

ADDIS ABABA UNIVERSITY

TECHNOLOGY FACULTY

DEPARTMENT OF URBAN AND REGIONAL PLANNING

POSTGRADUATE PROGRAM IN URBAN DESIGN AND DEVELOPMENT

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**MSc THESIS ON**  
**MODERNIZATION AND URBAN HERITAGE IN RAPIDLY**  
**TRANSFORMING URBAN CENTERS OF ETHIOPIA**  
**THE CASE OF THREE BUILDINGS AND OPEN SPACES IN MEKELLE, CAPITAL**  
**CITY OF TIGRAY NATIONAL REGIONAL STATE**

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BY – MUEZ ATSBEHA

ADVISOR – HEYAW TEREFE /PHD/

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JAN. 2009

ADDIS ABABA

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## Declaration

I, the undersigned, declare that the thesis is my original work and 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 of candidate

Muez Atsbeha Nirea

Signature



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## **Abstract**

This research is intended to investigate the impact of spatial modernization on urban heritage buildings and spaces in Mekelle city, capital of the Tigray National Regional state.

The city of Mekelle and other Ethiopian cities are modernizing at a time when there is international realization that modernization approaches of western cities of 1920- 1960's which led to destruction of urban heritage and loss of social and public life. The question is to what extent have urban centers of Ethiopia that are now in process of rapid modernization benefited from this realization. The study aims to answer this general question by studying three cases in Mekelle city.

A case study method is used for the investigation.

The findings indicate that spatial modernization in Mekelle is largely characterized by repetition of the mistakes committed by the modernization of western country cities. As a result, there is threat of destruction of heritage buildings and spaces, reduction of the public realm and loss of urban identity.

# **I. Introduction**

## **1.1 Background**

Towns and cities are, by their very nature, always in state of flux or change. They are constantly changing; expanding, contracting or undergoing internal restructuring in response to various changes in their land use, building pattern and road network are one of the major manifestations of these changes.

Many western towns and cities around the world are results of changes on unprecedented scale during the 20<sup>th</sup> century. Many of those changes have destroyed viable neighborhoods and urban heritages in the intent to meet technological and economical needs.

However, unlike the situation in the west industrialization world, modernization in developing countries like Ethiopia has not been quite rapid. In such context, transformation of urban areas is apt to be slow, but that does not guarantee the preservation of neighborhoods and urban heritages.

## **1.2 Problem statement**

The process of modernization which has started following the industrial revolution has led to the destruction of heritage, particularly in the western world. Many historical towns and cities in the developed countries underwent change on unprecedented scale in terms of building development pattern, land use and in terms of massive high way construction. They have undoubtedly gained considerable commercial vitality and accessibility by motor vehicles but they became new environments of high rise towers removed from traditional, cultural and historical living environment.

Conserving urban heritages which are historical buildings, open spaces, festive areas, art forms, sculptures, market areas etc, may seem less of a priority compared to more pressing issues such as infrastructural development, poverty alleviation or job creation. But with effective conservation mechanisms, the heritage resources are not only essential in revitalizing the local economy of cities, but also bring about sense of city identity and belongingness to its

residents. This realization has been saving many cities from losing their traditional architectural styles and historical urban heritages and from becoming totally new environments.

The obsession with modernity was major characteristics for most governments in the developing world. The western pattern of urban development continued to serve as the reference point for major countries like Ethiopia.

Ethiopia is one of the countries with the longest history whose history of urban settlements extends back to the Axumite Kingdoms as early as the 5<sup>th</sup> century BC. Its historical continuity has not interrupted except for five years of colonial occupation by Italy from 1936- 41. Its urban centers including many of the most recently founded were developed traditionally.

However, the country and its urban centers are plunged in a rapid process of modernization particularly since, the early 1990s. Ethiopia's urban centers delayed entering of the process of modernization implies that they are modernizing at a time when there is international realization that conservation of urban heritages is not only socio culturally useful but also economically valuable. The question is where urban centers of Ethiopia that are in a rapid process of modernization benefiting from this realization? The research intends to investigate this value by studying three cases from the city of Mekelle.

Mekelle is the capital city of the Tigray Notional Regional state since 1991. It was founded in the 19th century and has served as the capital of Ethiopia during the reign of Emperor Yohannes while its function as a national capital has led to develop many buildings and urban areas of a heritage value, its new function as state capital in the context of transition to a market economy is introducing a rapid process of modernization to the city.

### **1.3 Research questions**

The research therefore has two major questions.

1. How is the modernization process impacting on urban heritage in Mekelle?
2. How can its negative impacts on urban heritage be reduced?

### **1.4. Objectives of the research**

The main objectives of the researches are:

- To review the literature and understand the concepts of modernization and heritages
- To investigate the impacts of modernization on three heritage buildings and open spaces in Mekelle, the capital of Tigray National Regional State, and.
- To suggest ways by which the negative impacts may be reduced

### **1.5 The research methods**

The research question demands using both primary and secondary data as well as quantitative and qualitative data. A case study method is more appropriate for this kind of research and therefore, it is used as a main research approach.

#### **1.5.1. Selection of case study area**

The reason for the selecting Mekelle city as a case study area is that, it has many heritage buildings and cities and that it is in a rapid process of modernization. Mekelle became one of the capital cities of Ethiopia, when Emperor Yohannes chose it as seat of his government in the 1869. As a result, it owns numerous historic sites, characterized by cultural and traditional traits. At present, Mekelle is the capital city of Tigray Regional state. It is in the process of rapid growth and modernization that have put many heritages at risk.

The main criteria for selection of the cases were age and land use type. Structures and sites which were built during the foundation of the city Mekelle that reflect the level of civilization of the time and the history of the people have been given

the priority. In addition the study has the objective of investigating divers land uses. Accordingly, Edaga soney (An old commercial land use), Kebele 14 traditional settlement and Enda Raesi Recreational area have been selected as case study area.

### **1.5.2 Methods of data collection**

The study begun by recognizing the literature on the issues of modernization, urban heritage and their interaction. Field study which was aimed at gathering both primary and secondary data was conducted from Feb. 2008 to Sep.2008.

Primary data were collected from knowledgeable and graduates including those having in the case study area, using interviews and questionnaires(?) and from the physical environment using observation and photos.

Secondary data old documents, maps, photos were collected from organization such as – Tigray tourism commission

- = Tigray cultural association

- = Mekelle municipal office

- = Tigray urban development bureau

- = Mekelle city administration

- = Mekelle chamber of commerce through analysis of the originals when

possible and study of copies obtained from the sources when not. All the data were analyzed carefully to understand the background and heritage value of the study cases, the process of modernization of the city and the case study areas and the challenges facing heritage buildings and spaces in Mekelle city.

## **1.6 Scope and limitations of the study**

### **1.6.1 Scope**

The scope of the study is limited to the impact of modernization on the physical aspect of the city and particularly of buildings and spaces of historic and cultural significances, the detailed study is limited to the three sites mentioned earlier and the data collected from those cases reflects their situation during the field study period which has from Feb. 2008 to Sep.2008.

### **1.6.2 Limitation**

This research was planned to be accomplished principally by collecting and assembling data from institutions and government organization together with field observation and interviews with different stake holders and with information related to local and international trends. However there were limitations with regard to collection of data from institutions.

First, there were difficulties to find organized data because of lack of systematic data storage practices.

Secondly, some government institutions provided access to data only through highly bureaucratic procedures. This, in particular was a large problem to the researches given that the time available for the research was limited.

A third and more general problem was that there was very little awareness of the heritage values of the study cases and the value of the heritage in the city.

The last and most difficult limitation was finance. The field study had to be done without financial supported. It had to be, therefore, limited to the capacity of the researches which was sufficient only because the study town is the researchers own home town. All in all the researches believes that the research quality is not significantly affected by the limitations.

### **1.7 Relevance of the study**

Historic buildings and open spaces play a major role in depicting the culture and history of a society. They help as primary source of data on the history and culture of the society that produced them. They give identity to a place, attract both local and international visitors and serve as a source of income for the administration in which they are located the city of Mekelle possesses many structures and spaces of this type. If they are recognized they can reinforces the local and historical character of the city and help it to contribute to the process of expanding tourism in the region which is now mainly supported by Lalibela, Gonder, and Axum alone. This will be of considerable economic benefit not only to the region but also to Mekelle itself in addition to the social value of the heritage buildings and spaces. At present modernization of the city has become a big threat on.

## **1.8. Organization of the research**

The thesis is organized in to five chapters. Chapter I introduction consists of a brief background of the research and also presents the objective, the research questions, the scope and limitation of the study as well as the methods applied in the research.

Chapter II reviews the major theories and published research findings on the areas of urban heritages and modernization. It covers the concepts and benefits of urban heritages and the impacts of modernization process on the main elements of the city land- use, building pattern and road network.

Chapter III is focused mainly on the existing condition of the study area. It also introduces the urban heritage and modernization of Ethiopia, and the study area of Mekelle. Chapter IV provides a systematic description and analysis of the selected case studies. Chapter V presents the major findings of the research and some conclusions drawn from the research and actions suggested to be taken based on the findings.

## **II Theoretical review: Urban heritage and modernization**

This chapter will review the literature on urban heritage and modernization. The chapter will first discuss the concept of urban and then proceed to the discussion in urban heritage. Following discussions on the benefit of heritage, heritage integration and conservation strategies the paper concludes the chapter by presenting the discussion on spatial modernization

### **2.1. Urban**

Cities are manmade physical structures, placed in natural settings, in addition to being physical and geography's largest artifact, they are also social and the product of a very complex play of greatly varied forces.

Tibbalds (2001: 210) defines cities as physical as well as social units as follows:

“Stones make a wall, walls make a house, houses make streets, and streets make a city. A city is stones and a city is people: but it is not a heap of stones, and it is not just a jostle of people. In the step from the village to the city, a new community organization is built, based on the division of labor and on chains of commands.”<sup>1</sup>

Kostof (1991: 43) on the other hand divides cities in to two kinds.

“The first kind is the planned or designed or “created” city. This pattern invariably registered as an orderly, geometric diagram. The other kind is spontaneous city, also called “Chance-grown” “generated” as against “imposed”. The resultant form is irregular; non geometric, “organic” with an incidence of crooked and curved streets and randomly defined open space.”<sup>2</sup>

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1. Francis Tibbalds, (2001:210) “Making people friendly towns”: improving public environment in towns and cities, spoon press, London.

2. Kostof Spiro, (1991:43). The city shaped: Urban patterns and meanings through history, Thames and Hudson Ltd, London

Urban settlements differ from rural settlements in population size in their economic activities and the way of life of their inhabitants. It is the expression of these differences that creates difference in morphology a physical form and structure of the city. They are also changes in these dimensions that lead to changes in the form of the city in its main components which are normally considered to be buildings, open spaces and land use

Urban Land use is refers to the various used or functions to which land is put. Urban Land use includes housing, commerce, industry, etc. But land use is not a one- dimensional concept but rather a complex mix of various characteristics of ownership, physical environment structures and space uses.

Normally, while the private realm is dominated by buildings the public realm is dominated by open spaces.

As Francis Tibalds, (2001), suggest that, the place that makeup the public realm come in many shapes, sizes, and uses. They include streets and squares, alleys and water fronts in short all the places to which the public have physical and visual access.

Public open spaces are used also for recreational, wild life habituate Venus for special events and as breathing spaces for the city. The activities that take place particularly in open spaces between buildings are divided in to three as:

- a) **Necessary activities:-** are activities like going to work place, seating for taxi hopping and others similar activities.
- b) **Optional Activities:-** are those which are not necessary like taking a walk, sitting on garden seats and enjoying life, taking sun bath and other similar activities.
- c) **Social Activities:** - Include playing, cultural activities, religious activities, greetings and conservation, passive contacts etc. (Mathew 2003).

On the other hand a space type based categorization identifies the following types of spaces

- A social open space: that serves social events like manage bachelor parties, etc.

- Cultural space: signifies space allocated for cultural activities or justifies like music shows.
- Health oriented spaces: spaces used for exercising, jogging etc.
- Religious spaces: signifies spaces allocated for religious activities
- Political space : Space used for valuing or other political activities
- Buffer spaces: Spaces around pools, dams, nurseries etc.
- Recreational spaces: spaces allocated for recreational activities of various levels; squares and plazas, play lots, play grounds, play fields and parks.
- The street: a public road in a town and its side walks
- Neighborhood and city parks

Buildings are one of the most dominant elements of the morphology of a city buildings in urban contexts are different from those in rural contexts in their size, architecture and technology. Since they are often developed for particular uses and since they can last long they are likely to be the most prevalent types of heritage as well as difference in building culture is most expressed in differences in building form and technology leading to addition of distinct buildings to a culture when that culture mixes with another one.

## **2.2 Urban heritage**

Urban heritage as an architecture and the built environment as produced and generated during a particular period of time are often apt reflections of the values of the society at that point of its history.

Heritage means the property that is inherited or anything from the past that has meaning or value for the present and the future; including tangible cultural artifacts and the natural environment as well as intangible cultural values.

Heritage is often understood to mean monuments, i.e. churches, temples, all sorts of religious buildings, palaces, historic city walls and gates, and other types of institutional buildings. This understanding often excludes historic residential areas and historic city centers which equally represent the urban heritage. In addition, there may be non-tangible urban heritages, such as customs and beliefs, which play a role for the articulation of space use and the built environment.

### 2.2.1 Immovable urban heritages: tangible heritage

Immovable cultural heritage means cultural heritage attached to the ground with a foundation and which can be moved only by dismantling and shall include.

- 1 Sites where cultural heritage have been discovered pale- ontological historic and pre historic and archeological.
- 2 Building, memorial places, monuments and palaces
3. Remains of ancient town's burial place, caves
4. Churches, monastery, mosque or any other places of worship.<sup>3</sup>

The form of towns and cities represents the physical legacy of preceding generation's aspirations, uses and limitations. In that sense most aspect of the city is heritage as each successive wave of society has interpreted and contributed to this collective inheritance. Most of the urban heritage literatures argued that, historical urban heritages (Buildings and Open spaces) are structures which were built during the foundation of the urban centers that reflect the level of civilization at the time of conceptualization.

“Briefly, historic heritage is one that gives a sense of wonder and makes us want to know more about the people and culture that produce it. It has architectural, aesthetic, archaeological, economic, social and even political and spiritual or symbolic values. If it has survived the hazards of 100 years of usefulness, it has a good claim to being called historic”.<sup>4</sup>

Based on the above definitions, historical structures and sites broadly defined as:-  
Historical structure refers to buildings, monuments or statues that were built at respective time and have historically significance.

Historical Sites also refer to large settlements/group of buildings/ constructed at similar time that have historical significance or an area served as ceremonial place and festival place for the community.

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3. ORAAMP, (2001) A study on historic structures and sites of Addis Ababa, city government of Addis Ababa works and urban development's Bureau, Addis Ababa.

4. M. Feilden, (1982: 3), Conservation of historic buildings, Butterworth and co. Publishers Ltd, London.

Nevertheless, tangible heritage is not limited to buildings and monuments which are immovable by nature. It also includes artifacts which may be moved from place to place.

