government offices that the researcher has visited have no accessible arrangements to people with disability. As mentioned in the focus group discussion, the building of the city's Municipality is the most difficult. The researcher has tried to visit some government and private owned educational institutions and found out that educational institutions lack accessible arrangements for disabled persons. The ramp that was used by wheelchair users at the entrance of the Kennedy Library at Addis Ababa University was demolished and was replaced by stairs, however, while finalizing this paper the researcher has observed a new construction of a ramp at the entrance of the Kennedy Library.

Entertainment houses such as cinema houses have all excluded disabled persons at the entrance and in the way the seats are arranged. Buildings at marketplaces also exclude people with disabilities with elaborated stairs and no arrangements are sought for disabled persons. Although the researcher has never seen a car driven by a person with disability, she has observed parking lots prepared for cars driven by people with disability in few places in Addis Ababa. The researcher has also observed that mostly such places are left open or other cars that load and unload different things park on them. The condominium houses that are built by the government do not include the needs of disabled people since there are no special arrangements such as ramps in any of the condominium houses that the researcher has visited.

The old and new buildings of the National Bank seem to close their doors for people with motor impairments with their very difficult stairs; however, most commercial banks and insurances (government and private) give service at the ground floor. The researcher has found out that Health institutions and some Hotels have better provisions of ramps at their entrances. Most hospitals in the city have ramps for stretchers, though they are not built specifically for people who use wheel chairs. Some hospitals that the researcher has

visited have standard ramps at their entrances as well as inside. On the other hand, the organizations that work for disabled persons themselves do not have adequate accessible arrangements. Few of them have ramps but considering the very aim of their establishment it is very inadequate.

The fact that the designs of buildings do not cater for the needs of the motor impaired, in Addis Ababa deny their right to access different services. The situation is especially difficult for wheel chair users since they cannot enter buildings without special arrangements such as ramps. Even if they manage to enter buildings with the help of others they cannot use elevators because the positions of the buttons of elevators do not consider the situations of wheel chair users. Thus, they are forced to depend on other people whenever they want to use different services rendered in different buildings. The lack of appropriate designs for the motor impaired in Addis Ababa seems to force people with motor impairment to be dependent in terms of access and mobility.

3.1.2. The Street Environment and the Challenges faced by the Motor Impaired

Urban life necessitates the movement of people in the built environment. In this regard people with motor impairment similar to their non-disabled counterparts move in the urban space for various reasons. The main reason for traveling for the employed was to go to work. Students said that they mainly travel to go to school and the majority of the unemployed said that they mainly travel for different social purposes. Most (57%) of the survey respondents travel between 7 and 8 A.M followed by between 5 and 6 PM. According to the majority (78%) of survey respondents the reason for the choice of time is because these are times they travel for their different activities and it was found out that the majority of the respondents do not have a different choice of time in relation to their motor impairment.

The major problem for travelers on foot or for those using crutches was mentioned as the bad gradient of the road followed by road works left open without any precautions. The major problem of wheel chair users turned out to be road works left open without any

precaution followed by the bad gradient of the road. The bad gradient of the road pose the greater difficulty to reach taxi or bus stop as confirmed by the majority (79%) of the respondents. Survey respondents were asked to describe the situation in their neighborhoods and almost all (86%) of them affirmed that the pathways in their neighborhoods are not suitable to travel either by a crutch or wheelchair. For most (72%) of the respondents the pathways are challenging and since vehicles cannot enter into the neighborhoods of most of the respondents they have to travel with difficulty to get another means of transport. Except one survey respondent, vehicles cannot enter in the villages of all survey respondents using wheelchair for mobility. In addition to the bad gradient of the path ways, 69% of the survey respondents mentioned road works that are left open as their second problems to reach taxi or bus stop.

Most of the survey respondents cross streets either by themselves in any part of the street or by using Zebra crossings. None of the respondents have mentioned the use of street curb ramps showing that these street features are either non-existent or insignificant in the streets of Addis Ababa. The major problem while crossing streets according to the majority (94%) of survey respondents was mentioned as cars traveling with speed.

The majority (88%) of survey respondents disclosed that they choose particular places to travel. The reasons for choosing particular routes that were mentioned are the suitability of the route for the physical impairment each respondent has and personal liking. Only few (7%) respondents explained easily identifiable places as their reason for choosing particular places while traveling.

Almost all (96%) survey respondents face problems in the winter and when it is raining. The major challenge was found to be slippery pathways. Getting wet due to lack of shelter from rain in the streets was mentioned as the second challenge when it is raining and in the winter time. The third challenge mentioned was difficulty in choosing the path since water covers the pedestrian pavement. For wheel chair users the problem in rainy seasons was found out to be falling due to slippery places and the problem of wheels getting trapped in the potholes found in most of the streets of Addis Ababa.

All focus group participants affirmed the findings of the survey and felt that they are not taken into consideration while roads are designed. They have mentioned the ring road in Addis Ababa as a case in point. As they explained it is not suitable to travel for wheel chair users or crutch users. Those with artificial leg also face problems since they cannot jump over the fences and the pedestrian crosses are found at long intervals and reaching them is tiresome. The poor drainage of asphalt roads in Addis Ababa, and the gravel roads create problems for smooth movement, particularly to wheel chair users. The focus group participants also disclosed that they have never seen curb ramps prepared for wheel chair users in the streets of Addis Ababa. Even if there are some curb ramps in the streets of Addis Ababa these are prepared for cars and as the discussants asserted not suitable for wheel chair users. The ring roads that are constructed and those on construction pose a great difficulty especially to people with disabilities since there is no special concern rendered to the special needs of the motor impaired in the design of the streets.

The problems of the street environment mentioned by the survey respondents and focus group participants show the features of path ways and streets in Addis Ababa that are often strewn with hurdles and pose problems to all pedestrians, disabled and non-disabled alike. However, the problems become severe when encountered by a person with disability, since there are no mechanisms to easily avoid problems in the street environment. When non-disabled persons use different mechanisms to avoid hurdles the disabled person is forced to ask for other peoples' help. This further discourages the mobility of the disabled person and hence hampers one from realizing his/her potential and become a productive citizen of his/her country.

3.1.3. The Public Transport System from the Standpoint of the Motor Impaired

The fact that urban life necessitates movement requires the availability of different modes of transport. The mode of transport that is frequently used by the motor impaired in Addis Ababa was found out to be mini-buses. The majority (79%) of the survey respondents use mini- buses as their first resort for their day-to-day travel. The next mode of transport was

found out to be city buses. The third alternative mode of transport was mentioned as Lada taxis.

Some (24%) of the survey respondents said that they frequently travel on foot. For most (66%) of the respondents the main reason for choosing mini-buses as the first resort was mentioned as affordability and the next reason is their relative suitability for the physical impairment one has. The survey respondents explained that they chose mini-buses because they have better provision for the motor impaired than city buses. Thus, when they compare the hurdles on a city bus and the cost of a mini bus, they found the cost of mini-buses to be affordable. Wheel chair and crutch users especially emphasize the issue of suitability.

The above point was further confirmed by focus group discussants. Female discussants who use wheelchair and crutches said that they prefer mini-buses to travel. The fact that city buses are crowded most of the time seems to compel most motor impaired to depend on mini-buses as their primary alternative mode of transport.

The third reason given for choosing the mode of transport by some (34%) of the survey respondents was availability at any time of the day except for the high cost of mini-buses.

High entry steps were mentioned as the most difficult hurdle while boarding a city bus by most (65%) of the survey respondents who use city buses. The high risers of buses create problems to crutch users and those who move about with artificial legs.

In agreement with the findings of the survey, one of the focus group discussants recalled of her experience as follows:

When I go by bus, I always face problems because of the stairs; they are very difficult to climb. Once, while I was struggling to climb the stairs and enter, the driver shut the door on me and the door pushed me outside while my other leg was inside the bus, it was when people shout that the driver opened the door again to let my leg go.

Overcrowding and lack of cooperation from drivers and conductors of city buses further exacerbate the challenges as explained by most of the survey respondents. The other problem mentioned while boarding a city bus was lack of grabbers.

The major obstacle for disabled people after getting on a bus was mentioned as overcrowding, since they cannot tolerate all the pushing and swinging in a crowded bus. The second problem on a city bus was disclosed as lack of seat. Narrow aisles and seat spacing were mentioned as the third problem since there are no spaces especially prepared for disabled persons.

In the focus group discussion, a girl who uses crutches as mobility aid and uses both buses and taxis to travel, narrated her experience regarding modes of transport as follows:

I face serious problems in terms of transport, when I use buses I need space to stretch my legs and since the aisles are too narrow, I have to stretch it in the corridor of the bus, passengers usually stamp on my feet, and show no consideration, when I use mini-bus taxis it is only the front seat that is suitable for me, even that creates problems since the space is too narrow to stretch my legs and put my crutches.

The major problems while leaving a bus were mentioned as passing one's stop due to over-crowding and the difficulty posed by the heightened steps by survey respondents. The third problem while leaving a city bus was mentioned as a very short time for stoppage and passing one's stop due to the shortness of the time to reach the exit door.

All wheel chair users do not use city buses since there is no arrangement on public transport especially city buses to serve wheel chair users. As a result, the mode of transport they use was found out to be mini-buses. Even though most of the motor impaired use mini-buses, there are no mini-buses that provide ramps or other special services to people with different motor impairments in Addis Ababa.

A girl who was one of the focus group participants and who uses wheel chair claimed that she has never traveled by bus. What is more, she has enormous problems using mini-bus taxis. She said,

I have never traveled by bus. I only use taxis with the help of another person who can carry me enter and take a seat and put my wheelchair. The drivers and the assistants don't want to cooperate; I think they don't like a wheel chair user travel by their taxis.

The fact that there is a lack of cooperation from drivers and conductors of mini-buses was also mentioned by most (62%) of survey respondents as a major hurdle while boarding a mini-bus, followed by high entry steps. Almost half (46%) of the survey respondents disclosed that high entry steps pose challenge to them while entering a mini-bus. The third problem mentioned as a problem while boarding a minibus was narrow door openings.

The most difficult problem that the respondents face after getting into a minibus was found out to be narrow aisles and seat spacing. The lack of suitable aisles and seat spacing for people with different impairments pose the greater difficulty while traveling in a minibus.

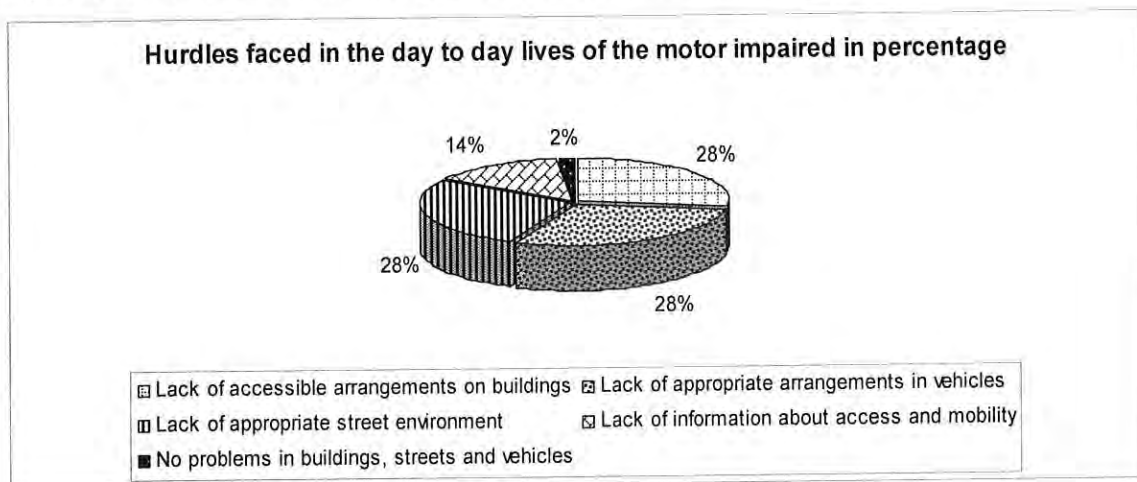
A girl whom the researcher visited at her home and who is afraid to travel told the researcher that the only road she knows is from home to school and she doesn't want to travel to other places because of the physical hurdles. In fact, she doesn't go to school alone. She always needs somebody to go with her, to render support if she faces very difficult situations on her way. The researcher had to go to the respondent's house to get her view since she is afraid to use any kind of transport except individual contract taxis. She cannot use mini-buses if the stairs are high. She has never traveled by bus. She said that she would have traveled alone if there were favorable situations allowing easy access and mobility. She said, "Whenever I travel, (to school) I need the support of other people. So, I won't move without a person besides me. I have never traveled alone. I have never gone to recreation places, cafes or other areas, the only place I go to is school, since I always can get escorts and since it is closer to my house."

