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Conservation of Architectural Heritage and Historic Cities in Ethiopia; Case Study the Walled City of Harar, Jugol.

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A Thesis Submitted to the School of Graduate Studies of Addis Ababa University
Presented in Partial Fulfillment of the Requirements for The Degree of Master of
Science in Conservation of Urban and Architectural Heritage.

Addis Ababa University


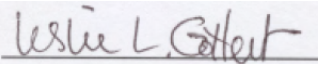
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This is to certify that the thesis prepared by Haftamu Aberha, entitled; *Conservation of Architectural Heritage and Historic Cities in Ethiopia, The Case of Walled City of Harar, Jugol*, and submitted in fulfillment of Master of Science (Conservation of Urban and Architectural Heritage) complies with the regulations of the university and meets the acceptable standards with respect originality and quality.

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DECLARATION

I declare that, this research report entitled as, “*Conservation of Architectural Heritage and Historic Cities in Ethiopia, Case Study the Walled City of Harar, Jugol.*” is original work of my own, has not been presented for a degree at any other university and that all sources of material used for the thesis have been duly acknowledged.

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ABBREVIATIONS (ACRONYMS)

AFCP; Ambassador's Fund for Cultural Preservation

ARCCH; Authority for Research and Conservation of Cultural Heritage

CRCCH, Center for Research and Conservation of Cultural Heritage

EiABC, Ethiopian Institute of Architecture, Building Construction and City Development

FDRE; Federal Democratic Republic of Ethiopia

HPNRCHTB; Harari People National Regional State Culture Heritage and Tourism
Bureau

i.e., for example

ICRROM; International Centre for the Study of the Preservation and Restoration of
Cultural Property

IDP; Integrated development plans

IES, Institute of Ethiopian Studies

JHCO; Jugol Heritage conservation office

LDP; Local development plans

MCT; Ministry of Culture and Tourism

NGO, Non Governmental Organization

TIKA, Turkish Coordination and Coordination Agency

UNDP; United Nations Development Programme

UNESCO, United Nations Educational Scientific and Cultural Organizations

US; United State

ABSTRACT

The historic city, Jugol, is a city state with unique character where the built structures and fence wall and the uprightly urban settlement have survived from generation to generation.

The main purpose of this study was to investigate conservation of architectural heritage and historic cities in Ethiopia, case study the walled city of Harar, Jugol. A qualitative method/ approach was employed to collect and analyze the data of the study. Data was collected using structured and semi structured interviews, using open and close ended questionnaire survey and field note, group discussion and document analysis.

The findings of the research indicate that numerous significant heritage buildings were rehabilitated and restored employing various degrees of intervention approaches over the past few decades until the present. The intervention approach conducted in the historic city was mainly rehabilitating significant historic structures with adapting their function in to other suitable functions.

It has also identified that several key governmental and foreign embassies with their diplomatic mission were financially and technically assisted restoration works particularly on the architectural heritages.

The historic city and its surrounding is facing multi-faceted problems. To mention that a few, lack of restoration and improper intervention approach, Rapid population growth, unrecognized development of infrastructure takes the lion share. The architectural heritages, walls, gates, streets and open spaces are deteriorating from time to time.

Finally, recommendations for rehabilitation of architectural and urban heritages, and appropriate intervention approaches are forwarded based on the findings.

Key Words: Conservation, Architectural Heritage, Historic Cities, Harar, Jugol

CHAPTER ONE: - INTRODUCTION

1.1. Background of the study

In the present day historic towns often have to adapt and upgrade to the changing life of its inhabitants. They also need to adapt to some extent the physical structures and activities to sustain the historic features of the city to fulfill modern requirements. Conservation and rehabilitation of the built heritage of old inner cities must be guaranteed when built and urban heritage are threatened by the redevelopment of urban quarters. (Florian N.,2015).

The emergence of philosophies of conservation has been internationally accepted and became a turning point after the second half of the 20th century for its striking achievement of conservation activities. UNESCO and ICOMOS drafted and disseminated such guiding ideologies as endorsements, charters, declarations and reports with a primary goal of caring cultural heritages which includes historical monuments, buildings, groups of buildings, sites and towns around the globe, from threatening factors. (Yahaya A, 2006).

Architectural heritage comprises valuable lessons with high cultural values which contain the tangible touches of the past societies and unique character and features of the types of built structures and the technological and material development with well-informed attitudes and traditional practices. (Roha W, 2015).

“A city is not just architecture or a monument. It is, most of all, a living space, where the meaning of the built environment has to be understood in relation to the living society, its needs for the preservation of memory as part of its culture and life, its sense of beauty, its use of places and its changing processes. The values of the city cannot be understood without the participation of the people living, using and shaping the space” (Bandarin, 2015 & Sara C, 2016).

Harar is a center of Islamic learning and commercial activities. The vernacular and traditional houses of *Jugol* have a unique arrangement of their interior design which typically found in the historic town only. The historic city of Harar, Jugol has continuing traditions and an authentic urban landscape. The oldest part of the city is encircled by a

defensive wall with five gates. The market area and mosques are located at the center. The selection of this site for the case study was to discuss and examine practices of conservation and rehabilitation approaches used in the fortified historic city of Harar, *Jugol* over the past few decades.

Tangible heritages have great significances to the local community and their affiliation with the intangible aspects. Acknowledging the intangible knowledge signifies an interest in their means of conservation. The physical attributes and the intangible values of cultural heritages have socio-cultural and economic benefits. (Jigyasu, 2015, Sara C, 2016). “The conservation use of these values and associated elements is thus key in order to guarantee the qualitative planning of cities” (Gabrielli, 2010, Ibid).

The *Jugol* wall of the city of Harar and the architectural built heritage within were registered by UNESCO as World Heritage Site in 2006. The Islamic cultural roots of the city are reflected in its vernacular architecture and traditional settlement pattern with the main features of narrow streets on the historic quarter. The traditional system Afocha and the structure of the community in the historic city are still active (Nomination file, 2006).

The historic quarter of *Jugol*, Harar has a traditional urban settlement and indigenous types of architectural heritage. The extraordinary, traditional Islamic urban arrangement and the historic architectural heritage are under threat, mainly suffering from environmental degradation, environmental pollution, weak accessibility and dilapidation and deterioration of historic structures. There is also lack of proper and adequate intervention approaches and residents are implementing unrecognizable restoration practices using modern materials.

According to Siravo and Candiracci, Urban heritages required fundamental ethics of conservation strategies. Heritages cannot be isolated from integrated development from the urban form. To ensure long term continuous preservation and functioning of the material and immaterial attributes must be integrated with the historic urban area. (Sara C, 2016).

The wooden doors of the main gate to the five neighborhoods are still intact, although exposed to environmental and weather condition. The restoration works at different time

which are conducted in the historic city using incompatible materials lead to loss of authentic value from the historic environment.

A detailed survey was conducted to assess and identify the condition of the houses and major problems currently challenging the historic city's neighborhoods and individual, historically and/ or/ architecturally significant buildings. Technical guidelines for rehabilitation of the built heritage and the historical city plan will be provided.

In light of this, the thesis evaluated the current restoration practices and the assistance of stakeholders, which have been involved in the restoration work and the current situation of the restored and transformed/adapted historical buildings inside the walled city. The types of building construction technology and traditional knowledge have been recommended in line with sustainable, contemporary approaches to preserving each type of historical building in the study area.

1.2. Statement of the problem

Conserving built heritage and traditional urban settlements is a driving force for maintaining local identity and satisfying the sense of place and pride of the society. The ancient urban wall was designed to protect and /or act as a defense for the living communities. The *Jugol*, or Walled Town of Harar, have five city gates, which let people enter and exit. They purposely accommodated the commercial center areas and geographic possibilities. The wall, towers and gateways are very important distinct features of the city which serve the residents as a source of pride and identity.

According to some historical accounts the enclosure wall of Harar, called *Jugol*, is believed to be constructed in the 13th century. (ICOMOS evaluation File of Harar, 2005). It has been affected by different factors, both environmental and man-made. The purpose of the wall constructed independently, was to serve as a defense wall, but latter local residents constructed different buildings in direct contact with it. Currently the wall and its environment are affected by environmental degradation.

The other challenging factors of the historic city is that the drainage system is inadequate and it is a reason for the deterioration of the fence wall. In this historic city, the drainage

system disturbs the visual appearance of the fortification wall from the outside of the fence wall.

The historic city which was enclosed with the defense walls have a different unique defining character of the Muslim city with typical historic architectures, traditional houses and mosques, narrow maze street patterns and so on. The architecture and urban city centers of many historic cities are currently in danger from the challenging factors presented by the fast pace of urbanization. “Included within these challenges are rapidly emerging urban environments, causing the destruction of historic structures to make way for new developments, and the deteriorate on of historic structures while agendas are focused towards new development rather than conservation.” (Boussa 2010; Bianca 2007, et al, 2015).

The uncontrolled urban growth in historic cities causes them to lose their authenticity and the originality of the city state. The traditional houses and mosques are currently deteriorating, dilapidated and left to decay and deteriorate. Sign boards are currently challenging the beauty of the historic cities.

The traditional settlements of historic city centers have narrow roads and very small paths, which opens the historic city to overloading and overcrowding of population movement. Due to these challenging factors, the city faces inaccessibility in case of emergency, parking and transportation.

‘Over recent years, the interest in urban sustainability has grown gaining a central importance in the international contemporary debate due to fast urbanization, increasing pollution, intensity of climate change and resource consumption. Cities are in fact the protagonists, responsible for 70 % of global greenhouse gas emissions, 60 % of global energy consumption and 70 % of global waste. The emergence of these phenomena constitutes a great challenge for the historic cities where sustainability ambitions and strategies must operate in accordance with the aims of urban heritage preservation.’ (Federica A, 2017).

In fact, it is known that extensive restoration work is currently being undertaken on the World Heritage city and has been done in the last few decades. Since the city is

recognized under the World Heritage Convention, it is really necessary to investigate, evaluate and comment on the restoration works, which have been performed in the historic areas; for example, whether they follow the international guidelines for conservation and restoration or not. Having carried out desktop review of these restoration projects in the historic cities, the degree of intervention works has been evaluated.

Private owners conducted restoration/ construction works using materials that have not aesthetic value or compatible to their original construction material. Wooden windows and doors are currently replaced with modern steel doors for security purposes. There is no color regulation inside the historic city. People simply paint their home as they want, not like the historic color.

It is necessary to develop a holistic approach in the conservation and preservation of the architectural heritage and historic city center of Harar in order to address these challenging factors. Historic urban settlements can be transformed or adapted into community centers, entertainments and cultural centers that could generate economic development for the local residents.

1.3. Objective of the study

1.3.1. General Objective

To assess the conservation of architectural heritage in historic cities in Ethiopia, using as a case study the Walled City of Harar, *Jugol*.

1.3.2. Specific Objectives

- To assess the current restoration practices in the World Heritage City of Harar, *Jugol*
- To evaluate the outcomes of the treatment of the *Jugol's* historical buildings and their current management and function and identify best – practices and challenges.

- To recommend an approach to the conservation of the historical structures of the city based on the preservation of the traditional lay out of the urban Muslim city state.
- To identify the key institutional actors involved in the conservation-restoration works.
- To identify the major factors threatening the historic city and architectural heritage.

1.4. Research questions

1. What are the restoration practices carried out on the *Jugol* historical buildings?
2. How have historical buildings in *Jugol* been adapted and transformed? What have been the opportunities?
3. What interventions are best suited to the restoration of the *Jugol* built heritage?
4. What are the key institutional actors involved in the conservation-restoration work?
5. What are the challenges in architectural and urban conservation in *Jugol*?

1.5. Scope/Delimitation of the Study

With regard to the thematic scope of the current research project, the study and analysis mainly focus on the conservation of architectural heritages of the Walled City of Harar, *Jugol*. The spatial scope of the research has been limited to the historic city of Walled town of Harar, *Jugol*, a property inscribed on the world heritage list in 2006. A case study has been selected to assess the restoration and adaptive reuse of several contributing features of the site.

1.6. Limitation of the study

In conducting this study, the researcher faced several limitations. For example, although his aim was to analyze early restoration practices at the site, access to archival reports, pre-restoration photographs of selected buildings and related literature was limited. Another challenge was that some respondents were not willing to answer distributed questionnaires on time. The researcher had tough time because the study was in city 518

kilometers away requiring a long journey to carry out field work to collect data for case study. The study itself is limited to built heritage within the boundaries of the World Heritage Site delineated in UNESCO documentation during the time coinciding with the reigns of Menelik II-Lij Iyasu-Zewditu-Haile Selasie I, roughly from the battle of Adwa in 1896 to the coronation of Emperor Haile Selasie I in 1930.

1.7. Significance of the study

This research identifies the current practices of conservation and restoration works and the actors which have been involving in the preservation works in the historic Muslim city of Harar, *Jugol*. The output of this study will have the following contributions:

- The findings could help to identify the challenging factors in the preservation work of the historic city, such as poor intervention approaches and recommend up to date, scientific approaches.
- The study could identify the stakeholders involved in the preservation and conservation works of the city and indicate a sustainable solution to engage them in investing their resources in an effective way.
- The output of this study is intended to serve as a resource for the development of future conservation plans and decisions regarding actions by the Authority for Research and Conservation of Cultural Heritage (ARCCH) and the Harari Culture and Tourism Bureau.
- It could help scholars as an initial reference while they conduct their thesis or case studies related to historic monuments.
- The findings of the research could encourage other scholars to carry out further studies.

1.8. Organization of the study

The research paper incorporates five chapters. The first chapter presents an overall introduction; The Second chapter reviews related literature and contextual reviews that provide a theoretical rationale for the study. The third chapter discusses the methodological approach and data collection instruments, procedures of data collection and analyses employed in this study. The fourth chapter comprises the main study data analyses, findings and discussion. The fifth and last chapter of the thesis offers the conclusions, recommendations and implications for further studies.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1. Introduction: Definition

Definition of Heritage

‘The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines heritage broadly and well: ‘heritage is our legacy from the past, what we live with today, and what we pass on to future generations’. In this definition heritage is neither limited in time nor restricted to material objects – whether they be historic remains, buildings, artefacts or whatever. Heritage is interpreted as the foundation of the present, the springboard for the future, with the present generation as its custodians and the creative link.’ (Dennis Rodwell, 2007:7)

Heritage, as derived from inheritance, is defined in the Oxford English Dictionary as ‘that which has been or may be inherited’ and involves both previous and future generations. In the urban context, it is the power of continuity from one generation to the next, it “is not only something we want to hand down to future generations, it is also something we want to appreciate and experience to the fullest extent” (Masser et al. 1994:31 & Aylin Orbasli, 2000). According to Millar (1995:120 & Orbasli, 2000), ‘heritage is about a special sense of belonging and of continuity that is different for each person’, whereas Ashworth (1997) & Orbasli (2000) prefers to refer to heritage as ‘the contemporary uses of the past’, and Lowenthal (1996:1) & Orbasli (2000) considers heritage to be a new cult, ‘whose shrines and icons daily multiply’.

Putu Ayu P. (2012) Agustiananda, arranged cultural heritage into six categories: 1) areas or districts, 2) traditional buildings, 3) colonial buildings, 4) religious buildings, 5) gates, memorials, bridges and street furniture, and 6) parks and open public spaces.

Cultural Heritage refers to material and immaterial aspects created by peoples’ wisdom considered as witness of previous societies and maintain for the advantage of the coming generation. Cultural heritage includes areas of districts, opens paces, and heritage buildings with significant character represents technological enhancement and knowledge of construction system at different period of time.

The Burra Charter (1979), defines internationally accepted guidelines and standards of heritage conservation terms as follow:

Conservation: means all the processes of looking after a place so as to retain its cultural significance.

Preservation: means maintaining the fabric of a place in its existing state and retarding deterioration.

Restoration: means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Reconstruction: means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.

Architectural conservation

‘Architectural conservation has evolved from the partly educational and inspirational, partly romantic and nostalgic preservation of individual buildings into a broad discipline supported by a number of key international governmental and non-governmental organizations, the subject of numerous charters, conventions, declarations and manifestos. Concurrently, especially by embracing inhabited settlements such as the historic areas of cities, it has confronted issues that extend substantially beyond those at its nucleus.’ (Dennis Rodwell, 2007:6)

“The concept of an historic monument embraces not only the single architectural work but also the urban and rural setting in which is found the evidence of a particular civilization, a significant development or an historic event.” (ICOMOS 1971, Orbasli, 2000).

Architectural conservation is a philosophy in which it can retain the historic features of a building, authentic original form and traditional construction techniques and technological usage through various approaches like restoration, repair, consolidation and so on. Numerous standards, charters and declarations were drafted by UNESCO and other advisory bodies and concerned organization regarding its application and degree of its intervention approach towards the historic heritage structures. Its main objective is to

prolong and preserve the material, design, historic, cultural values of historical buildings, and knowledge of the past society.

Urban conservation

Urban conservation deals with providing a better quality of life through recognition of the sense of place with cultural, political, economic, social values in a growing townscape ‘Conservation is a reflection and accumulation of values placed upon our traditions and culture.’ (Orbasli, 2000) “Without it we would all be much poorer, deprived of roots, more uncertain about who we are and who we were” (Fethi 1993:160, Orbasli, 2000). “Even lived-in surroundings are not identified as heritage; ‘people attach considerable value to aspects of their immediate environment which give them a sense of identity and pride of place’ (Butt 1988:1, Orbasli, 2000).

Conserving Historic cities and areas rich in historical significance with the concern of political, economic and social feasibilities of the townscape and heritage are creating a bridge or mirror of our past where traditions, culture and accumulation of values existed from time as memorial.

“The conservation of historic towns and urban areas is understood to mean those steps necessary for the protection, conservation and restoration of such town areas, as well as their development and harmonious adaptation to contemporary life.” (ICOMOS 1987, Orbasli, 2000).

Conservation is an action a response for undesirability or irreplaceable lost in historic buildings or areas. “Conservation is the careful planning and management of limited and selected resources. It is a conscious process to control and manipulate change to a minimum to a rate that ensures the survival of cultural heritage over a long time.” (Fethi 1993:161, Orbasli, 2000).

According to Aylin, tourists in Historic Towns, urban conservation is defined in the following terms.

1. It is multi-dimensional, and it involves, as well as the building fabric, the urban pattern, streets, open spaces, green areas and urban vistas.

2. It involves the services of a much wider range of disciplines and persons. It is influenced by political decision making at local and national levels, and probably most importantly;
3. It involves a social aspect. The users, the residents, the property owners, business interests, and other citizens who use the area, and those who depend on it for their livelihoods, are all part of the conservation process. (Orbasli, 2000)

Features and indicators of urbanization in Muslim cities from different dimensions

According to Shahryari & Arabi, Historic Muslim cities are influenced by various environmental, socio-cultural, and economic factors. The physical connection of the city, commercial centers, areas for gatherings and event hosting, religious institutions, schools, climate and time have considerable element in the formulation of the historic cities. (Farshid S. & Mehran P, 2015)

1. Physical dimension

This dimension focuses on building conservation, with the appearance of historic buildings, ensembles of structures, street and new structures with the involvement of multi-disciplinary professionals including conservator/restorer, archeologists, urban planner, and historians and so on with the involvement of different stakeholders. (Aylin O,2000, & Farshid S. & Mehran P, 2015)

2. Spatial dimension

It refers to the city as a whole with a major role for the urban planner with the considerations of circulation, traffic and the relationship between the internal and external space with their function which is closely linked to economic benefits. The major key players are urban planners with the role of interpretation and arrangement of external spaces and managers and tourism promoters with demands for the urban planners to provide a better access and use of parking facilities. (Aylin O,2000, & Farshid S. & Mehran P, 2015)

3. Socio - cultural dimension

In a living environment without human identity, it is difficult to continue thoughts, values, spiritual and material culture of the society. The social dimension deals with the urban society, the host/local community and the users. It only achieves with the continuation of the urban life. For instance, urban planning included narrow dead-end streets, separating public and private territories. (Aylin O,2000, & Farshid S. & Mehran P, 2015)

2.2. Adaptive Reuse as a Strategy for Architectural Heritage Conservation

“Nowadays adapting, restoring, conserving and working existing historical buildings into sustainable use became one of the imaginative challenges with-in the discipline of architecture. According to Brooker and Stone, the term ‘adaptive reuse’ – also called ‘remodeling’, ‘retrofitting’, ‘conversion’, ‘adaptation’, ‘reworking’, ‘rehabilitation’ or ‘refurbishment’ includes the concept that ‘the function is the most obvious change, but other alterations may be made to the building itself such as the circulation route, the orientation, the relationships between spaces; additions may be built and other areas may be demolished’ (B. Plevoets & K. Van Cleempoel, 2011). Adaptive re-use is seen in contemporary theory or philosophy as a significant strategy for the conservation of cultural heritage.

From the perspective of conservation and architecture scholars, who reviewed different literature and classified the approaches towards adaptive re-use into three types; typological, technical and architectural. (Ibid)

In the category of typological approach, conservation and adaptive re-use practices were organized based on building type as explained by Cantacuzino in the publication, *‘New Uses for Old Buildings’* before their conversion to a new purpose.