### **2.2.2. Intangible cultural heritage**

The concept of intangible cultural heritage in those cultural values themselves without the tangible artifacts they have produced can be considered as heritage.

Culture is the context with in which we need to situate the self. It is only by virtue of the interpretations, orientations and values provided by culture that we can formulate our identities and say, who we are, and where we come from. Therefore culture is always present and it is a record of mankind, achievements and relationships with the world. It has always a local dimension; though sometimes it imbeds universally shared values. It is this predominant local dimension that distinguished communities and societies makes culture a heritage that needs to be preserved.

## **2.3. The benefits of urban heritage**

### **2.3.1 Spatial benefits**

Traditionally, buildings and streets had remarkable ability to adapt over time to changing circumstances and different uses and opportunities. Places which can be used for variety of purposes offer their users more choice than places whose design limits them to single fixed use.

The materials of which our heritage buildings built were with their permanence, durability and enduring qualities as well as for ease of maintenance. It cannot be simply replicated in short time. They are actually belonged to the vivid local people with their ordinary life style, which could create impressive urban buildings and street landscape reflecting a clear local street spirit.

In an obvious way, human societies are spatial phenomena: they occupy regions of the earth's surface, and within and between these regions people encounter each other. But society does more than simply exist in space. It also takes on a definite spatial form. The space arranges itself by means of buildings and paths so

that the physical milieu of that society also takes on definite pattern. But also because, through the ways in which buildings, individually and collectively create and order space, we are able to recognize society that it exists and has a certain form. The traditional spirit of an old and organic settlement is a human-scale place for local people to live, work and rest or play.

Urban heritages should be an important part of the built environment which is used to enhance not only cultural, historic, economic and social benefits but also contribute to improving the quality and sustainability of the urban ecology:

The following spatial benefits of urban heritages are sited in summarized way. Most urban heritages:

- Creating lasting environments and they have lasting values and can be appreciated in their own right.
- Teach us about the past and the culture of those who came before us.
- Provide the context of community sense of identity where people relate to the land and to those who have gone before.
- Provide variety and contrast in the modern world and measure against which we can compare the achievements of today and;
- Provide visible evidence of continuity between past, present and future.

### **2.3.2 Economic benefits**

Urban heritage can be a major catalyst of economic development and urban regeneration. It has direct and indirect economic benefits to the society and to the country. The direct benefit is related to dollar profits gained from visitor's /tourists/.

In many large cities around the world, historic and cultural heritages have been central to an overall economic development strategy. Cities that ignore their historic heritage that can follow from their efforts are almost certain to suffer from financial loss. Similarly, Kostof Spiro has shown that:

The major and obvious beneficiary of heritage is tourism. Tourism is nowadays a multimillion pound industry in Britain, as elsewhere, and was recognized as such by the late 1960s, and certainly by the mid to late 1970s, when expenditure by overseas visitors increased from 359 million in 1969 to 1,820

million over 8 years, or nearly 230 million per year.<sup>5</sup>

Historical and traditional buildings and sites characterized by special beauty are able-in rich and poor countries alike-to improve quality of life, and can more effectively promote investment, development and growth of jobs, businesses, income and wealth.

“Today attractiveness reflected in the quality of life is a key economic development factor due to a combination of environmental, social, cultural and economical values. Both artistic and ecological resources contribute to the beauty of a site or a landscape, which in turn can potentially attract economic activities that produce wealth and reduce poverty.<sup>6</sup>

Conservation of urban heritage can be generally sustainable to the existent that it revitalized communities by creating a dynamic, growth oriented mix of new functions that regenerate economic and social life.

The attractiveness and beauty of a site is not only an aesthetic element, but contributes to economic development. The natural and manmade heritage beauty helps to increase productivity of all forms of capital. “We have to conserve it in a sustainable way, because, in turn, beauty lifts the human spirit and contributes to community the good life.<sup>7</sup>

### **2.3.3. Social benefits**

Space and society are clearly related: it is difficult to conceive of ‘space’ without social content and, equally, to conceive of society without a spatial component. The relationship is best conceived as continuous two way process in which people (and societies) create and modify spaces while at the same time being influenced by them in various ways.

Due to direct contact with society, the urban heritages have social benefits in order to keep the existence and continuity of cultural and historic value of the society. Always thus cultural and historic symbols of the society are reflected in

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5. Kostof Spiro, (1991:49). Ibid

6,7 Girard, (2002). Ibid

the space and buildings which create by the people in every consecutive generation in the past time.

Many people argue about the necessity of urban heritage, buildings, monuments and sites comparing it with the immediate revenue that could be generated by demolishing and redeveloping the cleared site with new structure that could accommodate the new function of the present area. The social benefits can be reviewed in terms of cultural and historical benefits.

“Cultures are unique but human beings are universal”

(Lozano 1990)

Culture is a powerful means of controlling cities, as a source of images and memories. It symbolizes “who belongs” in specific places as asset of architectural theme. It plays a leading role in urban redevelopment strategies based on historic perseveration or local heritage. Culture is more and more the business of cities, the basis of their tourist attractions and their unique, competitive edge.

“No one can duplicate your historic resources”

(Rypkema, 2004)

As discussed in detail by Rypkema, there are various types of importance of historic resources. Utilizing a community’s historic resources is a strategy absolutely exclusive to that community. Someone else can duplicate your water lines, industrial park, tax rate or permitting process. No one can duplicate your historic resources. Regardless of the other components, historic heritages are important to quality of life for three reasons.

- 1) More than any other man made element, historic buildings are used to differentiate one community from all others.
- 2) Many quality of life activities- museums, symphonic, theaters, libraries, leading in state parks are housed in historic buildings.
- 3) The quality of historic buildings and the quality of their preservation says much about communities self image. A community’s commitment to itself is a pre requisite for nearly all quality of life elements.<sup>8</sup>

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8. D. Rypkema, (1994: 29). The economics of historic preservation: national trust for historic Presentation, Washington, D.C.

## 2.4. Heritage integration strategies

Based on the complex nature of the process as well as its many different meanings, there are various kinds of approaches to an integrated development of urban heritage and the new development. Some of the existing theoretical and ideological positions are presented as follows.

### 2.4.1. Conservation

Conservation involves moving intervention at various scales and levels of intensity which are determined by the physical condition, causes of deterioration and anticipated future environment of the cultural property under treatment. In any major conservation project, several of those degrees may take place simultaneously in various parts of the whole. The seven degrees are (1) prevention of deterioration; (2) preservation of existing state; (3) consolidation of the fabric, (4) restoration; (5) rehabilitation; (6) reproduction; (7) reconstruction.”<sup>9</sup>

Clair (1973), stated that, conservation is also one of the urban renewal tools which require little degree of intervention in urban areas. In this context the urban renewal process should start with three renewal tools of conservation, rehabilitation, and redevelopment

1. **Conservation:** - the light touch, preventive measure, and the least controversial of three types. This renewal tool should be categorized as one that prevents blight more than correcting it and may be applied on neighborhoods in near standard quality with a few deficiencies.
2. **Rehabilitation:** - the renewal tool that, persons retain ownership of their property and rehabilitate it themselves through improvements that would be the property up to a predetermined standard.
3. **Redevelopment:** - the ultimate tool in renewal when conservation and rehabilitation are unable to bring about the desired cure is redevelopment, clearance, and rebuilding.<sup>10</sup>

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9. Tibbalds, (2001: 79). Ibid

10. Clair, (1973).Hand book on urban planning, Van strand Reinhold Ltd Company, New York.

Always Interventions practically involve some loss of a value in cultural property, but are justified in order to preserve the objects for the future.

To show the detail approaches of conservation, the document published of the standards and guidelines for the conservation of historic places in Canada has been preferred. In this document, conservation approach is broken down in to three categories: Preservation, Rehabilitation and Restoration.

**1. Preservation**

It is the action or process of protecting, Maintaining, and/or stabilizing the existing materials, form and integrity of a historic place or of an individual component, while protecting its heritage value. Preservation can include both short term and interim measures to protect or sterilize the place, as well as long term actions to retard deterioration or prevent damage so that the place can be kept serviceable through routine maintenance and minimal repaired, rather than extensive replacement and new construction.

2. **Rehabilitation:** rehabilitation is the action or process of making possible a continuing or compatible contemporary use of a historic place or all individual components, through repair, alterations, and /or additions while protecting its heritage value

**3. Restoration:**

It is the action or process of accurately revealing, recovering or representing the stage of a historic place or of an individual component, as it appeared at a particular period in its history, while protecting its heritage value.

## 2.5 Movements towards urban heritage conservation

Beginning from the 60's criticism was directed towards modernism- its urban design as well as the increasingly abstract urban theory behind it and its comprehensive transformation of cities.

“The reaction of the sixties took two separate paths. One led to an internal critique of modernist urbanism; the other pointed back toward history and the surviving scraps of our urban past. Each within its own context reopened the ancient debate of “organic” patterns and reaffirmed their validity.”<sup>11</sup>

The charter of new urbanism movement for example calls for new design concepts to meet new situations including innovative ways to retrieve the mistakes of recent development, new regulations and policies to keep the old mistakes from recurring; visionary proposals for making older areas competitive again. The charter continues to stand for the restoration of existing urban centers and towns within coherent metropolitan regions, the conservation of natural environments, and the preservation of built environment.

New urbanism reinforces the importance of being aware of and honoring the historic fabric of urban places and of designing new urban places that will accommodate change over time. Another general movement towards urban conservation is planning for sustainable cities.

Sustainability means: “Not cheating on our children”

(parfect and power,1997)

The term “sustainable” is now widely used to describe a world in which both human and natural systems can continue to exist long into the future. Based on that

“Sustainability means, meeting the needs of the present without compromising the ability of future generations to meet their own needs”.<sup>12</sup>

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11. World Commission on Environment and development, (1987:8), Brundtland report

12. J. Njoh, (1999). Urban planning housing and special structures in sub-Saharan Africa: nature impact and development implications of exogenous forces, Ash agate publishing Ltd, England.

The broad concept of “sustainable development” is also used to refer to alternatives to traditional patterns of physical social and economic development that can avoid problems such as exhaustion of natural resources, ecosystem destruction, pollution, over population, and the degradation of human living conditions.

J. Njoh, also provides the breakdown of the concept in to three different categories, namely, ecological, social and economical sustainability. From the broad definition of sustainability the societal sustainability is more relate to the urban heritage conservation.

“Sustainability seeks to increase the capacity of a society to satisfy human needs while maintain a balance between the fragile environment and human demands.”<sup>13</sup>

## **2.6. Spatial modernization**

### **2.6.1 General**

Historically, the idea of modernization is relatively new. Its basic principles can be derived from the age of enlightenment with the idea that people themselves could develop and change their society. The Modernization process is resulted mainly from the products of technological advance or industrialization, colonization, urbanization, and an expanding capitalist world market or globalization.

#### **➤ Industrialization**

Before the full emergence of capitalist economics in the eighteenth century, and the advent of the industrial revolution in the nineteenth century, cities were essentially small and organic in pattern. After the innovations of industries in many countries, major physical and economic changes took place.

Industrialization is a process of social and economic change where by a human group is transformed from a preindustrial society in to an industrial one. It is parts of a wider modernization process, where social physical and economical changes

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13. J. Njoh, (1999). Urban planning housing and special structures in sub-Saharan Africa: nature impact and development implications of exogenous forces, Ash agate publishing Ltd, England.

It is parts of a wider modernization process, where social physical and economical changes

➤ **Colonization**

It is a process by which maintains foreign colonies especially in order to exploit the economical and political importance. Colonial government developed physical structures and manipulated spatial forms as a means to achieving desired objectives.

Although urban development has had a long history in Africa, Its modern manifestation can be said to be essentially due to active European penetration of the continent in the last decade of the nineteenth century.

➤ **Urbanization**

Urbanization is a process of growing number and size of urban settlements in population and territories that had not been urban.

Together with poverty and over population, urbanization is one of the most significant process affecting human societies in the twentieth century. Urbanization was almost universally seen as a direct indication of modernization. Throughout history, industrialization and urbanization have tended to occur together.

➤ **Globalization**

Globalization can be defined as the integration of economic, political and cultural values and is related to the spreading of modernization throughout the world. Similarly, it is a phenomenon driven by the private sector, its sharpness and competitiveness includes change in markets, culture and security.

It theorizes the development of global economy in the sense that the world is moving in the direction of one cultural society. In addition, it describes the process by which events, decisions, and activities in one part of the world can come to have significant consequences for individuals and communities in quite distant parts of the globe. International firms, multinational corporations, and

transitional trading patterns link most of the globe in a tight web of economic interdependency.

At present time of Globalization, cities are becoming meaningless places beyond their citizen's grasp. We no longer know the origins of the world around us. We rarely know where the materials and products come from, who owns what, who is behind what, and what was intended. We live in cities where things happen without warning and without our participation. It is an alien world for most people. It is little surprise that most withdraw from community involvement to enjoy their own private and limited worlds

The above four main factors of modernization would be needed in the process of the constantly changing urban world. These changes will enable to bring about change in land use, building pattern and road network which have considered as urban heritage.

### **2.6.2 Urban land use pattern**

Before the full emergence of capitalist economics in the eighteenth century, and the advent of the industrial revolution in the nineteenth century, cities were essentially small and organic in pattern. After the innovations of industries in many countries, major land use pattern changes took place.

With the introduction of automobiles, high traffic roads have increasingly dominated heritage buildings and public spaces, which has consequently lost much of its cultural meaning and human purpose. Staggering percentage of urban land in major modern cities is devoted to the storage and movements of automobiles. Streets, no longer essential urban spaces for pedestrian use, and function as the fastest automobile link.

When we entered the era of mass production and consumption, cars began jamming city streets and highways, skirted by shopping malls. Cities began to suffer from rapid changes of unfamiliar physical developments and demand new capabilities, and, quite often, a basic rethinking of the cultural and traditional patterns of production and consumption.

Colonial influence upon urban systems was in contrast to the mercantile period, felt at all levels within the urban hierarchy, although variations existed according

to time and location. In some areas it is claimed that entirely new urban hierarchies were created. In others, there was wholesale reorientation of urban settlement and economic activity from inland trading routes to the new coastal entre-pots.

“The remarkable feature of the urban morphologies of colonial cities from large to small was the way in which they were almost totally dominated by the lebensraum of what usually remained a demographic minority.”<sup>14</sup>

Colonial government developed physical structures and manipulated spatial forms as a means to achieving desired objectives.

“The introduction of modern ‘planned’ environments based on western notions of civilization, when compared to the traditional indigenous city, has obviously modified for more than just the physical environment.”<sup>15</sup>

The frame work of the racial thinking of the time dictated a pecking order for the races where in whites occupied the highest rank while blacks occupied the lowest rank.

