



Self-help cooperative housing

Potentials and limitations as a housing delivery option

The case of Tana *kebele* in Bahir Dar

By

Dawod Abdie



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Declaration

I declare that this thesis has been carried out by me with the advice of Ato Abraham Workneh submitted for the master's degree at the Ethiopian institute of Architecture, Building construction and City development, Addis Ababa University, is my own independent work and has not been submitted by me to any other university/institution.

Addis Ababa
October, 2012

Dawod Abdie

Dedication

This work is dedicated to my father, Abdie Indris, who passed away last month, prior to the completion of this work, on May, 29th, 2012. My father was a major source of support, advice, guidance and encouragement in a long journey of my educational life. I am thankful to him for inspiring me through his effort. The finalization of this work would mean much to him.

Abstract

Housing the low income households has been one of the critical urban problems in Ethiopian cities due to high rate of urbanization. The same is true in Bahir Dar. The City Administration aimed to achieve one housing unit for one household in 2015 through integrated systems of housing delivery mechanism, including cooperative housing delivery. Even though cooperative housing was proposed as one strategy for housing the low income and Bureau of Cooperative Promotion is organizing housing cooperatives, currently the role of cooperative housing is not well defined. The land allocation for cooperatives was terminated before three years. The increasing growth of squatter settlements and overcrowding manifests the existing housing problem of the city. This calls for the study of potentials and limitations of each housing delivery options. Based on this the thesis set out to identify the potentials and limitations of aided self-help cooperative housing with scheme of core housing for low income households in Bahir Dar. The unit of analysis is the housing process. The focus is on collective ownership, core house provision, collective action and participation. For the depth study of the housing process case study design is selected. All three aided self-help housing cooperatives are selected in Bahir Dar with the criteria of availability of data, self-help concept and cooperative housing for low income households. Since they have the same structure and the same housing development scheme, they were analyzed as one. Core issues are analyzed from data gathered through document study, observational study, photography and interview of 42 households out of 60. The findings of the study identified that collective ownership, collective action, core house provision and participation of low income households are the potentials which create economic and social benefit for the beneficiaries. Absence of use and social mixity, opportunity cost of being involved in collective over private work (free rider problem) and non-flexible core house design were the identified limitations. The findings reveal that self-help cooperative housing has a potential that could be used as an alternative way of mitigating the housing problem of low income households in the city. Based on the findings in the research the recommendations are forwarded with proposal of design typologies in different contexts of the city.

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This work can't be finalized without the support, guidance, assistance and encouragement of some people next to the almighty God. So it is imperative to acknowledge them.

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Last but not least, my thanks go to my family for their advice, assistance, patience and encouragement. I am thankful to my parents, my mother Tihun Essa and my father Abdie Indris, for their encouragement and guidance throughout my life. The continuous support and inputs of my brothers, Seid Abdie and Hamid Abdie, have always been the strength and the source of encouragement in my life, for that I am thankful to them. Without the support of my family members, I could have never come this far to pursue my studies.

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List of acronyms

AARH	Agency for the Administration of Rental Housing
ANRS	Amhara National Regional State
BDIDP	Bahir Dar Integrated Development Plan
BOWUD	Bureau of Works and Urban Development
BUDH	Bureau of Urban Development and Housing
CHF	Cooperative Housing Federation
CPA	Cooperation Promotion Agency
CSA	Central Statistical Authority
E.C	Ethiopian Calendar
FUPI	Federal Urban Planning Institute
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit
HCB	Housing and Construction Bank
HH	Household
HU	Housing Unit
LDP	Local Development Plan
NGOs	Non-Governmental Organizations
UNESCO	United Nations, Education, Scientific, and Cultural Organization

Local words

Ato	A title added to a person's name given for male to mean Mr.
Birr	Ethiopian currency
Chika	Local building material that is a composition of wood and mud
Derg	Name of former government Committee (in Geez, ancient language of Ethiopia)
Equb	Local money saving method by which total monthly contributions of members are given to each member by draw
Iddir	Local traditional social organizations involved in mutual aid in times of hardship
Kebele	Smallest administrative unit
Kiflehager	Administrative unit one unit higher than zone used at the time of socialist regime
Woreda	Administrative unit one unit higher than Kebele
Awraja/zone	Administrative unit one unit higher than Woreda
Sefer	A common Amharic name for neighborhoods or settlements
Rasagz	Self- help
Tella	Traditional local alcoholic drink

Chapter 1

1. Description of the study and research method

1.1. Description of the study

1.1.1. Introduction

Urbanization has been a challenge in developing countries which affects the economic, social and environmental developments of urban areas. Rate of urbanization in developing countries is high with respect to urban growth and urban development. This is caused by rural to urban migration of people and the natural increase of population in urban areas. In Ethiopia, the rate of urbanization or annual population growth is 2.6 % (CSA, 2008). This rapid urbanization demands supply of housing to solve shelter problems of the city dwellers in general and the urban poor in particular. Housing provision is one of the major problems caused by this high rate of urbanization.

Bahir Dar City Administration has taken measures to alleviate housing problems of the city dwellers in general and the urban poor in particular. The City Administration has tried to solve the problem through condominium housing. But it is clear that neither the public nor the private sector alone can address the growing challenges of providing adequate and affordable housing and services to predominantly poor urban populations (UN-Habitat, 2001). This calls for integrated systems of supply of housing for different income groups.

In order to use different housing delivery options integrally, it is essential to study the potentials and limitations of each type of housing delivery system. More study was conducted on public housing provision, especially the impacts, challenges, potentials and limitations of the new condominium housing projects.

Based on this, the study examines aided self-help cooperative housing in Bahir Dar. The study is designed to better understand how low income households of the city have been able to access housing using self-help cooperative housing approach. The thesis focuses on collective ownership, collective action and participation of households in the different stages of the housing process. Therefore, the unit of analysis is the housing process with the above key issues (collective ownership, collective action and participation) as imbedded unit of analysis.

1.1.2. Significance of the study

The contribution of cooperative housing for low income households in Bahir Dar city has not well recognized and documented. Bekele in 2003 studied the impediments of cooperative housing in Bahir Dar from the institutional perspective. He studied the performance of cooperatives from 1995 - 2002 using housing cooperatives as unit of analysis. But this thesis has studied cooperative housing with reference to self-help housing for low income households in the Bahir Dar context using the housing process as unit of analysis.

Study of such delivery system will be able to contribute valuable learning opportunities to the overall strategy of housing delivery system for low income households of the city. In addition the study has a significance to have more alternative strategies for housing the poor and the low income households in the city. This will further initiate a need to investigate housing delivery options for urban poor. It will also proof how mobilization of resource and potentials in cooperative form in a community could be effective method in housing delivery of the urban poor.

1.1.3. Statement of the problem

Housing is one of the basic needs of human beings. But the increasing intensity of urban growth in the face of low level of economic development in developing countries makes housing delivery for low income households challenging. Governments of these developing countries take different housing delivery options to tackle the problem. Even though different efforts have been made, yet addressing the housing needs of the poor has always been almost impossible.

Bahir Dar is one of the cities facing these housing problems. The City Administration has tried different options to tackle the problem through different approaches. The approaches can be categorized as public sector, market sector, community sector and people sector.

Public sector housing delivery: This is housing delivery where houses are constructed by the state and rented and owned out to people, usually on a subsidized basis. Since the main target groups are low and middle income residents who didn't afford to buy real estate and to construct their own, the government is a supplier of housing. Condominium housing and public rental housing are under this category.

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Market sector housing delivery: After free market economy started, few private sector developers are engaged in housing the high income households of the city through real estate development. This sector only serves the high income households of the city.

People sector: On individual basis where individuals take land through lease system from the government or buy from other to build their houses.

Community sector: These are associations and cooperatives that solve their housing problem through partnership with the government and other NGOs.

“One housing unit (HU) for one household (HH)” by 2015 is the main goal set by the office of Bahir Dar City Administration in the 2006 Integrated Development Plan (FUPI, 2006). To achieve this goal, it requires the construction of 27000 housing units in ten years. Assuming equal numbers of housing units are constructed in each year, the total number of housing units to be constructed in each year will be 2700 through integrated effort of all stake holders (ibid).

Bahir Dar Integrated Development Plan (BDIDP) proposed 19% of the housing units to be handled through investors, 37% of the proposed housing units intervened by government through middle rise condominium housing, 22% of the proposed housing units through low cost housing construction by the municipality with special targeting of the lower income and 22% of the proposed housing units by individuals and cooperatives with attention for lower income group. Individuals or cooperatives that could pay 30% of the total cost for low cost houses will be encouraged to have own the house through long period payment (FUPI, 2006).

There was a good experience of cooperative housing in Bahir Dar in the late 1970s and 1980s that had solved the housing problems of low and middle income households. It was in 1995 the cooperative way of housing renovated by the regional government as one strategy of housing delivery. Bureau of Works and Urban Development (BoWUD) was the responsible organ for this. But in 1998 with the new proclamation the organizing and registering of cooperatives was given to the newly formed organ Bureau of Cooperative Promotion (BCP) (Proclamation No.147/1998). The land allocation criteria were based on financial capacity which requires 11000Eth.Birr as blocked account on each member of the cooperatives. The land allocations ignored the majority low income households of the city.

Even though the Cooperative Promotion Bureau is now organizing housing cooperatives, currently the role of cooperative housing delivery is not well defined. The land allocation has terminated before three years. These all aggravated the housing problem of the low income households. The backlog is ahead of delivery. The pressing demand creates spontaneous squatter settlements in the city. This calls for studying different housing delivery options to the urban poor. Therefore, the main issue is what strategies are viable options for alleviating the problem. Cooperative housing is one, which can be used to alleviate the problem integrally with other delivery options. But it has potentials and limitations as a delivery option to address the housing problem of low income households. Based on the problem defined the following research questions are formulated.