The second category was the technical approach, which makes a new function the primary technical concern. As Highfield endorses in *‘The Rehabilitation and Re-use of Old Buildings’* (1987), The merit of rehabilitation and in a technical chapter he discussed

improving and utilizing energy efficiency, introducing of new building features and improving the safety of the structure.

The strategic approach stresses the process and tactics, which have been applied in converting significant buildings. *In Conversion of Historic Architectural Buildings*, Robert present the seven concepts of conversion, which specifically refer to the physical intervention: building within, building over, building around, building alongside, recycling materials or vestiges, adapting to a new function and building in the style of. (B. Plevoets & K. Van Cleempoel, 2011).

As a methodological strategy in maintaining and preserving significant historical heritages adaptive reuse is the best approach in providing up-to-date standards. Adaptive reuse is the best features of rehabilitation approach in which it can sustain historic structure through providing compatible new function. While adapting historic building from its previous life in to the desired function some modifications are acceptable without disturbing the define character of the building,

It is also necessary to consider that the transportation of the construction materials consumes the energy form the non-renewable resources; the waste generated by the construction and demolition activities constitutes 30 percent of the annually produced waste in the United Kingdom. The rehabilitation and re-use of existing historic areas and buildings also offer the possibility for the more efficient use of the existing infrastructure and transport system and for reducing the pollution. Moreover, numerous studies demonstrate that the adaptive re-use of historic buildings often is not less economically beneficial or more expensive than new construction. R. Mason indicates that in the case, when no demolition of the existing buildings is required, the renovation and re-use of the existing buildings or building complexes, for the commercial purposes, usually cost from 12 percent less to 9 percent more than the implementation of the new construction project of the same extent. In the case, when the new development requires demolition of the existing buildings in construction site, the renovation and adaptive re-use of the existing structures would cost from 3 to 16 percent less. The assessment of alternatives for demolition of the existing buildings should also include the fact

that the existing historic buildings are the significant investment of energy and capital, which would be lost by demolishing them. (Indrė Gražulevičiūtė–Vilenišké, Vilnius Urbonas,2011)

2.3. Challenges of urban heritage/ historic cities conservation

Historic city centers are affected by the uncontrolled development pressure which caused urban heritages for loss, deterioration and threatened the historic fabrics. “Timothy and Boyd, 2003, argue that the majority of heritage supply is urban in location. Urban heritage comprises not only individual buildings or monuments of historic interest, but also the physical attributes of buildings, public spaces and urban morphology (Orbasli, 2000, Putu Ayu P. Agustiananda, 2012). The term ‘heritage’ acknowledges not only the non-economic values of the asset – in contrast with ‘resources’ which implies the consideration of its economic values – but also its bequest which further implies certain obligations and responsibilities.” (McKercher und du Cros, 2002, Ibid).

Conservation of urban heritages were neglected due to less attention from, the public participation, insufficient allocation of budget for rehabilitation/conservation, lack of trained man power and government give high priority in developing new squatters rather than revitalization of historic settlements. The following are the major problems which are identified in urban heritage preservation/conservation practices.

1. Financial aspect: lack of funds and absence of financial assistance schemes

In most of the cities there is limited or no regular funds allocated for conservation of historic buildings or urban heritages likewise most conservation works are performed through temporary projects. “A lack of adequate financial resources for heritage conservation is one of the most profound difficulties facing heritage managers in most of the world.” (Henson, 1989; Isar, 1986 in Timothy, Boyd, 2003 and Putu Ayu P. Agustiananda ,2012).

“There are several financial resources for building rehabilitation, such as public subsidy (through ‘gap funding’, direct grants, and low-interest loans), tax deduction or exemption, as well as revolving funds.” (Tiesdell, et al., 1996, Ibid). In Ethiopia, no

financial incentives are developed for conserving privately owned heritages. I argue that to ensure the continuity of heritage buildings from one period to the coming time financial assumptions should have initiated like tax deduction incentives, motivate private owners to renovate their property with their own expenses and so on.

“The government should change their policies from passive to active, which means in compensation for restrictions they impose, they should offer financial assistance for conservation to private owners.” (Lasafin and Kammeier, 1993, Ibid).

In community with low income and privately-owned heritages face financial difficulty for their maintenance expenditures. So, residents were exposed then to sold their houses and because they don't have enough financial guarantee to secure their financial issue since the preservation and materials for conservation is not easily available and they remain to sold and migrate from their original settlement where they belong to live. In this case the intangible aspect became threatened.

2. Conservation aspect: vacant and decaying historic property

In historic cities numerous historic buildings which are owned publicly and privately are facing from different decaying and deteriorating factories. ‘In the case of public property, the problem might have resulted from the lack of concern or attempts to maintain those buildings and areas.’ (Putu Ayu P. Agustiananda ,2012). Such problems may arise due to the lack of allocating regular funds from government. The privately-owned heritage buildings faced difficulties of allocating fund for maintaining their heritage buildings unless they have good sources of income or wealthy inherited from their family members. (Ibid).

3. Political aspect: commercialization and historic property privatization

“One of the intricate problems in conservation is finding new uses for historic buildings and new economic functions for historic quarters” (Burtenshaw, et al., 1996, Ibid). Historic buildings could leave their original functions and left to be abandoned. Transforming such valuable historic buildings may became currently a challenging issue in finding the compatible and sustainable use. “Nevertheless, the demolition of an historic building or environment is, by any reason, contradictory to the notion of identity, as

destroying such a building is like breaking a link of the past, the present and the future” (Budihardjo, 1984, Ibid).

Historic buildings and land could be sold for private and commercial matters despite lack of conservation or treatment to the historic building it may left to deteriorate and change its aesthetic quality of the historic fabric.

4. Socio-cultural aspect: Informal vendors in or near historic monuments and areas

In revitalizing historic centers cities informal or illegal vendors-built structures in or near historic settlements or around the historic fabric (Putu Ayu P. Agustiananda ,2012). For example, in the case of Harar, *Jugol* new houses were constructed or added with direct contact of the fence wall as one part of the structure. However informal vendors built temporary shelter of these kiosks and more and more people came to such areas and later on when displacing these illegal vendors its major problem will be compensation budget for their relocation. (Ibid)

5. Legal aspect: absence of local conservation regulations and ownership status conflict

In historic towns/cities legal regulations are inadequate in their preservation and protecting from tremendous development. There is lack of regulations to prohibited development around or near the historic environments. ‘At present, the local authority can only have discussions with the private sector without having the power to restrict redevelopment in a cultural building or area, due to the absence of regulations. If a cultural property is to be demolished, it can be said that there will be neither prohibition nor punishment. A reconciliation of the disputes is a prerequisite of comprehensive revitalization of the historic areas.’ (Putu Ayu P. Agustiananda, 2012)

2.4. Authenticity in architectural conservation

‘The sense of loss, or historical irreversibility, that transversally rose up in the form of counter-reaction to the attitudes of alienation of the architectural heritage, denounced during the Italian Renaissance, the French Revolution (anti-absolutist vandalism), and the

Industrial Revolution (strong historical scission), urged the community to reflect on the importance of their heritage legacy, exalting the value of memory and the principle of irreplaceable, leading to the need for rooting, and a pause for identification.’ (ALVES COSTA, 2002: 124)

“Following the development and the qualitative and quantitative changes in communities, that have made substantial changes in historic environments; the authenticity concept has attracted attention in order to strike a balance between conservation and development approaches” (Somayeh F. Nezhad, Parastoo Eshrati, Dorna Eshrati ,2015:93, Ibid). “The published document of English Heritage defined authenticity as “those characteristics that most truthfully reflect and embody the cultural heritage values of a place” (English Heritage, 2008: 71, Somayeh F. Nezhad, Parastoo Eshrati, Dorna Eshrati ,2015: 93, Ibid).

Authenticity is the only possibility which balance and keep the genuineness of conservation and development through keeping the historic environment or structure of its defining features from loss. It has to be priority in conservation work in preserving its authentic values of the historic building or area.

2.5. Harmonizing conservation and Sustainable development

‘Cities focus on achieving sustainable development. Sustainable development defines as ‘meeting the need of the present generation without compromising the ability of future generation to meet their own needs’ (The 1987 Brundtland report). Sustainable development has three basic components: economic growth, environmental protection, and social equity. Urbanization and modernization process impacts rapidly change for indigenous culture and heritages of the society. “Cultural heritage, as part of the cultural domains, has been widely acknowledged for its economic potential and contribution to communities’ development” (Hampton, 2005; Tweed and Southerland, 2007; Scheffler et al, 2009; Guzmán, P.C., Pereira Roders, A.R., Colenbrander, B.J.F.,2014).

The principal challenge for sustainable management of urban heritage is continuity and compatibility, as the main center of the historic setting needs to keep changing in form and function (et al.). “Research reveals that World Heritage properties are mainly being

threatened by aggressive development and management deficiencies” (ICOMOS, 2005; Guzmán, P.C., Pereira Roders, A.R., Colenbrander, B.J.F., 2014).

The management of urban heritage incorporate the intangible knowledge behind the society and the historic urban landscape of the setting environment which require holistic approach and strategies to integrate cultural heritage conservation and sustainable development.

Urban growth is transforming the essence of many historic urban areas. Global processes have a deep impact on the values attributed by communities to urban areas and their settings, and on the perceptions and realities of their inhabitants and users. On the one hand, urbanization provides economic, social and cultural opportunities that can enhance the quality of life and traditional character of urban areas; on the other hand, the unmanaged changes in urban density and growth can undermine the sense of place, the integrity of the urban fabric, and the identity of communities. Some historic urban areas are losing their functionality, traditional role and populations. The historic urban landscape approach may assist in managing and mitigating such impacts. (UNESCO,2011)

Conservation of historic cities and historically significant cultural heritages through regeneration, renewal and rehabilitation contribute for social and economic development. Sustainable development can achieve through integrating heritage conservation projects in to revitalization and development projects which have been drafted to possess.

According to Guzmán, P.C., Pereira Roders, A.R., Colenbrander, B.J.F., 2014, Conservation of cultural heritage is a driver for sustainable urban development with the following three monitoring trends.

1. *Strategic level*: recommendations to integrate heritage conservation in urban planning and policies
2. *Operational level*: by referencing the integration of heritage conservation and urban planning as best practice
3. *Cultural heritage within themes and categories*

In development works integrating cultural heritages are ignored and forced to be demolished. While possessing conservation and development monitoring aspects has to be developed in order to achieve sustainable development through conserving and preserving heritage buildings and historic cities.

2.6. Conceptual Framework

A historic city has to sustain the physical fabric and cultural property through providing continuous and effective management and conservation of the architectural and urban heritages of the city. As seen in the diagram in figure 1. Architectural heritage can be ensuring their sustainable management through continuous conservation, restoration, renovation, and rehabilitation of dilapidated and damaged heritage, and appropriate adaptive re-use. Through these approaches cultural heritage can convey a positive impact on rational use of resources and ecological situations, social viability, renewal of built fabrics, improving role of tourism and business sectors, and wellbeing of the local community. (Refer to Figure 1)

Such positive outcomes will provide opportunities in effectively using existing infrastructure, employments possibilities in the field of heritage conservation with a high qualified and well-paid salary and reducing pollution raised from demolition. It can also enhance the indigenous knowledge, increase cohesion of local community, bring stable economic resources and create an attractive environment for the business sector. It has also the advantage of bringing incentives for cultural heritage conservation, creating new services in local craft centers, attracting new people to the area, and harmonizing conservation and development in historic city centers. (Refer to Figure 1)

Rehabilitation of the historic urban environment signifies a way to maintain the visual integrity and connection between main city centers, maintain the state of conservation of architectural heritage in good condition, continuity of cultural practices, bring social and economic viabilities and maintain and invent new values and improve preservation of significant heritage buildings at the individual level or as a neighborhood. (Refer to Figure 1)

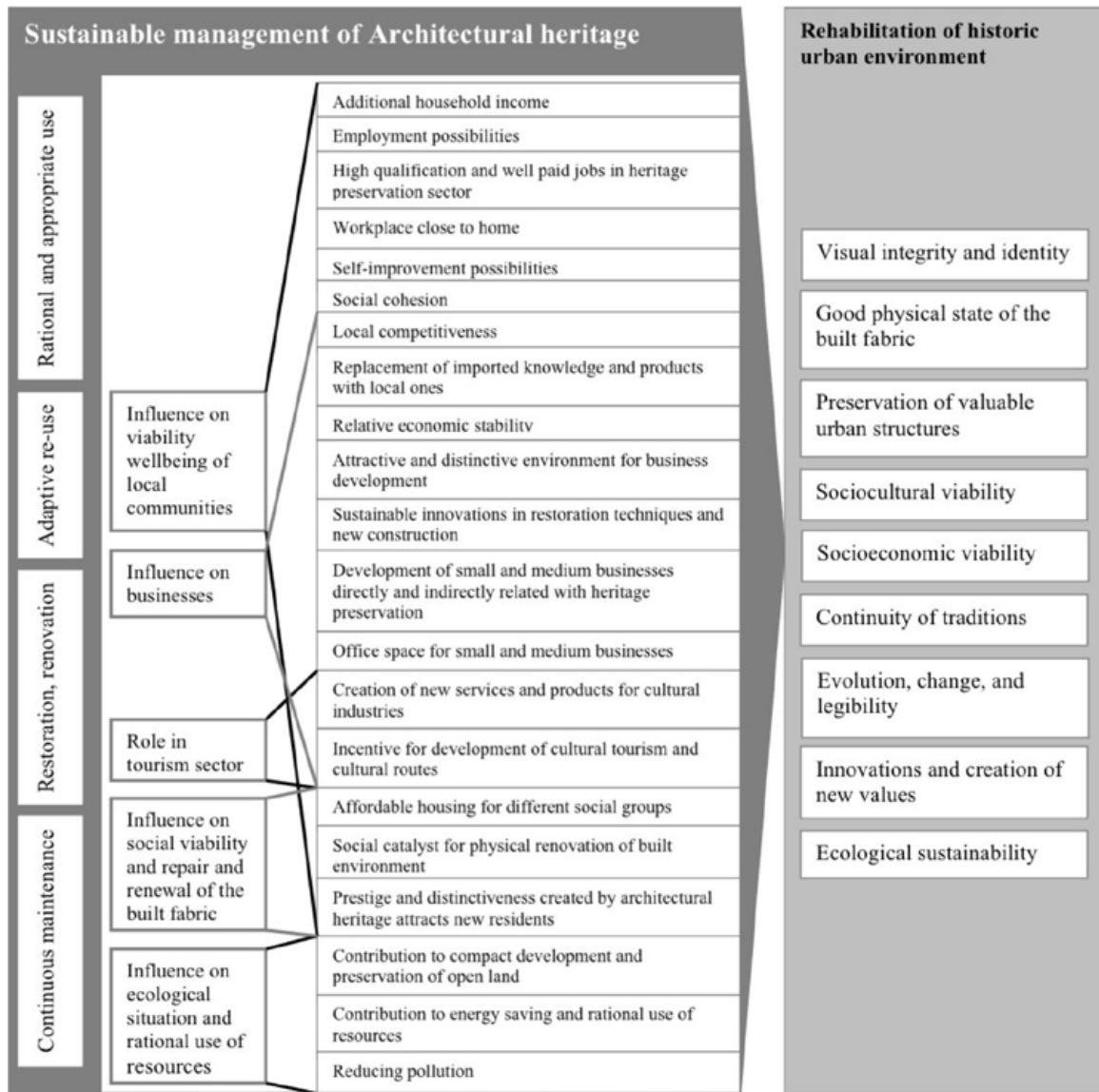


Figure 1. Conceptual framework for the architectural heritage as a socio-economic catalyst through the rehabilitation of the historical built environment (Sources Indrė Gražulevičiūtė–Vileniškė, Vilius Urbonas,2011)

2.7. Contextual Review: physical and cultural setting of the project area

2.7.1. Location of the study area

Harar is an administrative and commercial center located in the eastern part of Ethiopia and surrounded by the south-eastern plateau dividing the Great Rift Valley from the plains of the Ogaden lowlands. The city has two main parts; the old Town of *Jugol* encircled with fortification wall built around the 16th century and new town outside the fence, which has been developing since the late 19th century, and covers about 1950 hectares of land. (African Consult Services P.L.C, 2013).

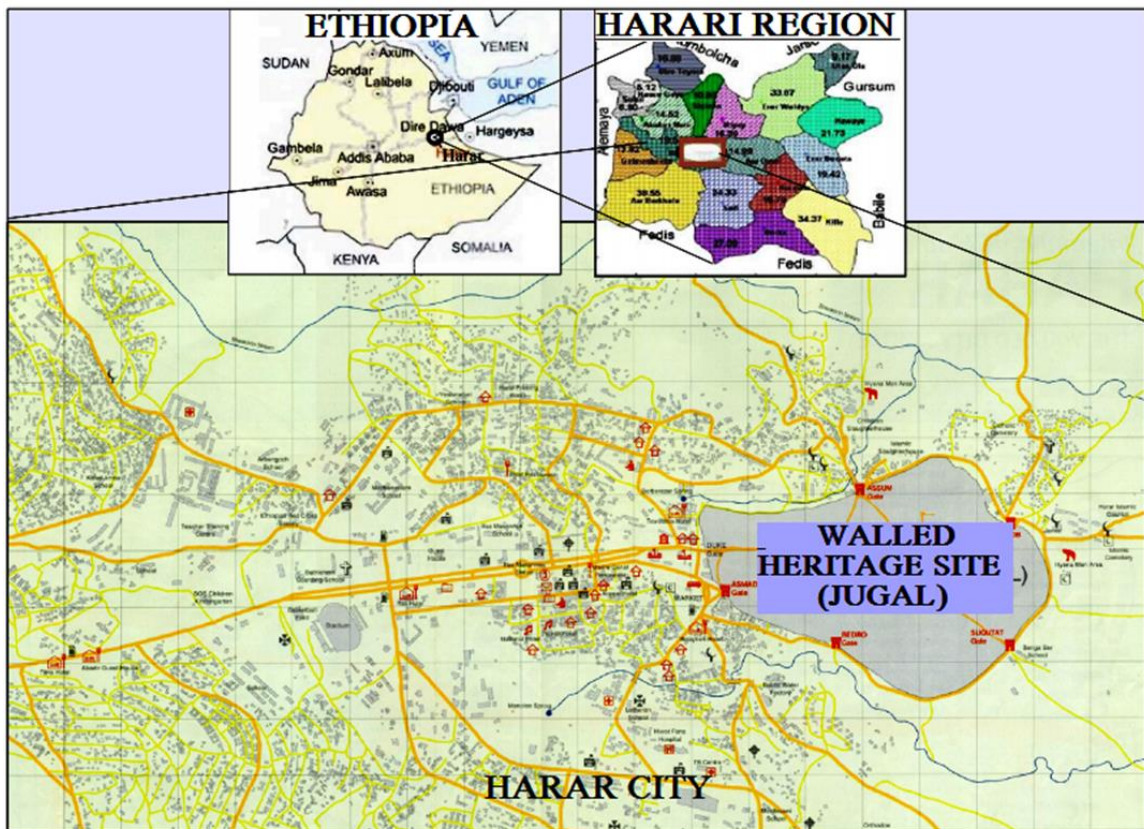


Figure 2. Location map of Harar, *Jugol* (Source: C.H.T.O, 2015, & Nebil Bekri, 2015)

2.7.2. Historical Development of Harar

On the 8th Century Harar was found in its present traditional historic urban settlement forms by merging seven clans to defend themselves from enemies. Around the 12th ‘sheik Abadir came from Arabia with his followers, gave Harar its name and organized the city in to five districts’. (Philippe Revault & Serge Santelli,2004). From 1520-77 Harar became one of the capital cities for the powerful kingdom of the sultanate of Adal. In 1552 the successor of imam Ahmed, Emir Nur Ibin Mujahid became responsible in securing the city from the Christian kingdom and encroachment of land from the Oromo tribes. The construction of the outer city wall was commenced by the order of the Emir. ‘For Harar, *Jugol* the walls with the five gates became the gateway to the outside world and facilitated controlling those entering to trade’. (Philippe Revault & Serge Santelli,2004). The trade activities were alive and continued. Trade with the Arabian Peninsula, the east African coast, Zanzibar, and central Ethiopia kept Harar alive. The Harari cast their own coin from silver and bronze, known as *Mahalag* and *ashraf*. It’s also known for a place of Islamic learning and religious manuscript. (Ibid).

In 1875-1985 the trade routes, the ports and the Emirate of Harar were occupied by Egyptians. In 1887 Emperor Menelik conquered Harar and replaced one of the renowned mosques at Feras Megala by Christian church Medhane Alem (Holy Savior of the World). From 1935-1941 the city came under the Italian Occupation.

The historic city of Harar, *Jugol* is nominated on the basis of criteria ii, iii, iv and v.