The colonial urban development in different countries notes that the sitting, form and function of structures and land uses resulted from specific aspects of European culture. The cultural values of any society, whether social, legal or religious, give rise to a set of institutions which determine much of the physical form of that culture. As a result the heritage buildings and open spaces in the central area are occupied by the foreigners and forced to deterioration without sense of ownership.

The quest for profit and prestige and the relentless exploitation of places that attract the public have led to the destruction of much of the heritage, of historic places that no longer turn a profit, of natural amenities that become overused.

In the Globalization period, many towns and cities around the world underwent change on unprecedented scale. This undoubtedly resulted in considerable commercial vitality and

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14, David D.rakakis

15, Chevery, 1980:205

unique lives of accessibility. The comprehensive redevelopment schemes have tended to destroy the familiar and successful urban form and the results have been largely destructive.<sup>16</sup>

Competition is thus in the process of becoming the only solution to the problem of globalization. The result is that societies are evermore engaged in an economic battle without mercy. Individuals and cities that are not competitive are being marginalized and eliminated from the economic race. Accordingly, the previous land use which is suitable to the urban heritages has been affected by the market and competition driven land use.

” Cities, especially American cities, have become privatized, partly because of the consumer society’s emphasis on the individual and the private sector, creating Private affluence and public squalor, but escalated greatly by the spread of the automobile. As public transit systems have declined, the number of places in American cities has become an empty desert.”<sup>17</sup>

### **2.6.3 Building pattern**

As discussed on the review of urban heritage, cities impress upon us, are not simply ‘neutral’ configurations of adobe, wood, corrugated iron, brick, concrete, steel and glass structures. But they are a lot more than that as they also constitute cultural artifacts reflecting the economic system (mode of production), functional requirement, cultural values and social norms of the designers and builders.

Regardless of social cost with the advent of the mechanical elevator and new technologies of construction, the modern city has become an environment of high rise towers removed from street life.

“To say that the undeveloped areas of the world are over urbanized is to pose the major economic problem with which they are confronted, namely, that they Continued rapid rates of urbanization are, therefore, likely to aggravate, rather than alleviate, present urban poverty and distress.”<sup>18</sup>

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16, Richard T. Legates and Frederic Stout, (2003:13, 440) Ibid

17. Richard T. Legates and Frederic Stout, (2003:13, 440) Ibid

18. Hoselity and Moore, 1963:209

However in many countries, the rates of urbanization exceed the capacity of national and local government to plan and organize this transformation. They do not have an adequate economic base to support present urban populations by the standards of the western world. As a result new forms of urban poverty have emerged through poor housing conditions, poorly managed cities lead to heritage deterioration. They contribute to unsustainable production and consumption patterns. Poorly managed cities also have negative impact on buildings and open spaces which have heritage values.

#### **2.6.4 Road network**

The social and spatial role of the traditional Street has been further undermined mainly by modern invented technologies and colonization,

The profile of the medieval or renaissance city, the most important historic urban design models, is generally low and horizontal, and there is usually a close connection between life inside the buildings and activity on the street. The social and commercial role of the traditional street has been further undermined by such modern movement design features as enclosed malls, middle arcades, and sunken or raised plazas. The modern city dweller is forced to create a social life on personal, controllable territory instead of engaging in a communal existence centered on the street.

Accompanying the need to control road or street pattern during the colonial era was the need to facilitate the movement of agricultural products, other raw materials from the center to the sea-ports and then to the metropolitan or colonial master nations. It is therefore no surprise that most efforts in the area of transportation development were concentrated on railways, whose location was determined solely by considerations of colonial economic and military objectives. In addition to this, Rakodi (1993) stated that the colonial settlements were superimposed on and attached to existing towns and cities elsewhere, while the choice of transport routes gave a boost to or by passed existing settlements with great damage of heritages.

Another important factor in the development of new technology in the industrialization process was the coming of railway. The impact of this revolutionary form of transport was so great as to be difficult to imagine today. The physical construction of the railways through existing urban areas and the construction of mainline stations and terminal within city centre caused immense destruction of traditional neighborhoods and heritage values.

## **III.Contextual Background: Heritage and Modernization in Ethiopia**

### **3.1 Introduction**

Ethiopia is an ancient country located in north east Africa, as it is generally known, the horn of Africa. Many archaeological findings hint that it is the origin of mankind, home to various people and is recognized as one of the early developments of world civilizations. In general the people of Ethiopia are deeply religious with the great sense of identity. They are proud of their culture and history.

The history of urbanization in Ethiopia dates back from the Axumite period more than three thousand years ago.

In many parts of Ethiopia, old historic town and villages bear evidence of the rich cultural heritage. However, the dynamics of rapid urbanization shifting economic activities rising cost of urban land and changed political and economic characteristics of the towns are subjecting them to changes particularly in the rapidly growing cities.

This chapter will review the history and condition of the major heritage cities in the Ethiopia and finally briefly discuss the force of change that has been confronting particularly those in rapidly growing cities of the country.

### **3.2 Heritage and major heritage locations in Ethiopia**

#### **3.2.1 Yeha**

It is believed that the oldest heritage site in Ethiopia is Yeha, the prime capital of the pre-Axumite period that has demonstrated the establishment of early urban life. It is located in the Tigray regional state and it is famous for its huge and remarkable temple. The temple is believed to date back to the 7th or 8th century B.C” (Tigray Tourism commission 2002). The temple is believed to be the oldest standing building in the country and Yeha and its Temple have been known to the outside world since the early 16th century.

The imposing Yeha temple though roof less is still standing. It was a large pre-Christian temple consisting of a single oblong chamber. The area of the remains of the temple measures 18.5m by 15m and its height stands at 12 meters.

Constructed of huge stones without the use of mortar, it has surprisingly defied the pressures and wear-and-tear of natural forces for at least 25 centuries. Professor David Phillipson writes. "The temple undoubtedly owes its good presentation to the fact that it was subsequently (perhaps about thousand years after its initial construction) converted in to Christian church". He adds, "The outer faces, edges and corners are superbly dressed with great precision". Yeha, with its ancient temple and magnificent site is a mysterious place that still beckons the traveler as few other places do.

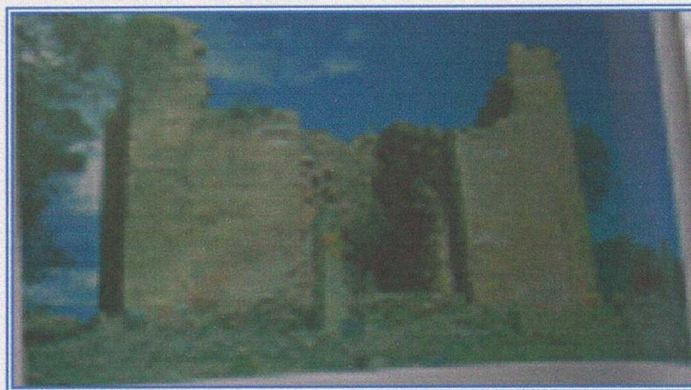


Fig1 Yeha Temple

### 3.2.2 Axum

Axum, believed to be founded in the 2<sup>nd</sup> century B.C, was once the capital city of one of the world's four super powers: the Axumite Kingdom. Axum was the capital and residence of the legendary queen of sheba. Today in the remains of the queen's palace, one can see, among other things, the bathing rooms, throne room, and a large kitchen of brick ovens. Axumite civilization was one of the greatest and the earliest civilizations in the world. Early Christianity had its first seeds there. During the Axumite period, Ethiopia had attained a high level of civilization and established extensive ties with the outside world. Axum's

glorious civilization is best symbolized today by its many monolithic obelisks still standing.

The largest, though fallen and broken, is more than 33 meters in height and about 500 tons in weight. Its four sides are richly decorated, and each represents a facade of a twelve story buildings. The second largest stele had been physically removed by the Italian's during their unsuccessful attempt to colonize Ethiopia but it is now re-erected at its original location in Axum. The third largest still standing is 23 meters high depicting a facade of nine stories.

Francis Anfray, a well-known French archeologist, wrote; "for their height, their massiveness, and decoration, their like cannot be found in the world."

The wooden beams curved in granite on the decorated stele are the most typical examples of the unique Axumite architecture. The painting on walls and ceilings of the Axumite period were imaginative designs for windows curved wooden roof panels were impressive architectural qualities.

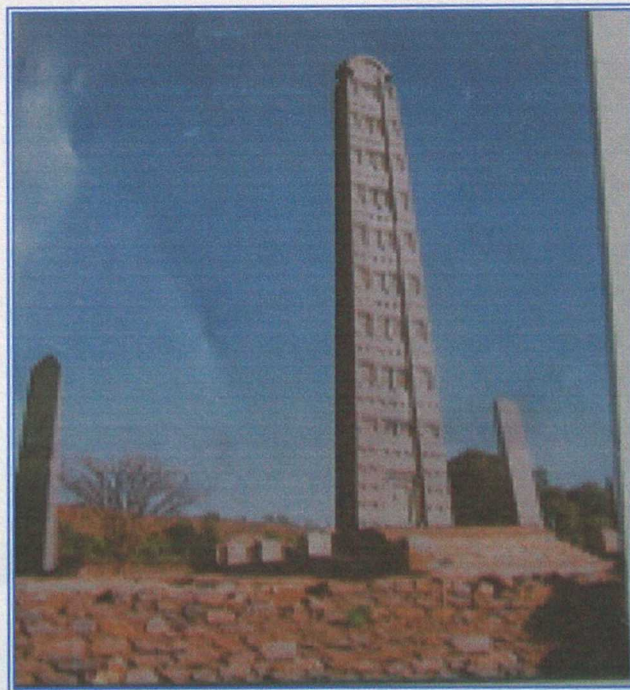


Fig.2 Axum obelisk

### 3.2.3 Lalibela

After the decline of Axum, the Christian kingdom retreated further south and established itself around the region of Lalibela, an area bearing the name of an emperor who is believed to have founded it. Ethiopian Lalibela was a devout Christian emperor who contributed to the growth of orthodox church by granting land to many prominent monasteries and churches in northern Ethiopia and particularly known for the construction of the eleven monolithic rock hewn churches. From the eleven monolithic churches Bete Giorgis church has unique architectural style. It is built in the shape of the Greek cross with the dome above the altar in the eastern arm of the cross. Architecturally its style is finer than the others. Its flat roof is ornamented with cross and sculptures in relief. The walls reflect the Axumite style of recessed and projecting stone work. A well planned and executed four high-relief pillars are found inside the church.

Lalibela was immersing in the mountainous areas of Lasta in the tenth century. It is the former capital of a local dynasty called the Zagwe. It is today highly known for its remarkable rock hewn churches.



Fig. 3- Betegiorgis rock hewn church

### 3.2.4 Harar

The emirate of Harar in the eastern part of the country represented another important centre of Islamic power and influence in the sixteen century.

The inhabitants were only Muslims. A notable incident in the history of Harar was the surprising city wall by Emir Nur, a mid sixteenth century ruler. The strong fortification wall that is still standing has five gates with oval towers.



Fig4 Harare main get

### 3.2.5 Gonder

The most known capital of the seventeenth century, however, was Gonder, which was established by emperor Fasiledes in the early 17<sup>th</sup> century. It remained as the capital of Ethiopia for about two centuries. The city today is best known for its famous crenellated castles.

The aristocracy and the monarchy supported the artists and artisans who put up buildings, illuminated manuscripts, decorated the interior of churches and palaces and worked stone, wood or pottery. The towns' castles and other monuments were built of hewn brown basalt blocks and contained features that derived from Axumite and zagwe times.

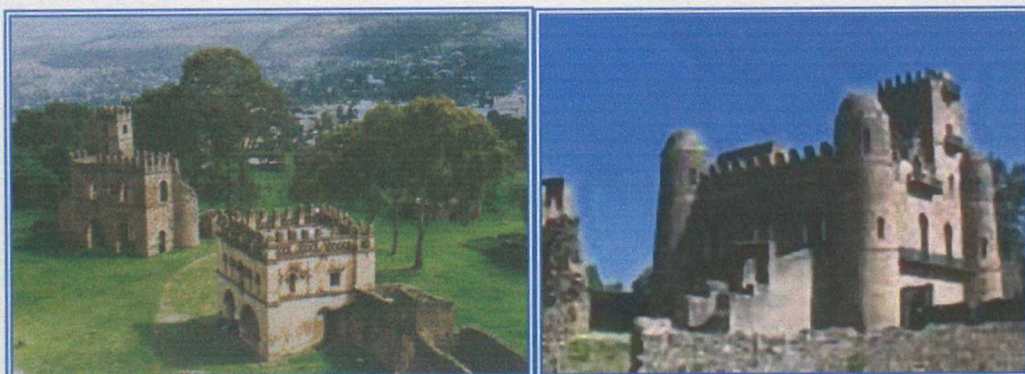


Fig. 5- Gonder castles

### 3.2.6 Mekelle

“Like in paradise the sweet water flows steadily from the well”

(Johannes IV)

Mekelle is the case study city. It is currently the capital of Tigray national regional state and it lies 780 K/m north of Addis Ababa. According to local historian, it was founded in the 13<sup>th</sup> century.

Historically, the city has had different status at country and regional levels, Emanated from a small village, Mekelle has served as a capital city of Ethiopia, capital city of Tigray, kiflehuger and capital city of southern zone, and currently it is a capital city of Tigray regional state and a zonal city by itself.



Fig.6 Location map of Mekelle

According to Ato Taddese Equar (1991 E.C), the first settlement in Mekelle was named “Endameskel” and it is now found in the eastern part of the city on the bottom of the Endayesus Mountain. According to elders, the name Endameskel was associated with the coming of the true cross locally known as “Gimade Meskel”. Tradition had it that having the cross from Jerusalem; delegates of Atse Dawit made a visit to the village on their way to Gishen. Later the name has been changed after that event. The generally accepted legend attributes the naming of Mekelle to the problem that the neighborhoods were not sufficient to feed the church students, which was a tradition in the Ethiopian church school at the time. Realizing this problem, the then monastery leader divided the village in to parts

and assigned his students to collect their food from each part. It was from this phenomenon that the Tigrigna word, “Mekelle” which literary means, “he divided” developed.

Around 1869 Ras Kassa, the later Yohannes IV, came to visit his relatives around Mekelle and he found out that the village was very attractive having a few inhabitants, indigenous forests, streams and springs. Yohannes chose Mekelle as the seat of his government and built his graceful palace, still intact, in 1870s and following that Mekelle aquired the position of capital city of Ethiopia at the end of 19<sup>th</sup> century.