As can be inferred from the responses of the survey the design of vehicles poses difficulty in the day-to-day movements of the motor impaired. It totally excluded wheel chair users and those who cannot negotiate steps to a considerable extent.

3.1.4. The Impact of Environmental Discrimination on the Motor Impaired

Environmental Discrimination as the study found out has a significant impact on the lives of the motor impaired. The most difficult hurdle in the day-to-day lives of the motor impaired was indicated to be lack of appropriate arrangements in vehicles followed by lack of accessible arrangements on buildings and the street environment as illustrated below.

Figure 8. Hurdles faced in the day-to-day lives of the motor impaired



Most (59%) of the survey respondents stated that lack of favorable arrangements for access and mobility hinders them from realizing their potential and to enjoy quality life. From the above respondents 32% mentioned that lack of access and mobility hampers them from leading quality life since they cannot participate in social life, as they wish it to be. The second largest group (28%) said that they are unable to realize their potential in terms of creative activities. A quarter (24%) of them mentioned that they are unable to

find jobs due to the lack of accessible situations in buildings, streets and the transport system.

Most (76%) of the respondents stated that the problems women with disabilities face are even more exacerbated due to their gender. As almost half (46%) of the respondents asserted most assistant providers can abuse them in the guise of help. Some (30%) of the respondents exclaimed that the women themselves find it difficult to ask for help and this aggravates the problems women face while using buildings, traveling in the streets and while using different modes of transport.

The focus group participants have stipulated various reasons for the lack of accessible architectural designs and suitable means for mobility. Some of the reasons according to their view include:

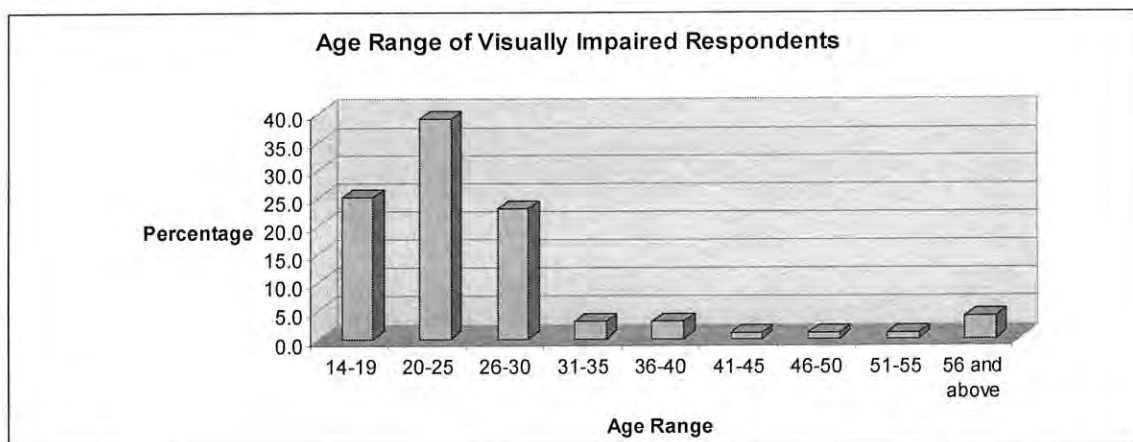
- They are forgotten in every aspect, and there is lack of attention from the government
- Lack of representation of disabled persons in parliament
- Most people with disabilities are confined at home and are invisible
- Most people with disabilities are not educated and cannot struggle for their rights
- There is no effort to include and participate people with disabilities in planning
- There is lack of interaction with the other members of society
- There is lack of research as to the needs of people with disabilities in urban design, buildings and roads design and transport system
- Lack of awareness from the part of the society regarding disability issues
- Lack of strong legislation regarding disability issues
- Lack of media coverage regarding disability issues

The fact that the urban built environment discriminates against disabled people negatively affects the social and professional lives of people with disabilities. As the study pointed out most of the respondents felt that they could have led quality life, had there been considerations in the urban built environment in terms of accessible buildings, street environment and transport system. Women, as most of the respondents asserted face what is called 'double jeopardy' due to the societal attitude towards women and their disability, making their day to day movement challenging. This calls for inclusive planning to help disabled persons move freely and access different services in the city.

3.2. Sample Description of People with Visual Impairment

The sample size taken from the group, which consists of the visually impaired, was 100 with 17% female and 83% male respondents. The fact that women respondents were significantly fewer than men might show that the majority of women with visual impairments are still struggling to join the outside world due to lack of educational and job opportunities. Similar to the group that consists of the motor impaired, the majority of the respondents (80%) were not married. This might be an indication of the exclusion of visually impaired people from social life which is attached to the societal stigma of being visually impaired. The respondents are found within the age range of 14-71 with an average age of 25 years as shown below.

Figure 9. Age Range of Visually Impaired Respondents



About half of the respondents have completed secondary school and a significant number of them have church education. Few of them had received certificates, diploma and Degree from different institutions. The majority of the respondents are pursuing their education in certificate, diploma and degree programs in private and government educational institutions as shown below.

Table 10. Educational Statuses of Respondents with Visual Impairment

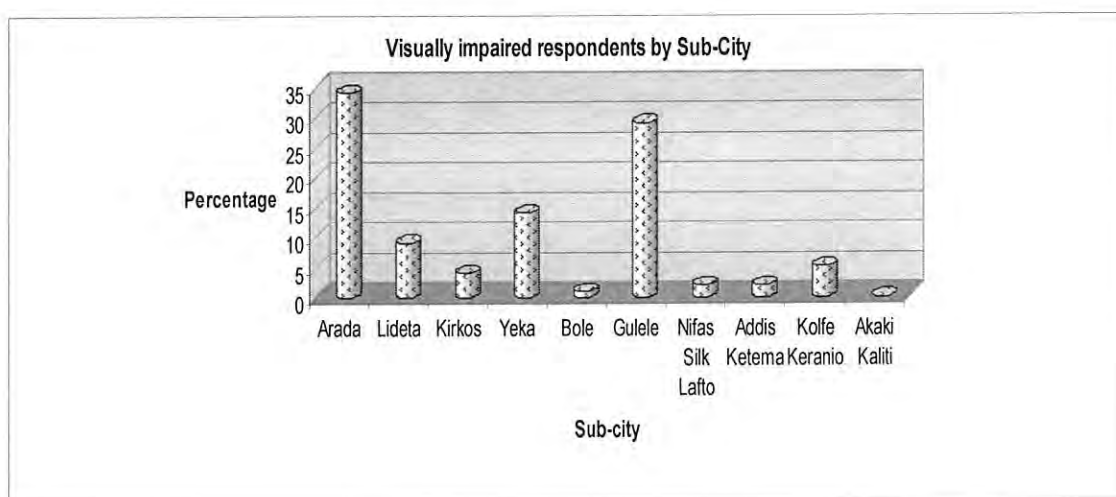
Educational Status	Percentage	Number
Diploma Student in Private College	20.8	11
Diploma Student in Government Institution	7.5	4
Degree Student in Government Institution	34.0	18
Certificate holder	3.8	2
Diploma holder	7.5	4
Degree holder	15.1	8
Other	11.3	6
Total	100	47

A quarter of the respondents (26%) were employed and the large majority of respondents were students. Among the employed office workers account for 6%, and 10% of these said that they work in non-governmental organizations. A considerable number of the respondents live alone by helping themselves.

The majority of respondents (80%) are migrants from other regions of the country. This might be an indication of lack of different educational or work opportunities in the other regions of the country making the capital city the only resort for a better life.

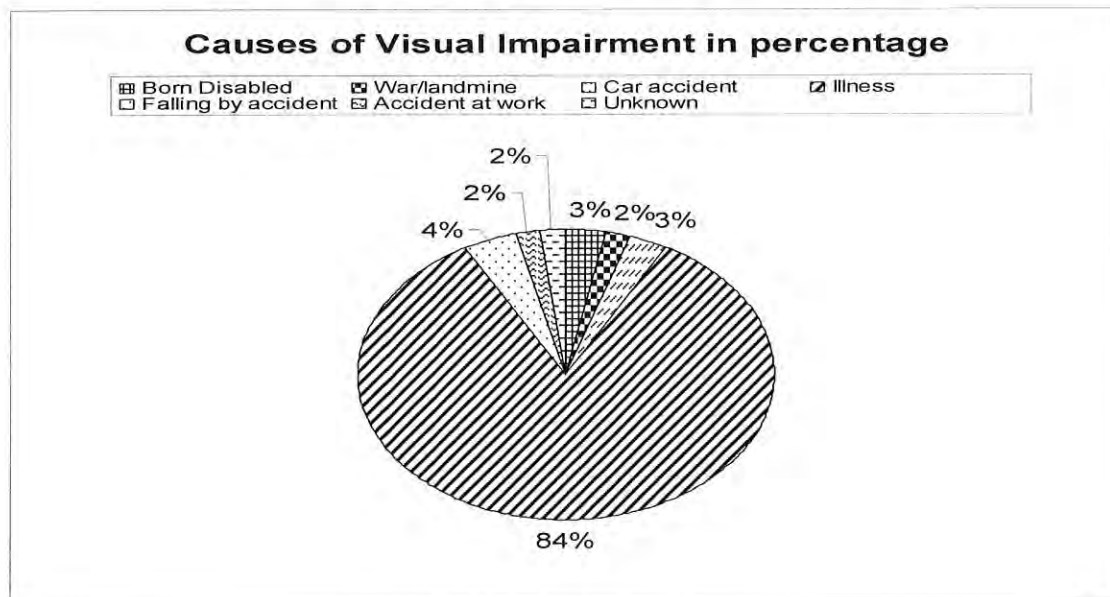
Similar to the motor impaired group all sub-cities were represented except Akaki/Kaliti. The majority of the respondents came from Gullele and Arada Sub- cities as illustrated below.

Figure 11. Visually impaired respondents by sub-city



The majority of the respondents were totally blind and 29% of them were weak sighted. Similar to the motor impaired group the major cause for the visual impairment among respondents was found out to be illness, though the kind of illness was not specified. The following diagram illustrates the causes of visual impairment among survey respondents.

Figure 12. Causes of Visual Impairment



3.2.1. Buildings and the Visually Impaired

Different services that are given in different buildings are meant for every user despite his/her physical conditions. However, lack of fitful arrangements in buildings hinders people with disability from using them. The problems that design of buildings pose to people with visual impairments are considered in terms of the existence of Braille indicators on elevators, office doors and toilets.

Visually impaired persons except for those with weak sight use white canes for findings their way and move about. However, if there are no braille buttons in multi-story buildings they find it difficult to identify floor numbers and offices they want to go to. Almost half (41%) of the survey respondents did not use elevators at all. Some (23%) of the survey respondents explained that they use elevators in service giving organizations such as banks. Few (12%) of them explained that they use elevators in hotels and when

they go to hospitals. Very few (9%) survey respondents expounded that they have come across an elevator with braille button in Addis Ababa. The researcher has also observed the existence of elevators with braille buttons in some service giving buildings in Addis Ababa. Most (77%) of the survey respondents have never encountered an elevator with a braille button. As a result, almost half (42%) of elevator users ask other people to help them identify when an elevator approaches. Half (49%) of the survey respondents revealed that they identify the approach of an elevator by the sound it gives even if this can be difficult since all elevators do not have a bell that chimes.