Criterion (ii): The historic town of Harar *Jugol* exhibits an important interchange of values of original Islamic culture, expressed in the social and cultural development of the city enclosed within the otherwise Christian region. Such influences have been merged with traditions that relate to the inland of Africa and particularly to southern Ethiopia, giving a particular characteristic form to its architecture and urban plan.

Criterion (iii): Harar *Jugol* bears exceptional testimony to cultural traditions related to Islamic and African roots. It is considered “the fourth holy city” of Islam, having been developed by a holy missionary from the Arabic Peninsula. Though a trading place and thus a melting pot of various influences, Harar has been in relative isolation in its region,

contributing to a cultural specificity, expressed in its characteristic community structure and traditions, which are still alive.

Criterion (iv): Harar Jugol is an outstanding example of a type of architectural and urban ensemble which illustrates the impact of African and Islamic traditions on the development of specific building types. The building types and the entire urban layout reflect these traditions, which give a particular character and even uniqueness to Harar Jugol.

Criterion (v): Harar Jugol with its surrounding landscape is an outstanding example of a traditional human settlement, representative of cultural interaction with the environment. The social and spatial structure (*Afocha*) and the language of the people all reflect a particular and even unique relationship that there developed with the environment. The cultural and physical relationships with the territory have survived till today, but they are also vulnerable to irreversible change under the impact of the modern globalizing world.

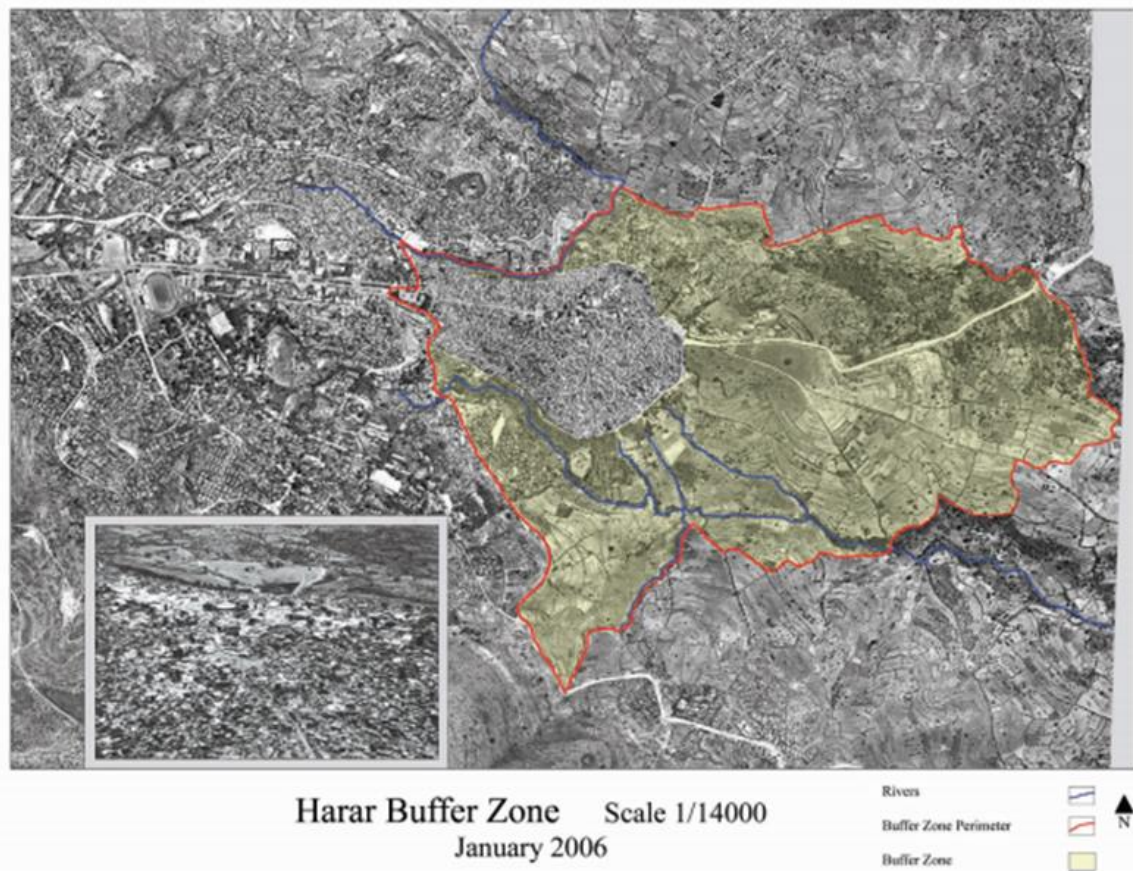


Figure 3. Harar Buffer zone, scale 1:4000 (Source: UNESCO, 2006)

Inner city arrangement

‘Historic cities are inscribed under world heritage list, described in the world heritage convention as ‘groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science.’ (UNESCO, 1972). Harar was established in its present urban form in the 16th century as an Islamic town characterized by a maze of narrow alleyways and forbidding facades (Nomination file 2005).



Figure 4. Aerial view of Jugol Feras Megala and Medhane Alem church.1942,
(Source: Phillipe Revault, and Serge Santelli, 2004)



Figure 5. Aerial View 1942, the historic center Jugol
(Source: Phillippe Revault, and Serge Santelli, 2004)



Figure 6. Aerial View 1942, the historic center of *Jugol*
(Source: Phillippe Revault, and Serge Santelli, 2004)

2.7.3. Organization of the city

2.7.3.1. Social organization

The residents of Harar organized in social structure called *Afocha*. This traditional social organization of *Afocha* ran by the local community of the city that facilitate the daily activities of the community including weeding and funerals. “The several traditional associations hinge on the ability of the Harari people to preserve their identity and social cohesiveness in the face of growing external political and economic pressures and internal social turmoil” (Waldron, S., 1974 & WEHIB M. AHMED.,2015). The traditional association *Afocha* has different officials, chair, rules with duties and responsibilities and penalty measures.

2.7.3.2. Spatial organization

The neighborhood is categorized in to seven administrative *kebele* lay down with the five gates which define the current urban form of the historic town of Jugol.

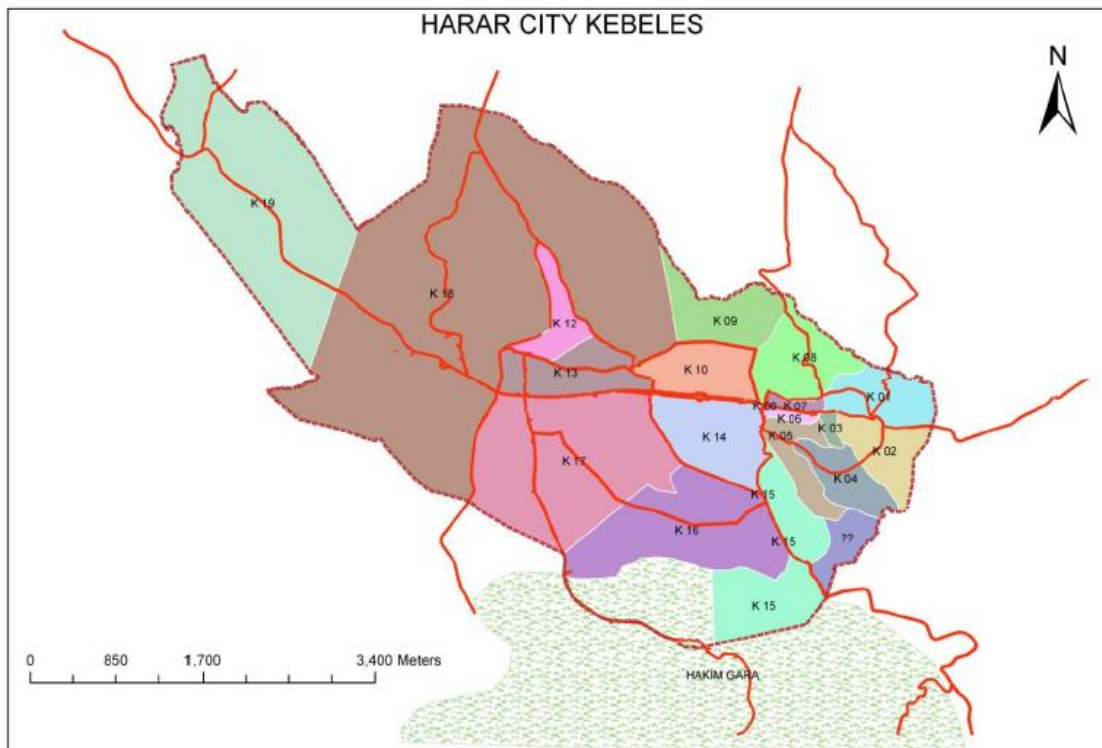


Figure 7.Kebele of Jugol (Source: FUPI, 2006.)

2.7.4. Urban transformation of Harar

2.7.4.1. Early settlement

The settlement of Harar is believed to be founded in the 8th century, when the seven tribes which had lived before in different seven villagers, formed a coalition. The Islamic city of Harar started to strengthen its independence by creating a fertile environment and becoming a strategic center for a trade route to the Arabian Peninsula. The construction of the outer wall was commenced by the Amir Nur who was the second conquer of the city while the first was his uncle called Gran Ahmed. “The construction of the wall of the city was completed by Emir Nur Ibn Mujahid (1551– 1568). The construction work was started in the 13th century near the gates, but it was in the 16th century that it encircled totally the city as ordered by Amir Nur; and it was completed around 1580.” (Azais and Chambard, 1929, Nomination file, 2006). Construction of mosques was started during this period. (Ibid). The city was settled to be a center of Islamic learning with significant development of viable commercial activities, it began to mint its own coinage with surrounded walls and its own Emir. ‘’And before me, within my reach, Harar, a mass of brown houses, set like a saddle on the small back of a donkey that’s like a rocky outcrop of the mountain between two verdant green gullies.’’ (Jerome ad jean Tharaud.,1936, p 158., & Philippe Revault & Serge Santelli,2004, p 149.)

2.7.4.2. During the Egyptian period

The walls were strengthened and around twenty-four watch towers with battlements were infused on the top of the wall with the main purpose of protection and safety of the inhabitants. The *Berbere Ber* was built by the Egyptians as a new gate which was later destroyed by the Italians and rebuilt with a new design currently known as *Shewa Ber/Asmaedian ber/*. Different mosques and traditional buildings were introduced with different new building designs and structures to the historic city of Harar.

2.7.4.3. Pre- Italian period 1887-1935

After the defeat of Emir’s force at the battle of Chelenko through Ras Mokonen who led the Menelik’s force and marched to the Walled city ceased to be Ethiopian kingdom. It

was during this time emperor Menelik made a change to the urban settlement of the Muslim city state. One of the greatest mosque which was situated around the Feras Megal was destroyed and reconstruct with octagonal Orthodox church of Medehane Alem (Holy Savior). A number of buildings were continued to be constructed inside and outside of the walled city. To mention historic buildings with in the walled city includes: - The replaced Octagonal church of Holy Savior on the greatest historic mosque, Ras Mekonnen Palace, Emir Abdulahi Hall, Teferi's, Menen's, and Iyassu's houses and the so-called Duke Ber, todays Harar Ber. While on the outside of the wall includes Churches in different parts of the town, the Duke House, Iyasu's House (Feres Kote), Ras Mekonnen School, and the emergence of a large settlement, especially the Neftegna sefer. (Nomination File, 2006).

2.7.4.4. During the Italian occupation

During the Italian Occupation Period a significant urban development was carried out inside and outside of the city of Harar. Outside the ramparts, in the western part beyond the city walls, they built the embryo of a new city including the Governor's Palace and other administrative buildings. At the same time, they introduced the straight street that runs east-west from Harar Ber to Fares Megala Square and the western gate to accommodate the passage of automobile transportation. The Italians actually modified the physiognomy of the old market place, Gidir Magala Square, in the old city, by building a permanent market in pink and green stone, accommodating arcades indoors, and thus enabling businesses to set up real shops. Its intervention of the road within the historic settlement and the historic fabric was successful. The construction of the Gidir Magala Mosque in 1935, was the last to have been built within the walls. (Nomination File, 2006).

2.7.4.5. Post Italian to present

During the Dergue Period urban lands and houses were nationalized in many cities of Ethiopia. Different historic buildings became nationalized and it is in this period that the historic city divided in to seven administrative units called *kebele*.

2.7.5. Characteristics of urban and architectural heritages

2.7.5.1. Commercial activities

Trade was an important part in spite of the political and geographical isolation in connecting the city from the outside world. In the history of the city Arab traders was the broadcasters on the basis of the location of the trade route. Trade contribute to the economic benefits and richness of the city in resisting from the Christian empire and the massive migration movement of the Oromo tribes. Trade was the prominent factor in promoting the image of the city in long distance from Harar to the Horn of Africa. Trade is also part of the founding of the city which starts around the 13th century with arrivers from the Arab Peninsula Saïd Ali Hamdogh (the founder of food market) and Saïd Ali Sharif (introduce bartering and exchange) as merchants of Abadir (Ibid). In formatting the urban structure of the city, the outcome of trade has a strong influence where the existence of the market at the inner-city with organic urban pattern of narrow streets surrounded by shops on both sides and on every gate, which have been seen as a symbol of the city.

The city has several commercial traces and activities which makes it living tangible asset of the city heritage.

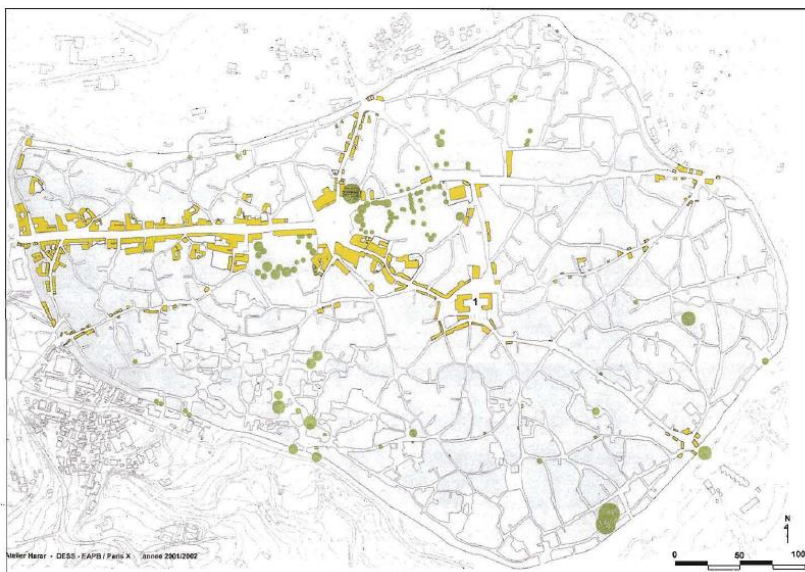


Figure 8. Commercial area inside Jugol (Source: Phillipe Revault, and Serge Santelli, 2004.)

Along the Andinnya Manget main street align shops are constructed with long sequence where modern trade involving imported goods and stores of building materials, auto parts, paper, and places of photography, tailors, and jewelry, etc.

The city has also active commercial activities along the Shewa Beri to the Ferese Megala axis. The Makina Girgir, Shewa Beri, Erere Beri, Felana Beri recognized by the city as a market area where local commodities and goods and services were exchanged.



Figure 9. Commercial activity on Argoba Bari (Source: The Researcher, 2018)

2.7.5.2. The City Wall and Gates

Jugol refers to the city wall as well as to the historic town with in the wall. Harar was surrounded with long wall starting from the period of Emir Nur Ibn al-Mujahid (1551-68) who had decided to build walls to protect the city from the Oromos and the Christian threat. ‘The construction was carried out with the assistance of Fakhraddin Yonis who came from Sheriff of Mecca to assist and carry out the construction of the wall properly’. (Harar Jugol, the Fortified Historic Town, 2006).

The length of the wall measures 3,342 meters in circumference and average four meters in height. It was built with local stone called *hashi*, which extracted from the area of Mount Hakim. It also used for the construction of the houses, mosques, and tombs in the city. The walls weren’t white washed. The oldest part of the wall located at its foundations was built with large uncut stones that were held together by a mortar of mud and reinforcements of wood incorporated at regular intervals of one meter. In the upper

part were to be found stones of smaller dimension, hold together by mortar. (Harar Jugol, the Fortified Historic Town, 2006 & Kaleb Getachew, 2016).

The wall has five gates positioning to the North, East, Southeast, South and West used to have watch towers but only one still existed. Their setting has been determined according to their strategic aspects of defense and the direction of the trade routes. The location of the gates also considers the proximity of the lakes or ponds. The locations of the gates are also in accordance with the directions of linking the city to the surroundings. There are historical traces connecting the number of gates, five, and the five pillars of Islam. They are opened on streets that lead to the city center and faced by five neighborhoods. A sixth gate was added by Menelik in 1887. The city gates were always guarded and locked at night and opened only during the day. It has a small house for observation and security near the gate way. Such houses are still existing in the case of the North Gate (Assum Bari), the East Gate (Argob Bari) and the Southeast Gate (Suqutat Bari).

Direction	Arabic	Somali	Oromifa	Amharic	Harari
North	Bab al-Fath / Bab Zayla	Errida Fuldano	Khararra Fallana	Follana Ber	Assum Bari
North -East	Bab ar-Rahman	Errida Erere	Kharra Ere	Erer Ber	Argob Bari
South-East	Bab as-salam		Kharra Sufi	Songa Ber	Suqutat Bari
South	Bab al-Hakim	Bab Bida	Kharra Badrowa	Buda Ber	Badro Bari
South-West	Bab an-Nasr	Errida Hamaraisa	Kharra Hamaraisa	Shoa Ber	Asmaadin Bari

Table 1: Names of the gates in different languages (Source: Nomination file of 2006)

2.7.5.3. Mosques

Harar is a center for religious learning and recognized as the fourth holiest city of Islam in the world. The city of Harar has 99 mosques, out of them 82 are found inside the walled town of Jugol. It is believed that the most ancient and prominent mosques were built between the 10th and 12th century, where the historic settlement was resided by coalition of inhabitants. The mosques of city bear the history of the city through their Significance and the names they carry. Majority of the mosques located mainly on the main street or crisscross Jugol and fairly distributed to the city purposely. There are also mosques built in the backyard dwellings, rated 18.75%. Mosques play a key role in preserving the striving historic urban settlement in to urban development which doesn't consider the traces of the traditional Islamic settlement. (Nomination file of 2006, Hisham Morata, 2010)

The mosques are witnesses for the historical development of the city and architectural features which testify their location within the city through their urban arrangement and original character.

Their construction material of the mosques is from local stone, called *hashi* and quicklime, *nora* which guarantee architecturally integrated with the physical texture of the city. Most of the mosques have simple form and Some of them are characterized by Small minarets. The mosques have three typologies:

A. Traditional Mosques

The prayer hall is rectangular in form varies between 24 m² and 35 m² surface area. Approximately two pillars supported the ceiling and divided the space into six spaces, and towards the axis of the door is the mihrab indicated the direction of the prayer. The floor was compacted with natural earth but currently replaced by cement and covered with carpets or mats. The finish of walls is whitewash, *nora*, with recessed shelves used for books, candles and shoes. The traditional mosque consists of a prayer hall and a courtyard.

The courtyard has two parts: first an entrance way situated at the front door way to the mosque with 5 M² area and second an open space covered by ribbed roof to enable prayer when the prayer space is crowded. There is a corner where teaching and another for ablution carried out. The mosques contain a small garden exists for medical and treatment plants. Depending on the era of construction some mosques have minarets which varies in shape. The Mosque of Mahad Sai is a type of this mosques, which was originated in the eighteenth-century. It is accessed through the courtyard of a house. (Nomination file of 2006, Hisham Morata, 2010)

B. Public (Grand) Mosques

These mosques were used for common prayers on Friday. The five grand mosques are located within vicinity Jugol in the five neighborhoods. The Din Agobara situated along Argoba Bari, Imam Ardin, located to the Suqutat Bari, Aw Mansur in the neighborhood of Badro Bari, Aw Machad to the zone of Asmaadin Bari and Kazir Abogn mosques are to be found in the districts of Assum Bari. The area of the prayer room and the number of pillars of these mosques is twice of that traditional one. (Nomination file of 2006, Hisham Morata, 2010)

C. Small (Sanctuaries) Mosques

It contains one or more tombs. This mosque type has a shrine of one or more of the imams (prayer leaders) or muezzins (prayer callers), and sometimes a person believed to be "Awlia" or saints. In this case, the mosque is revived every year in memory or celebrations. Masjid Syed Ahmed Ibrahim is an example of such type of shrine. (Nomination file of 2006, Hisham Morata, 2010)

2.7.5.4. Houses

The houses of the architectural heritages of the town are considered as unique symbols or identity of the city. The historic town of Jugol consists around 5115 houses inside the fence. In the historic town of Jugol three types of houses are identified; the traditional house, the mixed house, and the Indian house. (Nomination file of 2006, Hisham Morata, 2010)

A. Traditional Houses

The traditional houses are mostly rectangular in shape consisting of three rooms on the ground floor (the *gidir gar*, the *kirtat* and the *dera*) as well as a room called *quti qala* upstairs. The service area (the kitchens and restrooms) are located in the courtyard which has no direct contact to the main house. The courtyard is a shared space where the households used as main gatherings and accommodate various activities like weaving, washing and cooking is performed. This patio is separated from the street by a wall with an entrance door. It is the distribution area of two thresholds; the first, the rest of the house elements, which are limited by a specific door that separates the public street from the courtyard, and another to the main housing area and separates the semi-public from the private space. (Nomination file of 2006, Hisham Morata, 2010)

The *ge gar* (or *gidir gar*)

The *ge gar* is the main large house, which has large wooden door entrance subject to decoration with flora motifs. The entrance door by its size and excellence of the decoration work reflect the social status of the family. It is a space used to welcome guests, eating meals chewing *ch'at* (*bercha*) and neighborhood gettogether.