Fig.7-Atse Yohannes IV Palace

Traditionally Mekelle was divided in to two zones, Kolla (Main Mekelle) and Dogua (the Endayesus and Mekelle University area). The Mayliham areas, Endaguber, Enda Medhanialem and Kidanemihret churches were the first settlements and churches in the city. Yohannes the IV built Enda Teklehymanot church later. After his coronation in Axum, the king came to Mekelle and declares that the village was his royal seat. After Mekelle has been established as an urban center from 1869-1873 different neighborhoods called Seferes were established. These Seferes have their own historical development characteristics” (executive summary, 2006)

There are a number of reasons and coincidences that tied with the naming and foundation of the sefers. Most of the sefers flourished after the nobles were granted plots of land by the Emperor around the neighborhood and the names were taken from the names of the nobles. For example the places of Enda Resi and Abraha Castle belong to this type. In addition to this, names of some places were given to commemorate occasions, phenomena and historic events. Examples from this group are, Edaga Soney or Edaga Kadamay Woyane, Hawlti Semaetat, Edaga Bierai. Documents indicate that, some sefers also got their names following the Italian invasion. The Baloni or Ferengi seffer is a typical example of this type. But many parts of the old settlements of the city were named after churches in the areas. For example Endamariam and Endagaber, which are names of churches, are still serving as name of the Sefers.

### **3.2.7 Addis Ababa**

Addis Ababa was founded by Emperor Menelik at the end of the 19<sup>th</sup> century. Therefore, because it is not an ancient city it cannot have ancient monuments. Addis Ababa's heritages are rather its traditional Sefers, the houses of the nobility who were basically chiefs of the Sefers and some buildings that were constructed by the Italians during their occupation of the country from 1936-41.

The development process of the Sefers of Addis Ababa is similar to that of old Mekelle. Lands granted to the nobility by the emperor were used to build the nobility's own house and those of their followers. Many of these Sefers were named after the chiefs like for example Dejach Balch Sefer, Dejach Wube Sefer and Ras Biru Sefer. In the case of Addis Ababa there were also "Community Sefers" originally inhabited by homogeneous migrant communities like Dorze Sefer, Wolega Sefer, Sidamo Sefer etc.

The houses of the nobility were designed mainly by expatriates but they were constructed largely using local materials. Their characteristics were summarized by Lindaha (1970 p.99) as follows; "the ground floor is heavily built with thick masonry walls and rather few and small openings. There is usually an upper storey which is more light and open and sometimes entirely of wood and glass. There are plenty of open or glazed verandah and balconies either upstairs only or

also surrounding the heavy ground floor storey with alight exterior. The verandas etc. are richly decorated mostly with wooden ornaments produced by fret sawing or turning but partly also cut out of flat sheet metal and often painted in green color. There are fanciful roof shapes not always very suited for the roofing materials thatch and corrugated steel sheets. “

Occupation of the country by Italy from 1936- 1941 was another factor for the development of urban areas and buildings that may be considered as heritage today urban areas such as Mercato, Piassa, Casa Incis and Populare were founded during the Italian occupation period and there still maintain names from that period. Buildings such as the present Ras Hotel building, the Ministry of defense and many similar buildings particularly in Piassa area are legacies from this period which if preserved together with the above urban areas can represent a particular period in the history of the city.



Fig.8 Menillik square, piazza/Addis Ababa

### **3.3 Spatial modernization in Ethiopia**

#### **3.3.1 General**

It has been mentioned earlier that, internationally, the main engines of modernization were Industrialization, Colonization, Urbanization, and Globalization. The issue here is how these factors influenced urban development have in the development of urban centers in Ethiopia.

A new foundation for modernization was laid down at the end of the 19<sup>th</sup> century by emperor Menillik. Following the advances made in science and technology, Ethiopian's relations with other countries of the world began to expand. Ethiopia also began to influence by scientific innovations of the world by using Addis Ababa as stepping stone.

In the industrial sphere, although negligible when viewed in absolute terms there was some progress when compared with the situation before 1935. This was partly due to the foundation laid down by the Italians; partly, too, it was the result of post-liberation policies and efforts.

Urbanization in real sense in Ethiopian is after the completion of Ethio - Djibouti railway line in 1917 and the Italian occupation (1937-1941). Since many urban centers were flourished and mush roomed, as a result, these has been an influx of rural population with a certain degree of primacy both at national and regional levels

Global production in competition has increased firms to design global corporate strategies and obviously, international trade and capital flows are affected on the other hand a large part of the native cultural and historical heritage resources of the country. These problems are intensified by the private sector which drives the global financial and goods markets. The 1950s and 60s were times when Ethiopian was championing the cause of African unity. As diplomatic capital, it was expected to reflect a modern look. As the time it was necessarily expected to express civilization and modernity with trendy physical structures.

There are various literatures about the challenges and influences of modernization on historical and traditional heritages throughout the world. Therefore the next

topics show the impacts of the products of modernization on the urban spatial heritages in terms of their land use pattern, building pattern and road network.

### **3.3.2 Land use pattern**

In 1936, when Italy occupied Ethiopia, zoning was employed as an instrument not only for regulating land use, but also for controlling aspects of building development. Race was used as a guideline for planning. Efforts were made to separate the native settlement and working area from whites.

Efforts were made to separate the natives from whites but, at the same time, the indigenous population had to be impressed by the visible signs of colonial power.

According to Fasil Giorgis and Denis Garand (2007), the Italians wanted to build their consulates along with the city residents. However, they formed unique settlements creating neighborhoods of their own. Racial segregation was envisaged from the very beginning. Le-corbusier's plans for Addis Ababa were never finalized. But his preliminary sketches show street networks based on grand vistas and a city composed of distinct residential areas based on race. Shortly after its arrival, the fascist military administration was given orders by the due to remove statues of Menelike, the lion of Judah, the large replica of an Axumite stele, the monument of the Holy Trinity star and any other representations of the Ethiopian monarchy. The purpose of the removal of these monuments was to obliterate the memories of Ethiopian history and independence

A grid plan was super imposed on the organic form of the city. The main artery that connected the rail way station with Arada was intended to be the administrative center, and this plan clearly showed the intention of the Fascist government to make Addis Ababa the symbol of its civilizing mission. The introduction of zones and the creation of a grid layout were completely different from the concept of the Sefers. In the residential zones the indigenous population has to settle according to their ethnic origin and religion in areas of designated for them

The Italian master plan, which was based on the fascist leadership's ideal, tried to use urban planning as a means of showing Italian pressure and domination. It also

uses architecture and planning as one of its main acts of modernizing traditional nation. Segregation between Italian and indigenous quarters was one of its main features.

. Due to the current free market oriented economic policy of the Ethiopian government, there are so many changes in the physical and economical features of the country through modernization approach. The focus being on the private sector as the engine of the economic development strategy, there are large scale private developments in urban centers of Ethiopia. Most of the projects are profit oriented and are aimed to meet the needs of the individual owners and affected the physical layout of cities, the location and the development pattern of housing, commerce, recreational place, industries and the pattern of human interaction. Complex forms of cross-border activities increasingly characterized the international system includes change in market and culture.

Despite its long history of urbanization, Ethiopia is one of the least urbanized countries in the world today. However, Ethiopia is urbanizing fast, at a rate of 5 percent per-annum on the average, one of the fastest in the world (Nupl, 2003).

Such high urban growth rates of population dynamics i.e. continuously increased both in numbers and sizes of urban centers without commensurate developments of socio economic sectors make urbanization process unhealthy and this in turn affecting the continuity of urban heritages.

### **3.3.3 Change in building pattern**

With the coming of modern materials one notices the gradual change in the external appearance, finishing and durability of these buildings. The earliest structures were built with on open veranda on the perimeter. After the arrival of the railway in Addis Ababa, the open verandas were gradually covered with a wooden curtain wall, which was predominantly glazed. The curtain wall was divided in two small glass panes, an influence of American and oriental styles.

Many modern environments are "socially bad". Modern high rise and low rise housing have in common that they innovate fundamentally in spatial organization, and both produce, in common it seems, lifeless and deserted environments.

In the oval and circular houses of the nobility, imported corrugated iron sheets were replacing the traditional thatch/ the ceilings of most traditional houses of the nobility were decorated with intricate weavings made of skin, ropes and straw. The ceilings is displayed the skill of traditional craftsmen. Ceilings made with the same technique can be found also in churches and other important buildings. Their appearance improves with times as the smoke coming from domestic activities gives them a special glow and patina.

With the intervention of Asian and European builders imported materials and building techniques were introduced to accelerate the architectural development. High rates of economic and population growth make large scale redevelopment unavoidable, particularly in the inner city center where historical and traditional settlements and buildings found. The devastation of so many buildings, relocation of people from original living place, and segregation of homogenous districts were the resulted Consequences of the practice.

The modernization of urban Buildings in terms of pattern and meaning does not necessitate “westernization “of the built environment. A copy of the built environment from elsewhere will never be as good as the original. This resulted in replacement of local historic and cultural values by another foreign development pattern.

Design professionals today are often part of the problem this trend strengthens by the following Reviewed literature.

“We carry our “bag of tricks “around the world and bring them out where we land. This floating professional culture has only the most super vision conception of particular place. Root less; it is more susceptible to changes in professional fashion and theory than to local events.” Legates and stout (2003).

In general the traditional way of development pattern of buildings in terms of local material use and form and meaning are replaced by another modern glazed curtain wall and with an influence of foreign oriental styles.

### **3.3.4 Road networks**

Streets in one way or another reflect the local interests and thus their forms and patterns have been shaped by the respective neighborhoods, in as much as that there are some forms of socio spatial persistent suggesting particular morphological settings.

Following the expansion of the capital city, road construction was intensified at the beginning of the 20<sup>th</sup> century.

The opening of the Djibouti Addis Ababa contributed to the import export trade by facilitating the transport of heavier goods such as cars and machineries. In addition to this, after the arrival of the railway and other paved roads extended from the ports to different parts of Ethiopia, the traditional and cultural way of physical development patterns were gradually covered and dominated by the grid iron street pattern and major traffic roots for car without considering the pedestrians movements and social values. With the introduction of colonial power ease of movements was a prime importance to the occupying forces, and they immediately set about improving and constructing roads in Addiss Ababa and to regional capitals. A grid plan was super imposed on the organic form of the cities in Ethiopia.

## **IV. Case studies**

### **4.1 introduction: The urban heritages of Mekelle**

Within about seven centuries of age, Mekelle has developed a lot of historic and cultural traits. Remarkably since 1870s, when Emperor Yohannes chose Mekelle to serve the capital city of his government, the city hosted great events in its history. Based on the primary and secondary data gathered the following Neighborhoods/seferes/, and buildings are sited as those with high historic and cultural importance in the city's life time.

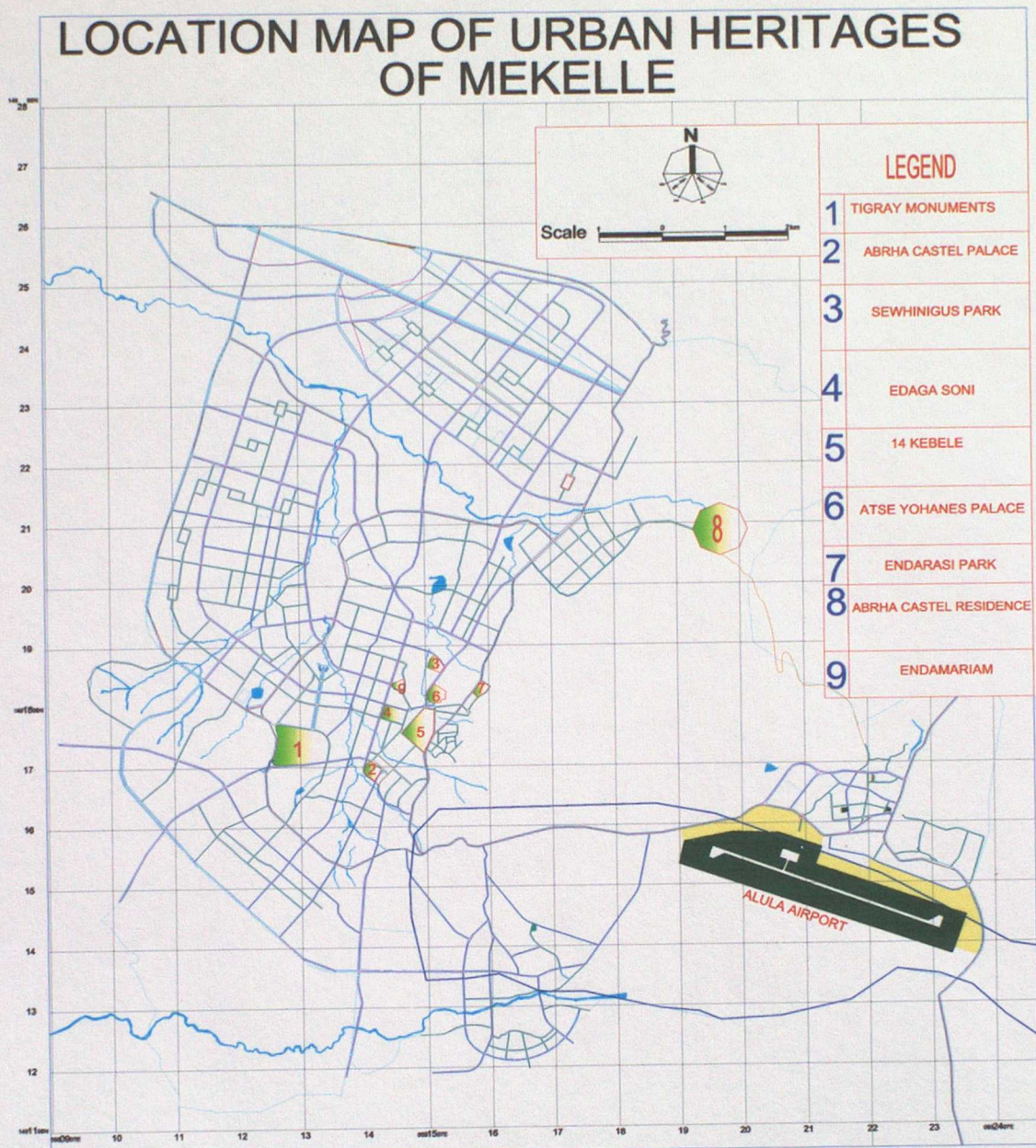


Fig.9- Location map of urban heritages of Mekelle

### 1. Mai-leham and the surrounding area

This area is believed to be founded by the original villagers in the 13<sup>th</sup>-14<sup>th</sup> century. The reasons could be the availability of rich farmlands many sources of spring water (rivers), availability of forest for fire wood and other purposes. These areas began to develop during Atse Yohannes's time. The Emperor chose the area as the seat of his government and built his graceful palace, still intact, in 1870's. The palace now serves as a museum and its whole compound area is protected or fenced with finely dressed stone masonry of an average height of 2 meter.