In many of the places that the researcher visited elevators do not have special sound systems to tell users to get in or get out. As to identifying different offices and corridors more than half (56%) of survey respondents disclosed that they ask other people to help them. Some (22%) of the survey respondents exclaimed that they use their canes and they count the offices they encounter. Few (14%) of them identify offices by touching walls and doors and when the places are familiar some use their mental pictures to differentiate the location of different offices. The lack of braille buttons in elevators, corridors and doors force the visually impaired to be dependent on others. If people are not around they find it difficult to reach the different offices and get the services they want in a timely manner.

The above point was consolidated by the focus group discussants. All of the focus group participants have never seen an elevator with braille buttons. One of the participants narrated his experience in this regard:

Once I went to HAPCO (HIV/AIDS Prevention and Control Office) in Dembel Building and I asked people to show me the office while I entered the elevator, but they just kept quiet, so I reached the ninth floor and didn't know where I was, then I went back to the first floor, it was after I moved like this for three times that a certain person who was watching me solved the problem by taking me to the office I wanted.

Concerning the building that they use everyday most (74%) of the survey respondents said that there are no special arrangements to make their lives easy while moving about in the buildings.

Among the building components that pose the greatest impediments stairs that lack staircases were mentioned by focus group participants. This is of particular importance since stair cases help them travel by leaning on them while climbing up and down the stairs. The fact that some buildings start to give different services without providing such important building elements poses the greatest hazard to the visually impaired.

Of course, some (20%) of the survey respondents explained that they have no problems in the buildings that they use everyday. More than half (55%) of survey respondents said that there are no changes in terms of buildings in their locality. It is some (33%) of the respondents that witnessed changes in terms of new buildings; however, the new buildings have no arrangements to aid the visually impaired.

As to toilets, most (76%) of the survey respondents used shared pit latrines at schools, at work places and at home. More than half (53%) of the respondents use public toilets and almost half (47%) do not use them. From those who do not use public toilets most (66%) expressed their reasons for not using as lack of toilets in their localities.

The issue of toilets was not raised as a significant problem by survey respondents as well as focus group discussants. However, focus group discussants expressed their wishes to use pits that are not wide and basins such as in a water closet toilet.

3.2.2. The Street Environment and the Challenges of the Visually Impaired

The pedestrian environment is very important for all and especially to people with visual impairments. Half of (52%) visually impaired people travel on foot to reach different destinations. Employed respondents mainly travel to go to work and students responded that they mainly travel to go to school. The third point mentioned as a reason for traveling was for different social purposes. Among the survey respondents 40% said that they travel between 5 and 6 P.M as well as between 7 and 8 AM whereas some (36%) of

respondents said that they traveled between 8 to 9 A.M again for some (32%) the time between 6 and 7 P.M was found out to be suitable. As some (39%) of them explained the reason for the choice of time is availability of different means of transport. Some (19%) responded that the times they chose are work and school time. There was no particular time that the respondents travel in relation to their visual impairment except for few (17%) respondents who chose to travel when the traffic becomes less and when escorts are available.

The problems pedestrians face while traveling on foot were put according to their significance and the greatest hurdle was found out to be parked cars on the path way as affirmed by the majority (89%) of survey respondents. The second problem was mentioned as the bad gradient of the road (86%) and the third hurdle was found out to be passengers that block pavements (84%). The fourth hurdle in the streets was mentioned as street works left open (81%). The problems mentioned have equal importance since there is no significant difference among the number of people who put the different problems in the above mentioned rank. The aforementioned problems are repeated when respondents explained the hurdles that they face reaching bus or taxi stops. Since there are no mechanisms that can help the visually impaired locate bus or taxi stops the majority of the respondents have to spend some time finding the bus or taxi stop by themselves and some are forced to ask other people to show them the bus and taxi stops. Few (17%) of the survey respondents travel with another passenger who can offer help in this regard. As can be seen from the findings of the study, lack of tactile or audible signals in the street environment force the visually impaired to waste their time finding bus or taxi stops or to be dependent on others for information.

The problems are further stressed by focus group participants. Almost all focus group participants have mentioned inaccessible street environment as their utmost hurdle in their day-to-day lives. Apart from the lack of the foot way for passengers, they have given special emphasis to potholes that are left open and electric or telephone poles that are planted in a haphazard way. Different governmental organizations such as the Telecommunications Corporation dig different ditches at different places and most

neglect covering them and the municipality does not fill them duly. This makes life for the visually impaired difficult in the city. Except two weak sighted participants the rest have experienced falling into potholes or crash against poles. Two participants, still carry the scars of their terrible falls into such potholes. One of the focus group participants said,

The pathways I use today will be changed tomorrow, making it difficult to draw a mental picture, I usually travel by myself and the major problem I face in my day to day life is the impediments posed by poles and pot holes. Recently, I have lost four of my front teeth due to a crash against an electric pole that stands on the pedestrian pavement.

The other participant has narrated her experience as follows:

I usually fall into the pot holes that are left by Tele or the municipality. It is especially difficult during the rainy season. I once entered into a pothole while hurriedly going to class. I was wet and came to class with all the mud and the water. The poles that are planted in the midst of the pedestrian pavement usually hit my nose and forehead. Once when I was going to ENAB, at 1 o'clock there were two women by the side of the street who were burning some dirt on the side road. It was the time when every body collects and burns the dirt (in November in Saint Michael's remembrance), I didn't notice but I treaded on the fire and my shoe that was made of rubber was on fire. I still didn't notice and went with the fire burning my shoe. Then a certain man came and shouted and brought leaves and dust and put out the fire.

Though the problems the focus group participants face are very similar each has his/her own story to tell. Another participant has the following to say:

The poles on the streets hit us, especially those that have protruding structures. There are also some structures in the streets that hit us hard on different parts of our body. Once I was traveling with my friend, we both are not sighted. We asked people to help us cross the street but they ignored us. So we decided to cross by ourselves. What we didn't know was that there was a big pothole in front of us. So we fell into it and the water was so stinky and some itchy insects were in it. The water was high up to our thighs. We managed to go out but the insects were all over our body. Oh! How difficult that day was!

There are so many painful experiences of crashing against poles and falling into potholes. The experience of the other participant is narrated as follows;

The problems of poles and potholes are common to all of us. I usually face difficulty in the pavement for pedestrians, people spread grains, and cars are also parked in it. Actually, I have also lost my front teeth by crashing against a parked car in the pedestrian pavement.

The street environment especially poles that are planted in irregular manner and pot holes left open without any precautions pose problems for the visually impaired since they usually travel alone guided by their mental map. If the street is changed from time to time movement becomes so difficult making the day-to-day mobility of the visually impaired full of sufferings. The street environment also includes crossing roads and in this regard most of the focus group discussants face pedestrians who have no concern and drivers who don't stop even after noticing the white cane. As they explain, most drivers don't know that they have to stop and give priority when they see a white cane. One of the discussants has summarized the street environment regarding crossing roads,

The designs of streets are not suitable at all. There is no mechanism that can help us easily cross streets. Many cars can come with speed and since we have no mechanism to cross the road we have to face the consequence and cross in the midst of many cars, and cars that travel with speed. When we ask others to help us cross the street most just ignore us.

The other problem that the visually impaired face in the streets is lack of cooperation from the passers by as emphasized by many of focus group discussants and misinformation regarding the direction of streets. Most able-bodied pedestrians view them as people who deserve pity and alms. What is more, misunderstanding of other pedestrians can also pose great problems as the following experience shows.

These days the problem I face most is crashing against pedestrians. My cane was broken several times because of this. Sometimes I jokingly said, "Do we have to change places, who is not sighted here you or me?" I always draw the map of the road in my mind. If people tell me that there is a pothole nearby, I carefully avoid it. If I don't know the nature of the street, I ask people to tell me where the potholes are and then I study the places carefully, this is my strategy. Some people say 'May God give you' when I ask them to help me cross the street. Some want to give me coins but what I want them to do is just to help me cross. So I tell them that I only want them to help me cross the street.

Most (71%) of the survey respondents disclosed that they chose particular places to travel. The reasons for choosing the places were given according to their importance as places put in one's mental spatial picture, personal liking and easily identifiable pathways. The majority (88%) of the survey respondents face different problems during winter, and when it rains. The problem that is put first by the largest majority (83%) was difficulty choosing one's path since water covers the pavement. The second problem was mentioned as getting wet due to lack of shelter from rain by 83% of the survey respondents and the third hurdle was cited as getting into the streams by 81% of survey respondents. Almost half (49%) of the respondents disclosed that they usually fall due to slippery pathways. The neighborhoods of most (76%) of the respondents are full of hurdles as expounded by the respondents and vehicles cannot enter into the villages of more than half (58%) of the respondents.

Most of the survey respondents said that they ask other peoples' help in crossing streets. More than half (58%) of survey respondents said that they ask other people to help them whenever they want to cross in any part of the street. Some (27%) of the respondents find zebra crossings and cross streets. Among the survey respondents very few (16%) of them cross streets by themselves in any part of the street. The major problem that visually impaired pedestrians face while crossing streets was found out to be cars that come with speed.

The very absence of the pedestrian pavement in most street of Addis Ababa and other hurdles in the street environment mentioned by the visually impaired are also shared by all including sighted pedestrians in Addis Ababa. However, when the pavement is covered by water, sighted people can design different mechanisms not to get into the water. This is very challenging for the visually impaired. Different street works pose problems to the visually impaired since there are no mechanisms to put warnings or to inform the visually impaired about what is going on in the pedestrian pavement making the day-to-day movement of the visually impaired in the streets of Addis Ababa full of trouble.

3.2.3. The Public Transport System from the Standpoint of the Visually Impaired

In order to move about freely in the city's built environment, there should be an accessible provision of transport. The mode of transport that is predominately used by the majority (94%) of the visually impaired was found out to be city buses. The second alternative mentioned by most (79%) of the survey respondents was mini-buses. Individual contract taxis are mentioned as the third option by some (20%) of the respondents. The reason for choosing city buses as their first resort was mentioned by almost half (47%) of them as availability at any time of the day. The next reason cited was the proximity of the bus stop. Proximity of taxi stop was mentioned by some (32%) of the respondents for choosing a mode of transport. The issue of affordability seems to force the majority of the visually impaired to depend solely on city buses. People with disabilities are found among the poorest of the poor and this fact is reflected in many areas of urban life one of which is the use of public transport.

The major hurdle while entering a bus was lack of grabbers by the doors according to 43% of the survey respondents, followed by lack of cooperation from drivers and conductors of city buses. Some (34%) of the respondents indicated that they face no problems while boarding a bus. Again almost half (42%) claimed that they face no problems while entering a minibus. However, the other half (45%) raised that the lack of cooperation from drivers and conductors pose problems while boarding a minibus. For most (79%) of the respondents, the major problem they face after getting on a bus was found out to be overcrowding followed by lack of seat. Narrow aisles and seat spacing, lack of grabbers and lack of specialized spaces for the disabled were also mentioned as hurdles on a bus.

The major hurdle visually impaired passengers face when leaving a bus was mentioned as short stop time that leads one to miss his/her terminal. This is affirmed by almost all of the survey respondents. The second problem mentioned in relation to leaving a bus is lack of information regarding the stop due to overcrowding. There are no mechanisms to inform the visually impaired that they have reached their destination. Therefore, in a

crowded bus they find it difficult to leave within the time that the bus stops in each station. More than half (59%) of the visually impaired survey respondents locate their stops by using their mental spatial picture. The second option to locate bus stops was asking others to tell them their stops.