1.1.4. Research Questions

Having the above housing delivery problems, the questions which will guide the research are the following. The main research question is

1. What are the potentials and limitations of self-help cooperative housing as a housing delivery option for housing the low income?

Sub questions are:

1. To what extent the low income households benefited from the cooperative housing through collective ownership, collective action and participation?
2. What were the problems and constraints in the overall process of housing the low income?
3. What could be the alternative strategy that makes cooperative housing to be a viable housing delivery option for housing the low income?

1.1.5. Objective of the study

Main objective

The main objective of the research is to explore the potentials and limitations cooperative housing experience with specific reference to self-help housing in Bahir Dar. And find out alternative solutions of housing with a special target to the low-income household of the city, considering the possibility of developing self-help co-operative housing in Bahir Dar.

Specific objectives

1. To analyze the development of low income housing with reference to self-help cooperatives
2. To assess the potentials and limitations of cooperative housing as a housing delivery option for low income households from collective ownership, collective action and participation point of views
3. To evaluate aided self-help cooperative housing in Bahir Dar in terms of housing outcomes, beneficiaries" satisfaction in collective ownership, collective action and participation in different stages of the housing development.
4. To suggest strategies which could promote cooperative housing as an alternative means for housing low income households of the city.

1.1.6. Scope and limitation of the research

Even though there are many factors for the well-functioning of cooperative housing, the fundamental elements lying within the scope of this study are: beneficiaries" view and satisfaction from collective ownership, collective action and participation. From the whole process, using these elements, the potentials and limitations are explored. Different forms of cooperative housing existed, like tenant cooperative housing and condominium housing; however, the research focuses only on self-help cooperative housing for low income households.

Since the projects are held in the socialist regime (Derg time) I have face some limitations concerning local references like agreement papers between the cooperative and the government at the initiation of the project.

1.1.7. Definition of terms

In order to avoid misconception of terms, key concepts used in the thesis must be defined. The following key concepts are the main themes of the thesis which have to be defined: housing, cooperative housing, housing cooperative, collective ownership, collective action, self-help housing and core housing.

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According to the definition of United Nations (1976 cited in Ashenafie, 2001) **housing** includes residential environment, neighborhood, micro-district or the physical structure, all service facilities needed for the physical health and social wellbeing of the family and individual. Turner (1976) defined housing as a noun and a verb. When it is considered as a noun, the focus is on the product. When it is considered as a verb, the focus is how people be housed and on the part played in society by the resources of houses or on the process of construction of the unit.

Since the housing process is the main concern, the thesis uses housing definition of United Nation (1976 cited in Ashenafie, 2001) and housing as a verb of Turner's definition.

Cooperative housing: Cooperative Housing is a system in shelter provision or addressing the tenure issues among members using the cooperative principles (CHF- international, 2004). Cooperative housing is an alternative housing approach that utilizes the principles and processes of housing development. It refers to the system that uses cooperative practices and methods in giving shelter services to its members. In cooperative housing, some of the aspect of housing provision is addressed not the comprehensive and integrated issue on shelter planning, development and management (CHF- international, 2004).

Housing cooperative: Housing cooperative is a legal association formed for the purpose of providing housing to its members. It is owned and controlled by its members. A cooperative is distinguished from other housing associations by its ownership structure and its commitment to cooperative principles. (CHF- international, 2004).

Collective ownership: The sharing of access and resource to a property on the basis of an agreement, which specifies the terms and conditions of such access or owning shares in the total property (UN-Habitat, 2001).

Collective action: this is the collective pooling of resources for achieving a common housing objective (e.g. finance, construction, management and maintenance). It could be share capital, labor or land (UN-Habitat, 2001).

Self-help housing: for this study self-help housing is defined as housing process that allows poor communities to act as key decision makers in project planning, design, management and implementation while the government provides only the initial project funding, training on project management and oversight during project implementation. But it can be pure self-help or aided

self-help and the extent of state intervention depends on the type of self-help. It can be on individual or organized (cooperative) basis (Ntema, 2011).

Aided self-help housing cooperative: these cooperatives are to be established by very low income groups and cannot afford to borrow from banks so that need some assistance from the government (Bekele, 2003). They are mostly organized by state and dominantly state control in the construction of core houses. Aided self-help includes the construction of a core house funded by the state and extension constructed by the poor themselves. The self-help principle incorporated in the approach is that the further extension of the house becomes the responsibility of the homeowner (Ntema, 2011).

Core housing: Core house is a structure that is incomplete. It is minimal in its size or level of completion, and designed with the intention that residents add space to it, or sub-divide it, after occupation. The houses may have minimal levels of finish or service which are designed to be upgraded over time (Napier, 2002). It is one of the spatial approaches of aided self-help cooperatives used. It can be seen as one level up next to sites and services approach. Core house is a type of house which increased with increase of family size (Abrams, 1964). All the above definitions of core housing are used in the thesis.

1.1.8. Organization of the study

The research is organized in six chapters together with abstract, bibliography and appendices.

Chapter one introduces the thesis. The introduction gives description of the research which includes: statement of the problem, research questions, objectives of the study, definition of terms, organization of the study, research design and method.

Having defined the problem and the general aim of the research, **Chapter two** provides the frame of reference/theoretical background. In this chapter review of topics of housing delivery options in different periods will be presented. Different approaches of housing delivery for low income will be assessed and analyzed with reference to self-help approach. And then the assessment will be made on housing delivery options in developing countries and cooperative housing in detail.

Following review of literature, in **Chapter three** the contextual background of Ethiopia and Bahir Dar will be discussed with respect to urban housing provision characteristics in Ethiopia,

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specifically in Bahir Dar. Finally, the limitations and potentials of self-help cooperative housing in Bahir Dar will be presented.

Chapter four will introduce the socio-economic condition of the residents of the selected case area; how the cooperatives were organized and formed, the finance/affordability, actors in the planning, design and implementation stages of the housing development; the condition of houses and their transformation. Finally the data will be presented in summarized form.

After each stage of housing development described, **Chapter five** provides data analysis and discussed to answer the research questions. Potentials and limitations are traced using: participation, collective ownership and collective action as embedded unit of analysis in each stage of the housing development.

Finally, **Chapter six** tries to conclude and recommend so as providing self-help cooperative housing as one strategy of housing delivery with an integral part of other delivery systems. The recommendation will have policy recommendation and proposal for action which includes design proposals of different typologies for different contexts.

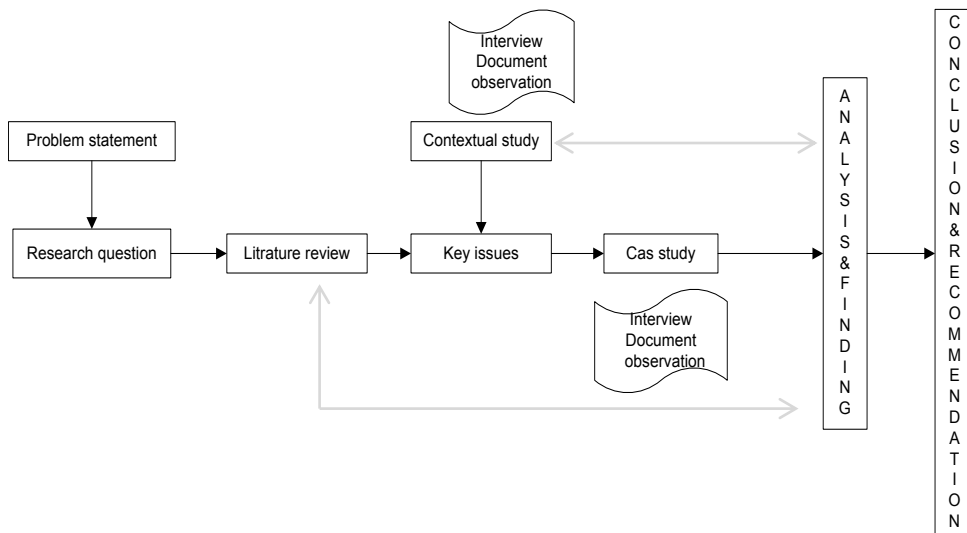


FIGURE 1 : Thesis structure

1.2. Research design and method

1.2.1. Research design

Case study design is appropriate for the investigation of case when it is necessary to understand parts of a case within the context of the whole (De Vaus, 2001). The case study allows an investigation to retain the holistic and meaningful characteristics of real life events (Yin, 1994). The main objective is to explore the potentials and limitations of self-help cooperative housing which requires the experiences of beneficiaries, the process and the consequences. Based on this the case study design has been chosen to explore, describe and explain the experiences of the participants and how they perceived their cooperative environment.

Selection of case for study: As the research question dictates and the proposition which is self-help cooperative housing can be used for housing the low income residents indicates the strategic not random selection of the case targets. The strategic case selection will be done by case screening from archival records with the criteria of the following:

- Cooperative housing project for low income household
- Cooperative housing which can have access of information
- Cooperative housing with the concept of self help

Number of cases selected: case studies have a potential for good internal validity than other designs. But the number of cases affects the external validity, but this can be done on the logic of replication rather than on sampling logic. Therefore, strategic selection of the case which can be a typology for the proposed proposition will solve external validity problems (De Vaus, 2001). Case study designs might consist of single case study (e.g. a community study, a study of an organization) or a series of case studies with perhaps each case testing a theory from a different angle. A case study project that entails a single case study is analogous to a single experiment. If similar results are found in repeated case studies, or predictable differences in results are found for particular cases in the study, then we develop greater confidence in the findings of the cases in the same way that we gain confidence in experimental results that are found in repeated experiments (ibid).