Fig.10: Palace compound

## 2. Endagaber and Sewhi nigus areas

These areas were developed by Raesi Seyoum to strengthen the palace as his seat. At that time the area was called the Serabet; which was developed to be a home for the servants and their relatives in the palace. The Raesi developed Sewhi-Nigus as his recreational and festive area. The area now serves as play field and green open space for the community. In addition, it serves as annual festive area for Timket (Epiphany)



Fig.11: Gabir Church



Fig.12- Sewhi Nigus Open space

### **3. Endamariam and the surrounding area**

It is founded by Raesi Gugussa Araya in the 1921-1933; the site has good scenery to the present city center open market. The Raesi chose a good landscape to establish his church or Baeta Mariam. There are still Hidmo houses, which demonstrate the tradition settlement types. The famous old open market, (Edaga soney/Kedamay weyane/which is still surrounded by unique arched buildings locally named Deffeo is found there. It is here in the open air market that the British Royal Air force carried out air raids in support of Emperor Haileselassie's bid to crush the peasant uprising known as the First Woyane in the late 1940s. The Deffeo houses were constructed to commemorate the Kedamay Woyane more than 270 martyrs who were brutally killed during the plane attack in 1940. The open market displays a wide range of local products, from fresh food to leather products and cereal products. Currently the modern urban standard shopping complex is being constructed in the traditional and historically known open market center.

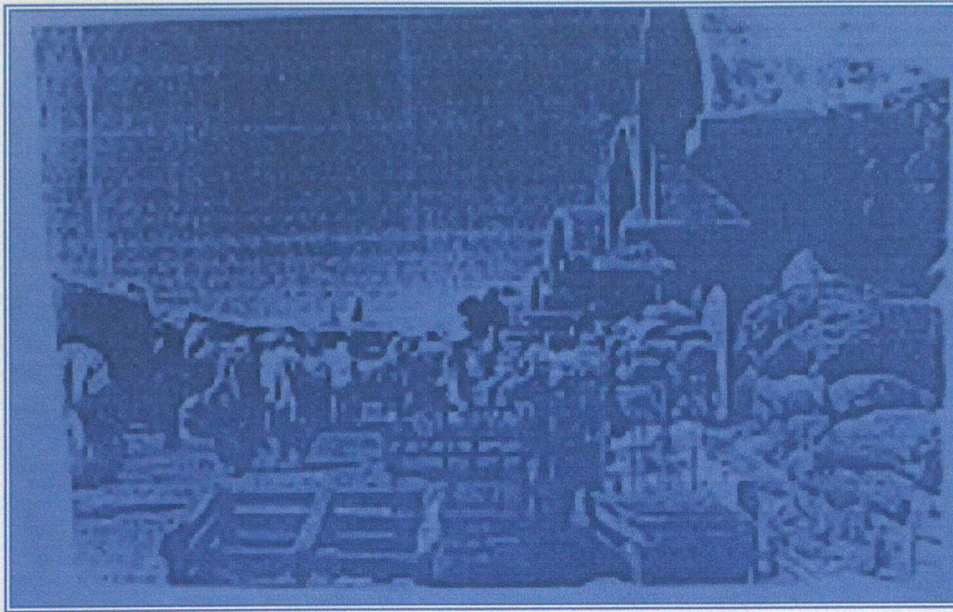


Fig.13-The Open air Market



Fig.14-Mariam church

#### 4. Enda Dejat Abraha and surroundings

This area was founded and developed by Dejatch Abraha Araya who wanted to establish his own Seffer. He built Abreha Castle, which has very similar architectural design with Emperor Yohanne's palace, in 1890. At present the castle is a two star hotel, commands a magnificent view of Mekelle town and its outskirts.



Fig.15: Abraha Castle

#### 5. The feleg daero

Feleg daero is a neighborhood located to the north east; at the escarpment that walls Mekelle. The locality has staged two historic moments. The first, set on the foot side of the mountain, is an abandoned church and the second one is the Dejatch Abreha Palace located on a raised place.

The palace/Castel is standing well since 19<sup>th</sup> century and it is about 120 years old. It's architectural design and construction materials and method of constriction

reflects the regions unique traditional and cultural way of life. It is a traditional two storied house with its upstairs, with a salon, opening towards east to form a balcony. The apartment has three pillars that shoulder the roof. The ceiling, like its counter, is made up of a series of paired beams running north-south against chained and flattened woods.



Fig. 16 Dejach Abraha palace

#### **6. Edaga bierai and Baloni seffer**

This area also called Ferengi Seffer for the reason that the Italians were settled there in the late 1930s was strengthened by the Italian aggressors in the 1936-1941 periods. The area was preferred as a site for their residential area. It was also near to the Endayesus fortifications, where the Italian cemeteries and the battle fields are found.



Fig. 17 the Italian Cemeteries

## 7. The selected case studies

At its early development stage, the economic base of the city was purely agriculture, but at present it is a center of strong business activity, light and heavy industries and service, higher public and private institutional economy dominated situation is being observed. Based on the 2007 Ethiopian housing and population census, Mekelle had 215548 populations in 2007. As a result modern buildings and open spaces are developed in a different and without responding to the former historical and traditional development patterns.

Some of the major developments are; modern multi-purpose shopping complex, Ring road, and other Asphalted roads, Apartments, Administrative buildings, recreational areas, condominium housing, four star hotels, different institutions. Similarly, the modern planning and designing principles have served as guide lines on each public and private physical development projects and on the overall city planning and design.

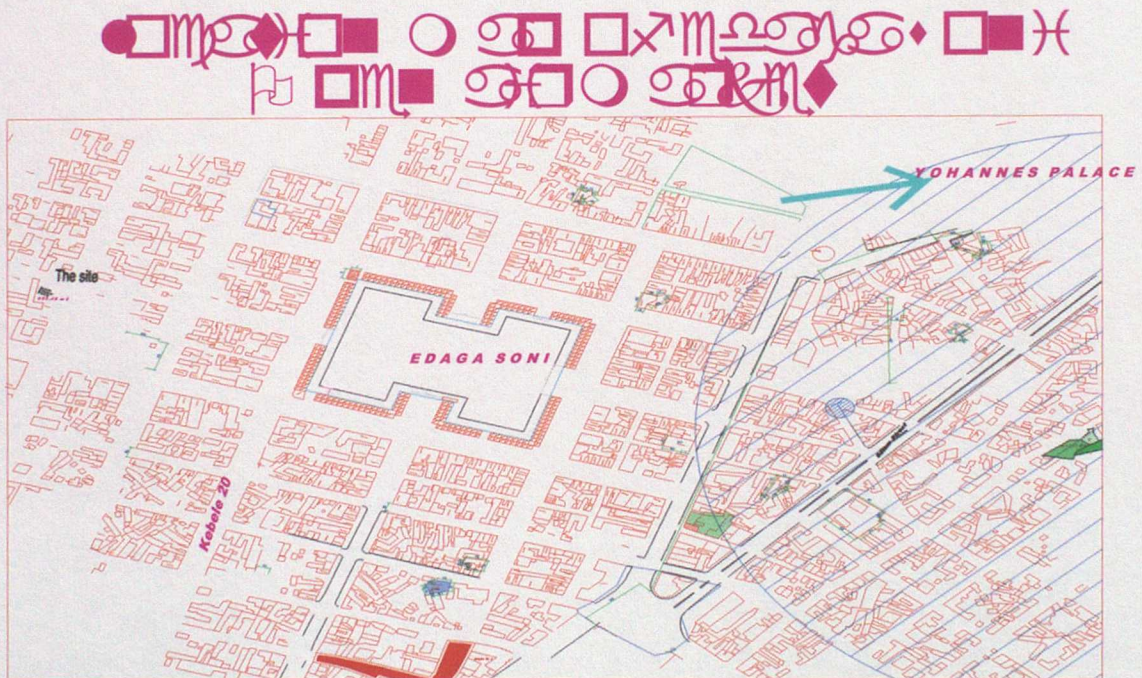
By using the morphological elements of land use pattern, building pattern and road networks of the city will be analyzed in the selected three case studies, Edaga soni or Edaga Kedamy Weyane open market place, the Kebelle 14 traditional Neighborhood and Endraesi recreational place one by one.

This chapter will present study of the selected cases. The case studies are generally presented under three topics: Historical background, intervention (modernization) and current physical and socio economic conditions.

## 4.2. Case study I- Edaga Soney open air market

### 4.2.1. Location

Edaga soney open air market or Edaga Kedamay Woyane is the famous old Monday market. It is located at the center of the city. Its area is about 2.52 Ha. And are the biggest and the oldest open market in Mekelle.



### 4.2.2 Historical background

It has cultural /traditional and historical significances. Traditionally it displays a wide range of local food leather products for transaction among urban and rural and among individuals of the society. It was the primary transfer point for the salt bar trade. The salt bar locally called Amole had been the standard currency of the

region until the late 19<sup>th</sup> century. The salt was mined from Denkil depression and transported by camel, mule and donkey caravans. As open public market place, it was an edifice where vivid human contact and interaction takes place. In addition, it was physically and visually permeable.

Similarly the old open market has historic significance. After 1940s, it was surrounded by unique arched buildings locally named Deffeo houses. They represent for the Kedamay Woyane Martyrs who were killed during plane attack in 1940s. The attack was carried out by British Royal air force in support of Emperor Haileselassie's bid to crash the peasant uprising known as the first Woyane. Accordingly, the historic significance of the market area is still represented by the existing Deffeo houses.

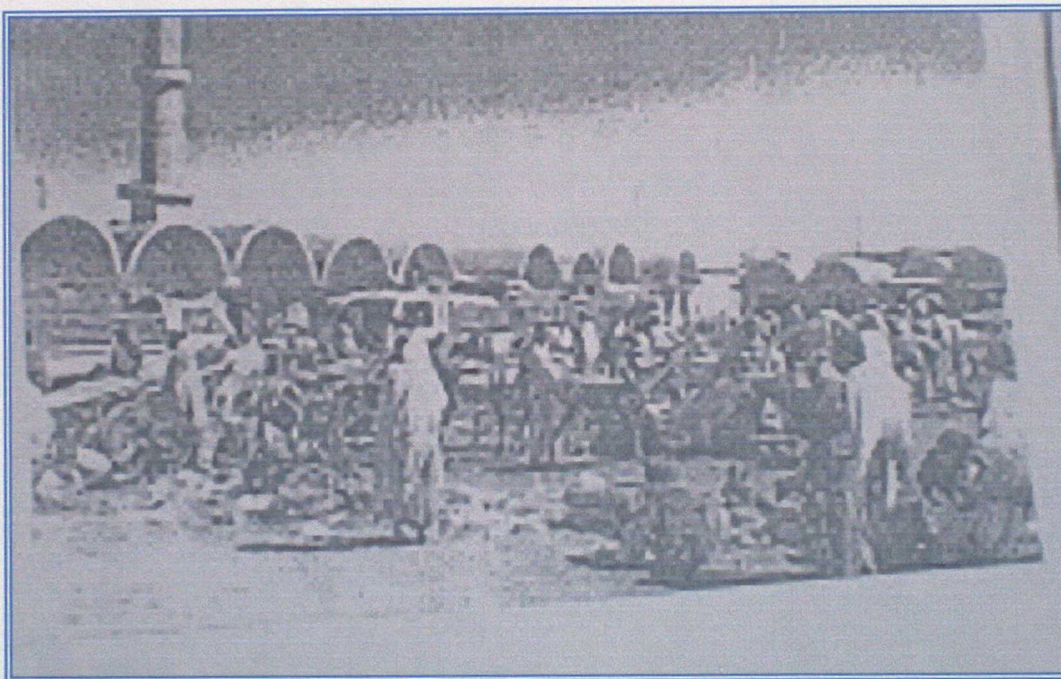


Fig.19- the Old Open Market with arched shops



Fig.20-The Salt bar by Camel

#### 4.2.3 Modern intervention

You can dream, create, design and build the most wonderful place in the world but it requires people to make the dream a reality”

(Walt Disney)

Currently a modern shopping complex is being constructed in the traditional and historically known open market center. Since 2003, the Mekelle chamber of commerce and Sectoral Association (MCCSA) has started to build modern huge, multifunctional shopping complex.

The total enterprises especially the micro, small and medium enterprises (SME) served in the future shopping complex have about 700 members. The investment cost of the project to complete is estimated to be 120 million Birr, equivalent to USD 13.5 million. When it becomes operational it will create 3,200 permanent jobs. At the time of field observation, more than 80% of the total project work was completed.



Fig.21-The Shopping complex under construction bounded by Deffeo houses

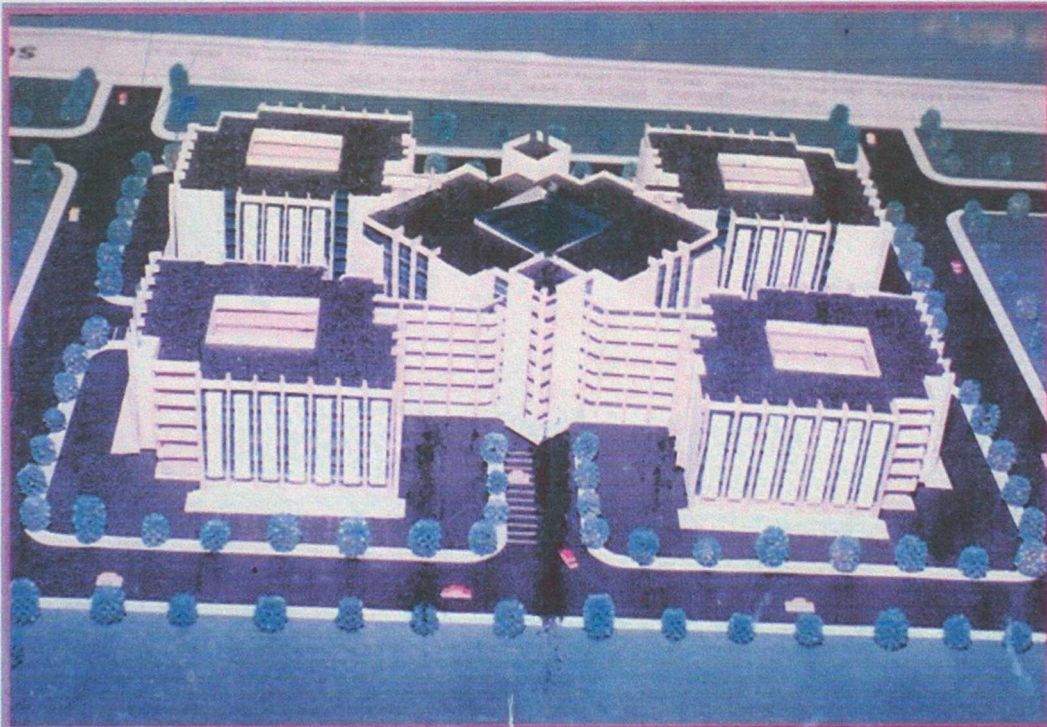


Fig.22- The 3D Drawing of the complex bounded by parking and Asphalted road

### **The need to develop the market area**

As urban design study final report compiled by Mekelle zone Industry, Trade and transport office, (2001), the following points are clearly stated to show the need of the huge project on the heritage open air market.