The focus group discussion that brought up issues of public transport with focus group participants has pointed out several difficulties. One of the serious problems is lack of information regarding route number of buses. Most focus group participants usually get wrong information and travel to places they don't want wasting their time and money. Buses that stop in front of street potholes create difficulty to board them. Buses that skip stations and stop at the next one also pose problems since no information regarding the change is provided to the visually impaired. Again the person might find it difficult to reach her or his destination easily. The lack of consideration from other people was also mentioned as a serious hurdle in terms of using transport. One of the discussants said:

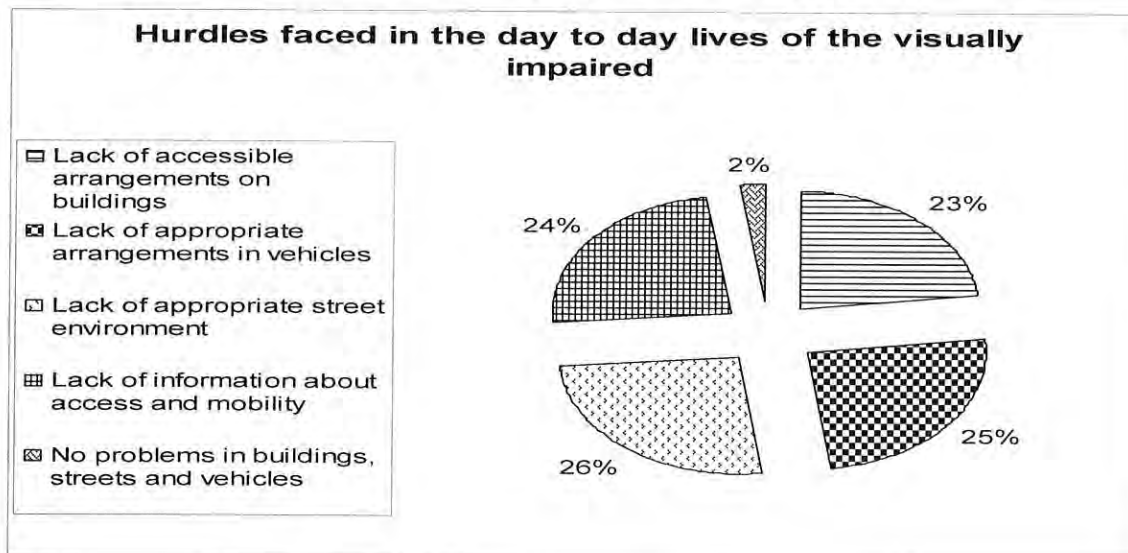
The other thing is people's lack of cooperation when boarding a mini-bus, I show my cane but people just push me and get in leaving me where I am, it really is amazing how they don't give consideration in this regard.

The problems that are mentioned by the survey respondents and focus group discussants are noticeable experiences of the visually impaired in many of the streets of Addis Ababa where they frequent to travel. If there was a mechanism to provide audible and tactile information regarding bus stops and destinations the visually impaired could easily find their destinations without relying on the help of sighted people, leading an independent and quality life.

3.2.4. The Impact of Environmental Discrimination on the Visually Impaired

As the aforementioned findings point out the visually impaired face significant discrimination in terms of access and mobility in the urban built environment. The major hurdles that the visually impaired face in their day to day lives were found out to be lack of appropriate street environment, lack of appropriate arrangements in vehicles and lack of information about access and mobility as illustrated below.

Figure 13. Hurdles faced in the day-to-day lives of the visually impaired



Almost half (48%) of the respondents attested that lack of favorable situations hinder them from realizing their potentials. Some (29%) responded that they are hampered from developing creative activities and some (19%) of them were unable to find jobs. A considerable number (46%) of the survey respondents did not feel that they are hampered from realizing their potentials due to lack of access and mobility.

Most (69%) of the survey respondents thought that women face additional problems due to their gender. The reason according to the survey respondents was found out to be difficulty to ask for the help of others in buildings, the street environment or the public transport system. Some (30%) asserted the dangers of abuse in the guise of assistance.

If the urban built environment was accessible, women were not forced to rely on others and be exposed to different kinds of abuses. In order to lead a quality life one has to move independently of others in urban areas. Urban planners and designers must see to it that there are mechanisms that enable each person to move from place to place independent of others.

The cause for the lack of suitable environment as the focus groups discussants unanimously agreed is lack of awareness regarding the needs of people with disabilities. Some mention the lack of lobbying in this regard and the inapplicability of studies such as this one. According to the participants the government is not giving attention to this issue and the Federation for the disabled persons including ENAB is not functional.

The solutions mentioned to solve the problems according to the focus group discussants were coordinated efforts among:

1. Individuals who are disabled
2. Organizations that are run by disabled persons (DPOs)
3. Organizations that are established to help and work for disabled persons
4. The government

In general, the focus group participants chiefly want to see an improved street environment. They want all poles including those with protruding structures to be planted away from the pavement for pedestrians, just like streets for cars are clean. They want potholes to be covered immediately. They also want to see accessible buildings and transport system. They want the public to be aware of them and be cooperative and they want the mass media to play a major role in this regard. They want the municipality of the city and other governmental bodies to consider them citizens whenever they do different urban works.

3.3. Access and Mobility: Views from Governmental Offices

In order to find out the role of different governmental bodies in relation to access and mobility issues of disabled persons, a small survey was undertaken among some eight governmental offices that are directly or indirectly related with the issue at hand. These were:

1. Ministry of Transport and Communication
2. Ethiopian Roads Authority
3. Addis Ababa Roads Authority
4. Addis Ababa City Government, Urban Plan Preparation and Supervision Unit
5. Addis Ababa City Government, Infrastructure and Construction Permit Department

6. Federal Urban Planning Institute
7. Ministry of Works and Urban Development
8. Building Construction Design Share Company

Regarding public transport, the specification and procurement expert at the Ministry of Transport and Communication explained that there are no public vehicles that are especially prepared for people with disabilities, the reasons he gave are:

- The need was and is never in question
- There is no particular body that gives attention to transport and disability issues (People are occupied with other matters)
- The issue is not forwarded by stakeholders including disabled persons' organizations

He mentioned that recently the Ethiopian Customs Authority has asked the Bureau regarding specifications of vehicles that can be driven by disabled persons since the government has lifted tax from vehicles for disabled persons. However, he said that even this arrangement is stopped since it was found out that disabled people are not using the cars themselves. Apart from this, there are no transport issues regarding disabled persons.

A counterpart Engineer at the Ethiopian Roads Authority said that no consideration is given for disabled people in the designing of roads. He doesn't know why this is so and said that there is no clear explanation for the lack but suggested using Zebra crossings for the benefits of all including disabled persons. Similarly, design team leader at Addis Ababa Roads Authority said that there is no arrangement for disabled persons in the street of Addis Ababa. He said that the city's Roads Authority used to embrace the designs of the Ethiopian Roads Authority. He explained that recently, a document is prepared that solely concerns with design of streets in cities but not implemented. In fact, he said this is also a copy taken from other countries and doesn't have a local input. As for the lack of having such a design he said there is no concern for disabled persons and the appropriate authorities have not yet come to recognize their need.

Regarding urban plans, a project coordinator at FUPI (Federal Urban Planning Institute) said that there are no planning criteria that take the needs of disabled people into consideration because there is no endorsed urban policy that includes people with disabilities. There is also no regulation that enforces to give special attention to disabled persons. Above all, he said, “the urban plans are just indicative and they are not prepared in such a way to include such details.”

This was asserted by the Deputy Managing Director at FUPI he stated, “There are no urban plan arrangements for people with disabilities at all, since the level of detail that are found in the existing plans don’t allow the provision of special attention to such special details.”

As to urban plan preparation in Addis Ababa an architect and town planner at Addis Ababa City Government, Urban Plan Preparation and Supervision Department said that the city plan is too general. And the plan doesn’t consider the special needs of disabled people in detail. He stressed the lack of special arrangements for disabled persons. As for the reasons for the lack he pinpointed the lack of human power in this regard, and lack of inclusion of disability issues in the activities of the department in general.

Policy and legislation monitoring and supervision team leader, at Ministry of Works and Urban Development has similar comments. According to him, there are some arrangements regarding buildings but no inclusion in the plan of the city of Addis Ababa. As to him the arrangements on buildings have to do with suitable toilets. According to him lack of arrangements for disabled persons is a result of the nature of the city plan that includes widespread activities making use of different spaces for special purposes and putting detailed specification difficult. He added that it is useful to implement international manuals in this regard and there is lack of manuals for the work and there is lack of skilled human resource in this matter.

Concerning the permit of construction an architect, who is a team leader of the Construction Permit Team at Addis Ababa City Government Infrastructure Department, stated that there is a regulation that enforces service giving buildings to have ramp and

lift arrangements for disabled persons. However, the permit team doesn't know how many buildings have applied the regulation since there is no data regarding the number of buildings that have ramps and lifts. The reason according to her is lack of particular office that supervises and checks the application of the regulations on the buildings that have taken construction permits from the team.

According to the Design Department Director at Building Construction Design Share Company, though it is important to include ramps and other building features for people with disability, in service giving buildings there are no such arrangements. As she explained it is only on hospital buildings that ramps are built since it is required as an important building component, otherwise the Share Company has not put in place designs for people with disabilities seriously. The reasons according to her are:

- The space given for construction is limited and if a space is included other than the area for stairs and lifts it will reduce other rooms of the building
- Ramp for disabled persons will cause additional cost on the overall cost of the building
- Lack of binding legislation that requires designs to include such features by the authority that gives construction permit

As the different government offices that are concerned with urban plan expounded the city wide structure plan for the city is broad and might not indicate details such as arrangements for disabled persons. However, there is a room to include such details in a hierarchical manner in the local development plan, and in the city's urban design. This is expected to take place at the municipality level, however, as the study found out the Addis Ababa City Government Urban Plan Preparation and Supervision Department does not have a detailed scheme which includes arrangements for people with disability in its local development plan, showing that it does not give consideration to this issue in buildings, streets and the transport system.

Chapter IV

4.1. Conclusions

Mobility and access are key elements in any kind of urban developmental efforts geared towards people with disabilities. The fact that urban planners overlook the needs of disabled persons in Addis Ababa makes the city inaccessible in various aspects.

4.1.1. Buildings

The needs of people with different impairments are not considered in buildings design. As a result, disabled persons are forced to be dependent on others, whenever they want to use the different services rendered in different buildings. As the study pointed out, this situation totally excluded wheelchair users from being beneficiaries of services rendered in different buildings.

It was found out that one of the reasons for this lack is the absence of regulation at the issuance of permit to the construction of buildings. Though the Construction Permit Department at Addis Ababa City Government affirmed the existence of a regulation that requires ramps and lifts in service giving buildings, The Building Design Share Company explained that such binding regulation is non existent. Be it as it may, this hampers disabled people from enjoying quality life. The inappropriately designed entrances, door openings, and corridors pose challenge to disabled persons especially the motor impaired. The recent design of government school buildings with stairs and stories discourage the motor impaired, since no consideration is being given to the mobility issues of students with disability.

The absence of standards in buildings design creates different problems to the visually impaired. For instance, buildings that lack staircases and elevators that lack Braille buttons create problems while the visually impaired are using such buildings.

Though suggesting detailed technical guidelines and standards is beyond the scope of the study, the researcher would like to mention general features that could be incorporated in buildings design.

- Ramps should be built at the entrances of all service giving government and private organizations
- Doors and corridors should be wide enough to allow mobility with aids such as crutches and wheelchairs
- Service giving private and government organizations should be located at the ground floor, especially when there is no lift provision in buildings of four or less storey
- Schools, public and private alike should have ramp provisions to facilitate the movement of the motor impaired students
- Special toilets should be prepared in service giving government and private organizations to disabled persons
- Stairs should have staircases to allow easy mobility of the visually impaired
- Lifts at service giving private and government organizations should have Braille buttons to accommodate the needs of the visually impaired (especially where it is known that there are many visually impaired customers)

4.1.2. The Street Environment

The street environment as the study found out pose the greatest challenge to the visually impaired. This is so since different government organizations perform different kinds of activities in the streets and do not have a system to warn and inform the visually impaired about the activities. Due to the irresponsibly left street works, falling into ditches and potholes become the day-to-day experiences of the visually impaired exposing many of them to serious bodily injuries. The lack of standard in the city enables electric poles to be planted haphazardly in the pedestrian environment. It makes it difficult for the visually impaired to draw mental spatial picture of the locality. Therefore, crashing against electric poles again becomes the everyday encounter of most visually impaired residents of the city.