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Based on this I have selected all the three cases which are typologies for aided self-help cooperatives in the city. Since they have the same structure and the same housing development scheme, for the sake of analysis they were analyzed as one. The names of the cooperatives are *Tateq lesra*, *Abiyot fana* and *Dilbetigil* housing cooperatives.

Unit of analysis: Yin (1994) differentiated two types of unit of analysis called holistic and embedded unit of analysis. In order to explore the potentials and limitations of self-help cooperative housing, it is essential to see the housing project from the beginning to the end. Therefore, the holistic unit of analysis is the housing process. The fundamental elements of self-help cooperative housing like collective ownership, collective action and participation used as embedded unit of analysis.

1.2.2. Research method

The purpose of data collection is to differentiate the potentials and limitations of cooperative housing from the points of collective ownership, collective action and participation in each stage of the housing development. Since the study is focusing on the experience, process and consequences the research method used is mixed method where qualitative followed by quantitative.

Source of data: Data will be collected from four data sources: Government bodies, cooperative committees, Individual members of the cooperative and the physical environment.

Data collection technique: Since different cases consist of different elements, different methods of data collection technique required for different elements. Based on this the different elements of the case and technique of data collection has been differentiated.

Interview: group interview is used with committee members of the cooperative. In depth interviews, concerning the overall process, their participation and collective action, conducted with 42 households out of the 60.

Questionnaire: These are quantitative datum organized based on the filters of house hold socio- economic condition, participation in the process, and collective action on each stage of the housing development.

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Observational study: This is used to measure the actual condition of housing units. How the building is functioning, the spaces used, the plot of land for each resident. How the house was transformed.

Maps and documents: In addition to primary data sources secondary sources: namely, reports, letters, government policies, proclamations , articles, government census, and maps acquired from the case areas, government officials , will also be used in analyzing the potentials and limitations of cooperative housing.

TABLE 1: Data collection technique

Issues	Interview	Questionnaire	Documents & mapping	Observational study
Participation of actors	* 2,3	*3		
Collective ownership	* 2,3		* 2	* 4
Collective action In Construction, Finance and management	* 2,3		* 1 &*2	

**Source of data: 1 .Government body, 2.Coop committee, 3, Members of coop and 4.Physical environment*

Data Analysis: Case study design achieves explanations by intensive analysis of many variables with in a case (De Vaus, 2001) .Since the research uses different types of data collection methods; the analysis will be mixed type of analyzing data. For questionnaire which is quantitative datum it will be analyzed using SPSS software. The interviews are analyzed and interpreted by tracing the potentials and limitations from each of the variable i.e. main issues of the research (collective ownership, collective action and participation) in different stages of the housing development. The internal validity will be assured by triangulation of the data from the cooperative member, the government body and the residents /members of the cooperatives.

Chapter 2

2. Literature review

2.1. Introduction

The main objective of this research is to identify the potentials and limitations of cooperative housing as housing delivery option through self-help concept for urban low income households in Bahir Dar. And the main goal is to contribute knowledge to housing delivery option in general and cooperative housing in particular. Therefore, the main concepts which are explored in this section are low income housing delivery options, self-help housing and cooperative housing.

2.2. Urbanization and urban growth

Urbanization is the process through which cities and towns develop and grow. It includes the movement of people from rural to urban areas and movement of people among cities. It is also the development of urban economies and urban social and Political systems (UN-Habitat, 2002). More than half of the world's population now lives in towns and Cities. The additional people expected between 2000 and 2015, nearly one billion will be added in urban areas compared to only about 125 million in rural. More of this growth will take place in developing countries. The way urban settlement develops and grows differs in different countries. The factors which shape the pattern of urbanization are namely: Globalization, demography, democratization, communication technology, economic transformation and social and cultural changes. All of these have influenced the pattern of urbanization in turn influences the approach for housing development (ibid).

2.3. Low income housing approaches

Solutions for Urban low income housing problem and the development of approaches to the problem has a long history. In 1950s and 1960s under **modernization** theory the response was controlling the urbanization process and focusing on urban growth by improving impact of urbanization on housing. Slums and squatter settlements were seen as forces holding back the progress towards modernization .The response was to eradicate or to leave them as they were

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(Elias, 2008). At that time governments constructed low cost housing (Ashenafie, 2001). The housing development was state driven or supply driven rather than demand driven in nature (Ward, 1982). The inefficiency of housing delivery by the public sector resulted in uncontrolled spontaneous growth of informal settlements. Small numbers of governments were successful in public sector delivery like Saudi Arabia and Singapore. Despite this, Governments of developing countries have recognized that they can neither supply sufficient numbers of houses for the growing urban population, nor can they control spontaneous growth of informal settlements. Following these governments in these countries shifted their approach to one of low-income housing delivery, the idea of **self-help housing** given much attention as a viable solution to the housing needs of the urban poor (Ntema, 2011). The proponents of self-help housing came up with the following three main arguments:

1. Government resources for housing are very limited. Following that, supply of housing will not continue because there will be insufficient financing for housing construction.
2. The squatters should be viewed as capable sources of housing growth rather than as representing a social problem.
3. The kind of completed housing units supplied by the state do not usually either take into account or meet the diverse cultural, social and economic needs and priorities of the intended target groups (Ward, 1982 cited in Ntema, 2011).

Finally the approach and policy changed the focus and forward to **enabling and partnership**. The adoption by the UN General Assembly in 1988 of the Global Strategy for Shelter (GSS) up to 2000 gave a boost to the enabling approach (Tibaijuka, 2009). People became the main subject. Housing strategies facilitate for other actors to participate in housing. The guiding principles of enabling strategies were: Private sector must be encouraged for all income groups; Government must reduce or even cease their efforts to provide housing units directly; and Public sector must seek to utilize its available resources to provide serviced land and housing finance with full cost recovery (Ashenafie, 2001).

World Bank in 1993 formulated certain policy recommendations which discourage government direct housing provision and regulation of the private housing markets. The recommendations were:

- Developing mortgage finance including lending and borrowing at positive interest rates
- Rationalizing subsidies
- Opening up urban land for residential development through provision of infrastructure

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- Reforming building and planning regulations concerning land and housing development for expanding market activity
- Organizing the building industry by eliminating regulatory barriers
- Developing institutional framework for managing the housing sector (World Bank, 1993)

Bureaucracy, huge overhead cost, long delays and market enabling rather than enabling the poor makes the World Bank criticized. The market enabling emphasizes affordability, cost recovery and replicability (Tibaijuka, 2009). The habitat agenda II recommends the poor themselves, community group, NGO, and women as main actors should be supported through the enabling strategies (Keivan & Werna, 2000).

Integrated approach to enabling housing strategies: This is an approach by integration of all related modes of provision. Each mode of housing provision has its own potential and limitations but suite the specific requirements of certain section of urban population (Keivan & Werna, 2000) .The *'integrated approach'*¹ may lead to increasing public sector involvement in the regulation of land and housing markets. In addition, it may also combine several modes of housing provision such as sites and services, cooperatives/CBO housing and formal and informal contractors (ibid).

TABLE 2: Low income housing approaches in different times

Period	phase	focus	Instrument
1960's-early 1970's	Modernization & urban growth	Physical planning. Production of shelter by public agencies	Blue print planning: Slum clearance and direct construction of housing
Mid 1970s mid 1980s	Growth & redistribution	Self help	Upgrading; sites and services
Late 1980s early 1990s	Enabling approach	Securing an enabling framework for action by people., private sector and markets	Public and private partnership; community participation and capacity building
Mid 1990s onwards	Sustainable development	Holistic planning to balance efficiency, equity and sustainability.	As above, with more emphasis on environmental management & poverty alleviation.

Source: adapted from (Tibaijuka, 2009)

¹ *'integrated approach'* to mean using different modes of provision in an integrated manner

2.3.1. Self-help Housing approach

Turner and other advocates of self-help argued self-help mechanisms as a possible alternative to the failing government-driven low-income housing program. It is believed that Turner was the most influential person of the self-help concept (Ntema, 2011).

2.3.2. Turner's self-help concept

Turner (1976) raised three main issues concerning self-help concepts in housing. The first concept was the concept of dweller control. He argued dwellers have to control the major decisions and have to be free to make their own contribution to the design, construction and management of their housing. If dwellers control major decisions, both the process and the environment produced will stimulate individual and social well-being. When people have neither control over, nor responsibility for key decisions in the process of housing, dwelling environments may instead become a barrier to personal fulfillment and a burden on the economy.

The second concept was the value of housing. Turner says the most important thing about housing is not what it is, but what it does in people's lives. Turner's third concept says that deficiencies and imperfections in your housing are infinitely more tolerable if they are your responsibility than if they are somebody else's. It is about economy of housing (Turner, 1976).

The simplest way of doing this in housing is to divide the process of decision-making into three easily recognizable sets of operations:

1. Planning and designing
2. Construction and building operations
3. The management and maintenance of what is built,

Even to provide a temporary home, a dwelling must give its users access to institutions, and amenities on which their livelihoods depend; it must provide a minimum shelter from climate and neighbors; and the users must have tenure long enough (Turner, 1976).

Turner comes with idea of self-help housing with argument of value of housing, economy of housing and authority over housing then he traces principles and practices from the arguments.

Value of housing: Turner argues what matters in housing is what it does for people rather than what it is. "A house can be a home if and only if it is minimally accessible, provides minimum

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shelter, and a minimum security of tenure” (Turner, 1976; 97). It is illogical to state housing problem in terms of deficits of units to some material standard rather people’s housing needs must always be stated in terms of priorities. By variable nature of three universal housing needs access, shelter, and tenure, Turner says on the issue of value of housing the choice is between the values of what procedures and products do for people and their environment, and the material values of the things themselves. In other words, it is the issue of use value versus market-value (exchange value) (Turner, 1976).