- The vaulted shopping units (12m<sup>2</sup> each; there are 270 of them) at Edaga Kedamay Woyane were considered as too rigid and insufficient for important trade/ service categories
- To accommodate certain functions that require wider floor space than a single vaulted shopping space.
- To introduced new shopping blocks within the market area to accommodate wide variety of trade categories.
- To optimize underutilized/ wasted spaces especially corners of the vaulted blocks at Edaga Kedamay Woyane.
- It is also very likely that Mekelle's population will continue to grow resulting in an increase demand for goods and services.
- Mekelle's proximity in a region bordered by Sudan and Eritrea makes it a potential foreign trade center.
- From public health point of view, the unhygienic situation in which most food stuff are being sold and stored in the existing open air market areas calls for an urgent intervention.
- Market management and security issues (against fire, theft, etc) also call for an improvement in Mekelle's market area.
- The conflict between the informal traders and legitimate tax-paying shop-owners in market areas can't be resolved without an orderly market arrangement.

The above guide lines that are believed to transform the existed open market to shopping complex are mainly focused on the new design without responding to the existing heritage buildings and without reflecting the history and tradition of the society on the new building as legible and easily understandable to the people. The document, as stated above, criticized the old buildings and created the gap not to conserve them. As a result the shopping complex is being built without

incorporating the meaningful heritage values. In addition to this, the chamber of commerce raises different questions to demolish the buildings on the ground level.

1. They request to demolish the old buildings in order to provide off street parking space on ground level. It is a critical problem because the complex has only one parking space in basement floor to accommodate cars of all members of the complex and all visitors.
2. No public toilet is provided to the visitors in the new complex. Therefore they need additional free space in the front foyer of the main building.
3. They also raised some concerns related to the visual quality of the heritage buildings in front of the new complex. They need to avoid the obstructed position of the arched heritage buildings.

The new shopping complex does not respond to the existing historical morphology by harmonizing with it due to lack of positive design stance.

In general, due to the conflicting interests, the current existing situation of the vaulted shops is at risk.

#### **4.2.4 Current physical and socio-economic conditions**

Initially, the project is aimed at fulfilling the needs already identified above are all focused to financial / economic benefits of the project without much consideration to the historic and cultural values of the site.

In this project critical physical and architectural changes have taken place. These changes led to the replacement of traditional and cultural values and styles with another modern style and custom. Before the modern shopping complex, the place was serving as open air with sense of locality and sense of place.

The form of the open market and the vaulted shops represents the legacy of preceding generations, aspirations, uses and limitations. As each successive wave of society has interpreted and contributed to this collective inheritance, attitudes towards such historic buildings and open market have not been characterized by any consistency.

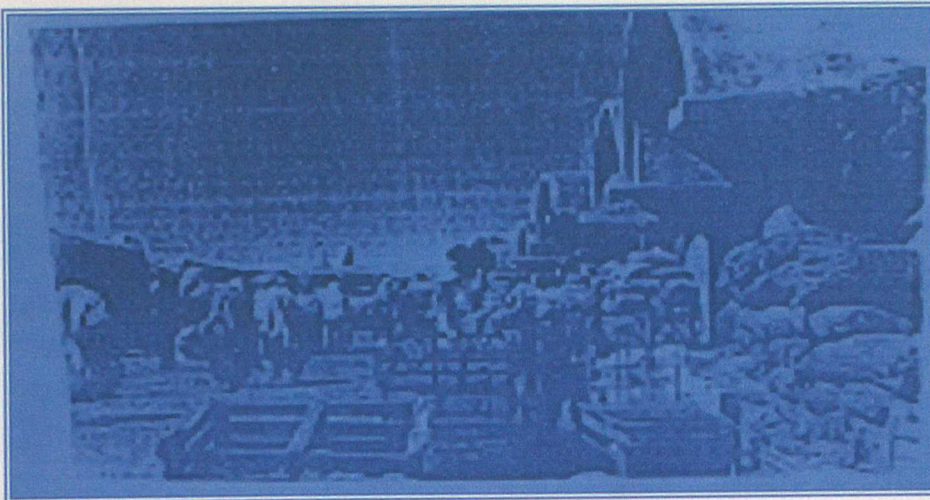


Fig.26- the Old Open Market with arched shops

The former open air market area was surrounded by unique arched buildings locally named Deffeo houses, they are not only heaps of concrete but they have represented to historic value of the society. More than 270 martyrs who were passed during the plane attack during the first revolutionary movement were represented by the open market with physical entity surrounding on it. However, at this time based on the data gathered from different sectors and the existing condition of the project, the meaningful houses are at risk to disappear.

The historic and cultural signs, symbols and the spiritual values that inspire the community were reflected on the vaulted buildings and the open air market are totally covered by new concrete structure to the height of G+4.

The first cause is that, the modern complex shopping is constructing without unifying character with the arched houses. The design output have created shopping complex which is remarkably similar with other new buildings in the city. The shopping complex is not as monumentally with figurative scale and composition in relation to the former 270 attached and aligned historic buildings on the ground level. We can understand, the new design was made by itself on free space without considering the existing historic houses. They are isolated from the new building by road in between and the different physical characters (shape, size, color) seems as two different physical forms in one place with different historic back ground.



Fig. 24- Shows un integrated pattern of development with the existing

The identified main factors for the initiation and the need to develop the shopping complex are mainly aimed to use the scarce land resource by constructing high rise shopping complex buildings to generate maximum economic benefits without considering much about the continuity of the valuable historic and traditional

heritage values. The evident observed from the three dimensional drawing of the soft copies below found from office of chamber of commerce is surrounded by asphalted road not by the vaulted buildings.

Another historic value that was not exploited as a potential is the historic relationship of this case study with the contemporary historic monument called Hawlty Semaetate found in Adihaki area. They have common historic back ground. They signify the first and second revolutionary movement of the Tigray people. Their strategic location in the city allows one to get visual accessibility from one to another. But the later shopping complex design and construction did not exploit and consider this opportunity to make an additional interesting hall mark of the city.

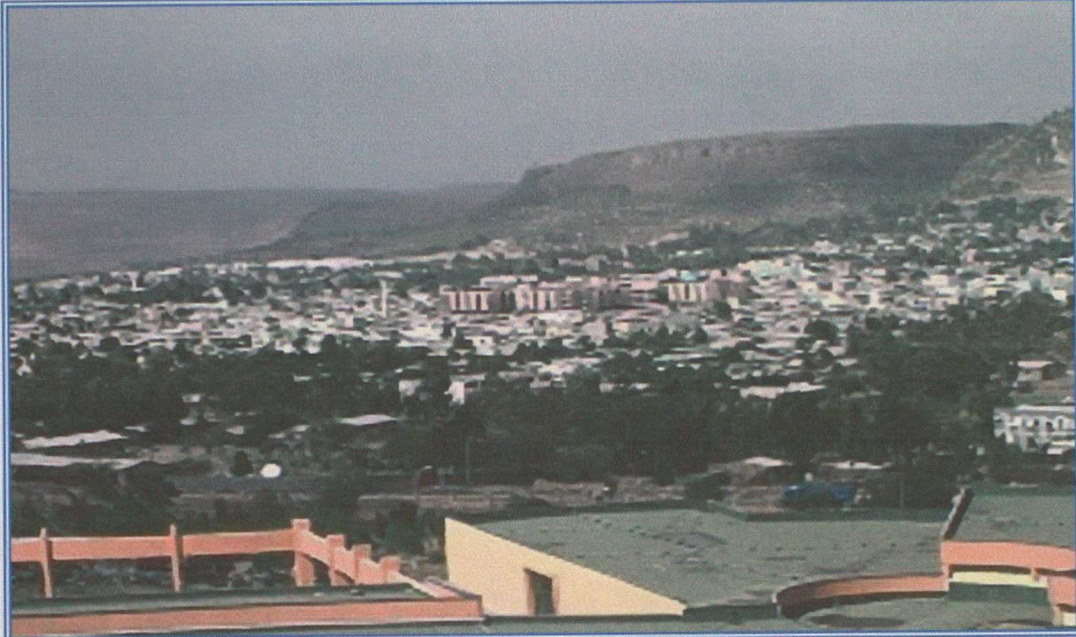
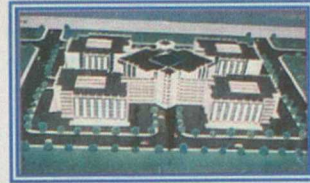


Fig.25- Shows the spatial and historical relationships of the two important urban heritages

It is evident that many tourists flock to historical cities of the world in order to visit their architectural designs which contain the past generations culture, tradition and history. This has enormously helped the cities earn high income from the sector, there by contributing to the development of the economy of the cities and the countries in general.

Those heritage buildings symbolize culture history and the psychological makeup of the society, not to mention the huge income that could be generated from them. The existing heritage buildings and open market can improve the sense of well being. They can also open people's minds and lift their vision to a greater sense of community and civic spirit and social integration, which in turn can potentially attract economic activities that produce wealth and reduce poverty.

In this case study, it is realized that, in order to compute or to attract only an immediate economic benefit by increasing the use of vertical space, it undermined the cultural and historic heritage values that could have brought about much greater economic assets over time, and this missed opportunity seems to have been sadly gone irrecoverably.

### 4.3. Case study two: kebele 14

#### 4.3.1 Location

The site has located at the central part of the city and good scenery to the present city center.

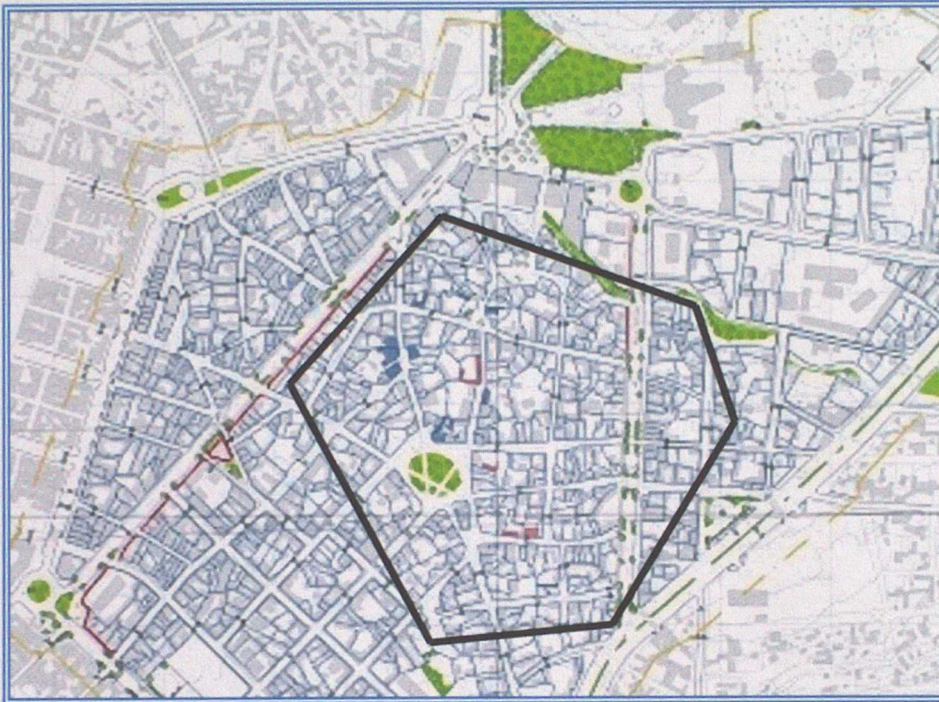


Fig26-Kebelle 14: from local development Plan

#### 4.3.2 Historical background

Space and society are clearly related: It is difficult to conserve of space without social content and, equally, to conceive of society without a spatial component.

The physical form of a community is one of the highest cultural expressions of the society, and as such it translates social structure, life style, and values in to buildings and spaces. The buildings and open spaces development patterns reflect the inhabitant's customary living pattern. Many of the social habits and ways of life that give the society its own identity are represented in the physical pattern of the time.

The Kebele is characterized by organic settlement structure. As described before in the background, kebele 14 is characterized by organic old settlement structures. The area entertains people who reside traditional houses called Hidmos. Most of the houses are compacted and tightly organized with traditional layout.

The historic and traditional atmosphere that exists in kebele 14 is a sum of many characteristics that they create particular patterns. These are

1. Use of traditional materials:- Stone, Wood, Soil, etc
2. Presence of the same typology of buildings
3. Proportion between buildings height and road width
4. Human measure of places
5. Organic settlement pattern
6. Narrow street

The Neighborhood has some intrinsic values and reflects the sense of cultural belongingness and sense of place. It is assigned as spiritual values that are not overtly connected to the economic dimensions. We also need to understand fully the local architectural typology related to the uses and functions of the particular buildings.

The communal nature of the streets found in the kebele 14 has various virtues. There are some forms of socio spatial persistence suggesting particular morphological settings. In general, it constitutes the major mode of socialized open space, displaying the richness and diversity of the urban life and culture of the city.



Fig-27.

The streets in kebele 14 are narrow, which prohibit automobile traffic yet promote pedestrian friendly walking. This setting facilitates streets as a socialized and communal open space in the city.



Fig.28- Types of houses and streets of the kebele

It is the fact of space that creates the special relation between function and social meaning in buildings. The ordering of space in buildings is really about the ordering of relations between people. They are social objects through their very form as objects. Streets are essentially socialized open spaces in the old traditional neighborhood which more represent the richness of the urban life and culture. The noticeable traditional spirit of the Kebele Street is a human scale place for local people to live, survive, reside, rest or play around in the traditional

types of house and or settlement is convenient place for human activities; all wholly reflect a humanizing sprit of folk architecture.

#### 4.3.3 Modern intervention

A modern growth was witnessed in Mekelle during the Italian five years occupation. The following occupation period lasted until 1941 and many buildings and streets as well as one grid-based city extension with a market place, date from that period. The organic irregularly grown street pattern which used to follow topographic characteristics was given up. Instead “modern grid Structures were introduced and applied in the following years in the district north and south of the city center and serve as reference to the current time in the organic traditional settlement.



Fig. 29-Development plan for Mekelle, 1937.Modern Grid type plan

The other remarkable changes also during the period of Raese Mengesha Seyoum, industry and business activities were dominant economic bases of the city. Many large and small scale factories were established and functioning. As a result the livelihood of the residents and the city itself were changed and continued the modernization trend to the present time.

According to local historian, during the Italian time bars and hotels, cinema halls, administrative buildings and the road linking Asmera with Mekelle and other parts of Ethiopia were opened. The decisions made during the design and construction of new buildings such as, the choice of construction materials, facade treatments and their orientation are different from the heritage buildings.

As shown in the figure below, there are private owner new buildings constructed without having positive relationship to existing morphology, these are without harmonizing with it, adapting to it and are simply built here and there. The unplanned demolition of houses came about as a result of land speculation. Certain private land lords with property in the area have had traditional buildings demolished in order to use their sites for new buildings which bring a higher return on capital.