The *Kirtat*

This is partially open to the main room but separated by a wall sometimes with a window to allow ventilation. It is used by married couples and a place where mother gives birth. It is also an intimate room which accommodate patients and also a sleeping space for women and children.

The *Dera*

This fronting the *kirtat*, used to store everyday objects. Occasionally it used to sustain the newly married couples until the conception of giving birth and a cupboard inserted in the wall in which clothes and fabric are kept.

The *Quti qala*

It is an Upstairs Room originally intended to be storing agricultural products from the field (coffee and fruits). Today such functions are changed into a bedroom of parents or eldest child of the family can welcome his guests. It accessed from the stair case.

Tit gar

It is a small room known as home of the eldest son, accessed either from indoor of the house or the courtyard. It reserved for the eldest son who would move in as the teenage years thus protecting of the private life of the young man and the rest of the family. It includes a platform either opposite to the door or to one side.



Figure 10. Rooms and Elements of traditional houses
(Source: Phillipe Revault, and Serge Santelli, 2004)

B. Mixed houses

This housing combined traditional Harari house with later extensions of Indian style on the first or second floor. When the Indian type are added above the traditional one; they are accessed by a timber passage open to the courtyard or street. The new ones are rectangular in form with no architectural complexity with the traditional type. On the first floor of the patio new rooms have added to one another side by side overlooking the courtyard through windows while on the second floor has the same pattern of distribution of rooms that are accessed via an external wooden corridor through a wooden ladder. These types of houses are common which simply transformed /or enlarged by adding houses of Indian type without destroying the traditional ones. (Nomination file of 2006, Hisham Morata, 2010)

C. Indian Houses

Indian merchant brought this type of style to Harar after 1887, and most of these houses were built on the peak area of the city. They are simply rectangular in form with two story buildings characterized by wooden veranda on the first floor of the main facade overlooking the courtyard or street. The Indian style house are different from that of traditional ones, the Indian-style unlike the traditional, open to the outside and closes on itself. (Nomination file of 2006, Hisham Morata, 2010)

No.	Types of houses	Number of the houses
1	Ge Gar (complete)	750
2	Partial Ge Gar	412
3	Mixed Ge Gar	96
4	Indian style houses	12
5	Other houses	768
	Total	3038

Table 2: Typology of traditional houses and their number (Source: The CTHB 2006.)

2.7.6. Traditional or/ indigenous knowledge of building construction system

The Harari houses have compounds which are surrounded by continuous walls, but not connected by doors in which several dwellers, and household units reside. It is in this case that several residences share a common one or two kitchens located within the compound, across the patio. The wall in the neighborhood towards the narrow street is a continuation wall of the next compound characterized with gates, simple wooden plunks and sometimes iron doors. When one needs to enter from one compound to the other compound he has to access the other compound from the outer lane.

As of an indigenous technique of construction the vernacular heritages of the city have rectangular plan with large living room called *gidir gar* having numerous raised platforms called 'nadaba' which serve as seat or beds. The traditional houses have five types of *nadabas* with each ranked raised up seat consisting a different name. *Amir nadabas* is reserved for the head of household which is the highest and deliberate strategic place for the protection of the city and the house in case of emergency. *Soutri nadaba* used for sleeping time and formed in between to the right otherwise left of the pillars and the walls. *Gedir nadaba* is the biggest located opposite to the door with visual access to the main room. *Tit nadaba* is the lowest located below *gedir nadaba* conventionally held in reserve for teen-agers. *Gebti her nadaba* is located to the back of the entrance door reserved for women in areas of protected from view. The *nadabas* are painted *Qey afar* (red earth) as a symbolical remembrance of *ge usu* who were killed at the battle of Chelenko. In the corner of the living house one or two cupboards are inserted in the wall for storing clothes and textiles.

As one enters the main living room (gidir gr), there is a doorway (but no door) leading left or right into the kirtät, a side-room with a ceiling only half the height of the gidir gr. The kirtät also has a nädäba. The wall between kirtät and gidir gr sometimes has a window-screen of delicately carved woodwork. Adjoining the kirtät, there is a second side-room, with a low ceiling: the dera, used for the storage of objects which are not susceptible to attack by rats. Since it is in the kirtät that the womenfolk usually stay when the men have their bära (meeting for chewing ch'at and for meditation) in the gidir gr, and since it is in the kirtät

where a young married woman used to live in seclusion for eight months after her wedding (the doorway being in that case shut with a fence of bamboo and a curtain) it may very likely be the "women's room" mentioned by Burton. (Elisabeth-Dorothea Hecht,1982)

There are hollowed containers and displaying of objects at the side of the wall which vary in depth and form are called niches (*Taqet*). There are eleven niches on walls of *gider gar* house. The *Eqed taqet* are symmetrically two niches located in the wall facing to the front entrance door which display symbolical religious objects, old manuscripts and pictures of the family members. *Tilli*(*according to nomination file written as tele*) *taqet* is located above the *edeq taqet* with an ogee-arch shape used to place calligraphy items. There are niches found above the walls of the different *nadabas* with a name carries to which they belong after the *nadabas* i.e *amir nadaba taqet* & *Gebti her nadaba taqet*. *Makhazu taqet* is a small niche located at the base of the pillar (*maxazu*) used to place incense and burner. There is also small niche inside the *nadabas* used to kept shoes. Cupboards are also built to store Ceremonial vestments of the women (*ge ganafi*) at the wall between *gidir gar* and *dera*.(Elisabeth-Dorothea Hecht,1982, Nomination file of, 2006)

On the side wall of the *dera* there is a special niche which used for storing of valuable treasury and jewelry of the household in the painted pottery covered with basketry cone shape called *afflala offal*.

There is a central pillar (*maxazu*) bearing the central beam (*amhil*) either to the left or right of living room where *amir nadaba* located in which two spears (*warham*) used to be hung. The ceilings of the traditional houses are completed with thin wooden trunks stripped of their branches. The *hamil* is larger beam which characterized with its larger size and special shape used to hang ostrich egg (*gurannet aquh*) in the old times while neon lamps in nowadays. (Elisabeth-Dorothea Hecht,1982, Nomination file of, 2006)

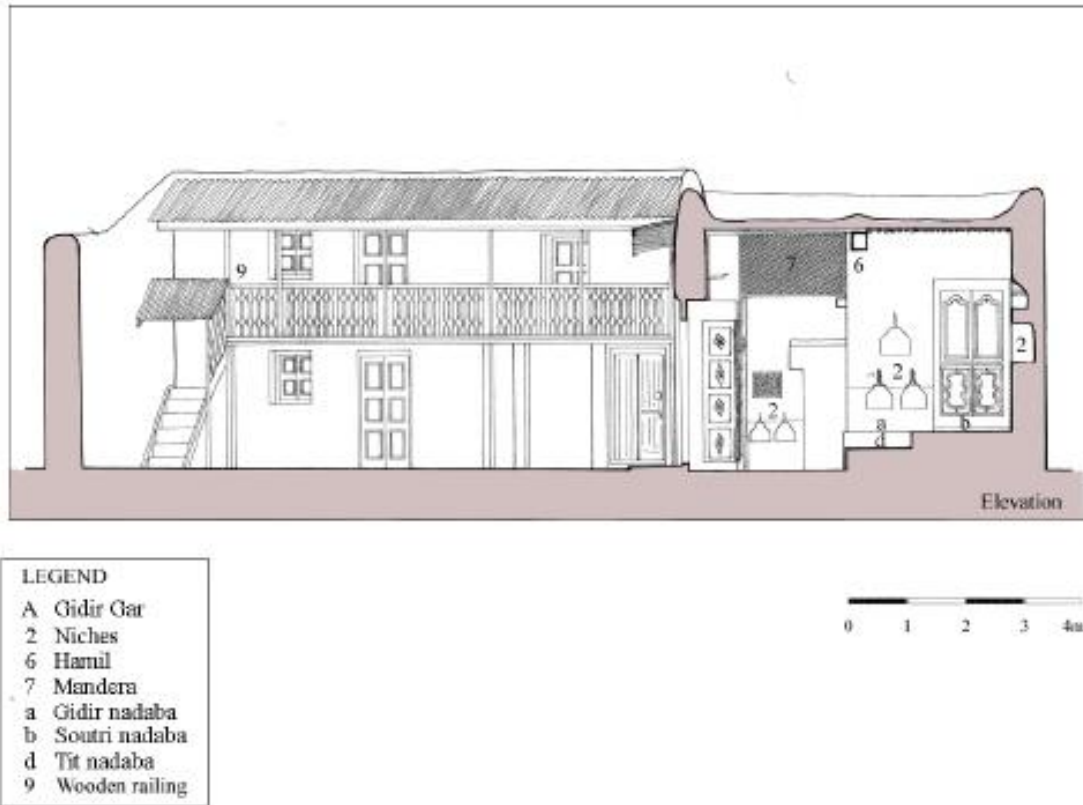


Figure 11. Construction system Mixed house of Khadija Ahmed house
 (Source: Nomination file of Harar, Jugol, 2006)

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter will present the methodological approach used to address the research topic on conservation of architectural heritage and historic cities in Ethiopia, the case of walled city of Jugol. The research methodology employs research design, data collection instruments, procedure of data collection and analysis, which are important to achieve the intended aims.

3.1. Research Design

The research design has been developed based on interview, questionnaires, case study and field observation. The design approach in research methodology matters in the overall frame of the study. The existing theories and practices in relatively to the research problem were the main reasons to select the study approach. So far, the researcher employs descriptive qualitative approach to identify the existing conservation practices, existing condition and key institutional assistance in restoration works through direct observation of the researcher, interviewing responsible officials and experts in the area, insights and sentiments from Advisors.

3.2. Data Collection Procedure

The researcher made basic investigation and assessment prior to the approval of the topic on the summer of 2017. After presenting the proposal defense once the questionnaires and interview items were prepared and revised the first field work had conducted from March,28 up to April 7, 2018 whereas the second field work was conducted from May 27 up to June 3, 2018.

3.3. Research Sampling

The principal objective of this thesis was to identify and discuss conservation practices, of the historic city of Harar, Jugol, through investigating previous restoration proposals, examining the changes using personal observation and interview and institutional collaboration towards the selected case studies. A qualitative research method was used to examine role of key institutional assistance and challenging problems towards the architectural and urban heritages of the city. With the aim of probing further into the

topic interview was conducted with both open and close ended questions to produce rich insights into people's thoughts, and experiences. The interviews were recorded and lasted up to one hour.

3.3.1. Target Population

The Target populations for this study were inhabitants of the city, institutions at federal and regional level as well as managers, conservators, experts and scholars in the field who are involved directly or indirectly to the conservation of the architectural and urban heritages of the city.

3.3.2. Sampling Unit

The sampling unit covers institutions, experts, local communities and scholars who lead the restoration practices with direct involvement on the preservation of architectural and urban heritage of Harar, Jugol.

3.3.3. Sample Size

Since the study is qualitative research, the data collection technique has been employed in-depth interview with four experts from JHCO, one scholar from IES, two experts from culture and heritage office, Harar , one expert from Municipality of Harar, one managerial from regional housing Agency, two experts from Rimbaud House and Ras Tefari House (Sherif Private Museum) and six from local community had been used as interviewed, 3 officials and experts from ARCCH are used for interview, and two group discussions with five members in one group were done with experts and professionals From JHCO and local community (one from JHCO and one from local community), so that the total sample size for interview and focused group discussion were 30 individual members.

No.	Categories	Size	Percentage
1	Group discussion of Experts and local communities	5	20
2	Local community	6	24
3	Scholar, managers and expertise	14	56
	Total	25	100

Table 3: Target Population and Sample Size of focus group and interview of officials
(Source: The Researcher, 2018)

The researcher arranged two focus groups with 5 people in a team. The number was limited to this number in order to allow flow of ideas fairly and so that all members of the group participate on the discussion. Taking more than this number could influence the participation of each individual.

3.4. Instruments of Data Collection

In order to achieve the objective of the study, different techniques for gathering data including document analysis, interviews, personal observations, field notes, and conducting a case study was employed.

3.4.1. Document Analysis

Documents related to the thesis title were collected by gathering information, caring out background reading and reviewing similar researches in this field from Harar culture and heritage Bureau, JHCO, ARCCCH, Municipality of Harar, IES, Addis Ababa University, EiABC, Reports and manuals From UNESCO and documents from Internet, books, journal, electronic document, were united. Theoretical data and ideas have been gathered and analyzed from secondary literature resources dealing with conservation of Architectural Heritages and Historic Cities. Document analysis was made on the area of conservation and rehabilitation, established as guidelines, principles and policies from UNESCO and other advisory bodies. Preservation proposals and reports in the area of study were analyzed from ongoing projects.

3.4.2. In-depth interviews

Interview were used as main mechanisms in data collecting by preparing structured questionnaires in order to get adequate details and findings with regard to the other applied methods. “In this study based on qualitative information interviews are used as effective means of collecting rich data used to understand subtle meanings in the phenomena under focus.” (Nunan, 1992, Zewdu Emiru, 2012). The interview section consisted of structured open-ended questionnaires’. While conducting the structured interview numerous questions were raised spontaneously.

Interviewee questionnaires were collected in three ways. First from professionals working on the area of restoration, second from urban planning developers and third from local community and local builders. To gain several interviewees in the field work from different departments /disciplines and professionals prior communication was made. The interviewees were selected from Authority for Research and Conservation of cultural Heritage (ARCCH), Jugol Heritage conservation office (JHCO), Culture and Heritage bureau, Municipality of Harar city, IES, traditional builders and local community. All interviewees were professionals in the area of conservation of historic buildings and integrated infrastructure developers in the historic town of Harar. The respondents were briefed about the overall structure of the structured interview questionnaires’ and the purpose of the interview in the output of the research before the interview was conducted.

3.4.3. Observation and field note

To collect the primary data on-site observation and survey was undertaken for gathering of information about the study area. The researcher applied these instruments of data collection methods capturing photographs, video recordings, and observation checklist to understand the state of the study area. In addition to observation, the researcher takes field notes, and details which help to compare the changes made with the previous restoration approaches, state of conservation issues and understand existing situation of the historic city.

3.4.4. Case study

The researcher conducted four case studies. The selected case studies are very significant heritage buildings found in the historic town of *Jugol* in which they have a potential to portray their workmanship skills in their construction system. These case studies were designed to make comparison what they look like prior and after restoration, the degree of intervention approach which have been employed and the function proposed after restoration. The specific case studies were carefully selected to enable the researcher identify the different institutional assistance in their conservation and reuse approach.

3.4.5. Focus group discussion

In addition to individual interviews the focus group discussion added potential insight for the researcher in which several opinions, and experiences were shared. Such group discussion was helpful, producing flexible and extensive opportunity how previous restoration practices were executed, and issues on the effectiveness of community-based conservation practices and the involvement of stake holder in conservation works were discussed.

3.5. Methods of Data analysis and interpretation

The researcher started analyzing data in two ways, initially, the researcher inspected the functional and practical project implementation process of the study area through examining existing materials and document analysis. Secondly, the newly data which are obtained from the observations, in- depth interviews, field notes, and case studies to understand the existing situation, and changes on physical intervention, reusing and institutional assistance of the site are analyzed and interpreted based on the qualitative methodology approach. The data are interpreted through the transcription of the findings based on narration in order to portray the findings and the flow of the context of experiences of the participants of the research. The data has been interpreted and presented for the reader in the arrangement of statements, pictures and maps.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1. Analysis and Findings

4.1.1. Conservation and Adaptive reuse practices in Harar, Jugol

Preservation and alteration works started from the Early times. Since the Egyptian were concerned in security, they strengthen the defense wall and secure the historic town from external opponents and intruders. The fortification walls are altered and reinforced several times and construct watch towers on the top of the walls. (AALUND F,1985)

After the Egyptian when the Emperor Menelik forces defeat the Emir's force; six gate called Duke Beri (at present Harar Beri) was opened for the entrance of the Christian kingdom from Shewa to Harar, Jugol. The destruction of one of the most Renowned mosque on *Faras Megala* and recreate it with octagonal wooden structure Christian church of holy savior of the world (*Medhana Alem*) is also one of the measures which has been made during the emperor period.

During the occupation of the Italian period a major urban development was introduced to the city. They introduced road which connects Harar Beri and Argobba Beri passing through the grand central place of *Faras Megala*. It was successfully integrated with the historic fabrics. The physical appearance of the old market place, *Gidir Magala Square*, was improved. They also reconstruct the western part of the walls and initiate the rebuilding of Buda Beri but it remained unfinished. *Asmaadin Bari or/ Shoa Ber* was restored by the Italians with battlements and carefully decorated and adorned with painted glazed tiles. 'As a result, new spatial forms and land uses have come into existence through large scale demolition and reconstruction. These changes are most intensive in the dense built environment of central urban areas where many historic and cultural heritage sites are located.' (Xiaohua Z, Xiangming C, 2016).

Sir Bernard M. Feilden in his book *Conservation of Historic Buildings* defined conservation as preventing decay and manage change dynamically. Taking in to account the physical condition, causes of deterioration and the anticipated future environment of

the historic fabric having in mind minimal intervention approach he categorized seven scales or degrees of intervention approach.

The researcher has developed the seven degree of intervention approach from Sir Bernard Fileden 'Conservation of Historic Buildings' in order to understand and study the degree of restoration practices as a check list towards the World Heritage City of Harar, *Jugol* and the selected case studies. The guidelines used as check list to investigate the previous intervention approach are discussed below.

(1) Prevention of deterioration (indirect conservation);

This approach involves controlling humidity, temperature and its environment without direct contact to the cultural property to reduce atmospheric pollution and traffic vibration. Controlling decay, vandalism, neglect and cleaning and keeping good the overall condition of the historic fabric using regular inspections are also applied in this method.

(2) Preservation of the existing state;

Preservation deals in preventing further decay with direct contact to the historic property using repair when necessary.

(3) Consolidation of the fabric (direct conservation);

This approach refers in to the physical fabric through employing new techniques to secure continued durability and structural integrity by applying and adhesive materials; including injection to detached mural paintings and grouting of the structure.

(4) Restoration;

Refers to reinstating of decayed and missing parts of the fabric to its original state. Its main feature is respecting the original material and additions must be easily distinguishable from the original. Any previous alterations to historic buildings must be respected and preserved and latter additions can be considered as 'historic documents' rather than previous restoration.

(5) Rehabilitation;

It is the best way which keeps historic buildings in use through introducing fewer changes to the structure. Adaptive re use of historic fabrics is the best way for

conservation and sustain the life of the heritage with their historic and aesthetic values. It can be saved and brought up economically and historic structures in to contemporary standards.

(6) Reproduction;

It involves copying an existing fabric and replacing missing or decayed decorative parts to maintain its aesthetic harmony. If cultural property is threatened by environmental factors the original fabric can move to a suitable environment and a reproduction substitutes to keep the unity of the site.

(7) Reconstruction

Reconstruction focuses on reversing non-existing structure based on accurate documentation and evidences, not with guess work.

The conservation and restoration practices in the historic town of Harar, *Jugol*, are increasing from time to time. Restoration of different historic buildings are being undertaken and in place. There are also restoration trends over the fence wall of Jugol and traditional residential houses.

Such conservation approaches which have been implemented in the historic town of Harar, *Jugol* over the past years involve restoration, reconstruction and rehabilitation to replace and rebuild the lost historic fabrics of a building.

In the old city of Jugol adaptive reuse practices are frequently introduced through rehabilitating the historic structures and its compound for compatible proposed functions. The renovated structures are proposed new functions including Museums, Offices, Cultural houses and guesthouses, institutional training center for traditional craft center and cultural centers etc.

There are different approaches to adaptation that some agree on maintaining the same use by just to changing the building performance (Holyoake and Watt, 2002, Laila H & Anuar T., 2014). Douglas, 2002 & Laila H & Anuar T., 2014 however stated "the difference is that the restoration returns a building to the condition it was when originally constructed, whereas renovation modifies a building so that it meets current standards and codes. Although it extends the useful life of the

building, renovation does not involve a change in use. “Heritage buildings will have some useful life that can be achieved through adaptation, hence their sustainability through a combination of improvement and conservation (Lowe, 2004; Kohler and Hassler, 2002; Douglas, 2002; Cooper, 2001, Laila H. & Anuar T., 2014).