Economy of housing: Turner argued the economy of housing is a matter of resource of personal rather than centrally controlled, and he says only if the people controls the material available and locally accessible resources be effectively used (Turner, 1976).

Authority over housing: Turner argues housing and other services has to be autonomous rather than heteronomous. He also argued that this autonomy is not being absolute. It depends on access to essential resources. But the central issue is who decides, and who provides. The influences of Turner’s idea of self-help were that: squatter settlements were seen as normal residents, self-help becomes part of housing policies worldwide. Despite this he did not promote absolute isolation of any key stakeholder. Yet his ideas are criticized by Burgess.

Criticism of turner’s self-help: Burgess argues that because commercial products and labor are invested in the production of self-help houses there is always market value. Turner wrongly assumes that use value dominates over market value and fails to appreciate their interrelations. Burgess says what usually makes self-help housing programs cheaper is not absence of profits, but rather the labor contribution (sweat equity) of the future users (Burgess, 1978).

In Burgess’s opinion, Turner’s individualistic view of self-help housing is not sufficiently inclusive. It views self-help housing as a process exclusive of the immediate socio-political context in which it takes place (Ntema, 2011). This debate of self-help housing helps to draw attention to shelter problems of the poor and acknowledge housing right of the poor internationally. International conferences like Vancouver conference in 1976 accepted the idea of self-help aimed for improving the socio economic living conditions of the poor households. This alternative housing strategy was adopted as a major component of financing of the housing programs in developing countries (Essayas, 2000).

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World Bank (1993) uses Turner concepts of self-help to fulfill its role. It was incorporated through sites and services, core housing and slum upgrading projects.

World Bank policies: World Bank became involved in low income housing based on the idea of Turner but in practice deviated from Turner's idea and emphasis on affordability and cost recovery. Some of the deviations from Turner's self-help housing concepts are as follows:

- Turner emphasizes financial circumstances of dwellers in housing delivery but World Bank emphasis on economic aspect of self-help model.
- Turner uses the use value of small scale housing projects but World Bank usually placed under the countries overall economic plan and large in scale (Ntema, 2011).

2.3.3. Participation of Community and Self Help Housing

Turner (1976) divides Participation of people within self-help housing into three. These are:

- Sponsors decide and users provide
- Users decide and Sponsors provide
- Users decide and users provide

The most common form of participation is that the sponsor selects the site, plans the dwellings; arrange the financing, organization and administration procedures before selecting the participants. Participants in sponsored or aided and mutual self-help projects are sometimes self-selecting. But more often this is done by the sponsor. Mostly they are „Sponsors decide and users provide“ type.

Users Decide and Sponsors Provide : The principle of user decision and sponsor provision has been well-established by private developers and higher income or new home buyers whose properties are publicly serviced or it may be pure self-help concept of „Users Decide and Users Provide“ (Turner, 1976).

One of several approaches towards evaluation of participation of community in a project is a model by Hamdi and Geothert (1997). The model uses the evaluation of participation of community in different stages of the project with different levels of participation. According to (Hamdi and Gothert, 1997) there are five different levels of community involvement. These are:

- None - No involvement from the community.
- Indirect - No direct involvement from the community but the government receives Information about the community from secondary sources.

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- Consultative - Information is received directly from the community by the government.
- Shared control - Community and government interact as far as possible.
- Full control - The community dominates and the government is only a resource.

The different stages of a project are:

- Initiate - Begins the process; the basic goals and objectives are defined.
- Plan - Specific activities, budget, and resources needed are at this stage identified. The general planning of the implementation stage is also included.
- Design - Details are developed and technical works are done at this stage.
- Implement – execution of the project or the construction of houses
- Maintain – long term repair of the houses.(Hamdi & Goethert, 1997)

The stages of a project are linked in a matrix to their levels of participation (see table 3).The matrix can be used to illustrate and understand the different situations of participatory involvement. It allows examination of the levels of participation and helps us to understand where community involvement would be most necessary. For example if the participation of the community in the planning stage of the housing development is consultative, it could be shaded as shown in the table below. Using this frame of reference the study will evaluate the participation of community in the case under study.

TABLE 3: Framework of participation

Stages of project Level of participation	Initiate	plan	Design	Implement	Maintain
none					
indirect					
consultative					
Shared control					
Full control					

Source: (Hamdi & Goethert, 1997).

Since the primary focus of this study is on housing projects for low-income housing, the focus is on aided self-help housing cooperatives. The following section presents aided self-help through cooperative means and the spatial approaches used in aided self-help cooperative housing.

2.3.4. Aided self-help housing

In this concept of self-help, the government became responsible to provide some of housing elements or aspects to make the house affordable by allowing individual or collective initiatives of households to house themselves. The role of the state was to support by providing land, tenure and basic services. Out of this the spatial approaches of aided self-help housing like sites and services and core housing concepts were born (Ntema, 2011).

Sites and services approach: The main objectives of sites and services were economy and security of tenure. Under economic objective affordability was attained by making land, infrastructure and service provision, and giving security of tenure by improving their house.

In minimal projects households might receive only land but in expensive projects, land and infrastructure with other utilities and core houses might be constructed leaving dwellers responsible for the finishing and extension of houses. This further gives them security of tenure (Ntema, 2011).

Core housing approach: Core housing is one of the spatial approaches of aided self-help concept. It is now become part of housing vocabulary. It rests on the premise that a family can expand as capacity has gained (Abrams, 1964). Core housing can be seen from product and process characteristics.

Product characteristics: Core housing as a product could be seen as incomplete structure, and most importantly that it is minimal in its size or level of completion, and designed with the intention that residents add space to it, or sub-divide it, after occupation (Napier, 2002).

Process characteristics: Core housing as process will include input of self-help and contractor during the different design and construction phases; the degree of freedom and choice granted to households, and the point at which households become involved; the types of financing packages available to residents. All these express core housing as process. The debate on self-help housing in 1950s and 1960s in attempting to provide full provision prepared the ground for the proposal and acceptance of core housing (Napier, 2002).

Core housing and assisted self-help housing: Abrams (1964) has traced the potentials and limitations of informal housing process. Then he suggested how this could be incorporated in to the public and private sectors. He has seen the limitation of participation of households in the

construction of houses. Then he proposed the provision of room where the family could live while they extend the house as resource available. Meantime Abrams suggested the core would be mass produced at scale and then user contributions would take place from that point onwards. He suggested different types of core housing

Types of core houses: The types of core houses can be one room core for small families; two room cores to be expand horizontally and vertically for the growing family and the row house core, the front and rear of which is expandable (Abrams, 1964).

There are two types of core houses the main core house and service core. The main core house can be divided as habitable core houses and non-habitable core house. Habitable core house includes single room core house, shell houses, multi room and multi-story. The non-habitable core houses includes wall house, roof and floor houses (Napier, 2002).

Abrams (1964) had put principles for the development of core housing. The principles are:

- The core should be livable with minimum unit mostly two rooms and flexible to expand
- The core should be designed to be extended by the household (with training available if requested) or more likely by locally settled small contractors.
- Home owner of the low income households should be given priority.
- The core should be on a plot of sufficient size to accommodate expansion according to several alternative plans, show houses being built to demonstrate the alternatives.
- Should be constructed from materials that allow expansion and which could be supplied through local material suppliers and producers who should also be assisted to develop in the area
- The core should be designed to be comfortable given local climatic conditions
- One or two houses with completed extension built as model.

The core was to be built by formal contractors. Both the core and the extensions were to be financed. The extensions were to be build according to plans supplied by the project developer (Abrams, 1964; 177). Comparing to sites and services, core housing insured basic housing standards. .

Advantages of schemes of sites and services and core housing: There are two main advantages of aided self-help. The first one is the potentials of spreading limited funds. Not only beneficiaries benefit but also government has a significant benefit by saving large amount of public budget by providing sites and services and the rest to be completed by the beneficiaries.

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And the second advantage is not only construction for longer period but also housing occupied before completion (Ntema, 2011).

Sites and services were thought to have a cost advantage over public housing since only serviced land and possibly small proportion of the cost of the building would be provided. In addition, the beneficiary would use their time and labor in the form of aided self-help to design and construct their houses according to the dictates of available funds, desire, and capacity to mobilize additional labor or finance (Tibajuka, 2009).

Unless the house is planned as core using the principles from the beginning, core housing may deteriorate into slum. When the principles of core construction are violated, the result will be not good. While a house built as rigid final product it can't be improved even when national economy has improved. Core housing makes this possible (Abrams, 1964).

Criticism of aided self-help housing and scheme of sites and services: the criticisms raised by different scholars are cost recovery, inadequate debt collection, poor maintenance of services, on delivery of services promised and costly for target and government (Napier, 2002). Many of the economies derived from bulk purchases of building materials by self-help cooperatives are negated by the heavy administrative costs involved (Burgess, 1985).

Modes of housing delivery options in developing countries: the different modes of Housing delivery options in developing countries can be divided into two main groups. These are formal and informal housing delivery strategies. The formal Housing is produced through the official means, recognized institutions and planning authorities etc. (Keivan & Werna, 2000). The informal Housing is usually produced by those who couldn't afford the formal and mostly labor intensive through self-help, indigenous and traditional materials (ibid).