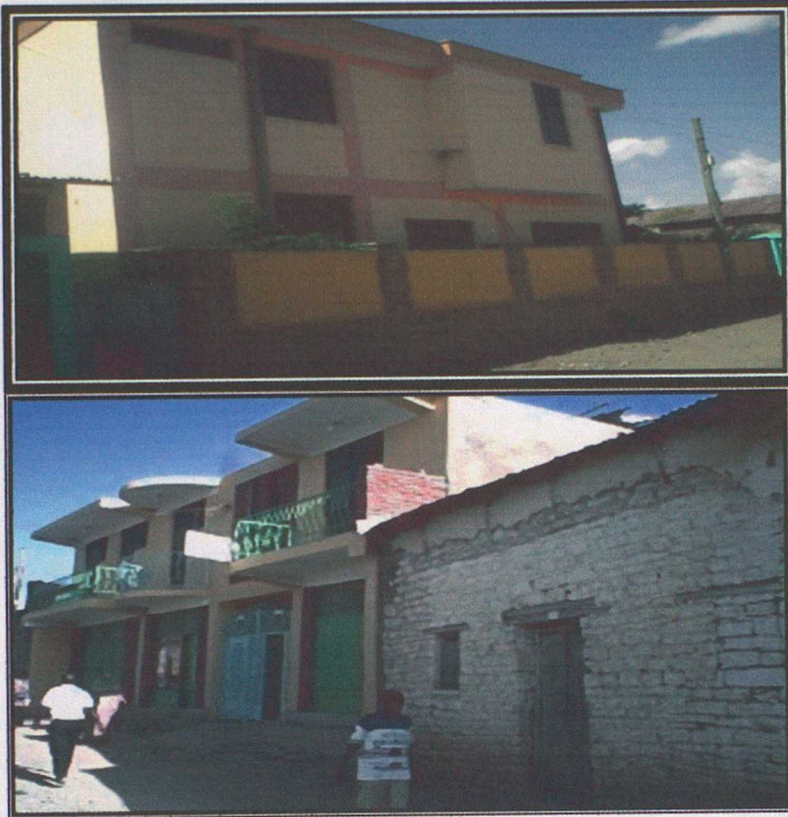


Fig.30- New houses redeveloped on the traditional settlement

The master plan of the city also has its own impact on the existence of the whole area as traditional settlement. The haphazard and arbitrary way of change and redevelopment practice with in the area is the result of the approach of the master plan. It focuses on modern physical development without detailed mechanism to conserve the unique characteristics of the heritage settlement to the future generation.

After all, the municipality has proposed to demolish and to replace the existing traditional buildings by new development. As shown in the figure below, all traditional buildings have been marked to be demolished to optimize the land value without considering the heritage value of the buildings and the organic settlement pattern.



Fig.31- Heritage buildings proposed to demolished

#### **4.2.4 Current physical and socio economic conditions**

“A town without old buildings is like a man without memory”

(Kostof spiro, 1991)

Currently, due to the immediate revenue that could be generated by redeveloping the site with new structure that could accommodate the new function demolishing is the prime objective of the municipality of Mekelle. Historic, traditional and or cultural conservation has moved from being an end in itself -save old buildings in order to become vehicle for achieving broader ends: Job creation, cultural stewardship, small business incubation, tourism and others. But at present the situation for the old buildings is not in proper way. Rather the modernization process through constructions of new buildings is the main theme of the public and private sector to satisfy the present demand. There is a question that “Why do tourists visit our country?” The answer is definitely to see our unique culture, tradition and history which represented by the physical features and not to visit our modern buildings and modern living characters. Therefore, if we ignore our urban heritage settlements and buildings, we lose a great deal of income in terms of hard currency.

The additional critical problem in the site is the deterioration of buildings and the settlement in general due to lack of attention and ineffective conservation mechanisms. Based on the gathered data the municipality assumed that, as it was conserved, but it is simply left over space. Because there are not any measures taken to protect the heritage from deteriorations.

In general the built environment that expresses the identity of the society, city's diversity and individuality is going to run down

Special cares have not been dedicated to the design of the contemporary buildings inside the kebele so that they could not remind past efforts. Historical parts of the city have not been restored and enhanced in concisely according to their characteristics. The Hidmo house, beautiful traditional stone masonry and the flat lawn grass roof are dominated by the modern developments.

#### 4.4. Case study three: Enda Raesi Recreational area

“Body is home of the individual human but city is home of the communal human”.

(Stephan Cutler, 1982)

##### 4.4.1 Location

The Endaraessi recreational place is also situated at the foot of the eastern escarpment overlooking the town. It is located on the east direction of the city near Atse Yohannes palace and covered by giant old indigenous trees, and is reminder of the wide forest cover that once graced the town.

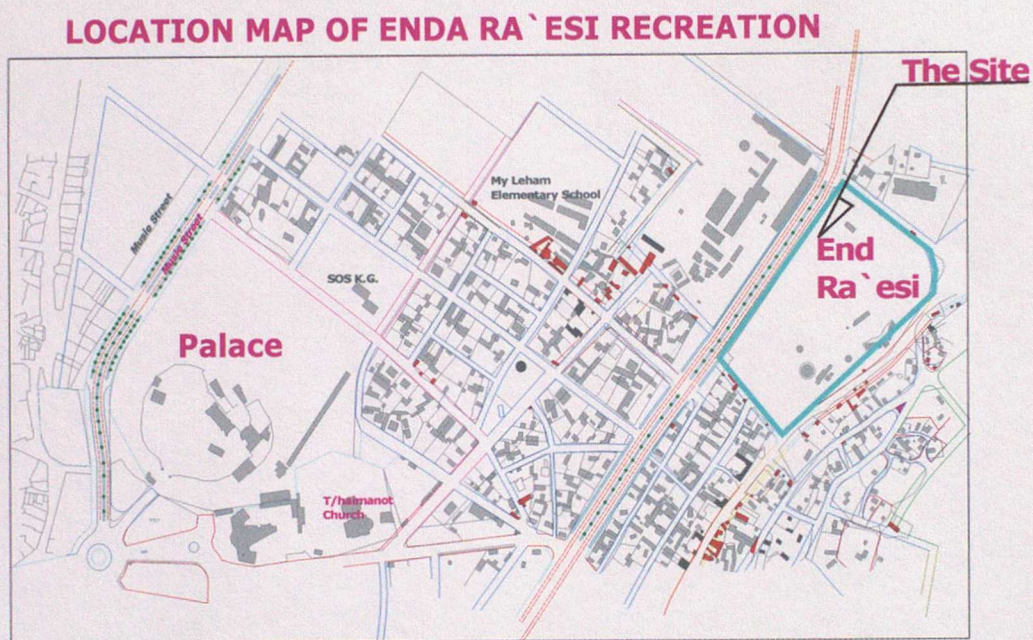


Fig 32- Location map

##### 4.4.2 Historical background of the open spaces

Initially it was incepted to be recreational and festive area for the royal family and the people. Currently, it serves as recreational area for the people.

The public realms are the most important parts of Mekele city. It is where huge crowd of people convene and various interactions take place. They are all the parts of the urban fabric to which the people have physical and visual access without any restriction. It is covered by giant old indigenous trees, and is a reminder of the wide forest area that once graced the town. In addition to the indigenous trees there are different types of traditional houses inside the compound.



Fig.37- the Indigenous trees and the circular traditional house

#### **4.4.3 MODERN INTERVENTION**

In 1998 E.C, the recreational place was given to an investor by lease to redevelop the area with facilities and services in a way of modern approaches. The proposed design to redevelop the site was already displayed to the public in 3D model as shown below. It was designed with plenty of functional facilities: Restaurant, swimming pool, Bedrooms, paved walkway etc with high built able area. As consequence, it will be affected the indigenous trees and the natural topography.



**Fig- 34 proposed development**



In addition to this the constructed new ring road has affected some parts of the original recreational area and it does not respond to it. As indicated in the photograph below, the original main entrance has now become almost inaccessible.

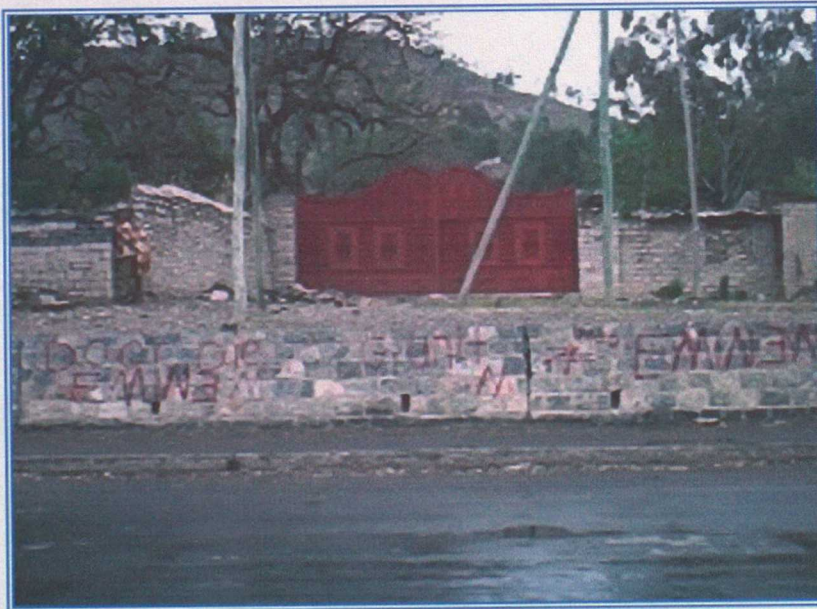


Fig.36- Main gate of the recreational place



Fig.36- Shows the difficulty in accessibility to the main gate

#### 4.4.4 Current physical and socio- economic conditions

“Man must constantly destroy himself in order to construct himself all over again”

(Theovan Doesburg)

The same as the previous case studies, the public realm also had declined. There has been a corresponding flourishing of the private and public development with an emphasis on privacy, and private consumption. In this place, private developers are following this appalling example and getting their developments to make exclusive profit.

At the time of field observation, the recreational area was closed and out of service. This is due to new plan launched to redevelop the site to modern functions and service rate as proposed by a private investor.

Short term expediency can be very harmful to the urban environment. The decision made during the designing and construction stage of the project did not consider the area. The Deepening and widening of environmental crisis presents a threat to local, regional and national security and even to the survival of people.

Environmental problems can be seen, in fact in the current trend of modern spatial development in the site where no attention is given to the heritage.

In Mekelle, there is a crucial shortage of open spaces and green areas within the newly developed areas or new settlement neighborhoods. Most of the greenery and open spaces are found in the urban heritage areas and surrounding them. They serve as recreational use, religious festive, play fields and are used as lungs of the settlements with in the city. In general, due to the pressure of modernization, the values of urban heritage open spaces are degraded. This was resulted through massive development of public and private buildings, Gymnasium, Ring road, inside and in surrounding. The probity is to provide maximum economic exploitation of the land, and best accessibility to car traffic facilities.

## **V. Findings, Conclusion and Recommendations**

### **5.1 Findings**

The main argument of this research is that the physical form of community is one of the highest cultural expressions of the society, and as such it translates social structure, life styles and values on to buildings and spaces in which the community lives and evolves. People are expressing themselves in the building they live in and the neighborhoods they frequent. Therefore these structures must not be destroyed arbitrarily

Based on this the main question of the research was how the approach of spatial modernization of the city was impacting on heritage buildings and spaces of the city of Mekelle. Study of the three cases indicates that the heritages are impacted on in three majored ways destruction, neglect and ignorance. These are discussed more detail below.

#### **5.1.1 Physical destruction**

At present the urban transformation and change in Mekelle is very rapid and the products of modernization are however putting pressure on the land use, building pattern and road networks which have heritages values. The social, economic and physical characteristics of the town's heritages are undergoing dramatic change.

One of the trends resulting from this change is the replacement of traditional architectural and physical development style with a modern style. The transition from tradition to modern style is occurring rapidly and is taking place in terms of replacement rather than adaptation, regardless of the local traditional pattern. The continuity of the local architecture established in harmony with physical and cultural requirements of the people, is diminishing. Most of the modern buildings around the urban heritage buildings in Mekelle are not respond to them. They are designed and constructed without reflecting any character of the local history and cultural of the society. And this reduced the symbols of social and historical to another parade of fashion. Accordingly, there are many modern developments of public and private buildings, shopping complexes, Ring road, and so on which undoubtedly resulted from considerable commercial vitality and unique lives of

accessibility for motor vehicles without an integrated way to the former urban heritage buildings and open space.

It appears there is eagerness to build above new environment in the name of modernization. Unhesitatingly, this trend of development in the city is destroying the buildings and open space with historic and cultural values which are delight to future generations.

### **5.1.2. Neglecting urban heritage**

The study also indicates that while urban heritage in high urban development pressure area are being threatened with destruction others which are located in low development pressure area are left to deteriorate. Deterioration obviously allows authorities to label the area as slums and eventually to bulldoze them. That means neglect is basically preparation for destruction

### **5.1.3 Ignorance of urban heritage**

A third trend that has been revealed by case studies II and III is ignoring the architecture and cultural value of the heritage when interesting new development within their context. The design of all new buildings built adjacent to the traditional houses in kebele 14 is conceived by ignoring the stone architecture of the old houses that has become the character of the kebele and a unique quality in the city. In a simpler way the design of the new developments introduced in the historical Endarasi Park are conceived by ignoring the history of of the park and even its natural elements like the old trees and its topography.

### **5.1.4 Consequences of the trends**

The study also indicates that these major trends are leading to socio-economic and environmental consequences.

#### **5.1.4.1 Socio economic consequences**

The social problem arising from modern developments is that these developments of buildings, roads, and commercial land uses in the area of urban heritages do not follow the inhabitant's custom and living pattern. As a result many of the social habits and ways of life that give the society its own identity are beginning to disappear. The local characteristics of the heritage buildings and

open spaces, have been offering each generation the possibility to practice its own. But modern developments are denying the spatial context to this way of life, culture and way of life. Each gave society the continuity of social integration, has disagreed with the modern developments. The cultural problem is evident in that the local architectural heritage has been destroyed and replaced by the modern style, each to standing without local social and cultural meanings.

The intrinsic values and the history of the community are exposed in the whole of the physical signs, symbols. That's why, different types of monuments and buildings are constructed in Mekelle in different periods of time to represent historic events and culture of the society. However, the values of the historic buildings have been diminished because of modern developments. For example, the arched buildings in the market place and the traditional houses in kebele 14 represent living embodiments of the collective memory of vital historic events that help in symbolizing a sense of co- belonging a deep unity between people and physical environment and between individuals, families and larger communities are replaced rather than conserved and integrated with modern development.

Due to the current problems in the urban heritages conservation, the direct and indirect economic value of the heritage buildings and open spaces are destroyed. The research has shown that the major and obvious economic beneficiary of heritage is tourism. Tourism is nowadays multimillion dollar industry in the world. The destruction or replacement of the original heritages resulted to suffer a dollar lost. Moreover, the indirect economic values of high quality heritage environment can improve the sense of well being and lift greater sense of community and civic spirit. The excellence or beauty of a site is not only an aesthetic element, but contributed to economic development. The natural and manmade heritage beauty helps to increase productivity of all forms of capitals. Thus indirect economic values of the urban heritages are compromised by the improper usage and inappropriate way of modernization. The beauty and other intrinsic value of the natural forests and landscapes of the open spaces that traditional organic settlement patterns and the historic buildings' of the past generation are distorted by the current developments.