As the study pointed out, the street environment also poses difficulties to the motor impaired, especially to wheel chair users. There are no curb ramps or other arrangements that facilitate travel with wheel chair in the city. As a result, wheel chair users are excluded from the street environment. People with different impairments face several challenges while traveling in the alleys of their neighborhoods, crossing streets, reaching bus and taxi stops since there are no mechanisms that can ease the difficulty they face.

In order to minimize the problems that people with disability face in the street environment the following points should be considered.

- Prepare arrangements in the streets such as curb ramps to help wheel chair users use the foot way and the visually impaired cross the road
- Street works should be fenced and watched over or covered immediately
- Foot paths should be free of barriers such as electric poles, and other barriers
- Poles should be planted in a systematic manner away from the middle of foot way
- Paths for animals, people and cars should be differentiated
- Ditches and potholes should be covered in the foot way
- Provision of audible traffic signals to inform the visually impaired that it is safe to cross the street

4.1.3. The Public Transport System

As explained in the study, the public transport system of the city totally excludes people with disability. Even though most visually impaired people use buses there are no mechanisms that can help them locate bus stations or bus stops. The design of vehicles and especially city buses totally exclude wheel chair users and there are no considerations given in terms of modification in the city transport specifically city buses and mini buses. Their able-bodied counterparts also face the problems people with disabilities face such as overcrowding, narrow aisles between seats and lack of grabbers. However, the impediments they create to disabled persons, as the study found out is more significant.

Some of the points that should be considered in the public transport system are given below.

- Low floor buses and mini-buses should be provided for the motor impaired
- Buses or mini-buses should provide removable ramps for instance the first door of the buses could be modified for this use
- There should be at least a few wheelchair lift equipped buses in the city
- Seats should be reserved for the motor impaired passengers who cannot stand for a long time in buses
- The space between seats that are reserved for the motor impaired should be wide to allow stretching of legs
- There should be an audible announcement regarding number of buses and each bus stop to help the visually impaired easily board and leave buses
- Raise the awareness of transport staff such as bus and taxi drivers and conductors regarding disability issues, helping them render assistance to passengers with different impairments

4.1.4. Institutional Settings

The study found out that there is general lack of concern from the side of urban planners and architects and responsible government organizations to disability issues. Urban planners and architects do not seek the participation of disabled persons whenever they prepare plans for the city. Lack of standards in terms of buildings and streets design, lack of coordination among different government organs such as the construction permit department at the city government infrastructure department and Buildings Design Share Company, Addis Ababa Roads Authority and Ethiopian Electric Power Corporation, the Municipality and Ethiopian Telecommunication Corporation leads to the creation of buildings that are built haphazardly, streets that create chaos all the time, poles that are planted indiscriminately, potholes and ditches left open without precautions making the city chaotic and inaccessible to all especially to people with disabilities.

Focus group respondents asserted that the few government and non-government organizations that work on disability issues focus on 'charity systems' that gives a picture of disabled people as worthy of other peoples' pity. The fact that people with disability lack the opportunity to learn and mix with the rest of the society makes them to remain poor and there is no denying that they constitute the poorest of the poor in the city. The organizations established by disabled people themselves are not in a position to lobby and influence government and non-government organizations due to the constraints of educated human power and finance. However, as the study found out, if opportunities are given disabled persons can do what able-bodied people perform, and the environment should not be a disabling factor. This is seen in many countries of the north and south. Many countries as mentioned in the discussion, have realized that they can use the potentials of their disabled citizens equally by avoiding barriers in the day-to-day movement of people with disability. The study also has shown that despite the serious environmental discrimination in the city, people with disabilities are trying to improve their lives through education and work. Therefore, avoiding environmental discrimination and preparing an all-inclusive urban plan are of fundamental importance to help disabled citizens who have the right to enjoy quality life in the urban built environment.

4.2. Recommendations and Policy Implications

The millennium development goal of reducing extreme poverty cannot be achieved without an all-inclusive strategy. One of the strategies should be taking disability issues into consideration in the urban built environment. The African Decade of Persons with Disabilities (1999-2009) cannot bring about meaningful contributions without considering the mobility and accessibility issues of disabled persons. Therefore, in order to bring about meaningful change there are some fundamental things that need to be set. The following important points should be considered as tools towards achieving inclusive plans and strategies towards creating an urban environment that is accessible and suitable for mobility.

- Including disability issues in the relevant policy-making and strategic plan of the city of Addis Ababa
- Involving people with disabilities through their organizations at the plan preparation stage for the city
- Mainstreaming disability issues in the policy and plan of the city
- Providing awareness raising programs concerning disability issues to the different staffs working in the city government
- Introducing program of action to make the built environment accessible in the city
- Promulgating binding legislation and regulations in terms of standardization of buildings and streets design and public transport at the start of the designing process in the city
- Revising the currently drafted proclamation to provide for urban plans and the National Building Proclamation in a manner that caters for the needs of disabled persons
- Consulting with and informing architects, construction engineers and all others who are involved in design and construction of the built environment regarding the special needs of disabled persons
- Discussing with organizations of disabled persons regarding the design of buildings, arrangements in the street environment and provisions in public transport

In order to make the above given key points feasible consultation of disabled people's organizations is of fundamental importance to come up with technical solutions that consider local situations. This of course needs further research from the side of all stakeholders. To create an urban built environment that is free of discrimination the fundamentals that need to be right are awareness, good will and coordination of all stakeholders including disabled peoples' organizations, government authorities and non-governmental bodies.

References

- A Proclamation to Provide for Urban Plans. 2005. Draft Document, Addis Ababa
- ADA Accessibility Guidelines for Buildings and Facilities. <http://www.access-board.gov/adaag/html>, amended in September 2002. (accessed March 10, 2006)
- Addis Ababa Traffic Police. Accidents Record 2006. Handwritten Compilation of Traffic Accidents for consecutive three years 1995 E.C. 1996E.C, 1997 E.C
- Botelho, Fernando. 2005. "Tapping the potential of professionals with disabilities." Issue 2/2005, International Trade Forum magazine of the International Trade Centre, Geneva
- Continental Plan of Action for the Africa Decade of Persons with disabilities: 1999-2009. February 2002. Addis Ababa <http://www.africandecade.org.za> (accessed April 21, 2006)
- Country Profile on Disability. Federal Democratic Republic of Ethiopia. March 2002. JICA. Planning and Evaluation Department. www.jica.go.jp/English/global/dis/pdf/eth-eng.pdf (accessed April 21, 2006)
- Devas Nick. 1993. "Evolving Approaches" in Nick Devas and Carlole Rakodi.(eds) *Managing Fast Growing Cities: New Approaches to Urban Planning and Management in the Developing World*. Longman, Essex, UK.
- Disability World Web-zine. 2005-06 <http://www.disabilityworld.org> (accessed March 24 2006)
- Department for International Development. (DFID).2000. Disability, Poverty and Development <http://www.dfid.gov.uk/pubs/files/disability.pdf> last updated April 11 2006 (accessed April 12, 2006)
- Employment of Disabled Persons. Manual on Selective Placement*. 1984. ILO. Geneva
- Employment of People with Disabilities: The Impact of Legislation. 2002. *Technical Consultation Report*. Addis Ababa, 20-22 May 2002, Geneva
- Gleeson Brendan. 1999. *Geographies of Disability*. Routledge, UK
- Global Partnership for Disability and Development. 2004. www.worldbank.org/disability/gpdd/ (accessed April 14,2006)

- Handicap National. 2005. *Action for Children with Disabilities. Community Based Rehabilitation activity manual*. Addis Ababa
- Jones David and Anita Payne. 1997. "Disability and Diversity in the city." In Jo Beall (ed) *A City for All, Valuing Difference and Working with Diversity*. Zed Books Ltd, London
- Lynch David. 1960. *The Image of the city*. The MIT Press, Cambridge
- Ministry of Labor and Social Affairs. July 1999. *National Programme of Action for Rehabilitation of Persons with Disabilities*. Addis Ababa
- National Building Proclamation.2005. Draft Document, Addis Ababa.
- Neufeldt Affred, H. and Albright Alison L. (eds). 1998. *Disability and Self-directed Employment, Business Development Models*. Captus University Publications, International Development Research Centre, Ontario, Canada.
- O'Toole B and Roy McConkey (eds).1995 *Innovations in Developing Countries for People with Disabilities*. Lisieux hall publications, Lancashire
- Power Marcus. 2001."Geographies of Disability and Development in Southern Africa." Disability Studies Quarterly Volume 21, P84-97 www.cds.hawaii.edu (accessed November 12, 2005)
- Rakodi, Carole. 1993 "Planning for Whom?" in Nick Devas and Carole Rakodi.(eds) *Managing Fast Growing Cities: New Approaches to Urban Planning and Management in the Developing World*. Longman, Essex, UK.
- Renaud Bertrand. 1987. "Urban Development Policies in Developing Countries." In George S. Tolley and Vinod Thomas (eds). *The Economics of Urbanization and Urban Polices in Developing Countries*. A World Bank Symposium. The World Bank. Washington D.C.
- Report on national consultations with people with disability in relation to the proposed United Nations Convention on human rights and disability. <http://www.internationaldisabilityalliance.org/index> (accessed April 21, 2006)
- The ADA and Access and Opportunity for Individuals with Disabilities. 2005 <http://www.fcc.gov/cgb/dro/adaintro.html> (accessed April 21, 2006)
- Tirussew Tefera. 1993. "Problems and Prospects of Persons with disabilities in Ethiopia." *Ethiopian Journal of Development Research*, 15, 1, Addis Ababa University
- Tirussew Tefera, Savolainen, Agedew R. and Daniel D. 1995. *Base Line Survey on Disabilities in Ethiopia*. FINNIDA Project, Institute of Development Research. Addis Ababa University. Addis Ababa

- Tirussew Tefera. 2001. "Gender and Disability in Ethiopia." *Ethiopian Journal of Development Research*, 23, 1, Addis Ababa University.
- Tirussew Tefera. 2005. *Disability in Ethiopia: Issues, Insights and Implications, Contextualizing Disability, Early Intervention, Inclusive Education, Gender and Disability, Resilience and Success*. AAU Printing Press. Addis Ababa
- Thomas Phillippa. Disability Policy Officer. June 2004. DFID and Disability. A Mapping of the Department for International Development and Disability Issues. www.disabilitykar.net (accessed April 17, 2006)
- United Nations Global Programme on Disability.
<http://www.un.org/esa/socdev/enable/disabout.htm> (accessed April 10,2006)
- United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities. 1992. <http://www.un.org/esa/socdev/enable/disabout.htm> (accessed April 10, 2006)
- Venter C. etal. 2002. "Enhanced Accessibility for People with Disabilities living in Urban Areas". Unpublished report PR/INT/248/02, Department for International Development (UK) Engineering Knowledge and Research: Project R8016 <http://www.globalride.sf.org/images/DFID.pdf> (accessed November 12, 2005)
- Wiman Ronald and Jim Sandhu. 2004. "Integrating Appropriate Measures for People with Disabilities in the Infrastructure Sector." A GTZ study Unpublished
- WHO. 2006. Community Based Rehabilitation. www.who.int/nmh/a5819/en (accessed April 25, 2006)
- Wubshet Berhanu. 1990. "Spatial Pattern of Streets in Addis Ababa." *In Proceedings of the First National conference of Ethiopian Studies*. Richard Pankurst, Ahmed Zekaria, Taddese Beyene (eds). April 11-12,1990. Institute of Ethiopian Studies.
- Wubshet Berhanu. 2002. *Urban Polices and the Formation of Social and Spatial Patterns in Ethiopia. The Case of Housing Areas in Addis Ababa*. Dr. Ing thesis. Department of Town and Regional Planning. Faculty of Architecture and Fine Arts. Norwegian University of Science and Technology, Trondheim.