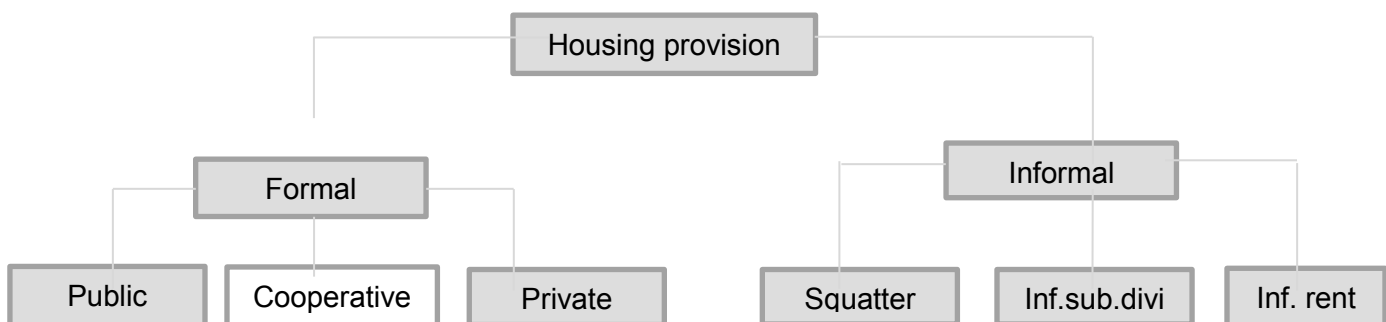


FIGURE 2: Different housing provision modes in developing countries

Source: adapted from (Keivan & Werna, 2000)(refocusing the housing debate in developing countries)

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TABLE 4: Advantages and disadvantages of different modes of housing provision

FORMAL /CONVENTIONAL			
Mode of provision	Means of implementation	Suited to countries	Target group
Public provision direct	<ul style="list-style-type: none"> • Large scale projects financed and initiated by governments • Largely built by contractors • Formal finance • Industrial building technology • Compliance with building and planning regulation 	<ul style="list-style-type: none"> • Largely inappropriate in developing countries as a form of low income housing 	<ul style="list-style-type: none"> • Better suited for essential public employee
Sites and services	<ul style="list-style-type: none"> • Project based serviced land allocation • Large degree of self-build • Initiated by national and international agencies • Complicated organization and bureaucracy • Problems with replication and cost recovery • Mixture of formal and informal finance • Traditional/Semi-industrial building technology • Compliance with planning and building regulations 	<ul style="list-style-type: none"> • Particularly suited to countries with land as public resource • More limited but still applicable In some countries 	<ul style="list-style-type: none"> • low to middle income groups
Settlement upgrading	<ul style="list-style-type: none"> • Extending services and regularizing existing low income settlements • Initiated by national governments or international agencies • Complicated organization and bureaucracy • Problems with replication and cost recovery 	<ul style="list-style-type: none"> • All developing countries 	<ul style="list-style-type: none"> • low income groups

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cooperative	<ul style="list-style-type: none"> • For organization of workers, trades people and low income households for the purpose of housing provision • Cooperation and negotiation with public authorities banks and contractors • Initiated by governments or organizations or more organic • Mixture of formal and informal finance • Semi industrial building technology • Compliance with planning regulations and building standards 	<ul style="list-style-type: none"> • Largely undeveloped but appropriate in all countries • Requires government support for expansion 	<ul style="list-style-type: none"> • Low to middle income
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Source: adapted from (Keivan & Werna, 2000) (refocusing the housing debate in developing countries...)

2.4. Cooperative housing

The Statement on Co-operative Identity was adopted at the 1995 General Assembly of the International Cooperative Alliance (ICA), held in Manchester on the occasion of the Alliance's Centenary. The Statement was the product of a lengthy process of consultation involving thousands of co-operatives around the world. The statement identifies the definition, values and principles of cooperatives.

The statement defines cooperative as an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise (International Cooperative Alliance(ICA), 1995). The proclamation on the formation of cooperative societies in Ethiopia, (Proclamation No.147/1998) states: "Cooperative Society" means a society established by individuals on voluntary basis to collectively solve their economic and social problems and it is democratically managed. Cooperative members may come from all walks of life, all ages, and belonging to all income groups.

Guiding principles and values of cooperatives

The values of cooperatives expressed in the international cooperative alliance in 1995 were self-help, self-responsibility, democracy, equality, equity, and solidarity. Cooperative members believe in the ethical values of honesty, openness, social responsibility, and caring for others. The principles are the following:

1. **Voluntary and Open Membership:** Cooperatives are voluntary organizations; open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
2. **Democratic Member Control:** Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. In primary cooperatives members have equal voting rights (one member, one vote) and cooperatives at other levels are also organized in a democratic manner.
3. **Member Economic Participation:** Members contribute equitably, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative.
4. **Autonomy and Independence:** Cooperatives are autonomous, self-help organizations controlled by their members. If they enter on agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.
5. **Education, Training and Information:** Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives.
6. **Cooperation among Cooperatives:** Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
7. **Concern for Community:** Cooperatives work for the sustainable development of their communities through policies approved by their members. But all the guiding principles didn't work in all types of cooperatives.

Cooperatives are built on principles of equity and fairness. Risk and benefits are shared equally by all members of the cooperative. It is the tool that the poor are engaged in the economic development process. Cooperatives are defined and differentiated based on three concepts.

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These are joint ownership, democratic control and operations for the benefit of members (Northcountry Cooperative Foundation(NCF), 2004).

Joint Ownership: When you join a cooperative, you invest some amount of money in the cooperative you're not only a customer or a user, you're also an owner.

Democratic Control: Participation in the decision-making process is one of the primary ways business owners exercise their rights as owners. Cooperatives operate on a one-member one-vote basis. Cooperatives are led by member-elected boards of directors. The directors are members who have agreed to serve the organization for a specific number of years.

Operations for the Benefit of Members: Cooperatives serve their members by encouraging local control and investment by the people who use the business.

Cooperatives can be seen as enterprises that put people rather than capital at the center of their business. Three basic interests bring together the cooperative idea are: ownership, Control and beneficiary. It is only in the cooperative enterprise that these three interests are brought together and vested directly in the hands of the user (ibid).

Housing cooperatives serve three basic functions towards the overall goal of adequate shelter for their members:

1. They enable households to pool resources to acquire and develop land and housing.
2. They facilitate access to finance.
3. They enable groups to join forces and reduce construction costs (Un-Habitat, 2002).

2.4.1. Forms of tenure for cooperative housing

When individuals decide to create housing cooperative the tenure arrangement is critical (UNCHS(Habitat), 1989). Based on tenure, cooperative can be three basic types. These are: limited, multiple mortgage and continuing.

Limited: collective effort goes up to the completion of the construction. When construction completes and subdivides the land, each member will have its own plot. The individual plots will be the property of each member.

Multiple mortgages: The cooperative owns and maintains the common areas (e.g., roads, paths, recreation areas and other community facilities). But the members own their separate units. Each member usually has a separate loan agreement with financial institutions in long-

term basis. A member can normally sell a flat. This type is sometimes known as a condominium and is used particularly for apartments.

Continuing: The cooperative owns all the land, houses and common areas. Members do not own their units individually but through their membership of the cooperative, own an equal share in all the assets of the society. Members cannot sell their houses and, when a member leaves, a transfer of the house is normally to the cooperative which finds a new member to occupy the unit (ibid).

2.4.2. Housing Cooperatives in the habitat Agenda

Cooperatives are considered as one way for the achievement of the two goals of Habitat Agenda, “adequate shelter for all” and “sustainable human settlement development”. A number of paragraphs of the Habitat Agenda describe the role of cooperatives concerning the two goals. A total of 20 paragraphs in the Habitat Agenda make specific reference to a cooperative approach in housing development (Un-Habitat, 2002). Paragraph 82 identifies cooperatives as one means for achieving the goal of adequate shelter for all. It encourages communities to form housing and multi-purpose community development cooperatives for the provision of low-cost housing (UN-habitat, 1996).

The Global Strategy for Shelter to the year 2000 states that implementation of a shelter strategy will involve the redistribution of responsibilities to a variety of actors and stakeholders, including individual households, cooperative groups, informal and formal private producers, governmental agencies and ministries (UN-Habitat, 1989; 18).

Obstacles for the growth of housing cooperatives: Most obstacles for cooperatives are tenure status, financial problems, inadequate legislative frame work, lack of knowledge by members and government officials. A key criticism of the co-operative model is that low income households want individual ownership. The cooperative concept is broadened to include cooperatives that are about ownership, others that are about delivery, and still others that are about management (Un-Habitat, 2000).

2.4.3. Self-help housing cooperatives

The simplest form of self-help construction is for an individual household to construct its own house and the other is through cooperative. The basic reason for building through self-help construction is to reduce costs of houses. When it becomes through cooperative form it further reduces the cost of the house (UNCHS(Habitat), 1989). Self-help housing cooperatives were considered useful instruments which low-income households could get opportunity and improve the quality of their lives while accessing affordable housing. Housing cooperatives adopt two methods they either construct houses or they advance loans to individuals who in turn construct their houses (Ntema, 2011).

Self-help cooperatives and state control: Even though housing cooperatives are people driven and autonomous the state interferes in two ways. The first it could interfere in provision of certain finance and technical advice. The second could be in the construction of houses directly. But the interference has positive and negative effects (Ntema, 2011).

Advantages of self-help housing cooperatives: Self-help housing cooperatives have a potential to increase housing production and decrease costs to the user and for the public. The other merit is promotion of owner occupancy. This in turn encourage social tie, stability, giving pride and promote saving. Collective pooling of resources, sharing of items and bulk purchase all reduce the cost of the house (Turner, 1976).