#### **5.1.4.2 Spatial (environmental) consequences**

Environmental problems can be seen in the current trend of modernization in Mekelle where no attention is given to spatial urban heritages. Short term expediency has become very harmful to the urban environment. The decision made during the design and construction of a buildings, on the use of resources, the choice of construction materials and the use of energy have an impact, on the building as a whole and the wider environment.

As more buildings are constructed, with no regard given to urban heritage buildings and open spaces, the consequences will eventually lead to an even greater reduction of green areas and natural and traditional character of the urban heritages. Most of the green areas and open spaces in Mekelle are found with in and around the urban heritage areas. The threat posed on these urban heritages, rapidly increasing and threatens the environment problems of not only in the specific case study area but the entire region. Existing buildings, open spaces and the activities that they house are a resource: but they are thrown away lightly. Once buildings and open spaces have gone, they cannot be put back.

#### **5.1.5. Major causes of the problem**

##### **5.1.5.1 Ineffective urban design, planning and regulatory mechanisms**

The study has shown that, to date, there are not well prepared guidelines that enforce urban heritage conservation and guide modernization effects. First and foremost of plans which can lead to integrated development are none existent. The only plan before 2006 has gone out dated with can in half its planning period among other reasons because of failure to respond not only to urban heritage conservation, but also to over all development of the city. The new development plan prepared to serve for 2006-2015 also has not detail directives towards conservation and an integrated development of the modern with old heritages. The urban heritages assessed in this study are all listed in the development plan to be protected. But due to lack of detail urban design and implementation guide lines

and due to neglect the Hidmo houses with their organic structures, the Diffeo houses, the Endaraesi recreational sites, and open spaces are now at risk.

In addition, there is no effective urban design and planning regulations to incorporate the contemporary architecture with the old cultural and historical heritage.

#### **5.1.5.2. Lack of awareness**

The study has shown that the awareness of most of the concerned public authorities on the cultural, historical and economical benefits of the urban heritages especially for the selected case studies has been quite limited. The existing deterioration situation of the urban heritages is the result of this limited awareness. The limited awareness is in all levels of public, private, religious, sectors and individuals in the city.

The data gathered shows that, the lack of awareness concerns not only the importance of the urban heritages but even then location and their historic and cultural significances. Accordingly, there have not been promotional works done concerning the historic and cultural sites. People, however, are not ignorant of the historical and cultural significance of those urban heritages, but due mainly to their limited economic capacity they are forced to destroy that heritage elements. The poor maintenance and unavailability of basic infrastructure in the heritage site is also another indication of lack of awareness. Some of the urban heritages are even abandoned and left over without function.

In general, the public at large and more importantly, the City Administration, Municipality, the Tourism Commission of Tigray, Cultural Association of Tigray, Tigray Works and Urban Development Bureau, the Chamber of Commerce of Mekelle, and the main religious groups did not give sufficient attention to the cultural and historical heritages of the city.

The coordination among different concerned authorities towards the conservation of important urban heritages is very weak. The concerned bodies do not have common understanding and level of awareness and they have not developed means and mechanisms to inform each other when new projects to be constructed with in and around the heritages. For instance, the construction of the huge

shopping complex in the Edaga Soney site was launched by the Municipality without consultation with the offer bodies. This is also the case for developments in the other urban heritage sites. Therefore lack of awareness and coordination is one of the major threats on the urban heritages of Mekelle city.

### **5.1.5.3 An imitative professional stance**

RyPkema (1994), "An imitative strategy for the built form quickly leads a city from being "some place" to any place" And that distance from "any place" to "no place" is short indeed"

What a city can lose when it loses its identity and becomes "no place" a "any place" has been described above. Observation of the type of buildings constructed in Mekelle and even in many cities of Ethiopia including the capital quickly reveals similarity to those in many western cities and cities of the Middle East countries. The fact that these models are preferred by developers also appears to press designers for greater imitating western models. These groups however, fine to understand the basic relationship between society and space that space is expression of the way of life of the people, not vice versa. As Rypkama has emphasized, this imitative trend is a dangerous trend than can quickly rob our cities of their identity

## 5.2 Conclusion

Modernization is closely linked to economic liberalization and has positive effects on growth in terms of infrastructural provision, technological improvement, creation of employment opportunities, and so on. In this 21<sup>st</sup> century, the influence of modernization approach to the developing country is inevitable. To ignore the reality, or to recognize it but not respond, will make many cities the victims rather than the beneficiaries. The most important challenge to be met in the city is the articulation of the globally oriented physical and economic functions of the city with the locally rooted society, culture and history.

Within about seven centuries of age, Mekelle has developed numerous historic, cultural and traditional traits. Remarkably since 1870 when Emperor Yohannes IV chose Mekelle as capital city of his government the city has been developers many built up structures considered as historical and cultural heritages with significant values.

These cultural and historical buildings and places represent living embodiments of the collective memory of vital historic events that help determine a sense of co-belonging, of deep unity between people and nature and between individuals, families and large communities.

Today the study area, Mekelle, is experiencing relatively fast change in economic development, faces high population pressure and is, therefore, obliged to provide basic infrastructure, housing, employment, and other services following the poverty and high population influx to the city. Such crucial problems facing the city have made traditional, historical and cultural heritage buildings and open spaces to be given lesser attention by the public and private sectors.

As a consequence, the transformation and the change to economic development are occurring rapidly and took place in terms of replacement rather than adaptation and integration regardless of the urban heritages.

The major interest of the thesis was to find out the extent to which the spatial modernization process in Mekelle, the capital of the tigray Natonal Regional State is informed with lessons learnt from the modernization of cities in western countries in terms of urban heritage conservation. The findings of the research

however indicate that the spatial modernization process in Mekelle is on a track characterized by repetition the mistakes committed by the modernization of western country cities such as destruction of buildings and spaces which are expression of traditional values, reduction of the public realm and loss of elements of urban, regional and even national identity.

The factors that were responsible for these problems were mainly emphasized as:

1. There is lack of awareness in all levels of public, private and religious sectors. In some cases, concerned authorities do not recognize only the social, economic, and historical importance of the heritages, but also they did not know where there are located/found/. The other point related to the awareness is the minimal attention given to the creation of public awareness concerning the importance of the heritage values.

The most significant change is however, the general loss of sense of ownership which has led to the loss of the sense of attachment of citizens to their surroundings. The effect of this, with its enduring effects of short and hence a tendency not to invest on quality has been more influential on development quality than the policies themselves. Other factors which contributed to the low level of development quality include economic constraints, lack of urban and architectural design, and taste of developers.

2. Apart from the recognition and identification of urban heritage in the development plan (2006-2018), by the tourism Bureau, there are no well organized urban heritage conservation approaches which are based on an integrated development of modern with old. The main focus of the master plan is on the new development that tries to satisfy the demand of free market oriented economic activities with less attention to the heritage values.
3. The capacity of the professionals in the municipality and other concerned sectors is also inadequate to enable them to foresee and implement some of the planning and design guide lines. This might be because of the very limited knowledge acquired by professional planners and architects about

the profession of an integrated development without an imitative strategy for the built form from other places.

Finally, it is mandatory to address the above issues and the major causes of the problem listed in the findings in detail to create localized physical environment and to achieve an integrated development in order to safe guard the continuity of the cultural and historical urban heritage buildings and open spaces.

### **5.3 Recommendations**

“Who controls the past controls the future, which controls the present controls the past”

(Hobson, 2004)

It has been said that towns and cities are, by their very nature, always in a state of flux or change. They are dynamic, rather than static, constructs and the process of design and management must recognize this. We must appreciate, however, that, for most people, change involving the loss of familiar surroundings is very painful- particularly so when it occurs on a large or comprehensive scale. So urban change is inevitably a painful process and those involved in it need to recognize this and do everything practicable to minimize or mitigate its harmful impacts.

The modernization period saw, in many countries, the complete redevelopment of town centers in order to satisfy new social and commercial demands and pressures.

However, the current phase of globalization demands new capabilities and changes in attitudes and preferences towards satisfying human needs while maintaining balance between this fragile environment and human demands. The existing historic buildings and open spaces and the activities that they house are resources and should be conserved to achieve sustainable development.

As it has been discussed in the preceding chapters, presently the need for conservation of the urban heritage buildings and open space of Mekelle are very essential because of their cultural, historical and economical values. To achieve those values and to minimize the impact of modernization on the urban heritages, the following important activities are recommended

### **5.3.1. Create an integrated development**

“We should seek ways to ameliorate the pain of change by the promotion of incremental development. Blood transfusions, rather than organ transplants, are required”

(Francis, 2000)

It is rarely the case that total preservation is completely right and that total redevelopment is completely wrong. But it is a matter of integration and balancing development that is considered as best. The modern development should respond to existing environment.

We should be prepared to use new and innovative ideas and technologies where those are appropriate and they can afford good solutions to development problems. Based on the principles of sustainable development, a city planning and design strategies should need always to address, conserving the best of the past, looking after present needs and devising an appropriate future in a balanced and integrated way.

The short term expediency can be very harmful to the urban heritage and the environment in general. The decisions made during the preparation, approval and implementation of any modern physical development should have long lasting effects

For the current urban environment, conservation of existing structures is a major strategy or the creation of successful public spaces. Rather than demolishing buildings and spaces and starting over, we can infill, modify, and recycle these environments by adding missing urban elements based on the historically sound principles.

This requires that as urban designers we must work as surgeons or as mechanics and repair the diverse broken parts of the city rather than trying to manufacture completely new, self sufficient, conflict free urban machine. It requires that we must reorient our thinking towards centralization rather than dispersion, integration rather than segregation, and urban space that expresses it's setting rather than super imposing order from outside.

To a certain extent, it is a matter of balance getting the best of both worlds. As discussed in the approaches or degrees of intervention towards urban heritages, conservation is the most appropriate mechanism. Mixing the new

and unusual with the old and familiar will usually result in attractive, rich, urban environments which people will find comfortable and enjoyable.

The integrated development creates the design themes. There are several design themes and concepts that have been historically well tried and proven.

The most important and tying all the rest together is an underlying and perceptible sense of order and unity. Closely associated with this is the accentuation of contrasts- between soft and hard landscaping, between narrow streets and larger public spaces, between busy and quiet retreats, and soon.

New proposals whether for a large piece of urban design or on individual building must have a positive relationship to the existing morphology by harmonizing with it. The important thing is to take a positive design stance not just an arbitrary one.

### **5.3.2. Provision of an effective urban heritage conservation policy and Regulation**

“Urban design is where business, government development, planning, and design converge”  
(Stephan cuttler, 1982)

There are various kinds of approaches and degrees of intervention in urban development, Interventions in the modern experience particularly always involve some loss of historic and cultural urban heritages. But these should be justified in terms of not short term but long term.

In order to uphold social benefits, it is mandatory to have an effective urban heritage conservation regulations. These regulations must incorporate general and specific policies, regulations and directives in heritage identification, research, registration, and access to urban heritage, use of heritage, heritage conservation (preservation, rehabilitation and restoration), heritage incentives, heritage education and promotion.

In addition to this, the master plan of Mekelle should be supported by detailed urban design that clearly demonstrates how the modern physical development can be integrated with the heritages in terms of pattern, color, material and meaning.

### **5.3.3. Create public awareness**

Without proper public awareness, it is difficult to protect from damage and to achieve the social, economical and historical benefits of the urban heritages. As the major findings indicated earlier, in Mekelle there are intensive damages of heritage values which have taken place unknowingly.

This indicates that proper means and strategies to create awareness towards the heritages shall be carried out. Awareness can be created by means of the following

- Make different kinds of activities and social gathering around the heritages.
- Organized visits towards the heritage of all the sectors of the society; the children, the young and the adults.
- Prepare and distribute written documents a pamphlet with short history of the heritage.
- Providing notice boards and visible gate way are important to impress and remind the passengers.
- Provide basic infrastructures and facilities to encourage people to spend their spare time there.
- Create profitable small business to be incorporated in the heritage areas without compromising the basic values of the heritages..

The politician or decision makers and other concerned sectors should aware and avoid from keeping throwing away the heritage of the city for expediency or short term commercial advantages.

### **5.3.4. Develop partnership and coordination**

As discussed in the findings, the current coordination and the common understanding between different sectors to common values are different. All stand for the same purpose. But now they work largely in isolation. Therefore I recommend creating public to public and public to private partnership and coordination of the partnership toward a conservation scheme. This can be used as counter balance for any destructive decisions or to help correct each other's mistake by the other and to give technical, professional support to each other.

### **5.3.5. Capacity building**

What so ever the regulations and physical plans prepared, it needs the capable professional man power to implement and to control according to the planning and designing regulations. Therefore I recommend providing capacity building related to professionals, governmental organizations related to the urban heritages. This can be done by organizing local and international forums on which knowledge and conformation regarding up-to-date conservation systems and mechanisms be disseminated.

### **5.3.6. Immediate measures toward the selected case studies**

#### **5.3.6.1. Edaga soney open market**

There is a need for regulations to prevent destruction of the remaining part of the Edaga Soney open market. The land use likely to be relevant for many years to come since radical change in living standards that makes open markets less relevant is un likely to occur in a very short time. In addition there is also need for correction measures to harmonize the new development. With the architecture and symbolism of the market, the researches strongly believes that particularly the historical similarity between the hawlti semaetat in Adihaki and the market place must be expressed in their built form.

#### **6.3.6.2. Kebelle 14**

One of the joys of towns and cities is their variety. Different areas have different characteristics of activities, scale, uses and functions. Cities need soft areas; hard areas; old areas new areas, areas of high building; areas of low building; shopping areas, recreational areas and so on. We need to recognize this variety to define areas of cohesive character. The tension between new and old parts of a town or city must be positively exploited to produce a design environment with a rich and complex association between new and old places.

Kebelle 14, which is one of the unique areas of Mekelle is in neglected condition today. This must be changed urgently.

The Kebelle should not be considered merely as conserved area together with other buildings. Organic pattern of streets and settlement with narrow streets must also be included. In addition, detail urban design principles and regulations should be prepared with some facade treatments of material, pattern color, orientation, height, size etc. in order to regulate the architecture of new developments to be realized in the heritage areas

#### **5.3.6.3, Enda Raesi recreational space**

“The city is not a concrete jangle, it is a human zoo”

( Tibalds Framcis)

According to the data gathered, some parts of the Endarasi recreational area was already leased to a private developer. But it needs a great care to the indigenous trees and the topographical nature from excessive construction of physical built able space by concrete in order to exploit more money from the modern functional developments like swimming pool, paved inside streets, paved play grounds, restaurant, bed rooms etc. because this can destroy the original greenery character of the place.

#### **5.3.7. Further studies**

The study was intended to deal with the impact of special modernization on urban heritages in Mekelle. However, its scope had to be limited in order to finish the work in the time and resource available to the researches. As a result the following important issues related to study area must be left for future research;

1. How can heritage buildings and spaces be changed to meet new demands without losing their form and meaning?
2. How can the design of new developments in heritage areas be regulated in order to harmonize them with the heritages?

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