Appendices

- Appendix I Questionnaire I to the Motor Impaired
- Appendix II Questionnaire II to the Visually Impaired
- Appendix III Questions for Focus Group discussants
- Appendix IV Questions to different government offices
- Appendix V Personnel responding to the Questions in different government offices
- Appendix VI Focus Group Discussion Participants
- Appendix VII List of Different Buildings Visited

Appendix I

Questionnaire I

This questionnaire should be filled by a person with physical disability. (with different motor impairments including use of aids such as wheelchairs and crutches). This questionnaire is prepared in order to find out the problems that people with disabilities face in relation to mobility and accessibility. This includes the plans and designs of building, streets and vehicles. The study tries to find out the arrangements that are in place or that should be in place in the local development plan of the city of Addis Ababa.

The questionnaire has three parts. The first part inquired the background information of the respondent followed by questions pertaining to buildings and roads and vehicles respectively. The questionnaires are prepared as part of a study that is undertaken as a partial fulfillment of the requirement for the degree of Master of Arts in Regional and Local Development Studies.

I kindly request a candid answer so that the study reflects the fact. Thank you.

Enumerator _____ Sub-city/ Kebele _____

Name of respondent

Telephone of respondent

Address p.o.Box or e-mail of respondent

Part I. Background Data

1. Sub-city

1. Arada
2. Kirkos
3. Yeka
4. Bole

Code

5. Lideta
6. Gullele
7. Nefas silk/Lafto
8. Addis Ketema
9. Akaki/Kaliti
10. Kolfe/ Keranio

2. Kebele

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3. Age (in full years)

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4. Marital Status

1. Married
2. Single
3. Divorced
4. Widowed
5. Separated

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5. Sex

1. Female
2. Male

6. Religion

1. Orthodox
2. Protestant
3. Catholic
4. Muslim
5. Traditional
6. Others, Please specify _____

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7. General Educational level

1. Uneducated
2. Read and Write
3. 1-6
4. 9-10
5. 10+1
6. 10+2
7. 12 complete
8. Above 12

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8. Post Secondary training

01. Certificate student in private college
02. Diploma student in private college
03. Degree student in private college
04. Certificate student in government institution
05. Diploma student in government institution
06. Degree student in government institution
07. Certificate holder
08. Diploma holder
09. Degree holder

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- 10. M.A
- 11. Ph.d
- 12. Others Please specify _____

- 9. Informal training
 - 1. Church School
 - 2. Koran School
 - 3. Literacy Program
 - 4. Certificate in vocational training
 - 5. taking vocational training
 - 6. Others Please specify _____

- 10. Size of Household (how many members are in the family?)

Female		Male	

 - 1. Female
 - 2. Male

- 11. How many members live with disability?
 - 1. Only me
 - 2. Two members
 - 3. Three members
 - 4. four members
 - 5. five members
 - 6. others please specify _____

- 12. What is the cause of your disability?
 - 1. Born disabled
 - 2. Genetic
 - 3. War/ landmine
 - 4. Car accident
 - 5. Illness
 - 6. falling by accident
 - 7. accident on work
 - 8. landmines
 - 9. Others please specify _____

- 13. What is the extent of your impairment?
 - 1. Using wheelchair unable to stand and walk
 - 2. Moving by metal aid in the legs
 - 3. Limited walking problem
 - 4. Using crutches difficulty walking
 - 5. Difficulty to eat and drink mobility problem of hands and legs
 - 6. Others please specify _____

- 14. What is your position in the household?
 - 01. Husband
 - 02. Wife
 - 03. Child
 - 04. Grandparent
 - 05. In-law
 - 06. Sister of wife
 - 07. Sister of husband

- 08. Brother of wife
- 09. Brother of husband
- 10. Others please specify _____

15. Employment Status

- 1. Employed
- 2. Unemployed
- 3. Retired
- 4. Student
- 5. Unpaid family worker
- 6. Living with aid of relatives
- 7. getting aid from NGOs
- 8. Getting aid from government
- 9. Others please specify _____

16. If employed what is your occupation?

- 1. Civil Servant
- 2. Owner of micro and small scale enterprise (such as crafts and beauty salon)
- 3. Owner of private company
- 4. Employee in micro and small scale enterprise
- 5. Employee in and NGO
- 6. Employee in private companies
- 7. Others Please specify _____

17. For how long do you live in Addis Ababa?

- 1. I was born and grew up here
- 2. Others please specify _____

Part II. Buildings

18. Where do you use ramps?

- 01. At school
- 02. At my work place
- 03. At my home
- 04. In hotels
- 05. In service giving organizations (bank/insurance)
- 06. At the municipality
- 07. In hospitals/clinics
- 08. In market places
- 09. There are no ramps in all the above
- 10. I don't have to use ramp
- 11. Others please specify _____

19. Where do you use elevators especially made for disabled people?

- 01. At school
- 02. At my work place
- 03. At my home
- 04. In hotels

- 05. In service giving organizations (bank/insurance)
- 06. At the Municipality
- 07. In hospitals/clinics
- 08. In market places
- 09. There are no especial elevators for disabled people
- 10. I don't have to use elevators especially made for disabled people
- 11. Others please specify _____

20. If there are no ramps or elevators in the above mentioned places how do you manage to enter the buildings?

- 1. I have an assistant
- 2. I call for help
- 3. I can enter by myself
- 4. Others please specify _____

21. Do you find ramps in places that you frequently visit?

- 1. Yes
- 2. No
- 3. I don't know

22. If yes to question 21 how many buildings?

- 1. one
- 2. two
- 3. three
- 4. four
- 5. five
- 6. six
- 7. Others please specify _____

23. Which buildings have especially prepared ramps?

- 1. Clinics/hospitals
- 2. Schools
- 3. Hotels
- 4. Service giving (bank/insurance)
- 5. The municipality building
- 6. Buildings at market places
- 7. others please specify _____

24. What kind of latrines do you have at school?

- 1. Open defecation
- 2. Shared pit latrines
- 3. Shared water closet
- 4. Toilet especially made for disabled people
- 5. Others please specify _____

25. What kind of latrines do you have at home?

- 1. Open defecation

- 2. Private pit latrines
- 3. Shared pit latrines
- 4. Private water closet
- 5. Toilet especially made for disable people
- 6. Others please specify _____

26. What kind of latrines do you have at your work place?

- 1. Open defecation
- 2. Shared pit latrines
- 3. Water closet
- 4. Toilet especially made for disabled people
- 5. Others Please specify _____

27. Do you use public toilets?

- 1. Yes
- 2. No

28. If yes have you ever seen public toilets for disable people?

- 1. Yes
- 2. No but there is no alternative so I use
- 3. Others please specify _____

29. If no what is your reason?

- 1. It is not suitable for me
- 2. It is very crowded
- 3. There is no public toilet in my locality
- 4. Others Please specify _____

30. Do you face special problems at night?

- 1. Yes
- 2. No
- 3. I don't know

31. If yes to question 30 what is the main problem?

- 1. Doors I use in the day time will be locked at night and unable to exit
- 2. Lack of adequate electric light and inability to identify places
- 3. Since people are not around I find it difficult to move as I want
- 4. Others please specify _____

Part III. The Street Environment and the Transport system

32. What is/are your main reason/s for traveling?
Please put it according to importance.

- 1. to go to work
- 2. to go to school
- 3. for different social purposes

- 4. for recreation
- 5. Other please specify _____

33. What are the modes of transport that you frequently use?
Please put it according to importance

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- 1. city bus
- 2. Mini-bus
- 3. Lada taxi
- 4. Contract taxis
- 5. Own car
- 6. I frequently travel on foot
- 7. I frequently travel using my wheel chair
- 8. Others please specify _____

34. If you don't have a car what is your reason for choosing this mode of transport?
Please put it according to importance

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- 1. Proximity of bus stop
- 2. Proximity of taxi stop
- 3. I can afford the cost
- 4. Availability at any time
- 5. Suitability for the physical problem I have
- 6. Others please specify _____

35. At what time of do you prefer to travel?
Please put it according to importance

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- 1. 6 -7 A.M
- 2. 7-8 A.M
- 3. 8-9 A.M
- 4. 9-10 A.M
- 5. 10-11 A.M
- 6. 11-12 A.M
- 7. 12A.M-1 P.M
- 8. 1 -2 P.M
- 9. 2-3 P.M
- 10. 3-4 P.M
- 11. 4-5 P.M
- 12. 5-6 P.M
- 13. 6-7 P.M
- 14. 7-8 P.M
- 15. 8-9 P.M
- 16. 9-10 P.M
- 17. 10-11 P.M
- 18. Others please specify _____

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36. What is your reason for choosing this particular time?
{Please put it according to importance}

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- 1. Availability of different means of transport
- 2. Availability of escorts at that time
- 3. Less traffic

4. It is the time I travel for my different activities
5. others please specify _____

37. What are the problems you often face when you travel on foot or using crutch?

Please put it according to importance

1. Road works left open
2. The bad gradient of the road
3. Parked car on the way
4. long journey
5. passengers that don't let you pass
6. I don't face problems in this regard
7. Others please specify _____

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38. What are the problems you face when you travel with wheel chair?

Please put it according to importance

1. Road works left open
2. The bad gradient of the road
3. Parked car on the way
4. Long journey
5. passengers that don't let you pass
6. I don't face problems in this regard
7. Others please specify _____

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39. What problems do you face to reach taxi or bus stop?

Please put it according to importance

1. Road works left open
2. The bad gradient of the road
3. Parked car on the way
4. Long journey
5. passengers that don't let you pass
6. I don't face problems in this regard
7. Others please specify _____

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40. How do you cross streets?

Please put it according to importance

1. Using Zebra crossings
2. Asking others for help in any part of the street
3. Any place in the street by myself
4. Using ramp curbs in the streets
5. Others please specify _____

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41. What problems do you face when crossing streets?

Please put it according to importance

1. Cars with speed
2. Crowdedness
3. I don't face problems

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4. others please specify _____

42. What problems do you face when entering bus?

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- Please put it according to importance
1. High entry steps not suitable
 2. Lack of rail grabbers at the entrance
 3. Very narrow door openings
 4. Lack of cooperation from drivers and conductors of buses
 5. Crowdedness
 6. I have no problems
 7. Others please specify _____

43. What problems do you face when boarding a mini-bus?

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- Please put it according to importance
1. High entry steps
 2. Narrow door openings
 3. Lack of cooperation from conductors of mini-buses
 4. I face no problems
 5. Others please specify _____

44. What problems do you face after getting on a bus?

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- Please put it according to importance
1. Lack of seat
 2. Lack of specialized space
 3. Narrow aisles and seat spacing
 4. Over crowdedness
 5. Lack of rail grabbers
 6. Slippery or not level floors
 7. I face no problems
 8. Others please specify _____

45. What problems do you face after getting into a mini-bus?

--	--	--	--	--

- Please put it according to importance
1. Lack of suitable space for my limitations
 2. Narrow aisles and seat spacing
 3. Slippery or not level floors
 4. I face no problems
 5. Others please specify _____

46. What problems do you face when leaving a bus?

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- Please put it according to importance
1. Heightened steps
 2. Short stop leading to passing one's stop
 3. Lack of information regarding my stop due to crowdedness
 4. passing my stop due to crowdedness
 5. I face no problems

6. Others please specify _____

47. Do you think women face different problems compared to men?

- 1. Yes
- 2. No
- 3. I don't know

48. If your answer is yes what are the reasons?

- 1. They find it difficult to ask for help
- 2. Assistant providers can abuse them due to their gender
- 3. Others please specify _____

49. What is the most difficult hurdle that you face in your day to day life?

Please put it according to importance

- 1. Lack of accessible arrangements on buildings
- 2. Lack of appropriate arrangements in vehicles
- 3. Lack of appropriate street environment
- 4. Lack of information about access and mobility
- 5. I face no problems in buildings, streets and vehicles
- 6. Others please specify _____

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50. Do you choose particular places to travel?