The three advantages of self-help cooperative housing are: First, it gives participation of beneficiaries in providing their own housing. In a direct way it provides them the opportunity to participate in the housing development. It provides opportunities for marginalized groups to have experience of participating in wider decision making and to take control of their own lives. Secondly, it mobilizes the skills of the community and its financial resources. Thirdly, the cooperative mobilize additional resources into the housing delivery system (UNCHS(Habitat), 1989).

Chapter three

3. Contextual background

3.1. Over view of Bahir Dar city

Bahir Dar is a capital city of Amhara National Regional State. It is found north east of Ethiopia, It is located at 11° 38' N and 37° 15' E; at an altitude of 1.79 km above sea level at about 565 km distance North West of Addis Ababa. The city is encompassed with flat landscape (FUPI, 2006).The city is known for its wide streets lined with palm trees. It is also considered by the United Nations, Education, Scientific, and Cultural Organization (UNESCO) as one of the most beautiful, well planned, and safest cities. The city was the winner of award for United Nations, Education, Scientific, and Cultural Organization (UNESCO) cities for Peace Prize held in the 18 of March 2002 in the Moroccan city of Marrakesh (UNESCO, 2002). In 1994 this city had an estimated total Population of 96,140 and 20,857 households, of which 45,436 were men and 50,704 were women (FUPI, 2006). The 2007 national census shows the total population of Bahir Dar Special Zone increased to 220, 344. The data reveals that within 13 years the population of the city has increased by more than 124 000 people (Bahir Dar City Administration, 2009).

3.2. Historical Development and Master Plan of Bahir Dar

Before Italian occupation of Ethiopia, the history of Bahir Dar city was not well-known. But history tells us that around 13 century in the Solomon dynasty the name of the city was given by a monk who came to construct the church in the lake shore of Tana (Bahir Dar City Administration, 2001).One of the factors for the development of the city was the starting of the construction of road from Addis Ababa to Bahir Dar .But the road construction was terminated due to the occupation of the area by the Italians in 1936. At this time Italians used the city as center for Gojjam kiflehager. Relatively, Italians solved drainage problem of the Town. Then they provide infrastructure for the town, For example, they have started construction of airport in small farming area .It was used as medium airport station until 1986.They had constructed the Abay Bridge from wood to connect Gojjam with Begemidr/Gondar/. The place where Italians

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lived in the city was from St. George church to Tewodros stadium. Now most recreational areas are found in this area .In 1942 Italians were defeated by Ethiopian patriots at a place called “Serdomesk”. And they left the place by destroying the infrastructure they had developed. In 1943 it became the capital city of the Woreda. Azazne Zewd Zemedagegnehu became the first Head of the administration. In 1945 central government proclaimed the city to have municipal service. Gila Georgis became the head of the municipality. In 1948 the first plan of Bahir Dar city was prepared by engineer Tadese Woldegebreal. The plan didn’t include detail land use .But based on this plan roads were constructed. Following this, post office, telegram, electricity school and health posts were constructed and opened. After that Emperor Haile Selassie visited the city in different times. He proposed Bahir Dar the second option to be the capital city of the country. The then government brought study group from London to study the city potential to be capital city of the country .And finally the study group suggested the favorability of the city to be a capital city of the country. In 1956 with new structure of Awraja/zone, Bahir Dar became capital of Awraja and the first administrator of the Awraja was Aemro Selassie Abebe. The administration had brought engineers and made improvement of the first plan. Following that, commercial, residential, office and roads were constructed. From 1950-1956 with the collaboration of the American Government Abay drainage study was conducted .It was one of the main contribution factor for the development of the city (Bahir Dar City Administration, 2001).

To make the future development of the city sustainable, modern master plan was needed. Based on this idea with the leader of Professor Maks Gutter from German the research group came to the city and started to study the area in 1961. In 1962 they had finished the master plan preparation and they presented in African Assembly Hall. The master plan assumes to include 3000 people. The plan included the place from Dib Anbesa hotel to Telecommunication office main branch of the city which is the inner-city of the current city .The master plan divided the land use of the city for commercial, residential, industrial, and recreational and for government institutions. After that the government assigned the issue for internal affairs Minister Habtemariam W/kidan to be head of the municipality to implement the new master plan (Bahir Dar City Administration, 2001).

Bahir Dar has got its first master plan in 1948 its second master plan in 1964 and its third master plan in 1996. The fourth master plan which is commonly known as the Integrated Development Plan was prepared in 2006 and is currently serving the city. The city used to have

one local development plan which was prepared for differentiated kebles in the central core area as slums in 2010 (Bahir Dar City Administration, 2006).

3.3. Housing situation in Bahir Dar city

The provision of housing and other services have not been able to keep pace with fast population increase emanated from natural increase in cities as well as migration from rural to urban. Greater needs for housing affected the increasing number of low -income households with little income to afford. Therefore, housing shortage since a long ago became one of the critical urban problems in some cities of Ethiopia. The same is true for Bahir Dar, where housing is identified as one of the key development issues (FUPI, 2006).

Existing housing unit and future demands: the 1984 population and housing census has reported the availability of some about 9206 housing units (HU) and 10,291 households (HH) in Bahir Dar . The 1994 census result showed the number of Households (HH) as 20,857 and housing units (HU) as 19808. Assuming the same ratio would prevail until 2005, the number of housing units is estimated to reach 35566 with corresponding number of 37344 households. Assuming the ratio would reach one to one ratio in 2015, number of housing units (HU) would reach 61570 and the number of households (HH) which will be accommodated in these housing units will be 61570. Based on this, to achieve the goal of one to one ratio, 26004 housing units have to be constructed in ten years of planning period (FUPI, 2006). Assuming equal numbers of housing units are constructed in each year, at least 2600 housing units has to be constructed in each year. The following table shows this.

TABLE 5: Additional housing unit requirements

Period	Population size	HH	HU	HH/HU
1984	54146	10291	9206	1.11
1994	94236	20857	19808	1.05
2005	168048	37344	35566	1.05
2015	277064	61570	61570	1

Source: adapted from Bahir Dar Integrated Development Plan of 2006(FUPI, 2006)

Self-help cooperative housing

Housing condition: The housing Condition of neighborhoods in the central parts of the city shows there are low standard houses with most of the houses being *kebele* owned. These *kebeles* are *kebele* 05, 04,06and 12 which have been identified as slums. It has also been observed that most of the housing units in the central parts of the city have no or with sub - standard related services/facilities.

Squatter settlement: The squatter settlements in the city are growing in every side of the periphery especially around the lakeshore. The number of squatter housing units in the year 2000 was 4823 units. And it was 3504 units in 1994 which shows an increase of 38% .The study in this regard reveals the availability of more than 5000 squatter settlement in the city in 2006.This shows there is a mismatch between demand and supply (FUPI, 2006).

Slum and overcrowding: Like Addis Ababa, the central core area of Bahir Dar is also characterized by the existence of slums. The slum areas in the central parts of Bahir Dar are mostly found in *kebele* 01, 04, 05,06and 12 (FUPI, 2006).The livelihoods of the residents are based on informal trading like selling local drinks. The City Administration has prepared one Local Development Plan (LDP) which incorporates *Kebeles* 05, 06 and 12 in 2010. The purpose of this Local Development Plan is to design a detail spatial, social, economic and environmental development options in the *kebeles*. This plan covers 47 hectares of land and is designed to serve for about 10 years (2009-2020). Since the area is near to the main market the proposal uses only 4.6 percent of the total land use area for mixed and residential purpose which accommodates only 725 households (Bahir Dar City Adminstration, 2009).

Formal housing supply and institutional set up

The formal housing supply found in the city can be categorized as public sector, market sector, people sector and community sector housing delivery systems.

Public sector housing: This is housing supply system where government directly involved in the supply of housing for low and middle income residents of the city. It includes *kebele* houses, rental houses and condominium houses. The governmental institutions directly involved in the supply of these houses are: Construction and Housing Development Agency (Condominium housing), ANRS Housing Development Agency previously which was called Rental Housing Administration and the City service.

Self-help cooperative housing

Housing Development Agency: It administers more than 415 residential and 92 commercial rental houses in Bahir Dar city. Now the agency is working with the housing associations that were under municipality waiting list. The cooperatives are those that didn't get land due to the termination of land allocation for cooperative housing. And now they are constructing houses in collaboration using the new concept of 40-60 housing scheme.

Condominium housing in Bahir Dar

As part of the Ethiopian Integrated Housing Development Programme, Bahir Dar Integrated Housing Development started constructing of condominium houses in 2007. The main responsible organ for the housing development is the City Administration Housing Development Agency. The program assumes the main targets of the housing development to be low and middle income residents of the city.

The total houses transferred to beneficiaries whose construction started in 2007 were 1618 housing units. The agency now transferring housing units started construction in 2008 and finished in 2011. The total housing units constructed was 2093. Out of this governmental organizations, like university, have taken 1127 housing units. The remaining 966 housing units are transferred to selected civil servants, institutions, federal defense members, kebele dwellers and housing cooperatives.

The numbers of housing cooperatives left under municipality waiting list for land allocation and didn't get land due to the termination of land allocation were 31 housing cooperatives. Out of this the City Administration Housing Development Agency gives opportunity to take condominium blocks for 15 housing cooperatives. But only 5 of them agree to take the condominium blocks.

As Ato Fisseha Sintayehu, Officer at planning preparation, monitoring and evaluation department, said, the agency distributes a paper to know the housing demand of the city dwellers in the year 2011. The paper distributed in each sector office of the city to be filled by an affiliate having not a house with his/her name. The number of housing need filled and collected was 30284 households demanding the condominium housing which will be constructed in the future.