Through the assistance of the Italians during the occupation period, a master plan was prepared for the new town of Harar, with a limited approach to the old town of *Jugol*. Introduction of the new roads were part of the Plan. Later on, with the help of UNESCO and UNDP masterplan for the preservation and presentation of cultural heritage in Ethiopia were prepared but it was not feasible. It was only a report which only conveys basic recommendations and indications of future development towards the historic city.

According to the group discussions from the target group conservation works in Harar are conducted using international guidelines and regulations which UNESCO and the advisory bodies establish different guidelines and principles. There are no any regulating manuals on how the intervention approach were undertaken, principles of conservation approach which recognized the local cultural practices particularly at local level and in general at country level. More over there is no guiding principle and instructions on how local community could rehabilitate and restore their residence. It also noted that while approving construction and restoration work near or with in the historic building the municipals haven't any directive and criteria regarding the historic town so they demand the approval from heritage conservation directorate. It is thus the lack of regulation in building height, setbacks, color code, arrangement and compatibility of material usage made the local community to use present-day materials. The delay for approval/or permitting restoration work from the heritage officials and from the municipalities the owners gave up with the bureaucratic approaches and decide by themselves restoring their house through applying new materials and replacing the historic fabric with new item of construction material which has no compatibility.

The regulations and proclamations of the Ethiopian declarations are documents which only state powers and responsibilities of the organizations that are in custody of securing the preservation of cultural heritage so as to bestow for the benefit of future generation

without losing their original character and identity. Mainly such documents don't state ethics and approach of restoration and the organizations didn't establish any approaches that could be used by the local community while rehabilitating their property.

The city drafted five years revitalization project since 2010 of the historic town of Harar, Jugol with an objective of enhancing the quality of life of the inhabitants, upgrading the urban environment and maintain the cultural values and unique architectural heritages of the city through rehabilitating and reusing in to other suitable functions. The reconstruction of the two gates and rehabilitation of several heritage buildings were the initiatives of this project.

The following are case studies, in which conservation and adaptive reuse practices have been assessed.



Figure 12 : Location of case studies (Sources: The Researcher, 2018)

Case study 1. Conservation and reuse of Rimbaud House

It is one of the Indian type building located in the vicinity of Jugol. Its construction period is in the early 20th century. It is named after the French poet Arthur Rimbaud. "The style is broadly characterized by the extensive use of wooden panels, timber

balconies, fretwork, imported polychrome glass window, and carved doorways.” (Flmning,1985).

The building was exposed to different man-made and natural problems which facilitate the structure to look in a poor condition. Since 1989 a project sponsored by UNDP and UNESCO were conducted to prepare a master plan for the preservation of historic buildings of Harar. In 1991 after the preparation of the study sample restoration work started to commence on the fence wall and Rimbaud House, but the project was not successful. Walls on the ground floor which supports the windows were deteriorated, decorated facade was disintegrated, faded and affected by different environmental problems where it looked in bad state of conservation. In the first-floor latrines, and cornices were dilapidated. Peeling off plastering and missing masonry walls were also noted. About 11 Meter of the fence wall was deteriorated and collapsed. Since the state of the historic building and its adjacent buildings were in a poor shape, the conservation project encompasses strengthening and maintenance works such as roof structure, roofing, structural membrane, facade, flooring, walls, ceilings, doors and windows, balconies and balustrades. The conservation project was led by the experts in restoration from the federal government ARCCH and the regional bureau.

The following are major problems which were encountered while the restoration project has undertaken: -

1. Water is an important element used for preparing adhesives materials in the restoration work. The historic town faces availability of adequate water, which resulted negative impact in completing the conservation work of Rimbaud house in the allocated time and cost.
2. Lack of construction companies which were aware of restoration in wood work and joinery. Since conservation demand professionals and technical experts with adequate knowledge of detailing the elements of the historic wooden fabric. The regional bureau invited bidders to work the wooden facade, staircase, doors, and windows but adequate bidders were not found. The bureau ought to bargain with organizations.
3. The location of the building was in an inaccessible spot for accommodating vehicles (trucks) while importing materials used for restoration to the site. Transporting using

- man power was the only alternative but its impacts resulted to be higher in time and resources.
4. The other problem was unavailability of dried indigenous *zigba tree* to find. Even though the region was rich in timber called *Zigba* but transporting dried timbers to the site was one of the challenges. Due to the limited resources and man power in the area, the restoration project was led by experts from ARCCH. Therefore, due to remoteness, the professionals recommended importing the material by the awarded contractor.

In the maintenance work of the Rimbaud house local contractors and experts were involved. For the decorated wooden facade, a local firm called Eastern Engineering construction PLC signed an agreement with the regional culture and sport bureau in Harar which the specification and the working drawings were prepared by the CRCCH, Since it was under the ministry of culture and information. The CRCCH were provided consultation and leading the restoration project. While conducting and executing the facade restoration work of Rimbaud house the contractor imported different kinds of machines to shape and carve the decorated elements of the wooden facade and the external ornamental detailing.

Elias Carpentry work was the local firm which signed an agreement to refurbish and install deteriorated windows, doors and verandahs. Yonis general contractor operated the electrical installation work.

Beneath the windows of the main wall on the ground floor had severely deteriorated and disintegrated. They treated and consolidated it using intermediate wooden beam of indigenous wanza timber (size 10* 10 cm) and local stone of *Hashi* with the necessary cementing.

On the second floor of the main wall flooring was filled of soil and collective cobbles but it was replaced with wooden board by disintegrating the timber called *Wanza*. As main reason, the floor was thick resulted bending and deteriorating the load bearing wooden columns, whereas the other reason was to suitable the future proposed function of the building which will not cause any more problem to the structural stability.

The compound fence wall was reconstructed since the original wall was gone and some part of it was previously restored inappropriately by the dwellers. It was reconstructed using the same material where *Hashi* and mud were used based on the full documentation of the original location and construction material. The processing and preparation of mud mortar were ready for months in which it could reach the strength of the adhesive and cementation degree of the mortar. After the completion of the reconstruction admixture ratio of 1:5:22.5 of lime, cement and sand respectively, the walls were plastered internally and external.

The latrine located on the first floor was improved, new installations were introduced. The load bearing wooden posts was strengthened and the rotten ones were replaced by indigenous timber *wanza* (10 * 10* 3.50 cm). Wooden boards of size (4.10*1.85 m) were laid and 15 cm screed was filled using the local stone *Hashi*. Finally, 8 cm concrete was poured and constructed partition wall of brick masonry.

The internal and external fractured and failed surfaces, and old plastering affected from smoke were removed by scratching to prepare for stucco work and re-coated using the well-suited mix ratio. It is in this approach in which the surface was prepared for the next level of conservation work.

Near to the main building one part of the wall of the adjacent building was in a poor condition and it was intervene by rearranging the masonry wall, repair and consolidating using intermediate beam through demolishing and rebuilding to their original state. Windows were refabricated based on the remains since they were missed and completely destroyed. Treatment was made to strengthen the rafters, struts and corrugated iron sheet instead of replacement to follow the principle of minimum intervention as much as possible.

The restoration practices which have been made were effective. It has to appreciate the methodology, material selection and intervention approach. It has been conducted under strict supervision by experts in preservation from ARCCH by employing skilled manpower and labors. Works which need more caution and technical knowledge were contracted to qualified firms which have the professionals.



Figure 13. Rimbaud house after restoration (Sources: The Researcher, 2018)

The restoration work was not limited only to the historic building of Rimbaud house but it includes adjacent buildings, upgrading landscape work and the canopy of the stair case on the Bridge house. On the Bridge house the loadbearing of Canopy of the stair, Rafters, struts and corrugated iron sheet were renovated. One side of the canopy was loading on the fence wall which cause deterioration of the fence while at the other side was wooden columns which were in state of deteriorations themselves. It was upgraded and detaching the awning from the fence wall by installing *Zigba* wooden columns of 3.8*8*8cm on both sides with base of mass concrete and stone masonry.

Currently the bridge house is under restoration since the main structure of the bridge house was not part of the restoration when the restoration project of Rimbaud house executed. The restoration work included electrical installation, strengthening and grouting of fractured and collapsed walls and floorings, plastering and paintings, replacement of decayed and weathered wooden shutters and membranes. They are now conducting the restoration work under the financial assistance of the French Embassy. This project aims to stabilize the heritage building from further decay and failure. It involves intervention approaches such as strengthening, repair, and replacing failed

structures, damaged and missed elements. After the maintenance work it is proposed to be reused and adapted as a guest house.



Figure 14. The Bridge house (Sources: The Researcher, 2018)

The Historic building is now reused and adapted to a cultural center named after the French poet Artur Rimbaud so that to recall memory of his work while staying in the city. The center has collections of historical manuscripts, thesis, books and display photographs and paintings painted by him. On the ground floor it has a space for the center to investigate the previous archival resources and black and white photos. While leading to the first floor on the wall there are poems of Arthur Rimbaud. The first-floor display paintings, black and white photographs and a room which tells about Artur Rimbaud. It has also a latrine. The second floor also displays photographs and paintings.

As it is stated on the plate located towards the right side of the gate the restoration of Rimbaud house was organized by Harar People National Regional State, Harar culture and sport bureau ,CRCCH (under ministry of culture and information),the embassy of France in Ethiopia, the embassy of Italy in Ethiopia, the French center for Ethiopian studies in collaboration with Addis Ababa university, institute of Ethiopian studies, Institute national des langues et civilisations Orientales, Instituto universitario Orientale, Ethiopian Tourism

commission, Musee Arthur Rimbaud (Charleville-Mezieres), Zigba. The following also contribute; Air France, Alcatel, Alitalia, BGI, Dama Trading, Electric World, Ethiopian Airlines, Fawzi Abdulatif, Glorious, Hilton, IZATCO, Jلال Abdulatif, Mesfin G/Yes oda, National Motors, Nestle, Pifrrre Berge, Renault V.I., ET. RIES, Sheraton Addis Ababa, Société Générale De Surveillance, Safe -Way Travels, M.A. Sherif Private LTD, Total, Transworld, Société Parisienne De Ventilation ET D'Electricite, Yves Saint-Laurent.

Case study 2. Conservation and reuse of Ras Tefari Mokennen house

The Ras Tefari Mokennen house is a two-story building which lies in a 1328 m² area. It was constructed during the reign of Ras Tefari. It is another Indian type house constructed during the late 19th - early 20th century. It is one of the land mark historic structures which are found in the walled town, with decorated wooden facades and doors. The building is characterized by decorated wooden façade on the first floor and ornamented wooden doors. Its construction materials are stone, wood, and metal.

Building condition prior to restoration

The restoration report states that no previous treatment actions were undertaken to slow the degree of deterioration of the historic house using non-destructive, periodic and routine maintenance. But the poor inhabitants applied inappropriate painting to the external wall which were inhabited for the last thirty (30) years. The building was in a bad condition due to lack of proper restoration and over utilization. The house needed rehabilitation works on the foundation, walls, roofs, wood works, ceilings, glazings, site works, electrical installation and latrines. The following were major defects reviewed from condition report which has been made by Imran Abdallah prior to restoration work. (Imran Abdallah, 2009)

1. Defects on wooden elements and structural system
 - Exterior wooden feature such as siding, corner boards, brackets, columns, window and door peeling off their paint.
 - Columns, capitals and decorative exterior wooden elements were damaged.

- Wooden elements were rotten by insects, some balustrade and cornice elements were lost and missed.
 - Water drainage system, down pipes and gutters were deteriorated and damaged.
 - Missed, damaged and stripped glasses of original wooden doors and some were replaced with incompatible metal door.
 - Doors and staircase which are important in defining the historic building of Ras Tefari house were dilapidated except the ones in the front were in a good condition.
2. Defects on masonry wall
 - Masonry wall were crumbled, deteriorated and disintegrated mortar joints, loosened stones, dampen walls and removed off plasters were observed over all the building.
 - Leakage of water, inappropriate drainage system, deteriorated down pipes and gutters resulted for dampness.
 3. Metal elements
 - Deteriorated, weathered and missed parts of metal elements due to corrosion
 4. Roofing
 - Weakened and deteriorated roofing material of corrugated iron sheet



Figure 15. Prior restoration Tefari house (Source: Imran A., 2009)

Degree of interventions and reuse practices

It is in this case which the Harar heritage offices develop a guideline and ethics while conserving and preserving the historic house of Ras Tefari. Since several intervention approaches were employed, the defining characters of the house was identified and documented prior to restoration works. The materials, forms, location, spatial configurations, uses and cultural associations that contribute to the heritage value of the historic Tefari house has been documented while preserving its heritage value.

Different types of intervention approach employed in the exterior and interior parts of the building. For instance, rehabilitation in order to fit the new proposed function (i.e, Museum). Repair & replacement of deteriorated features were necessary and extensions and alterations to the historic place were planned and applied in order to accommodate new spaces for museum. The introduction of bathrooms on the exterior of the building was additions which previously were not functioned.

The rehabilitation project report states that ten standard guidelines were developed in which they can follow while undertaking the restoration work of Ras Teferi house. These are stated by Imran Abdallah, 2009, as follow:

- i. Conserve the heritage value of the historic building. Do not remove, replace, or substantially alter its intact or repairable character-defining elements. Do not move a part of the historic building if its current location is a character-defining element.
- ii. Conserve heritage value by adopting an approach calling for minimal intervention.
- iii. Recognize the building as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties or by combining features of the same property that never coexisted. The building represents the so called Indian-house style that is introduced to the country during the last two decades of 19th century. Just preserve that style.
- iv. Find a use for the historic building that requires minimal or no change to its character-defining elements. Various functions (i.e. hotel, school, office,

accommodation and museum) has been considered and a museum is selected as it requires the least change.

- v. Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.
- vi. Maintain character-defining elements on an ongoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods. Replace in kind any extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.
- vii. Make any intervention needed to preserve character - defining elements physically and visually compatible with the historic place, and identifiable upon close inspection. Document any intervention for future reference.
- viii. Repair rather than replace character-defining elements. Where character-defining elements are too severely deteriorated to repair, and where sufficient physical evidence exists, replace them with new elements that match the forms, materials and detailing of sound versions of the same elements. Where there is insufficient physical evidence, make the form, material and detailing of the new elements compatible with the character of the historic place.
- ix. Conserve the heritage value and character-defining elements when creating any new additions to a historic place or any related new construction. Make the new work physically and visually compatible with, subordinate to and distinguishable from the historic place.
- x. Create any new additions or related new construction so that the essential form and integrity of a historic place will not be impaired if the new work is removed in the future.



Figure 16: Ras Teferi house during restoration (Source: Hisham M, 2010)

The methodological approach to the preservation and rehabilitation of the Ras Tefari house followed by first identifying the state of conservation through evaluating the condition of the historic fabric and elements of the construction material. It's based on identifying the significant features and values of the heritage in particular and the worth towards the city in general. Since the historical building poses a high historical significance and techniques of construction system, it was one of the major reasons which the city thinks to adopt and reuse in to another function.



Figure 17. Ras Tefari house currently sherif private museum & its Decorated door

(Sources: The Researcher, 2018)

The historic significance of the house is attached with the great personality of Ras Tefari believed that he spent his youth in the house. The building was used as branch office for ABSS export and Transport Company during the occupation of Italian period. The *DERGUE* period whose ideology was socialist revolution nationalized the house and was rented poor inhabitants of the town. While many dwellers occupied the building, it was deteriorated due to overpopulation, lack of preservation and maintenance works and other environmental factors. It is in this situation which considered as turning point that the city proposes the historic building to rehabilitate and reuse for spectacular Sherif's private collection.

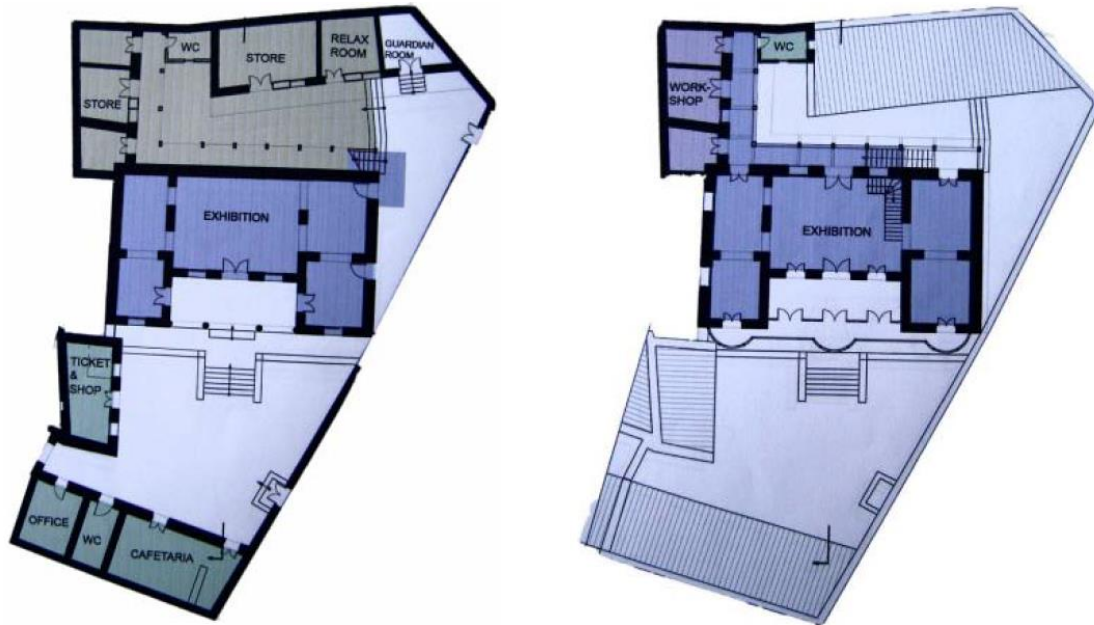


Figure 18. Proposed Ground floor and first floor plan for the exhibition

(Source: Imran A, 2009)

The Abdala Sherif is one of the responsible person who conserve and collect different artifacts of the city. He has established pioneer museum in Ethiopia. The collections are now transferred from his private museum in to the historic building of Ras Tefari Mokennen after the restoration work. The restoration work was financially sponsored by the American government. The first floor of the building is adapted to various artifacts, exhibition, and room for ticket office while the additional houses in front of the main building are used for conducting general workshops. The private museum displays multi-cultural vernacular arts, coinages and manuscripts etc. It is in this house that the only book binding and digitization is practiced and conducted.

Once restoration works were conducted, it doesn't mean that these buildings do not need any more supervision and treatment. Any restoration work has its own limitations and advantages likewise, Ras Tefari house. The maintenance approach was not as successful as Rimbaud House. The historic building require continuous preservation works. On the first floor the cement flooring is deteriorating and exposed causes for weakening the life span of the building. The wooden elements need to be treated and painted to consolidate. One also feels vibration when upstairs.



Figure 19. Current photo of Ras Tefari house (Sources: The Researcher, 2018)

Case study 3. Conservation and reuse of Etege Menen House

The Etege Menen House was one of the known historic buildings located in front of Lij Eyasu house around *Medhane Alem* church. It was constructed during the period when Ras Teferi Mokonen was governor of Harar. Its purpose was to serve as residence for Etege Menen (*Chagula bet*). It was a G+1 building with decorated wooden veranda and a stair case to the right side leading to the first floor. Under the Dergue Period it was nationalized and rented to the dwellers of the local community.

The prior restored condition of the building was deteriorated and dilapidated. The character defining elements of the building are weakened due to the lack of periodic maintenance, Environmental problems and over population in were the major problems encountered. The major sources of the problems were man-made and natural causes. It is now in a good condition since its rehabilitation period.



Figure 20. Condition of the building prior to restoration (Source: JHCO,2018)

The building served as hospital, and later on as a hotel known as *Etege* hotel. It also used as Library, but later after the rehabilitation project it was adapted in to a craft center which currently upgraded in to college. (*An interview with Yemach Zekaria*).

The historic building was rehabilitated without changing the original character of the building. The Renovation/ rehabilitation project includes expansion and addition of other buildings in the compound like the traditional Harari house, wood and metal workshops to accommodate the desired function.



Figure 21. Post restoration of Etege Menen house (Sources: The Researcher, 2018)

Currently, it was adapted to ENAY ABIDA Harari traditional Craft center. It was established with the assistance of Spanish government. Such projects were drafted to be implemented in five regions, but it became feasible in Harar.

The college exercises now five specialization areas such as weaving, wood working, embroidery, sewing (wicker work) & manufacturing of Harari traditional hat.



Figure 22. During training (Sources: The Researcher, 2018)

The craft center gives training in two ways. The first is long term training given mainly to women and its duration is up to 9 months, while the short-term trainings are provided during their leisure time for university students, high school students and others in order to know their culture through intangible practices. After training and specialization in the areas of their practices, the trainees create and generate income by creating micro & small partnership.