- 1. Yes
- 2. No
- 3. I don't know

51. If yes to question 50 why do you choose particular places?

- 1. Easily identifiable path ways
- 2. Personal liking
- 3. Suitability for the physical problem I have
- 4. Availability of other passengers
- 5. Others please specify _____

52. Do you face different problems in the winter and when it is rainy?

- 1. Yes
- 2. No
- 3. I don't know

53. If yes to question 52 what kind of problems?

Please put it according to importance

- 1. I usually fall due to slippery places
- 2. The tire of my wheel chair gets stuck with holes in the streets
- 3. I face difficulty choosing my path since water covers my way
- 4. I usually become wet due to lack of shelter from rain
- 5. Others please specify _____

--	--	--	--	--

54. Does lack of favorable situation for mobility hinder you from realizing your potential?

1. Yes
2. No
3. I don't know

55. If yes to question 54 what are the things that you miss out?

1. School
2. Work
3. Creative activities
4. social life
5. Others please specify _____

56. Are there changes in the buildings and streets of your locality?

1. Yes
2. No
3. I don't know

57. If yes to question 56 are the changes suitable for you?

1. New building with ramps/Braille buttons
2. Streets with crossings accessible to people with disabilities
3. Improved pedestrian pavements for people with disabilities
4. Others please specify _____

58. If no what do you think is the reason?

--	--	--	--	--

Please put it according to importance

1. Urban planners, buildings and road designers and vehicle importers give no/little attention to the needs of people with disabilities
2. Lack of lobby from the side of people with disabilities regarding their special needs
3. Lack of governmental and non-governmental organizations that present disability issues
4. Governmental and non-governmental organizations that work with disability issues are weak and very few
5. Planners don't inquire the participation of disabled people
6. Others please specify _____

Open Ended Questions

1. Schools are becoming multi-storey. Do you think this can affect people with disabilities? Why and how?

2. What do you think city planners, designers of roads and buildings and importers of public buses do for people with disabilities?
3. What do you want to see in terms of mobility and accessibility in Addis Ababa?
4. Does the building you are working in have arrangements for you to make things accessible?
5. Is your village suitable for travel e.g using crutches or wheelchair?
6. Can vehicles enter to your village without a problem?

Appendix II

Questionnaire II

This questionnaire should be filled by a person who is visually impaired. This questionnaire is prepared in order to find out the problems that people with disabilities face in relation to mobility and accessibility. This includes the plans and designs of building, streets, and vehicles. The study tries to find out the arrangements that are in place or that should be in place in the local development plan of the city of Addis Ababa.

The questionnaire has three parts. The first part inquired the background information of the respondent followed by questions pertaining to buildings and roads and vehicles respectively. The questionnaires are prepared as part of a study that is undertaken as a partial fulfillment of the requirement for the degree of Master of Arts in Regional and Local Development Studies.

I kindly request a candid answer so that the study reflects the fact. Thank you.

Enumerator _____ Sub-city/ Keble _____

Name of respondent _____

Telephone of respondent _____

Address P.O.Box or e-mail of respondent _____

Part I. Background Data

1. Sub-city

Code

1. Arada

2. Kirkos

3. Yeka

4. Bole

5. Gullele

6. Nefas silk/Lafto

7. Addis Ketema

8. Akaki/Kaliti

9. Kolfe/ Keranio

10. Lideta

2. Kebele

3. Age (in full years)

4. Marital Status

- 1. Married
- 2. Single
- 3. Divorced
- 4. Widowed
- 5. Separated

5. Sex

- 1. Female
- 2. Male

6. Religion

- 1. Orthodox
- 2. Protestant
- 3. Catholic
- 4. Muslim
- 5. Traditional
- 6. Others, Please specify _____

7. General Educational level

- 1. Uneducated
- 2. Read and Write
- 3. 1-6
- 4. 9-10
- 5. 10+1
- 6. 10+2
- 7. 12 complete
- 8. Above 12

8. Post Secondary training

- 01. Certificate student in private college
- 02. Diploma student in private college
- 03. Degree student in private college
- 04. Certificate student in government institution
- 05. Diploma student in government institution
- 06. Degree student in government institution
- 07. Certificate holder
- 08. Diploma holder
- 09. Degree holder
- 10. M.A
- 11. Ph.d
- 12. Others Please specify _____

9. Informal training

- 1. Church School
- 2. Koran School
- 3. Literacy Program
- 4. Certificate in vocational training
- 5. Taking vocational training
- 6. Others Please specify _____

10. Size of Household (how many members are in the family?)

Female		Male	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

1. Female
 2. Male
11. How many members live with disability?
1. Only me
 2. Two members
 3. Three members
 4. Four members
 5. Five members
 6. Others please specify _____
12. What is the cause of your disability?
1. Born disabled
 2. Genetic
 3. War/ landmine
 4. Car accident
 5. Illness
 6. Falling by accident
 7. Accident on work
 8. Landmines
 9. Others please specify _____
13. What is the extent of your impairment?
1. Totally blind
 2. I can see a little bit
 3. Others please specify _____
14. What is your position in the household?
01. Husband
 02. Wife
 03. Child
 04. Grandparent
 05. In-law
 06. Sister of wife
 07. Sister of husband
 08. Brother of wife
 09. Brother of husband
 10. Others please specify _____
15. Employment Status
1. Employed
 2. Unemployed
 3. Retired
 4. Student
 5. Unpaid family worker
 6. Living with aid of relatives
 7. Getting aid from NGOs
 8. Getting aid from government
 9. Others please specify _____
16. If employed what is your occupation?
1. Civil Servant

- 2. Owner of micro and small scale enterprise (such as crafts and beauty salon)
 - 3. Owner of private company
 - 4. Employee in micro and small scale enterprise
 - 5. Employee in and NGO
 - 6. Employee in private companies
 - 7. Others please specify _____
17. For how long do you live in Addis Ababa?
- 1. I was born and grew up here
 - 2. Others please specify _____

Part II. Buildings

18. Where do you use elevators (lifts)?
- 01. At school
 - 02. At my work place
 - 03. At my home
 - 04. In hotels
 - 05. In service giving organizations (bank/insurance)
 - 06. In hospitals and Clinics
 - 07. In buildings at market places
 - 08. There are no elevators in all the above places
 - 09. I don't use elevators
 - 10. Others please specify _____
19. If you use elevators in the above mentioned places how do you know when it approaches ?
- 1. I ask people
 - 2. I follow the bell chime
 - 3. Others please specify _____
20. Have you ever come across an elevator with Braille button in Addis Ababa?
- 1. Yes
 - 2. No
 - 3. I don't know
21. If yes to question 20 how many buildings?
- 1. one
 - 2. two
 - 3. three
 - 4. four
 - 5. five
 - 6. six
 - 7. Others please specify _____
22. Which buildings have elevators with Braille buttons?
- 1. Clinics/hospitals
 - 2. Schools

- 3. Hotels
- 4. Service giving (bank/insurance)
- 5. Buildings at market places
- 6. others please specify _____

23. What kind of latrines do you have at school?

- 1. Open defecation
- 2. Shared pit latrines
- 3. Shared water closet
- 4. Toilet especially made for disabled people
- 5. Others please specify _____

24. What kind of latrines do you have at home?

- 1. Open defecation
- 2. Private pit latrines
- 3. Shared pit latrines
- 4. Private water closet
- 5. Toilet especially made for disable people
- 6. Others please specify _____

25. What kind of latrines do you have at your work place?

- 1. Open defecation
- 2. Shared pit latrines
- 3. Water closet
- 4. Toilet especially made for disabled people
- 5. Others Please specify _____

26. Do you use public toilets?

- 1. Yes
- 2. No

27. If no what is your reason?

- 1. It is not suitable for me
- 2. It is very crowded
- 3. There is no public toilet in my locality
- 4. Others Please specify _____

Part III. The Street Environment and the Transport System

28. What is/are your main reason/s for traveling?

Please put it according to importance.

- 1. to go to work
- 2. to go to school
- 3. for different social purposes
- 4. for recreation
- 5. Other please specify _____

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29. What are the modes of transport that you frequently use?

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Please put it according to importance

1. city bus
2. Mini-bus
3. Lada taxi
4. Contract taxis
5. Own car
6. I frequently travel on foot
7. Others please specify _____

30. If you don't travel with a driver in your car what is your reason for choosing this mode of transport?

Please put it according to importance

1. Proximity of taxi stops
2. Proximity of bus stop
3. Availability at any time
4. Suitability for the physical problem I have
5. Others please specify _____

--	--	--	--	--

31. At what time of do you prefer to travel?

Please put it according to importance

01. 6 -7 A.M
02. 7-8 A.M
03. 8-9 A.M
04. 9-10 A.M
05. 10-11 A.M
06. 11-12 A.M
07. 12A.M-1 P.M
08. 1 -2 P.M
09. 2-3 P.M
10. -4 P.M
11. 4-5 P.M
12. 5-6 P.M
13. 6-7 P.M
14. 7-8 P.M
15. 8-9 P.M
16. 9-10 P.M
17. 10-11 P.M
18. Others please specify _____

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32. What is your reason for choosing this particular time?
(Please put it according to importance)

1. Availability of different means of transport
2. Availability of escorts at that time
3. Less traffic
4. Others please specify _____

--	--	--	--	--

33. What are the problems you often face when you travel on foot?
Please put it according to importance

--	--	--	--	--

1. Road works left open
2. The bad gradient of the road
3. Parked car on the way
4. Ponds created by damaged pipes
5. passengers that don't let you pass
6. I don't face problems in this regard
7. Others please specify _____

34. What problems do you face to reach taxi or bus stop?
Please put it according to importance

--	--	--	--	--

1. Road works left open
2. The bad gradient of the road
3. Parked car on the way
4. Long journey
5. passengers that don't let you pass
6. I don't face problems in this regard
7. Others please specify _____

35. How do you cross streets?
Please put it according to importance

--	--	--	--	--

1. Using Zebra crossings
2. Asking others for help in any part of the street
3. I, myself cross any place in the street
4. Using the sounds given by traffic signs
5. Others please specify _____

36. What major problem do you face when crossing streets?

--

1. Cars with speed
2. Crowdedness
3. I don't face problems
4. Others please specify _____

37. How do you locate bus stops?

--

1. Asking others to show me
2. By traveling with another passenger that can offer help
3. Finding the bus stop by myself
4. Others please specify _____

38. What problems do you face when entering bus?
Please put it according to importance

--	--	--	--	--

1. High entry steps not suitable
2. Lack of rail grabbers at the entrance
3. Very narrow door openings
4. Lack of cooperation from drivers and conductors of buses

- 5. I have no problems
- 6. Others please specify _____

39. What problems do you face when boarding a mini-bus?

--	--	--	--	--

Please put it according to importance

- 1. High entry steps
- 2. Narrow door openings
- 3. Lack of cooperation from conductors of mini-buses
- 4. I face no problems
- 5. Others please specify _____

40. What problems do you face after getting on a bus?

--	--	--	--	--

Please put it according to importance

- 1. Lack of seat
- 2. Lack of specialized space
- 3. Narrow aisles and seat spacing
- 4. Overcrowding
- 5. Lack of rail grabbers
- 6. Slippery or not level floors
- 7. I face no problems
- 8. Others please specify _____

41. What is the major problem you face when leaving a bus?

--

- 1. Heightened steps
- 2. Short stop leading to passing one's stop
- 3. Lack of information regarding my stop due to crowdedness
- 4. I face no problems
- 5. Others please specify _____

42. How do you locate your stop when leaving a bus?

--

- 1. Mental spatial picture
- 2. Asking others to tell us the stop
- 3. Audible information
- 4. Others please specify _____