Self-help cooperative housing

Market sector housing: After free market economy started, few private sector developers are engaged in housing development in the city through real estate development. Even though the city has many potentials of development, few real estate developers are engaged in this sector. These are Yaby Ras Real Estate, Mulugeta Real Estate and Impact Real Estate etc. Impact Real Estate is the only real estate developer that started construction of houses. This part was assumed for high income residents of the city. But still it doesn't contribute to the housing problem of the city.

Community sector housing: These are associations and cooperatives that solve their housing problem in partnership with the government, NGOs and other international governmental organizations. The following are NGOs and international cooperative organization participate on housing delivery in Bahir Dar.

GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit): It is an international cooperative organization of the German government. It participated in housing the households who are evicted from Eritrea. The organization not only constructed houses but also participated in the provision of urban services like community and private toilets /latrines and solid waste management etc.

Habitat for Humanity Ethiopia: This NGO has come to the city in the year 2008 with the aim of housing the poor of the city with a revolving fund concept. The total houses constructed by the NGO are 200 units in *kebele* 14. The target groups are selected from all nine *kebeles* with the voluntary basis and selection criteria of the *kebele*. The criterion incorporates income and family size of the affiliates. The 50 affiliates selected in each *kebele* were organized in two saving groups. One *kebele* affiliates will have saving group with the *kebele* name in the first (for example Belay Zelke saving group 1). After that the committees are selected from each *kebele* affiliates. The committee has three divisions: saving controlling committee, family selection committee and the executive committee.

The typology of housing has main house and service quarter with in the plot area of 200m². Before construction the affiliates has to save in their saving group book but with individual name and has to report to the NGO. The affiliate has to contribute 24 hour minimum from the total given time of construction of houses in order to get the house when the construction is finished. Each affiliate has given responsibility to construct each house through lottery base. But the local contractors are hired and construction materials are sold by the committee. When they want

Self-help cooperative housing

money they will ask the NGO to lend them. After the construction has finished, the houses are given to the beneficiaries with lottery base. The houses are under the owner of the NGO until the loan has been repaid. But after the loan has repaid the ownership will be transferred to the beneficiaries. But the City Administration makes the NGO to stop constructing houses with the claim that the houses are built by mud. But the NGO claims they had an agreement with the City Administration to construct 300 housing units. The regulatory frame work has not been rigid. The city administration and the NGO have to bridge their gap to solve the housing problem of the poor.

Historical development of cooperative housing and legal frame work in Bahir Dar

Cooperative housing in Ethiopia in a large scale was promoted by the Government of socialist regime/"Derg" through the Ministry of Housing and Urban Development (MUDH). The government provided cooperatives with land, finance, building materials, organizational skills, education and training. The Housing and Savings Bank (now Construction and Business Bank) was the major source of finance for housing cooperatives. The Housing supply by cooperatives increased due to controlled price of materials, land being allocated with no charge, and low mortgage interest rates (4.5%). Even though the subsidized cooperatives can't meet the housing demand of high number of low income households in the country, between 1975 and 1992 housing cooperatives produced 40,539 units (Un-Habitat, 1989).

Cooperative housing in Bahir Dar can be seen in two historic time. The first cooperatives were those cooperative housing constructed their house at the time of the socialist regime. All these cooperative housing are found in Tana *kebele*. We can say Tana *kebele* as *keble* of cooperatives since it has more than 36 housing cooperatives who construct their house in this *kebele*. The following are some of the cooperatives organized and constructed their houses in Tana *kebele* through self-help concept in the time of socialist regime.

Abay housing cooperative: The cooperative was established in 1986. The number of cooperative members are 22. One of the criteria to be a member of the cooperative was income of the member has to be salary of 400-600 Eth.birr. The design of the houses was prepared by the government. The typologies were 12 HCB walled houses 12 mud walled houses. The construction of the houses was held by local contractor. The construction of the houses has taken three years. The tenure was incremental from cooperative to individual ownership.

Self-help cooperative housing

Ediget Behibret housing cooperative: it was formed by teachers in 1979 based on self-help concept of cooperatives. The cooperative has one typical house typology. Even though the typologies were prepared by government, selection from different options was given to the cooperative members. The houses have one main house with three rooms and service with two rooms (kitchen and toilet). The construction was held by hired contractor by the cooperative. The typologies were designed as duplex houses. The finance of the construction was a loan from Housing and Saving Bank (HSB).

Andinet housing cooperative: it was established in 1986. The peculiarity of this cooperative was members were from different income groups. They were not all civil servants but health professionals, drivers and merchants. The cost of the houses also vary based on the income of the members. The costs of the houses were 5000 Eth, Birr, 6500 Eth. Birr and 9500 Eth. Birr. All houses are mud wall. The rooms of main houses range from 2-3. The construction and financing of the houses were the same as like other self-help housing cooperatives. Other cooperatives who construct with the same principles in the socialist regime were Tana housing cooperative and Ediget fana housing cooperative.

Summing all, the participation of the members was in selecting predetermined designs. The finance of the construction of houses was by the loan from Housing and Saving Bank (HSB) with subsidized basis. The tenure of the self-help cooperatives was incremental from cooperative to individual ownership. In hiring of contractors and purchase of materials, the cooperatives actively participated.

The second group of cooperative housing is formed following the downfall of the socialist regime. Due to the political situation from 1991 until 1995 cooperative housing organization was discontinued in the Region. It was in 1995 that organizing housing cooperative came again under the context of the new socio economic and political condition (Bekele, 2003). The organizing agent of cooperatives was Bureau of Works and Urban Development (BoWUD). It aims to organize three types of housing cooperatives normal, self-help and aided self-help based on financial capacity and income of members of cooperatives.

Normal housing cooperative: these are cooperatives to be formed by members who are regularly employed and have monthly salary income that make them eligible for bank loans to borrow the money required to build their house.

Self-help cooperative housing

Aided self-help cooperatives: these are cooperatives to be established by households who have very low income and cannot afford to borrow from banks so that need some assistance from the government or other welfare bodies.

Pure self-help cooperatives: these are cooperatives established by members who do not want bank loan or who are not eligible to join either of the other two types. In practice, however, Bureau of Works and Urban Development (BoWUD) had been organizing only one type of cooperatives that approximate the “Normal” type. (Bekele, 2003).

Bureau of Works and Urban Development (BoWUD) gives auditing service, land allocation, low cost housing design, arrange financial services with soft loan, engineering services, give training and orientation for the cooperatives. In 1998, a new cooperative proclamation (No147/98) was enacted. According to this proclamation the task of organizing and registering cooperatives was given to the newly formed government organ called Bureau of Cooperatives Promotion (BCP).

The criterions to be register as a cooperative were:

1. The meetings held to establish the cooperative by founding members –indicating the name and type of the cooperative
2. Cooperative bylaw which aligned with the proclamation
3. List of members with their income, address, age and sex etc.
4. List of executive committees of the cooperative
5. The amount of capital raised

Having got certificate from Bureau of Cooperatives Promotion (BCP), the cooperative certificate send to municipality. The municipality lists under waiting list of land allocation. The municipality checks the deposit of each member to be 11000 Eth.Birr in order to give the land. The land was given through lease with a term of 99 years. The cooperatives are not performing their construction and other tasks in a cooperative way. The cooperatives cooperate in order to get the land after the land has got in most of the cooperatives the cooperative concept diminished. After 2010 the land allocation for cooperatives has stopped and there are 31 housing cooperatives under the waiting list for land allocation. Cooperatives are ready to construct apartments with the new 40-60 housing scheme with the partnership of Housing Development Agency. And five of the cooperatives are agree to take the condominium blocks built in 2010 which are now transferring to the residents.

Self-help cooperative housing

Even though the land allocation was stopped, Bureau of Cooperatives Promotion (BCP) is now organizing housing and other types of cooperatives. And the cooperatives are working in partnership with the government. The proclamation no 147/1998 which is amended in the year 2004 provide for the establishment of cooperative societies states „Housing Cooperative Societies“ as one area of cooperative society.

"One Housing Unit (HU) for one House Hold" by 2015 is the main goal set by the office of the Bahir Dar City Administration. To achieve this goal it proposes to construct 27,000 housing units in ten years. It had planned to full fill this through the integrated effort of all stakeholders (investors, the community, the government and the municipality). From this 22% of the expected goal to be handled by individuals and housing cooperatives of all income groups with more attention for the lower income group .And one of the strategies proposed by the plan to facilitate and realize the above targeted goals was: those individuals or cooperatives that could pay 30% of the total cost for low cost houses will be encouraged to have own the house through long period payment (FUPI, 2006).

Overall the low income households are ignored in cooperative housing .In the socialist regime even though it considers the low income, but the beneficiary has to be employed in governmental offices where most of the low income people are not government employed. In the new system even though Bureau of Cooperatives Promotion (BCP) is organizing different income groups of housing cooperatives ,the land allocation requirement of 11000.Eth.Birr in each member of the housing cooperatives makes hard for low income households to house themselves through cooperative housing. But now the regional government aims to implement the new 40-60 housing scheme for middle and low income households with subsidy of the low income households.

The contextual background shows how the problem is critical ; The legal frame work set up for cooperative housing on the current Integrated Development Plan; the experience of the city on self-help cooperatives in the past; the current experiences of cooperative like associations who are housing themselves through a revolving fund got from the NGOs like Habitat Humanity Ethiopia and the current movement of housing cooperatives and Housing Development Agency to implement the new 40-60 housing scheme in the city. All these show how the problem is critical and the potentiality of developing self-help cooperative housing in Bahir Dar.