Old Harar handicraft activity is one of the best-known traditions which could be encouraged and developed. This should be one of the activities which creates jobs for the inhabitants and economic prosperity for the Old Town. The mixture of activities through which the traditional economic and social types are conserved, should be accepted, and existing ones should be reinforced. It is necessary to establish an inventory of all existing activities, as well as those which have disappeared. A new strategy would be required to improve the conditions and for the presentation of these activities, while encouraging the redevelopment of those which are vanishing. (Maryam, 1990: 413, Asante,2008:78)

The center is now providing training in the five areas for people who came from all the regions. It is now upgraded in to Enay Abida Harari Traditional Craft Training College.

Case study 4. Conservation and reuse of Mohammed Ali Compound

The Mohamed Ali building is another (3rd) Indian type building built by the Indian merchant when they came after the conquest of Harar in 1887. It is a one-story building with a simple rectangular plan characterized by wooden verandas at first floor. The facade of the building overlooked the courtyard. The house is decorated and ornamented with wooden porches and facades which are oriented towards the highest elevation of the city. The wooden verandah and construction in Indian type made a huge influence in the construction of the traditional houses.

The compound of Mohammed Ali lies in an area of 4300 m² with one story main building and other houses in the compound with total of 39 households living. It is one of the nationalized lands and used as public residences where the inhabitants rented at low prices since the socialist revolution in 1974.

The building suffered from serious preservation problems because the inhabitants could not afford the cost for the restoration work of the building. The residents were beyond the capacity of the building in which shortage of facilities like kitchen; toilet and water supply were the challenging problems. The lack of its preservation and maintenance work resulted in the loss of the building's architectural features and threatened further deterioration and potential collapse of the building.

The restoration and rehabilitation project of Mohammed Ali employed several approaches. Documenting and identifying the defined character of the heritage was the principal approach and causes of deterioration were identified and discussed. Finally appropriate approach has been recommended to follow while restoring the historic structure.

The project, restoration proposal was first studied and initiated by the Harar regional bureau of culture and tourism. The project proposal was sent to find financial assistance to ARCCH and 2,000,000.00 ETB (two million birr) was allotted for the preservation. The budget was planned to be feasible in three phases where at the first phase 600,000.00 ETB was sent to the regional office. A local contractor called Getachew Yimer contracted to perform the rehabilitation work of Mohammed Ali compound but the efforts were not

successful and terminated because of the low performance on the methodological and intervention approach. The budget then transferred in to Abadir kindergarten which was one of the modern schools in Harar, Jugol.

The condition of the building became worse and resembled to be collapse. The total estimating to accomplish the project was 6,022,718.00 ETB. The regional government was started looking for financial and technical assistance to the German embassy in which the regional government can cover the 20% (which includes compensation and relocation costs) of the project while the 80% of the project would be cover by the embassy. But the request was not accepted by the German embassy.

It was the Turkish government which assisted the financial and technical assistance of the restoration project. The Harar regional government state on this proposal that on the completion of the restoration project was to establish hotel to be administrated by both governments.

The condition of the building required professionals who are highly qualified and compatible durable materials. The Turkish had to bring technical experts and the materials used in the restoration from Turkey. The restoration project employs various degree of the intervention approaches. It involves rehabilitating the historic structure through repair, replace and consolidate the historic defining character of the building. It also includes additions and expansions for guest house in the compound.



Figure 23. Prior & post restoration work

(Source: JHCO & The Researcher, 2018)



Figure 24. During restoration work (Source: JHCO, 2018)



Figure 25. The current condition of the building (Source: The Researcher, 2018)

Since the launching of revitalization program in 2010 by the Harari regional government several heritage buildings were restored. The restoration project of Mohammed Ali was part of this program. In addition to the preservation work it aims enhancing economic activities through adapting and changing the restored structures in to income generating functions. The initiative of the project comes from the regional bureau of Jugol heritage conservation office.

The rehabilitation project is completed. Since the building is the house of the late ottoman empire and the first ottoman consulate were open in Harar. The Turkish government works as medium administration as consultant manager for ten (10) years and as contractor for the renovation of the historic building. Now it is proposed that the house to be a museum which the culture of the two countries could display and there are also souvenir shop and guesthouse are among the new functions.



Figure 26. The compound and its vicinity (Source: The Researcher, 2018)

The effort made by the Turkish government has to be appreciated because the challenging condition of the heritage building and how after they were able to save its defining elements. Since the condition of the structure was in such a poor condition, many people question the applied methodology of intervention approach. According to

Nebil Bekri, improvement is one of the approaches used to restore the stability of building and compound. The definition of conservation is now one of the debatable topics in the world in which different principles, approaches, and definitions are developing.

Some of the respondents believe that the rehabilitation project was effective and appropriate while others argued that there were a strong political and cultural motive. There were complications between the TIKA and the Government of Ethiopia concerning the payments of custom duties. While importing materials for the restoration project, the contractor was requested to pay tax, but they were not willing to pay since their company or government was a non-profit organization supporting the Ethiopian Government in rehabilitating the nation's legacy.

In such case, it is suggested that the government should provide tax incentives or duty-free privileges for contractors or companies duly conducting restoration works. Since the field requires high investment, NGOs like TIKA should be encourage to invest and their effort in the preservation work supported. Countries like Turkey that are experienced and master the philosophy and approach of restoration works, which benefit not only the retention of the heritage building they restore, but also the transformation of technological and knowledge to the local experts and the country, means a lot. Because the materials used in the restoration work were imported from Turkish sources. Some scholars argue that why was the importing materials necessary, rather than using local materials. Having left the building as it was before in the poor condition proper documentation were needed, but in order to save the building, the researcher believes that, the work has been done on time even though, its intervention approach affected the authenticity of the historic building and employed improvements on the outlook of the facade. The basic forms of the building were not changed. The major problem in preserving the historic city of Harar was that finding the wood material is difficult. The materials used in this restoration project were almost all imported from Turkey.

4.1.2. Community-based Conservation Practices

The situation of the ordinary house of the vernacular architecture of Harar has been now threatened by different factors. The Harari people have a tradition of removing garbage from their old city to the place where they have to be dumping sites. They used donkey to remove and collect the waste remaining outside of the walled town and keep their town clean and immaculate. The Harari people, with the involvement of local community and first and foremost led by Abdala Sharif (owner of sheriff private museum), conducted major preservation and restoration practices. It is in this time that vast community - based conservation practices were conducted in the fence wall, historic buildings, a lot of mosques and so on were restored and preserved through the help and collaboration of the local community. According to different interviewees, when the local community began to conduct preservation works in their homes, the Culture and Tourism Bureau was providing with financial support, purchasing and transportation of the original materials for the community (as acquiring these materials to use in preservation work was difficult for the local community). A foremost reason was that, using these traditional materials requires much greater financial overhead than contemporary materials, which can easily be found anywhere. In Harar, the most challenging construction material to find is wood.

According to Ahmed Zakariya, the Harari people have a tradition of cleaning and involved basic preservation works. The local community looked -after their houses when rain fall washes and grasses grow on the roof (top) clear the bushes and paint their houses using lime wash. This culture is currently not practiced as much as previously, because during the old times the residents were farmers and they were familiar with selecting quarry stone and traditional construction materials and transporting them with their donkeys. Selecting a quarry to provided stone or construction purposes requires a special knowledge, which can feel the stone that will be durable in the environment. In the historic quarter of *Jugol*, fences, houses and the walls were constructed with stone material called *Hashun*. The construction materials used for the walls and houses in the city were rough stone and granite which are found in the surrounding local area. The mortar used to bind was clay. The “red earth” (*qeh afar*) which was used to compact the ground floor and the *naddaba* of the traditional houses. Combined crushed stones and

clay are used to plaster the internal and external part of the traditional houses and finally whitewash or lime stone was plastered and painted. The building materials were extracted from the landmark of Mount Hakim located near Harar. The wall of traditional houses is finished with white -washed lime stone (*nacih afar*) while the floor and visible parts of *nadaba* are smoothed with red earth (*qeh afar*).

So, the culture of conservation was the knowledge of the individual farmers, where-as in the present time, a gap was created in the transfer of the knowledge to experts. It is in this case that the local community at this time applies contemporary materials like the introduction of cement and corrugated iron sheet were observed, a result of the impact of the vast stage of globalization.

The significant achievement of the community involvement in conservation work made a great contribution in protecting the heritage ensembles of the city from further deterioration. It should be noted that involving local community in heritage management, conservation work and creating awareness cannot be under -estimated at the city level and more than that. Meanwhile the descendants of the inhabitants are the creators of the city, the residents still have the traditional knowledge on how to maintain their cultural inheritance. The involvement of local community as allies can bring anticipated outcomes for sponsored and initiated revitalization projects to the historic city so to enhance the life of the local community economically, culturally and environmentally.

4.1.3. Assistance of Key Governmental and Foreign institutions in Restoration Practices

4.1.3.1. Governmental Institutions

The outstanding historic monuments are part of the living heritages of Harar which form the traditional Muslim urban settlement comprised of various vernacular architectures of the Harari house, mixed house and other types of structures and historical urban settlements from the obscuration of Harar, Jugol.

In Ethiopia nationwide policy for the conservation and preservation of cultural heritage started from the second half of 19th century during Emperor Menelik II. The imperial

proclamation was the only existing legislation in Ethiopia but never enforced (Unpublished ARCCH document). Proclamation no. 229/1966 was the first act of legislation which creates a base of safeguarding heritages of the country (Ibid). Proclamation no.36/1989 cultural heritage proclamation was found with a derivation of the 229/1966 (Ibid). The1997 cultural policy of Ethiopia was endorsed by the council of FDRE on October in 1997 (Ibid). A Proclamation to Provide for Research and Conservation of Cultural Heritage, 209/2000 established the Authority for Research and Conservation of Cultural heritage (ARCCH) with clear duties and responsibilities (Negarit Gazeta, 209/2000).

The main governmental institutions which are involving directly or indirectly with the preservation of historic buildings and urban development of the historic city of Harar, *Jugol* are listed and discussed their power below. The Ministry of Culture and Tourism (MCT) is the lead in the sector and have a responsible body in preserving, conserving and documenting of the cultural heritage of the country.

Authority for Research and Conservation of Cultural Heritages (ARCCH)

The ARCCH is a federal institution established under the proclamation no. of 209/2000, with organizational structures of the institution including six main departmental disciplines such as the National Museum of Ethiopia, Archeology and Paleontology, Cultural Anthropology, Heritage restoration and conservation, Inventory and inspection of cultural heritage and heritage research & central documentation and five supportive departmental services such as administration and finance, international and public relation, planning and programming, Law and auditing.

The authority establishes with four main objectives which are stated in the *Negarite Gazeta 209/2000* as follow.

1. *Carry out a scientific registration and supervision of Cultural Heritage so that, Cultural Heritage, as bearing witnesses to history, may be handed down from generation to generation;*
2. *Protect Cultural and Historical Heritages against manmade and natural disasters;*

3. *Enable the benefits of Cultural and Historical Heritage assist in the economic and social development of the country and*
4. *Discover and study Cultural and Historical Heritage.*

It also has the following powers, duties and responsibilities.

1. *Registers cultural heritage in cooperation with the appropriate bodies;*
2. *Protects and supervises cultural heritages;*
3. *Gives the necessary education on preserving of cultural heritages;*
4. *Collects cultural heritage in museum and displays for visitors and also organizes exhibitions;*
5. *Carries out study and research on cultural heritages;*
6. *Gives permission for cultural heritage restoration and conservation work;*
7. *Controls illicit trafficking and looting of cultural heritages, and take all the necessary measures and devises ways for the restitution of cultural heritages, which have been taken illegally out of the country;*
8. *Provides professional and technical support for preservation and protection of cultural heritages as well as for study and research activities conducted on some regional administration;*

Having seen these powers and responsibilities; the authority involvement on the preparation of nomination file for the registration of the city under the world heritage list and any conservation and restoration work which have been conducted in the historic town have the involvement and the share of the authority in line with the local and international institutions who are involving in preservation works. For instance, inventorying heritages and developing conservation polices, approving and permitting grand restoration works and developments which are planned to be conducted through evaluating the documents and sending experts to the site to make sure the feasibility of the proposed proposal to the ground. Some finished and ongoing restoration projects like the Rimbaud house, Abadir kindergarten school, the Lij Eyasu house and other historic buildings and fabrics of the city has the involvement of the authority by allocating budget for their restoration and conservation works, providing experts or professionals for consultation and leading the restoration projects. In general, any development proposals,

restoration works and other activities regarding the world heritage city of Jugol the authority have direct involvements in making outstanding decisions.

Jugol Heritage Conservation Office (JHCO)

The JHCO is established with the proclamation no.50/1997 with an amendment for Harari people regional state “Historic *Jugol* movable and immovable heritage conservation office establishment proclamation no.21/1992”. Since the inclusion of Harar, *Jugol* as world heritage and the city attract several local and international institutions and developers so, this office was established at the national level to manage and control the movable and immovable heritages of the city. The JHCO have a lion share and conducts several restoration projects with the assistance of ARCCCH and several international institutions like the American Ambassador Fund, French Embassy, Spain Embassy and Turkish Government. For instance, the restoration of Ras Tefari house, Etege Menen house and Mohammed Ali compound. In the historic town the responsible institution which is the ARCCCH and JHCO allocate budget for their preservation and conservation works at federal and national level respectively. The office establishes with a main responsibility to control all illegal constructions, preventing historic buildings from demolitions, controlling and permitting renewals, modifications and restoration works in the historic town. This may also conduct in collaboration with the municipality of the city.

The Municipality of Harar

The municipality city of Harar is the responsible organization in developing and integrating infrastructure like construction of sewer system and laying of cobblestone. They also permit construction works at the Jugol and follow and control the application of the permitted constructions. It is also responsible and coordinating office for the preparation of local development plans (LDP) and integrated development plans (IDP) at the historic town of Harar, Jugol and the new town of Harar. Public open spaces are administrated and upgraded under the municipality of the city.

Regional Construction and Urban development bureau

The Construction and Urban development bureau consult and supervise restoration and construction works which has been undertaken and ongoing projects. This institutional branch passing permission works to the JHCO and gives an approval dependable up on the recommendations from JHCO.

The administrative kebeles inside Jugol

The seven administrative kebeles are the branch organizations which receive construction works permit and process them to the responsible bodies. They manage and administered kebele houses and protect illegal constructions in the city, likewise public houses are administered by Rental housing agency.

4.1.3.2. International and Non-governmental Organization Assistance

Since 1989, government sponsor projects in collaboration with CRCCH and international donors or financial assistance from UNESCO & UNDP was made with a primary goal for preparation on master plan for the safeguarding of historic town of Harar. Later on, UNDP support financial support with a project titled as conservation of Historical Town of Harar (Project No: ETH/86/008/C/0199). This period was the turning point in which the city get attention from local and international assistance. Such International assistance for the preservation of cultural heritages of the fortified town of Harar are growing from time to time from UNESCO and other intergovernmental organizations. The involvement of ICOMOS and ICRROM was crucial as they are advisory bodies of UNESCO, through preparing reports, evaluate and inspect the state of the city through periodic inspections.

As document analysis and group discussions resulted indicates that diplomatic missionaries or Foreign embassies with regard of their diplomatic branches are collaborating with bilateral agreements on the preservation and managing of heritage buildings in the city. They are key partnership in raising fund for full of the preservation and adaptive reuse of the outstanding historic buildings and provide technical support after and during preservation through conducting workshops, technical training through preparing exchange programs to their countries.

The Government of France

The Embassy of France in Ethiopia, is one of the diplomatic missions, which assisted the restoration work of the Poet Arthur Rimbaud House. With the help of financial support from this embassy currently the Bridge House is under restoration which they will transform in-to gust -house.

American Government (Ambassador's Fund for Cultural Preservation (AFCP))

The AFCP program was established by the U.S. Government in order to support developing countries' efforts to preserve and maintain their cultural heritage. Since its commencement 2001, Ethiopia has been received nine grants of cultural heritage preservation projects, over the past fifteen years, to enable the preservation of sites in Yeha, Guzara, Lalibela, Sheik Hussen Shrine, Hager Fiker Theatre, Teferi Mekonnen Palace in Harar, Mohammed Ali House in Addis Ababa, Lalibela, and Yemrhanna Kirstos.¹

The effort being made by the US Ambassadors Fund has to be appreciated because through this program several heritage sites were saved from collapse. Through the financial assistance of AFCP to the Ethiopian Government in Harar, preserving the historic house of Ras Teferi was one of the successful projects, which have been undertaken in the historic walled town of Harar, Jugol.

Spanish Government

The accomplishment of the restoration and rehabilitation project of Etege Menen house currently adapted to Enay Abida Harari Traditional Craft Training College was accomplished with the financial assistance of the Spanish Embassy in 2015.

Turkish Government

The Turkish government through its Turkish Cooperation and Coordination Agency (TIKA) was involved in providing the financial and technical assistance for preserving and restoring the historic building of Mohammed Ali and its compound, which was built

¹U.S. EMBASSY IN ETHIOPIA, <https://et.usembassy.gov/education-culture/cultural-programs/>

during Ottoman Period around 1912. Thanks to the TIKA, the restoration program prevented the historic building from collapse and deterioration since the building was neglected and subject to different deteriorating agents. CAGDAS ELK. INSAAT DEKORASYON RESTORATION SAN. VE TIC. LTD. STI was the company appointed by TIKA to undertake the restoration, landscaping and rehabilitation of the last Ottoman Consul's residence.

TIKA is a government subdivision of the Prime Minister of Turkey. The department conducted different restoration projects in different periods and countries. Among them in Bosnia the oldest Ottoman-built mosque called Ferhadija were renovated and in Ethiopia the rehabilitation project of the Nejashi Mosque built early 7th century by the companions of prophet Mohammed which was one of the earliest mosques in the world, located in Tigray region, in the town Wukuro and the last consulate house at Harar, The Mohammed Ali were the projects which were part of their rehabilitation project.²

The international support on rehabilitation of the historic buildings in the walled town of Jugol, was summarized in tabular form.

No	Building name	Date of origin	Restoration period	Institutional assistance	Adapted to
1.	Rimbaud House	Early 20 th century	Start date 1996 Completion Date 1999	French Government	Museum/library/ exhibition and research center/handicraft production and sales
2.	Ras Tefari Makonnen House	Late 19 th - early 20 th century	Start date 2004 Completion date 2007	American Government (Ambassador's Fund for Cultural Programs); private donations	Private museum/archive/book binding workshop/Harari music preservation studio

² <https://ethiopiaobservatory.com/>

3.	Etege Menen House	Late 19 th - early 20 th century	Start 2012 Completion 2015	Spanish Government	Regional Tourist Office/Handicraft Training / Demonstration Center and Sales
4.	Mohammed Ali	Early 20 th century	Start 2015 Completion 2017/18	Turkish Government (TIKA)	Proposed to be museum of the two countries (Ethiopia & Turkey), guest house and souvenir shops.

Table 4: Rehabilitated historic structures with international institutional support in Harar, Jugol (Source: Gottert, 2014 & JHCO & ARCCH, 2018)

4.1.4. Challenges of Architectural and Urban Heritage conservation in Harar, Jugol

4.1.4.1. Lack of public spaces and court yards

The spatial size or shape of the public open spaces in the setting of urban area define their cultural, political and socioeconomic significances of the city. According to Benjamin W. Stanley, Barbara L. Stark, Katrina L. Johnston, & Michael E. Smith typology of open spaces are categorized in to seven categories such as (1) food production areas; (2) parks and gardens; (3) recreational space; (4) plazas; (5) streets; (6) transport facilities; and (7) incidental space.

The walled city has a strong relationship and continuous interaction with in the local community. As Harar is a center for cultural activities and religious learning with mosques as spiritual value. The city was renowned with open and not crowded spaces with identical characteristics of active city with its commercial activities as a brand.

Jugol has some great social hierarchy direction which is called *Afocha* as community organization, *Ahli*-family network and friends as *marinyet*.

The city lacks open play grounds, yards to accommodate recreational areas for children and the above-mentioned community relationships. Harar was known for its agricultural practices, food productions and medicine inside the compounds but due to the imbalance between the land and the population inside the city, interior court yard home garden areas are used to construct additional houses and services for kitchen, toilets, etc. As observed by international food production experts, “In lower-income neighborhoods in developing countries, such as in Nairobi, local food production at the intermediate and residential scales often represent a critical addition to household income and nutrition rather than an ideological pursuit (Freeman, 1991; Castillo, 2003, Benjamin W. Stanley, Barbara L. Stark, Katrina L. Johnston, & Michael E. Smith, 2012), a situation that may have arisen in ancient low-density urbanism as well” (e.g., Stark and Ossa, 2007; Fletcher, 2009, Ibid). When they also poured their court-yards with concrete to smooth their compound as well as for new construction, this led to an unfortunate, unintended consequence, the drying of the rivers around the historic city that contributes to water scarcity in a region already threatened by drought and lack of water resources.

In addition, in Harar, private gardens, public and government offices and sacred places are the most significant sources of public open space where social interaction and recreation activities are performed. Due to the density of population growth in the city private owners were currently enclose their gardens and yards to secure the limits of their compound and increase their security.

4.1.4.2. Illegal constructions:

The historic city is not an individual architecture but a living city with unique original urban Muslim settlement and heritage ensembles which keep their authentic settlement setting from the past to present. People who are living in the historic city demand a better way of life and infrastructure. To fulfill their need they introduced unrecognized encroachments and constructions using modern materials which has no compatible value to the original traditional houses.