43. Do you think women face different problems compared to men?

--

- 1. Yes
- 2. No
- 3. I don't know

--

44. If your answer is yes what are the reasons?

- 1. They find it difficult to ask for help
- 2. Assistant providers can abuse them due to their gender
- 3. Others please specify _____

45. What is the most difficult hurdle that you face in your day to day life?

Please put it according to importance

--	--	--	--	--

1. Lack of accessible arrangements on buildings
2. Lack of appropriate arrangements in vehicles
3. Lack of appropriate street environment
4. Lack of information about access and mobility
5. I face no problems in buildings, streets and vehicles
6. Others please specify _____

46. Do you choose particular places to travel?

1. Yes
2. No
3. I don't know

47. If yes to question 46 why do you choose particular places?

1. Easily identifiable path ways
2. Personal liking
3. Places I choose in my mind's spatial picture
3. Suitability for the impairment I have
5. Availability of other passengers
6. Others please specify _____

48. Does lack of favorable situation for mobility hinder you from realizing your potential?

1. Yes
2. No
3. I don't know

49. If yes to question 48 what are the things that you miss out?

1. School
2. Work
3. Creative activities
4. Others please specify _____

50. Are there changes in the buildings and streets of your locality?

1. Yes
2. No
3. I don't know

51. If yes to question 50 do the changes include the following?

1. New building with elevators and Braille buttons
2. Streets with crossings accessible to the visually impaired
3. Audible signals on pavements for the visually impaired

4. Even if there are changes there are no arrangements for the visually impaired
5. Others please specify _____

52. If no to question 50 what do you think is/are the reason/s?

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Please put it according to importance

1. Urban planners, buildings and road designers and vehicle importers give no/little attention to the needs the visually impaired
2. Lack of lobby from the side of the visually impaired regarding their special needs
3. Lack of governmental and non-governmental organizations that present the issues of the visually impaired
4. Governmental and non-governmental organizations that work with the issues of the visually impaired are weak and very few
5. Planners don't inquire the participation of disabled people
6. Others please specify _____

53. Do you face different problems in the winter and when it is rainy?

--

1. Yes
2. No
3. I don't know

54. If yes to question 53 what kind of problems?

--	--	--	--	--

Please put it according to importance

1. I usually fall due to slippery places
2. I face difficulty choosing my path since water covers my way
3. I usually get into the streams in the streets
4. I usually become wet due to lack of shelter from rain
5. Others please specify _____

Open Ended Questions

1. How do you locate different offices and corridors when you try to get different services in different buildings?
2. What do you think city planners, designers of roads and buildings and importers of public buses do to the needs of the visually impaired?
3. What do you want to see in terms of mobility and accessibility in Addis Ababa?
4. Does the building you are working in have arrangements for you to make things accessible?
5. Is your village suitable for traveling or full of hurdles? For instance, poles of EEPCO, pot holes of Ethiopian Telecommunication Corporation etc.
6. Can vehicles enter your village without a problem?

Appendix III

Questions for Focus Group Discussion (presented to both groups)

1. Narration: What are the problems that each of you face because of the physical problem that you have in relation to:-
 - Entering and leaving different buildings (stairs, elevators etc)?
 - Using Toilets
2. Narration: What are the problems you face in transport services in relation to:-
 - Using different means of transport (buses, mini-buses, lada taxis etc.)
 - The Street Environment
 - Design of Vehicles (presented specifically to the physically impaired)
3. What do you think is the cause for poor consideration in urban planning to people with disabilities in Addis Ababa?
4. What should be done in terms of improving access and mobility to people with disabilities in Addis Ababa?
5. Do women with disabilities face additional problems than their male counterparts, what are the problems?
6. Do you want to tell me any other thing in relation to access and mobility in the city of Addis Ababa?

Appendix VI

Questions to Different Government Offices

1. A Questionnaire to the Federal Urban Planning Institute

1. Are there special arrangements to people with disabilities (those using wheel chair, crutches and those with difficulty for mobility) and the visually impaired in the existing urban plan programs?
2. If your answer is yes what are these arrangements?
3. If your answer is there are no such arrangements what is or what are the reason or reasons?
4. What is the major reason for the lack of arranging access and mobility to disabled persons from the part of FUPI?

2. A Questionnaire to different offices under Addis Ababa City Government

2.1. Questions to Plan Preparation and Supervision Department

1. Are there any arrangements for people with disabilities (People with motor and visual impairments) in the existing urban planning documents of Addis Ababa?
2. If yes what are these arrangements?
3. If no why is there no arrangement?
4. What is the major problem on the part of the Plan Preparation and Supervision Department in relation to access and mobility issues to people with disabilities (the visually impaired and the physically handicapped)?

2.2. Questions to the Infrastructure Department's Construction Permit Team

1. Is there an arrangement that considers the needs of people with disabilities when building permits are issued?
2. If yes what are these arrangements?
3. If there are arrangements how many buildings in the city have applied these arrangements to people with disabilities?
4. If no why is there no arrangement?
5. What is the major problem on the part of the building permit issuance unit in relation to access and mobility issues of people with disabilities (the visually impaired and the physically handicapped)?

3. Questions to Building Construction Design Share Company

1. When the Share Company prepares designs does it include designs that consider the need of people with disabilities?
2. If yes what are the designs/ what do they include?
3. How many buildings have such designs in the city of Addis Ababa and which buildings can be cited as examples?
4. If your answer is there are no such designs what is the reason?
5. What is/are the major problem/s on the part of the Share Company in relation to access and mobility issues of people with disabilities? (the visually impaired and the physically handicapped)?

4. Questions to Ethiopian Roads Authority and Addis Ababa Roads Authority

1. Are there any arrangements for people with disabilities (for the visually impaired and the physically handicapped) in the existing road networks and those on construction in Addis Ababa?
2. If yes what are these arrangements?
3. How many streets have such arrangements, can you give examples?
4. If no why is there no arrangement?
5. What is/are the major problem/s on the part of the Ethiopian/ Addis Ababa Roads Authority in relation to access and mobility issues to people with disabilities (the visually impaired and the physically handicapped) in the existing as well as under construction road networks?

5. Questions to Ministry of Transport and Communication

1. Among the existing public transport methods are there vehicles that can accommodate people with disabilities such as those with motor disorders and the visually impaired?
2. If your answer is yes how many vehicles give services to disabled persons?
3. If your answer is there are no such services what is the reason?
4. What is/are the major problem/problems encountered by the Ministry in terms of importing public transport vehicles to people with disabilities?

6. Questions to Ministry of Works and Urban Development

1. Are there special arrangements to people with disabilities (those using wheel chair, crutches and those with difficulty for mobility) and the visually impaired in the existing urban plan programs and documents?
2. If your answer is yes what are these arrangements?
3. If your answer is there are no such arrangements what is or what are the reason or reasons?
4. What is the major reason for the lack of arranging access and mobility to disabled persons from the part of Ministry of Works and Urban Development?

Officials responding to the questionnaires

Appendix V

Personnel Responding to the Questionnaires from the Different Governmental Offices

1. Tadesse Gebremedhin- Ministry of Transport and Communication – Specification and Procurement Expert
2. Habtamu Demeke- Counterpart Engineer- Ethiopian Roads Authority
3. Samuel Hailekidan – Design Team Leader, Addis Ababa Roads Authority
4. Dawit Solomon – Architect and Town Planner- Addis Ababa City Administration, Urban Plan Preparation and Supervision Unit
5. Simret Afework – Architect, Building Permit Unit, Addis Ababa City Administration, Infrastructure Department
6. Yalemtega Tiruneh- Project Coordinator- Federal Urban Planning Institute
7. Tilahun Fekade- Deputy Managing Director – Federal Urban Planning Institute
8. Tamiru Wondemagenehu- Policy and legislation monitoring and supervision team, Ministry of Urban Works and Development
9. Aberash Ayele- Design Department Director – Building Construction Design Share Company

Appendix VI

Focus Group Discussion Participants: (the Motor Impaired)

No	Name		Sub-city	Kebele	Age	Education	Sex
1.	Negash Matebu	Limited walking problem	Lideta	17	17	Grade 9	Male
2.	Abreham Bekele	Limited walking problem	Lideta	17	15	Grade 9	Male
3.	Melaku Tegenu	Limited walking problem	Lideta	17	13	Grade 3	Male
4.	Layla Nasr	Crutch user	Kirkos	16	15	Grade 9	Female
5.	Tsige Bekele	Limited walking problem	Arada	16	19	10+1	Female
6.	Frew Melese	Limited walking problem	Lideta	18	17	10+1	Male
7.	Betelhem Atnafu	Wheel chair user	Lideta	18	17	Grade 9	Female
8.	Zeru Tekle	Crutch user	Lideta	12	20	10+1	Male
9	Hayria Kamil	Artificial leg	Kirkos	16	20	10+1	Female
10.	Haleluya	quadriplegic severe walking problem	Lideta	12	17	Grade 9	Female

Focus Group Discussion Participants (from the Visually Impaired)

No	Name		Sub-city	Kebele	Age	Education	Sex
1.	Derbew Kassaye	Total blind	Lideta	13	26	10+3 (Diploma)	Male
2.	Mehari Wea	Total blind	Arada	13	32	10+2	Male
3.	Assefa Yakob	Total blind	Arada	11/12	29	10+2	Male
4.	Kedija Hassan	Total blind	Arada	11/12	28	10+3 (Diploma)	Female
5.	Yenatfanta Ayalew	Total blind	Gulele	03	25	10+3 (Diploma)	Female
6.	Fatuma Yasin	Total blind	Gulele	19	22	10+3 (Diploma)	Female
7.	Amarech Zenebe	Total blind	Arada	17	26	10+3 (Diploma)	Female
8.	Temesgen Kebede	Weak sighted	Kirkos	12	23	10+3 (Diploma)	Male
9	Fekadu Ababu	Weak sighted	Arada	11/12	27	10+3 (Diploma)	Male

Appendix VII

List of Different buildings visited

1. The Addis Ababa Municipality Building
2. Bethel Hospital
3. St. Gabriel Hospital
4. Menelik Hospital
5. International Heart Clinic
6. Bruck Clinic
7. Blacklion Hospital
8. Semien Hotel
9. Queen Sheba Hotel
10. Ghion Hotel
11. Sheraton Hotel
12. Hilton Hotel
13. National Bank of Ethiopia
14. Awash Bank (22 Mazoria Branch)
15. Nib Bank (National Theatre Branch)
16. Commercial Bank (Arat Kilo branch)
17. Tana Building (Mercato)
18. Dembel City Center
19. Arada Building (Piazza)
20. Teklu Desta Building (under the Administration for Rented Houses)
21. Condominium Houses (Keranio 3 and Getji sites)
22. Addis Ababa University (sidist kilo Campus)
23. Addis Ababa University (Building college at Lideta)
24. Royal college (piazza and Lancia)
25. Admas College (Misrak Campus)
26. Roha College (behind Bambis)
27. Saint Mary College (Lideta Branch)
28. Tikur Anbessa Comprehensive Secondary School (under construction)
29. Ministry of Labor and Social Affairs (Kazanchis)
30. Federal Urban Planning Institute (Etmex building)
31. Addis Ababa Roads Authority (in the Premises of Lafto sub-city)
32. Ethiopian Roads Authority
33. Building construction share company
34. Ministry of Works and Urban Development (progress building)
35. Ministry of Transport and Communication (in front of Stadium)
36. WARYT Building
37. Nyala Insurance (Micky Leland road)
38. Cinema Ampiere
39. Ambassador Theatre
40. Agona Cinema
41. Alem Cinema
42. Handicap National (the two branches at Lideta)
43. The building of ENAPH
44. The building of ENAB

Declaration

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

Name: Misrak Tarekegn

Signature: Misrak

Place of Submission: Addis Ababa University. Regional and Local Development Studies

Date of Submission: August 3, 2006