For example, the building below is constructed in the compound of Etege Menen which was illegally constructed. According to *Nebil Bekri* the building is illegally constructed

using contemporary materials and its construction has been terminated and stopped. Illegal constructions have the power to change the aesthetic view of the city and outstanding buildings. The introduction of new materials and new form resulted disturbing the traditional historic settlements. It needs to regulate and control under strict protocols which new construction could examine their building height, texture, facade, mass of the structure and where, how and why to apply are important elements which will help to manage the proposed final outlook from disturbing the visual integrity of the old town. It is thus which the inhabitants motivate them to build their traditional houses using the modern construction materials and technologies.



Figure 27. Illegal construction in the compound of Etege Menen
(Sources: The Researcher, 2018)

Some of the people who reside in the historic town of *Jugol*, upgrade their house using hollow concrete block (HCB) and cement materials. Their intention was to rehabilitate their home from the problem that have been exposed. Its degree of renewal may vary from house hold to house hold. Some of them paint and plaster their house with cement and some of them also decorate the enclosure walls with different colors which are not compatible with the historic construction material in terms of composition, durability and color.



Figure 27. Newly constructed and traditional houses (Source: Mohammed,2018)

It is also noticeable that the residents build additional houses in line with the traditional and historic houses, using modern construction materials with steel frame window type, to rent. These actions facilitate the deteriorating agents which shorten the life of the historic building and add to the need for the residents to replace their original traditional house with a modern building. Such action disturbs the authenticity and integrity of the city.

The walled town of Jugol is a city in which low -income people reside and settle. So, the low-income people are unable to restored their original house using the original construction material and technique as main reason, materials used for restoration are expensive. Due to this reason they rebuild their house using the contemporary material which is available easily. Due to the tightness of space some of the local community added upstairs above the Harari historic traditional houses.



Figure 28. Building constructed using HCB and cement plaster
(Sources: The Researcher, 2018)

The Harari type of the traditional houses and their compounds are now threatened by the intrusion of new styles on the facades and introducing of newly -constructed houses. The space of the compound is now compacted and tight as the people demand more shelter to accommodate the current population. This leads to overcrowding and lack of space to breathe. It is clearly visible that the city is to some extent changing their historic fabric and life -style.



Figure 29. Comparison of original houses and additions (Sources: The Researcher, 2018)

The main problem is that the people are not aware of preserving their historic cities. Hence, in some areas streets and waste disposal are blocked, due to the illegal settlement of squatters. One tangible evidence is that the local community -suffers from transporting dead body to the graveyard through the internal alley ways and streets. The first picture shows that the corpse was jammed and/or wedged between the historic building and the newly constructed house. The second picture show that the dead body fell while the community reversed the coffin in order to pass through the street.



Figure30. Moving dead body in narrow lane (Source: Mohammed, 2018)

Around the main road from Harar Beri to central point of Feras Megala the owners expand the size of doors so as facilitate their commercial transactions. Their wooden doors are replaced with metal and steel doors and add shades on the top of the buildings which disturb the view and beauty of the city.



Figure 31. Expanded metal doors and corrugate iron sheet shade

(Sources: The Researcher, 2018)

According to *Nebil Bekri*, director of the *Jugol* Heritage Conservation Office, the partial demolished picture shown below is located on the left side of Feras Megala when you pass from Harar Beri to the renowned central part of the city. It was given to a private investor to rehabilitate and use for other compatible function, but the investor demolished the historic structure to rebuild it. It was a story building where the first-floor part of the building was completely demolished and the community saved the ground floor by informing the responsible body about the destruction of the historic building.



Figure 32. Partially demolished historic building. (Sources: The Researcher, 2018)

4.1.4.3. Rapid population Growth

Development pressure is one of the impacts which cause the historic town of Jugol arose by manmade. Several inhabitants of the city demand to live in the Walled city because of security, rental houses and life is much easier than that of the new city out of the walled town. The crowdedness and overload capacity of the city lead to construct new additional houses on the courtyards and upper floors with materials which has no compatibility to the historic buildings. The Neighborhood Development Plan for Historic City of Jugol, indicated that the population density inside Jugol was estimated to be 700-800 people per hectare, while the density of the housing unit was 173 houses per hectare. Kebele 1 and 2 has high population density while the remaining five kebeles (3,4,5,6,7) have lower density of population estimated to be 349 -726 people/ha that is because of the first two kebeles are used for residence while the others consist commercial activities.

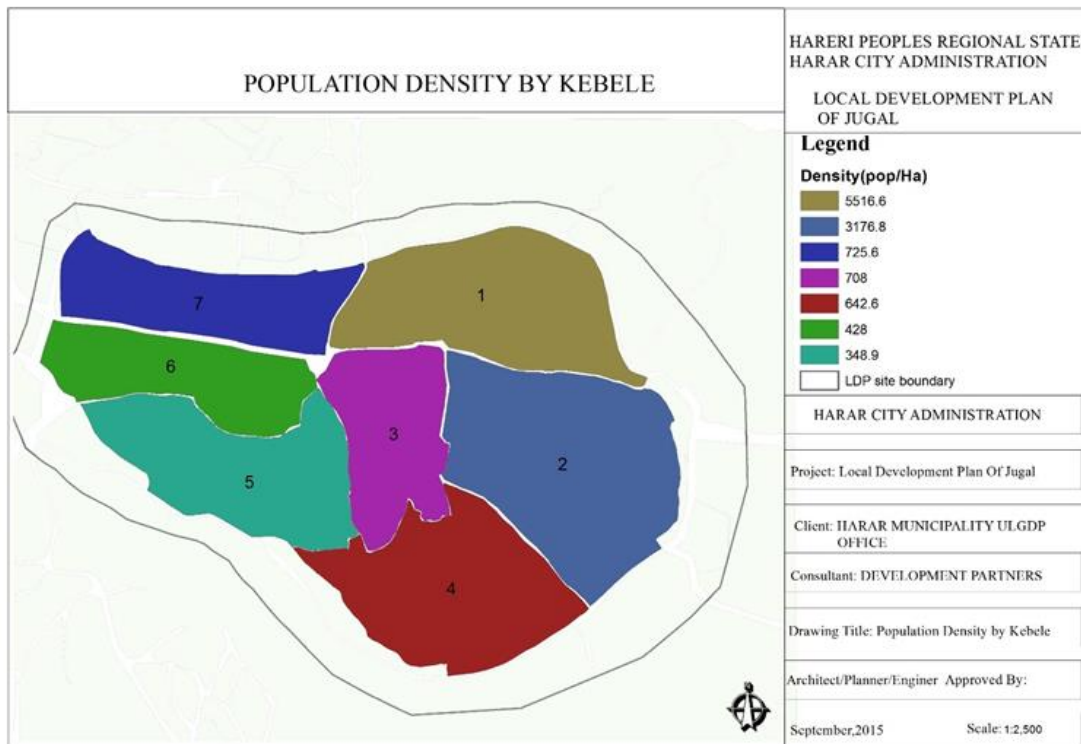


Figure 33. Population density of Jugol by kebele.

(Source: Harar Municipality ULGDP, 2016)

The average density of the seven kebeles is 1649.5 people/ha. This is also very high. For instance, the ministry of urban development and construction (2012) provided the urban density standard for different level of urban centers. In accordance with this, small towns shall have density of 100inh/ha, medium towns 200inh/ha, large towns 300inh/ha, cities 400inh/ha and metropolitan 500inh/ha. The average density of Jugol is more than three times that of density of metropolitan city stated in the revised standards for structure plan preparation and implementation.³

4.1.4.4. Unrecognizable Integration of Infrastructure Development

Historical cities are required to update and adjust to modern requirements in order to fulfill the demands and expectations of the living community from their environment. In the historic town of Jugol vast infrastructure development was conducted in different periods and it is still underway to fulfill the contemporary needs of the society. Even though such approaches were applied and practiced in the historic center, they lacked integration and quality. The current installation of high tele communication towers and the poles used for electrical installation with their distorted and intermingled wire cables are damaging and disturbing the aesthetic values and the visual connections of the historic quarter. The introduction of the cobble -stone also had a drawback, after the lay down of the cobblestone the alleyways or streets were collect water and humidity inside them later on the historic structures exposed to Rising damp. This plays a significant role in shortening the life of historic structures of the city. Since the city were designated under the World Heritage Center a vast study on how to integrate development inside the Jugol city was undertaken by the Harari regional government in line with different multidisciplinary stakeholders. The production of line map of the Jugol and related studies were incorporated.

³ Report of the Neighborhood Development Plan for the historic city of Jugol, Harari peoples regional state,2016.



Figure 34. Distorted poles and cables of electrical installation

(Sources: The Researcher, 2018)

4.1.5. State of Conservation

As historic town with a pattern of traditional Muslim settlement a various changes or threatening factors are recognized from time to time. Starting from the preparation of nomination file and to the present day the Jugol heritage office has been identifying the state of conservation of the heritages of the city based on measuring criteria heritages in a good condition, heritages in fair condition and heritages in poor condition. Even though such analysis and investigations were conducted, as the city life is functional and continuous various issues are facilitating the destruction and weakening the valuable assets of the city.

4.1.5.1. The walls

The walls were not surrounded regularly with geometrical forms due to the topographical situation and parts of the settlement of the historic Muslim city, that was emerged prior to the construction of the fortification of the fence wall on the 13th c. Even though different restoration practices applied in different time intervals to stabilize the fence walls. The remaining original wall that was not intrusion is now under a threat to different

environmental and man-made causes. It is now in a poor condition. Parts of the walls are intervention with unrecognizable cement material which didn't have compatibility in terms of nature, texture, volume and color with the original nature of the local construction material.

They lack periodical investigation and treatment approaches which right now facilitating their deteriorating agents. Some parts of the original wall are now collapsing and other parts are deteriorating. Relatively the previously restored parts are currently under good condition which helps them to resist the environmental factors due to the nature of the material that was used to restored and strengthen them.



Figure 35. Partially ruined part of the Jugol wall (Sources: The Researcher, 2018)

The condition of the fence wall is now in an alarming period in which it require special attention of its conservation and treatment works. The stake holders on the preservation of cultural heritage need to make free the one side linked constructed houses from that of the wall. Such factors facilitate to shortened the life of the wall in line with the other environmental factors.

The restoration works of the wall require high knowledge and skill specially in its current condition. The nature of the original traditional wall was that of stone masonry of local stone called *Hashi* with cementation of mud mortar. Introducing new nature of stone in restoration works of the traditional wall has to integrate with the existing original wall. It has to guarantee the safety and continuity of the remained original wall. The JHCO and other responsible institutions should have to aware of the restoration approach which planned to apply in the historic fence of the wall. The intervention approaches applied have to assess their short and long-term impact to the original wall. Its acceptability

depends on the continuity of the original material and knowledge of the traditional construction. The institutions need to work in routine maintenance through periodic inspection and survey assessments to protect the wall from further collapse and demolish.



Figure 36. Rebuilding the demolished part of Jugol wall (Sources: The Researcher, 2018)

4.1.5.2. The gates

As the Muslim city was defined with defense wall, five gates with extremely important location were provided to accesses and control the movement of the city in and out based on the availability of water supply and geographical possibility. According to the local community and the remaining evidences of the surviving gates, these doors were closed with two wooden flaps openings and constructed by assembling together with the walls. But later on, two of the gates were recreated and rebuilt with completely modern construction system and material, whereas three of them are still survived with their original character and nature of their material. During the Italian period near to the gates an entrance was added to accommodate vehicular accesses and passage. The gates such as Argoberi, Suqutatberi and Assumberi are still integral and they are less in services or active since the opening of the vehicular access along them. They are in demand of urgent maintenance. In the meantime, they have been under mismanagement through the

period of the Italian occupation. The walls and gates are a witness which survived over the centuries, but now they are exposing to tear and wear of the original wooden doors.



Figure 37. Picture of Suq tat bari & Argo bari (Sources: The Researcher, 2018)

4.1.5.3. Architectural heritages

Jugol as historic city has comprise valuable heritages as individual buildings and ensembles of historic structures which has been now exposed in to the deterioration and dilapidation agents resulted from lack of proper maintenance and repair plan. The medieval walled town survived for a long period of time by preserving the heritages and legacies of the city which are now facing from different deterioration factors such as age, environmental factors and lack of appropriate usage and over population reside within the historic city as a whole or compound level as a house hold case. Since 1988 several studies have been undertaken in the historic walled town to investigate the condition of the buildings and social life with in the city. The city is now threatening the historic buildings and manifestations of the social life.

The arraignment of the city historic buildings, grand mosques, streets and the gates were strategically based on the five neighborhood squatters. In the residential district and street of Girgir mekina buildings with balconies of wooden lattices and arched metal doors were present which later replaced for security matter. The old city conjures up an image of dilapidated buildings narrow twisting lanes and traffic congestion on the reestablished streets. (Jara H.,1990)



Figure 38. View from Mohammed Ali compound (Sources: The Researcher, 2018)

After the city announced the revitalization project several traditional Harari houses, Indian and mixed houses were rehabilitated and adopted in to other functions which the city can enhance the cultural, economic and social life of the inhabitants. Even though various restoration practices were undertaken as a single building level or compound level, in the evolution of the town from the old times different periods of heritage buildings and neighborhoods were integrates which affirm imprints of the then society. So, it needs to approach and make a neighborhood rehabilitation tactic in which the quarter can be adapted to community-based activities with making the indigenous people active in the area so as the inhabitants can have better infrastructure and meet the demands which up-to-date city can provide in the modern world. As a result, the inhabitants can then maintain their intangible aspects and tangible attributes of the city.



Figure 38. Dilapidated Indian type house (Sources: The Researcher, 2018)

4.1.5.4. Streets

The street network has a character of narrow winding streets consisting of public and private and semi-private streets. Streets in the historic town of Jugol, were designed to accommodate pedestrian walkability and animals not for vehicular transportation. In Jugol there are principal streets which used as a main route from the gates to the different quarters/neighborhoods of the city. There are also short cut streets which individual houses connect their house to their neighborhood and to the main routes. The width of streets varied from place to place for instance in the commercial centers during the occupation of the Italian period the main routes to the four gates except the Shewa Beri were intervention to accommodate vehicular passage. Where as in the inner city there are also narrow streets which accommodate passing at once only one person while others can pass loaded donkey and camel transportation.



Figure 39. Streets in Jugol (Sources: The Researcher, 2018)

4.2. Discussion and Result

4.2.1. Conservation practices

Historic cities incorporate valuable tangible and intangible attributes inside them. Heritage buildings require conservation and treatment to pass from one period to another period for encouraging future generations. In the historic town of Harar, *Jugol*, several conservation practices have been undertaken from the old times through the involvement of local communities. The urban growth of the city has witnessed several achievements which enhance the outlook of the current historic buildings. Numerous developments were conducted within the historic city such as replacing and reconstructing significant mosque to Christian church and introduction of major buildings within and outside the fortified town.

Later on, the Italians played a significant role in the Urban integration and infrastructure facilities towards the historic quarter and a new mosque were constructed. The Italians also put their imprints on the restoration and rebuilding of the historic wall and gates of *Jugol*. The recognition of the historic city under the World Heritage List enable numerous restoration works through drafting Several guidelines, standards, reports and guidelines in order to manage the historic quarters and significant heritage values from further deterioration and possible impacts which can severely damage the physical property.

According to Gregory & Douglas, “Rehabilitation is the recycling of buildings restoration and new construction” (Peter A. Bullon,2007). The conservation approach applied in the historic town is mainly Rehabilitation. Many of the rehabilitated historic buildings were proposed to possess new functions. The four case studies were rehabilitated to new life. They enhance identity of local community, pledge sustainable development and continuity of the significant heritage buildings. Restoration works of the walls, gates, and heritage building aims to returns to their previous original state. Whereas rehabilitation engage in qualifying outstanding heritage buildings of the city of Harar, Jugol through modifying parts of the buildings and reusing their life in to suitable function.

Conservation practices employed in the historic Walled Town of Harar, *Jugol*, was assessed based on the category of Sir Bernard M. Feilden who stated seven degrees of intervention approach in his book of *Conservation of Historic Buildings*. Since the damages or threats to historic buildings was varies from building to building, besides their means of intervention also differs. The level of the treatment has to be minimal and enlighten the degree to what extent has to be approached. Restoration, reconstruction, rehabilitation, repair, preventive conservation and consolidations are among the approaches which has been employed to conserve the historic structures from the threat which they were exposed to.

The historic town has numerous heritage buildings which have very significant value in which they have the capacity to convey and reflect their workmanship and traditional skills. The conservation practices which has been conducted has brought very significant point towards the inhabitants of the city, the life of the buildings and the city. These practices show the lessons learned in which one conservation from another has become better.

The results indicate that numerous restoration and rehabilitation works of heritage projects are reused and proposed in to new function except buildings under restoration. Since the city preserve and convey a message of traditional Muslim settlement characterized by narrow maze streets and fence wall, several efforts of preservation works were carried out from time to time. The city also promotes revitalization projects which will enhance the quality of life of the dwellers and enabling sustainable

development through conservation and rehabilitation of significant heritage buildings. Most of the restoration works were conducted mainly as individual building or as compound level but the city demands a neighborhood-based approach which living community, streets, urban qualities and cultural practices could prolong for a long period.

The aim and purpose of the current restoration practices was to preserve significant heritages buildings which contribute and carry an image of a period where building construction and technique could bear through retention of character defining elements of the city by providing a new function which could enhance the view of the city.

4.2.1.1. Methodological approach

The methodological approach in conservation practices of the city with the involvement of local community were mainly applied with a knowledge and guidance of traditional builders. The local community was the main actors that have been involved actively in the conservation - preservation works. The local community and traditional builders know the technique on how to construct, prepare mortar, select quarry and construction materials with their experience and local knowledge. Later on, efforts for safeguarding heritage sites of Harar, *Jugol* preservation document were prepare in which it could guide conservation approaches in the historic quarters or proposed site.

Having seen such practices, the CRCCH later ARCCH and Harari culture and tourism bureau were in a mandate of safeguarding of cultural heritages of the city. Professionals became leaders for conservation works through the start phase of its investigations and documenting condition of the building, preparing methodological approach and degree of interventions with their level of knowledge and technological usage. For instance, in conducting restoration work of the Rimbaud House, technologies were limited like camera to filming the condition of the building and the changes made during and after restoration, computers were difficult to find although reports were written in type writer where their visibility has to be questioned. Interventions and changes were theoretically written as report. The proposals for the applications were mainly sketch not computer based.

However, the three conservation case studies of Ras Teferi house, Etege Menen House, and Mohammed Ali compound respectively has good documentation as seen comparatively from the previous Rimbaud House. Proper conservation documentations were not conducted in all the case studies whereas restoration documents were prepared for tendering consisting of condition report with limited photographs, bill of quantities and proposed conservation approach. The proposed approach was written in words rather indicating on how to conduct using sketch and CAD. Pathological maps were not prepared to mapped and discussed the size and nature of crack.

Whereas in the Mohammed Ali compound TIKAs were responsible for the preservation of its funding and consultation the work. The JHCO hasn't any document on how TIKAs could undertake the conservation approach and technique towards the heritage building or to evaluate and examine the nature of the material which proposed to be applied and used. At this stage knowledges towards conservation are grown from time to time and methodological approaches were improved and standardized in to worldwide acceptable ethics and approach. Conservation is a science which require high knowledge, technological advancement and multi-disciplined professionals.

4.2.1.2. Material usage

Materials used in conservation works has to be compatible as much as possible in terms of nature, weight, and availability. Most of the restoration practices undertaken in the historic town of Harar, *Jugol*, are compatible in terms of material usage with that of original ones. New special mixture of lime, cement, and sand were used and produced while strengthening. It is in thus conservation and rehabilitation of Mohammed Ali is different from the other case studies and some major restoration works in the city. The building material was imported from Turkish with all the contractor, work man ship and technicians to under taken the restoration works. Materials used in restoration has to be culturally, historically and environmentally acceptable and compatible with the original construction material.

4.2.2. Reusing practices

In the historic town of Harar after the socialist revolution of DERG period Heritage buildings with significant values has been nationalized and rented as residences, offices and other functions without preservation and conservation works. Adapted re-use approach is one of the most important means of heritage conservation. In the historic city of Harar, *Jugol*, reusing heritage building through rehabilitation is an option which experienced and protect cultural heritages from demolishing and secure their sustainable and continuity.

The concept or attitude of adapting heritage buildings in to museum, cultural and community center grows from time to time. As of the result achieved in selected case studies were positive and significant. Private owners start to question JHCO to remodeled and adapted their traditional houses in to museum, in order to display their valuable cultural practices and traditions of the people at their house. So, the initiative of adapting a heritage building in to new sustainable function was raised by organization who is in charge of restoration practices whereas at present the awareness was grown with in the inhabitants and request a help on rehabilitating and reusing the heritage buildings they own.

The historic city of Harar, *Jugol* has been adapted several outstanding significant heritage buildings in to new suitable functions which can enhance the culture and historical values of the city. Result and survey indicate that several modifications have been made for the reusing processes. The researcher discusses strategic approaches of adaptive reuse based on the concept of Plevoets & Cleempoel.

4.2.2.1. Typological strategies

The researcher has investigated the four case studies on reusing practices after restoration works of the significant historic structures. The adaptation processes were based on the space and the structural type. The classifications or typologies of buildings are community/public buildings. These significant properties adapted in to Museum, exhibition area, library and research center, hand craft center and demonstration center

and sale. There are also efforts in which significant buildings of private residences were rehabilitated and giving a new life in which, they can serve as a museum and guest houses.

4.2.2.2. Technical strategies

In order to fit and accommodate the proposed new function, the historic building must have strengthened and stabilize in the required standards of the building. During the intervention approach prior to adapting in to the desirable new life or function technical strategies has been provided and employed in which it can upgrade and guarantee the stability and continuity of the function. The buildings, load bearing structures including the walls, columns, timber frames have been strengthened. The internal and external surfaces, floors, roofs, facades, and compounds were restored and consolidated. Improvement have been made on Electrical, & Sanitary installations, waste disposal, and quality air movement can flow inside the building. Since the selected case studies were previously inhabited by the dwellers, their state was in a poor condition. Intervention and conservation approach guarantee the stability and continuity of the historic buildings. For example, as it was illustrated and discussed in the findings in detail deteriorated elements and structural elements were replace and consolidate in the four case studies. Likewise, additions and improvements also employed technically to accommodate the proposed function. The structural system, building envelop and safety and resources requirements were upgraded.

4.2.2.3. Architectural strategies/strategic approaches

The selected heritage buildings convey or reflect a significant workmanship skill and knowledge of construction system. The strategic approach for the rehabilitation includes different approaches which the architectural and physical character could enhance without affecting its outlook using insertion and additions with the compound or on the building. Almost all of the selected historic structures prior to conservation and reusing were in a poor condition. The intervention approach employee recycling and treating of historic materials through corrective maintenance, additions and recreating part of the building. To fit the new proposed function interior parts of the buildings were remodeled using materials assurance or guarantee structurally safety.

4.2.3. Assistance of stake holders in conservation work

In the preservation of heritage buildings, the involvement of multidisciplinary fields or stake holders is an essential part. Conservation work has not been only the mandate or responsibilities of the conservation institutions who engage in the field. In order to promote the rehabilitation projects and preserve significant heritage buildings of the city, the involvement of stakeholders in terms of financial and technical assistance plays a vital role. The identified key institutions involving in the conservation works in the historic town include governmental, community, international organizations and embassies through their diplomatic missioners.

In the campaign for the preservation of the significant heritages of the city the involvement of various stake holders as alliance has to highlight and appreciated. The conservation institution has a significant contribution in persuading political decision makers, policy makers that will have an impact on providing integrated development and sustainable conservation approach towards the historic city center of Harar, *Jugol*.

As a key player at a national or local level, governmental heritage institutions who are responsible for preserving cultural heritages of the city are ARCCH and JHCO respectively. Efforts at rehabilitating and revitalizing the historical buildings and historic city centers of *Jugol* in supervision and permitting construction works the Municipality, *Kebeles* and housing agencies are governmental stakeholders assisted in the field. The involvement of the local community has made a significant contribution in the conservation works which has been conducted in the past decades and with ongoing projects. The international organizations like UNESCO, UNDP, ICCROM, and ICOMOS are also involve in providing financial, technical aspects which the World heritage Site could maintain its significant values of the historic Walled city through periodic inspections. Foreign governments were also involved in the preservation works through their diplomatic missionaries. The American Government (Ambassador's Fund for Cultural Programs), French embassy, Spain government, and Turkish government, TIKA are among the foreign governments assisted the conservation works financially and technically.

The institutions involving in conservation works has to consider the responsible institutions, professionals or experts in the field of heritage conservation and local communities on the ongoing projects and future plans. The participation of local stakeholders, community and international assistance has to inspire and appreciate in order to anticipate in research, preservation works, share knowledge and experience and prepare guidelines for sustainable conservation approach towards the historic city of Harar, *Jugol*.

4.2.4. Challenges of urban and architectural heritages

Historic cities and architectural heritages with culturally and historically significance are threatening by different causes of deterioration. Buffer zones and core zones are important in preserving of historic districts and architectural buildings to regulate and manage outdoor encroachments and developments within the walled city. The illegal constructions, arrangement, texture, color code and introduction of new materials are disturbing the visual integrity and authenticity of the historic city of Harar, *Jugol*. The walled town is not limited to the historic structures, urban quarters and streets, fence wall and other qualities but also inhabitants which demand modern standards of life. The inner city of the walled town is limited to physically integrated development. Caring capacity of the city is increasing from time to time and resulted in to over crowdedness. Inadequate infrastructure which resulted a negative impact on vehicular accesses in case of emergency. Insufficient fund for maintenance works and lack of proper preservation plans leads the city to weaken and deteriorate the historic fabric of the city. The surviving historic fabrics including the walls, historic buildings, gates, the historic quarters and distinctive architectural features with its significant elements of streets and town scape of *Jugol* are in need of conservation. It is necessary to follow a holistic approach in which state of conservation and major challenges of historic city of Harar could identify and approaches with best preservation solutions.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. CONCLUSION

The result of the study was organized based on descriptive qualitative method in which data were collected using interview, discussion and case studies. Though, the study emphasized on the restoration practices and key institutional assistance in conservation works. Major problems and state of conservation of urban and architectural heritages of historic town of Harar, *Jugol* has been assessed and discussed.

One of the basic objective was to assess restoration practices in the world heritage city of Harar, *Jugol*. However, the form of the traditional Muslim city has left significant traces in the urban development and setting of the present town of *Jugol*. The Egyptians restored and rebuilt the enclosure wall and built ramparts because they were concerned with security matters. After reoccupying the city, Emperor Menelik introduced several buildings within and outside the walled city. The replacement of the renowned mosque around Faras Megala with the octagonal church called Medhane Alem (Holy Savior of the World). During the Italian Occupation, various developments took place, such as the introduction of the roads to the walled city, one of the successfully integrated developments. Rebuilding the Shewa Bari, strengthening of the enclosure wall and construction of the last mosque in Harar were among the Italians' major interventions.

Several campaigns were conducted in restoring the walls of the city, historic buildings and traditional houses. The international campaign to prepare a master plan for the presentation and conservation of the historic town of Harar, *Jugol* was among the government -sponsored projects by UNESCO and UNDP, but the study was not implemented.

Furthermore, the study reveals numerous buildings with outstanding universal Value where restored and rehabilitated with local and international assistance. The Rimbaud house, Ras Tefari house, Etege Menen house, and Mohammed Ali house and its compound were among the principal restoration works undertaken in the historic quarter. The restoration approach of these buildings was measured and evaluated according to the concept of Sir Bernard M. Feilden who stated in his book of '*Conservation of Historic Buildings*' using the 'seven degrees of intervention' approach.

The intervention approach employed in *Jugol* was mainly rehabilitation of historic buildings and their adaptive reuse is the significant feature of this approach. The seven degrees were applied one way or another, while the rehabilitation projects were executed. In the preservation, efforts enormous conservation practices were achieved by the local community.

The Ministry of Culture and Tourism is the leading partner of the sector in which different institutional branches have a role. The ARCCH and JHCO are the responsible governmental institutions in the preservation work. Foreign governments are also involved in the maintenance work through their diplomatic missions providing financial and technical assistance, such as the American, French, and Spanish Embassies and the Turkish Government (TIKA).

Finally, it has to be stated that the state of conservation of the architectural and urban heritage of the city has several grounds which increase their deterioration and dilapidation period. Lack of adequate maintenance: some of the inhabitants recreate irreversibly their historic buildings using contemporary materials, insufficient financial funds and lack of public awareness and administrative organizations are among the challenges. Overpopulation due to migration from other areas might resulted to the replacement of the indigenous population, and development pressure which resulted to lost tangible attributes and intangible knowledge.

As a result of the changes in material, construction technique, building height, and wall color, which are character -defining elements of the traditional heritage, that severely affect the identity and historic urban form and the intangible knowledge of the society.

5.2. RECOMENDATIONS

To ensure the sustainable conservation approach of architectural heritage in the historic city of *Jugol*, the following mechanisms are recommended:

A. Conservation Approach

- Prior to conservation, careful investigation should be conducted to document and identify defining character defining elements and the significance values, construction system and architectural features of the historic building.
- A detailed restoration plan should be elaborated, including the geographic location of the building, construction materials, technologies applied and selection of technical workmanship.
- It should document the historic information of the building, construction methods and techniques used, subsequent alterations, and the state of conservation, prior to and after restoration work.
- The approach employed should be a reversible with minimal intervention approach. To preserve better and retain the originality of the historic building, the approach should have at minimal approach and it could be recovered without losing of the historic fabric when needed or better mechanism of preservation was identified.
- Combination of proper mix ratio mortar should be developed to use in conservation works of masonry and plaster filling so as to limit or avoid the introduction of cement material.
- Any stake-holder involving in conservation works should have to consider the local knowledge, architectural integrity and compatibility of materials through identifying construction and structural system, full geometrical symbol/pathologies of cracking, and their diagnosis of the deteriorating factors with a standard and clear methodological treatments of their intervention approach and available solutions to major problems.
- Reduce illegal construction works and inappropriate modifications and treatment approaches which affect the authentic value of the city through creating

awareness to the local community so as they can grow sense of pride and belongingness

- Adapted and rehabilitated buildings should be inspected through periodic supervision and monitoring program to evaluate the effectiveness of their new functions and their current conditions. An appropriate schedule and a plan for maintenance need to be develop and implemented, including the on-site training of cleaners and maintenance workers in the required techniques for upkeep of the historical building and its original fabric.

B. Organizations and policy framework

- Institutions, which have a common interest in the historic city of *Jugol*, like conservation and development work should have discussed and created a mechanism of bridging the gap, which can perform and comply integrated and recognized development with common ground plans towards the historic city.
- A policy frame-work should have to be develop in order to accommodate an integrated development strategy in to the historic town of *Jugol*, which targets to the enhancement of the local community life.
- Heritage conservation bureaus should have developed mutual plans that can be meet through the arrangement from federal level to the regional or local level.
- The ARCCCH and JHCO should draft standards of conservation documents, laws and principles in the local context in constitution with the local community and stakeholders, which will assist the conservator or site engineer while possessing conservation practices and inspect the degree of the intervention approach.
- Conservation works shall not be limited to governmental institutions especially to the sector of culture and tourism bureau only. All sectorial departments should consider and integrated protection and preservation of cultural heritage in their plan. The local community, private owners and local governments shall have sense of ownership so as they can contribute their own share. Appeals to international donors need to be through an inclusive joint frame work.

- The role of the community in different aspects of conservation work like in the planning process, identification of sites, work on sites, and use of the site should include an opportunity to evaluate and examine the achievements of the projects.
- The responsible organizations should prepare a comprehensive all aspect of conservation manual and guidelines for the inhabitants on how to preserve and maintain the traditional buildings and the historic houses they live in.
- The responsible stake-holders should monitor the state of built heritage through periodic inspection of conservation work to protect the site from the deterioration of historical fabric and the loss of its authenticity.
- Local skills, knowledge and techniques of construction, which are vital to preservation work, should be identified and documented.
- Campaigns to promote heritage conservation should have approaches to commence and motivate stake-holders to engage in restoration practices.

C. Implication for additional research

- Additional research is required to understand more fully the role of the local community in decision-making about the use and the upkeep of traditional buildings, such as houses, mosques, shrines, the lanes, streets and market place, and the Jugol wall and its gates and traditional system of sanitation.
- Further research into the role of women, clergy, shopkeepers, etc. in building ownership and decision-making about their modification and maintenance.
- Further research about community needs and desires for change to contribute to improved health and welfare, such as better access to water and sanitation, better circulation through the town, better air quality, etc. This study needs to be integrated into study on the UNESCO guidelines for protecting the World Heritage site so that recommendations can be developed about the types of changes that are needed and possible in the Jugol and its buffer zone.
- Further study about the World Heritage site and the opportunities and threats related to it.

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Annex 1. Questionnaires

Ethiopian institute of architecture, Building construction and city
development (EIABC)

Addis Ababa University

Questioners to be filled by respondents

Dear respondent:

I am currently pursuing my master's degree of conservation of urban and architectural heritage at the Ethiopian institute of architecture, building construction and city development (EIABC), Addis Ababa university. I am currently working towards the completion of my post graduate degree s partial fulfilment, the research titled as: "Conservation of Architectural Heritage and Historic Cities in Ethiopia a case of the walled city of Harar." Hence, I kindly request you to fill in these questioners since your response has significant contribution for the successful accomplishment of the study.so you are cordially invited to provide the guiding information.

Part 1: Demographic outline

1. Sex Male Female
2. Age 18-25 25-35 35-45 45-55 55-65
3. Educational back ground
 - No formal schooling Primary school completed
 - Secondary school completed Certificate Diploma
 - Degree and above others _____

1. How are restoration works or/ practices implementing in Harar? What type of restoration methods have you observed in Harar?
2. What are the most effective approaches used to measure the degree during supervision of conservation-restoration works? In your opinion, what are the best methods?
3. What in conserving architectural heritage are used? including pathologies, treatments restoration techniques and available solutions to major problems. Have you noticed changes in methods recently?
4. What major challenges are encountered in the historic quarter?
5. What do you suggest as possible solutions for overcoming those challenges in the historic quarter?
6. How are historic buildings rehabilitated and adapted for new uses?
7. What are the opportunities and challenges faced in adapting historic buildings for new uses?
8. What was the role of the community in different aspects of conservation work? Planning process, identification of sites, work on sites, use of the site etc.
9. What was the anticipated benefit to the community of the conservation of the site? Did it come about?
Is your organization involve in the preservation and conservation work?
10. What was your organization's role?
11. What specific restoration work did you accomplish?
12. How can heritage became better integrated with economic development, tourism and sustainable development?
13. How can Harar Jugol heritage best be managed in the future? How can it be protected, conserved and interpreted?
14. How do you explain the state of conservation of the architectural heritages of the city?
15. Is there any legal framework that can compel private owners to restore their property?

Yes No

If your answer is 'yes', please state them?

16. Are you satisfied with the previous restoration work that has been done?
17. What factors did you face in controlling new construction in the historic center? Is there any legal issue to regulate? if yes, state it here?
18. Is there any Muslim traditional institution involve in the preservation or conservation practices?
Yes No
- If your answer is yes state it here
19. List the organizations/associations involved in preservation and conservation work under the following categories.
- i) Governmental organizations
 - ii) Intergovernmental organizations
 - iii) Non-governmental organizations
 - iv) Academic institutions
 - v) Community associations
 - vi) Religious association
 - vii) Private sector/ Private owners

Annex 2: -Medium term Protocol between HPNRCHTB &TIKA

**PROTOCOL FOR
MEDIUM-TERM ADMINISTRATION AS CONSULTANT MANAGER OF THE LAST
OTTOMAN CONSUL'S HOUSE AT HARAR
BETWEEN
HARARI PEOPLE NATIONAL REGIONAL STATE CULTURE HERITAGE AND
TOURISM BUREAU
AND
TURKISH COOPERATION AND COORDINATION AGENCY (TIKA)**

For the purpose of maintaining attachment and cooperation between two countries increasingly and strengthening current historical and cultural connection between Republic of Turkey and Federal Democratic Republic of Ethiopia,

Republic of Turkey Prime Ministry Turkish Cooperation and Coordination Agency (hereinafter referred as TIKa) and Harari People Regional State Culture Heritage and Tourism Bureau (herein after referred as HRCHTB),

Parties hereby agreed on issues mentioned in this Protocol for the ten year (10) medium-term Administration as Consultant Manager (herein after referred as *Administration*) of the Last Ottoman Consul's House and structures around, which are brought to Harar cultural life through restoration by TIKa within the frame of "*Project Agreement on the Rehabilitation, Restoration and Landscaping of the Last Ottoman Consul's House and Structures Around at Harar between Turkish Cooperation and Coordination Agency and Harari People Regional State Culture Heritage and Tourism Bureau*" which is signed between parties on 22/01/2016.

PARTIES

Article 1

Parties of hereby this Protocol are Republic of Turkey Prime Ministry Turkish Cooperation and Coordination Agency and Federal Democratic Republic of Ethiopia Harari People Regional State Culture Heritage and Tourism Bureau.

SUBJECT AND SCOPE

Article 2

2.1 Subject of hereby this Protocol is Medium-term Administration as Consultant Manager of the Last Ottoman Consul's House and structure & facilities around, which are brought to Harar cultural life again through restoration by TIKa within the frame of "*Project Agreement on Performing Environmental*



1



Planning and Rehabilitation of the Last Ottoman Consul's House and Structures Around at Harar between Turkish Cooperation and Coordination Agency and Harari Regional State Government of Culture, Heritage and Tourism Bureau” which is signed between parties on 22/01/2016. Administration subject include the structures restored by TIKa and the structures to be restored in this context.

2.2 Immovable(s) and facilities, which is subject to *Administration*, cover buildings of which restoration is performed by TIKa and buildings of which restoration will be performed in this context.

PURPOSE

Article 3

By this Protocol, it is hereby purposed that protecting historical structures of which will be administrated by TIKa, strengthening historical and cultural connections between two countries by the help of courses, education programs, exhibition and similar activities which are planned to be realized at these structures and contributing to cooperation between these two countries which is increasing day by day.

OBLIGATION OF THE PARTIES

Article 4

4.1 OBLIGATIONS OF TIKa

TIKa,

4.1.1 Shall protect structures and facilities of which administrated by TIKa within the scope of protocol and ensure protection of their unique architecture.

4.1.2 Shall determine content and scope of courses and other activities which are mentioned in article 3 in the direction of consultations that will be realized with HRCHTB

4.1.3 Shall report courses, exhibitions, educational and similar activities that will be performed at complex to HRCHTB.

4.1.4 Shall not be responsible for all kinds of taxation that might arise from *Administration* or running process of the complex.



4.2 OBLIGATIONS OF HRCHTB

HRCHTB

4.2.1 Shall ensure getting all kinds of necessary permissions and approvals which are required to be received local or central official bodies for realization of Administration procedure and registration of Administration procedure to the relevant registry.

4.2.2 Shall provide necessary support for putting protocol provisions in to practice as soon as possible.

4.2.3 Shall write supportive letter of tax exemption to federal government for materials imported for the purpose of Last Ottoman Consul's House and TIK, A must inform the need before 30 days.

4.2.4 Shall provide necessary support to local official bodies by ensuring necessary communication and coordination in terms of providing services such as electric, water, telephone and similar which might be required during Administration and running relevant complex under the protocol.

4.3 MUTUAL OBLIGATIONS AND GENERAL PROVISIONS

4.3.1 Parties shall ensure coordination by making attempts before relevant bodies for the purpose of taking all kinds of necessary measures in terms of solving problems that might occur during running the complex.

4.3.2 Parties shall cooperate for running area that will be used a historical, cultural and touristic complex within the frame of activities including educational activities and experience share in terms of subject pursuant to completion of Administration procedure.

ADMINISTRATION EXTENT

Articles 5

The details of administration mechanism will be prepared by two parties in the future.

IMPLEMENTATION

Articles 6

The Protocol shall be implemented mutually by two Parties. In this regard, a specialist whom will be assigned by TIK A and HRCHTB as one for each shall undertake relevant coordination, monitoring-evaluation and reporting works in terms of putting provisions of the protocol into practice.



SETTLEMENT OF DISPUTES


Article 7

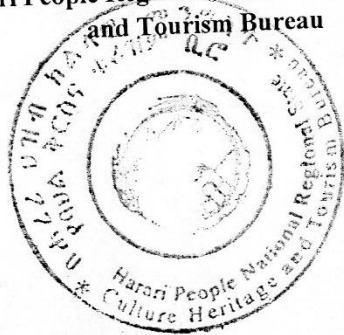
All kinds of disputes that might arise due to interpretation or implementation of hereby this protocol shall be settled by parties fairly through Regional President and Turkish Ambassador to Ethiopia. If they could not settle disputes they will be judged by the constitution of Federal Republic of Ethiopia and regional constitution.

FORCE

Article 8

Hereby this protocol which consists of four (4) pages and eight (8) articles and which is arranged as four (4) copies of which two copies are in Turkish and two copies are in English respectively, pursuant to approval by relevant bodies of the parties, enters into force on .../.../2017 when signed by relevant authorities of the parties, the agreement shall remain in force for a period of 10 year and shall be automatically extended by 10-year interval upon the expiration unless given notice of termination by the contracting parties. Even though Turkish and English texts are respected equally, as two parties understand English well for signing document English is prevail.


Abdulhakim Abdi OMER
Bureau Head
On behalf of the
Harari People Regional State Culture Heritage
and Tourism Bureau




Fazil Akın ERDOĞAN
Coordinator of Addis Ababa Office
On behalf of the Turkish Cooperation and
Coordination Agency