Chapter 4

4. Case study

4.1. The area and the people

The case area is found on north of Kidane Mihret church with the name of “*Ras Agez sefer*” (to mean self –help) because of self-help and aided self-help housing cooperatives are found in this area. The study area has 2.38 hectare of land with the total of sixty households. The area is delineated by sub arterial road in the north and east side of the area, narrow width open space in south and Tana cooperative in the west. The north side of sub arterial road now becomes cobble stone. The side of the area faces the coble stone is line with small shops, cafeterias and other small scale commercial activities like tailors. The area found on the west side of the new forty meter arterial road. It is the municipality that owns the public spaces around the neighborhood including the open space.

The study area has three blocks. Each of the blocks has 20 households. Ten in front and ten in back .Each block has its cooperative but with the same structure, management, design and construction. The services which are found around the site are Tana “*kebele*”² administration north east of the site and Nigat elementary school in west of the site. The site was on the outskirts of the city at initial Stage of the project. But now we can say it is found in the intermediate zone of the city.

² Kebele is the lowest governmental administrative unit

Self-help cooperative housing

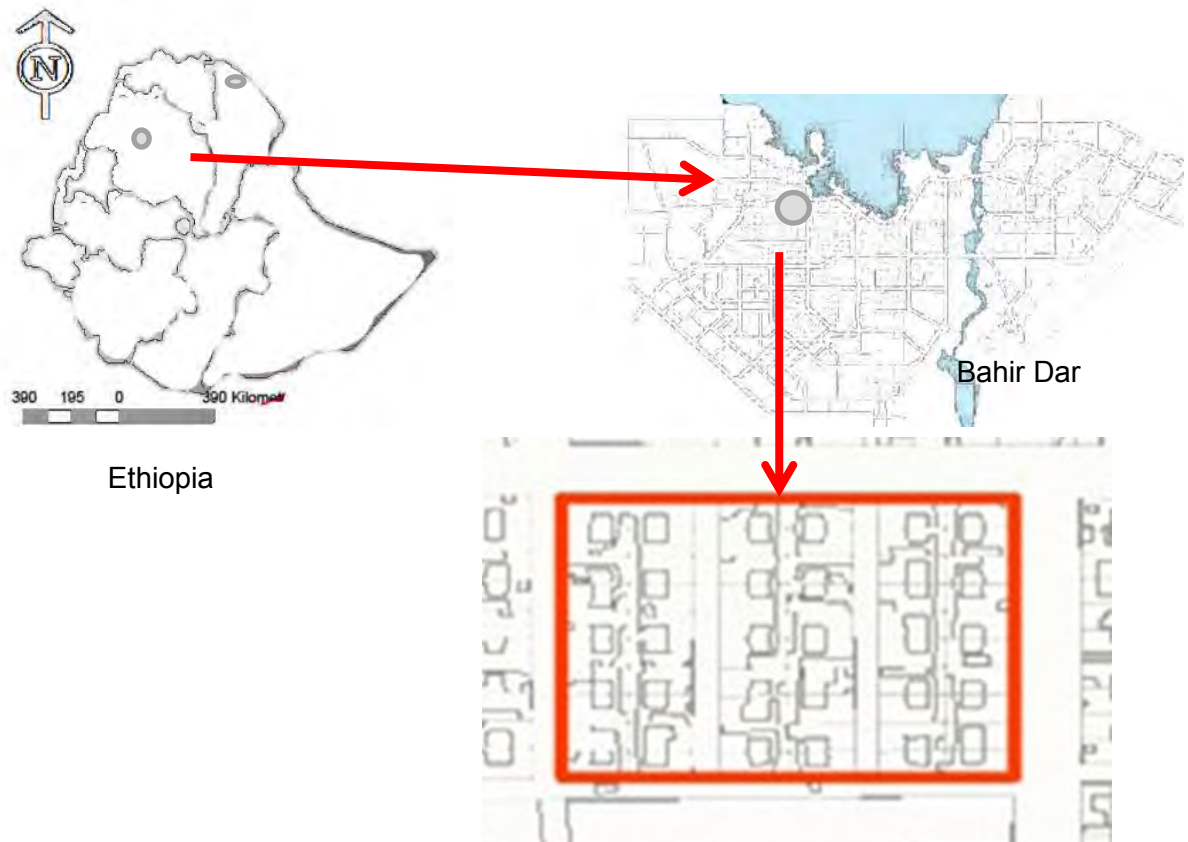


Figure 3: location of aided self-help cooperatives

The sub arterial road became coble stone below with open ditch drainage as shown below. The cooperative plans to make the local roads coble stone road.



FIGURE 4: Sub arterial road inside the neighborhood

(Source: Site photo by the researcher)

Socio economic condition of the three housing cooperatives

The members of the cooperatives were living in private rental houses and *kebele* houses before coming to the cooperative houses. At the initial stage of the project the beneficiaries were all civil servants (teachers and soldiers). But now some of them working other works and some of them are under retirement. Some female headed households are using other means of livelihood like renting and selling of “*Tela*”³. Others are working small scale works in the neighborhood. From the total 42 respondents 24% are female headed households. The average household size in the neighborhood is four. In addition to the whole process of their housing consolidation, the households are tied by social organizations like “*iddir*” and “*equb*”⁴. The *iddir* incorporates not only aided self-help housing cooperatives but also other residents in the neighborhood. The *iddir* house is found in an open space to the south of the aided self-help cooperatives neighborhood as shown below.



FIGURE 5 : “Iddir” house inside an open area

(Source: Site photo by the researcher)

³ Tela is traditional alcoholic drink

⁴ Equb is traditional form of saving

4.2. Origin of the project (Initiation stage)

After the 1975 proclamation of nationalization of all urban land and extra houses (proclamation No_47/75), the maximum plot area any individual allowed to own was only 500square meter. But through the 1986 housing proclamation, the government through the Ministry of Urban Development and Housing (MUDH) organized housing cooperatives by the Rental Housing Administration in some cities of the country (UNCHS(Habitat), 1989).

Organizing of the cooperatives: a group decides and form association to obtain housing through housing cooperatives and then contacted the housing cooperative organizing section of the Ministry of Urban Development and Housing (MUDH).First they were registered in temporary basis until the members fulfill the requirement for permanent basis; the requirements for permanent basis were:

- List of members with committee
- Address of the cooperative
- Evidence of no member has a house in his name
- Evidence of income of members(it has to be between 127-250 eth. birr)

Based on the above criteria the sixty households with three different housing cooperatives namely Dilbetigl, Tateqlesra and Abiyotfana were formed in 1983. Each cooperative has 20 households as members. Then they contacted the organizing section of Ministry of Urban Development and Housing (MUDH) in Gojam kiflehager and registered on a permanent basis.

After that, the self-help cooperative members selected one or two standard house plans according to their financial capacity. But in the case of aided self-help cooperatives selection of the design was done by the government. The site plan was prepared by the housing research and service department of MUDH. After the site prepared for legality the following were the main requirements the cooperatives had submit

- List of members and Executive committees
- Legal address of the cooperative
- By-laws of the cooperatives
- Copy of land title deed and construction permit

Actors and their role in the housing development

The main actors in the cooperative housing development were Ministry of Urban Development and Housing (MUDH), former Housing and Saving Bank (HSB) now Construction and Business Bank, the cooperative committee and cooperative members.

Ministry of Urban Development and Housing (MUDH): MUDH participated through two sections. These were Housing Cooperative Department and Building Materials Enterprise. The Housing Cooperatives section had divisions of technical, training, organization and finance departments. The following were the tasks of the Housing Cooperative section

- Assigning supervisors ,organizers and auditors for housing cooperatives
- Organizing self-help and aided self-help housing cooperatives
- Conflict resolution between Cooperatives and contractors
- Selecting site for housing and preparing design typologies
- Preparing bill of quantity and deciding required quantity of building materials

The building material was supplied by the Building Material Enterprise section of MUDH on a subsidized basis. The loan repayment from aided self-help cooperatives was collected by former Rental Housing Agency (now Housing Development Agency).

Housing and saving bank (HSB): the main task of Housing and Saving Bank was giving loan to the cooperatives. Based on the income of the residents, the bank subsidized the low income cooperatives with 4.5 % of interest. Especially for *Ras agez* cooperatives which were aided self-help type the subsidized interest was not compound interest. The loan was released by four stages of construction. These were for foundation, for wall, for window and door and for roof and finishing.

Cooperative committee and members: The main tasks of the cooperatives and its members were: hiring of contractors with the approval of MUDH, paying contractors, taking responsibility for the progress of the work and material purchase for construction. The members participated in site clearing and other decision issues.

Municipality: The role of the municipality in the process was as follows

- Provide land and construction permits
- Provision of infrastructure like road and other services

4.3. Planning and designing stage

Housing typologies and their designs: All the designs of the houses were prepared by MUDH at the central level. MUDH aimed at a number of house plans at varying costs which could be selected by cooperative members based on their income and financial capacity.

Typologies of houses:

The design typologies were different for each type of housing cooperatives. Based on the financial capacity of the cooperative members and income, Self-help cooperatives had mixed types of typologies. The typology named with the beginning of letter C to mean core houses for example, Abay housing cooperative has 4 houses with C2 type.

The typology given for aided self-help cooperatives was one type for all the three cooperatives. Each had one main core houses with two rooms (living/dining and bed room) and service core with two rooms (kitchen and toilet).

The houses were designed as duplex for all the three cooperatives. The total duplex houses in the three aided self-help cooperatives were 30 with the total of sixty households. Each housing cooperative had ten duplex blocks with the total of 20 households in each cooperative.

The typical plan had main core house and service core at the back with individual plot of 250m². The core houses were designed with shared wall as it can be seen in the figure below.

Ato Zewge Tsegaye, former executive committee member of Abyot Fana Ras agez housing cooperative Said

” The main problems concerning selection of design of the houses were: Since the three cooperatives were subsidized by the government in finance and construction material than other self-help housing cooperatives, we couldn't have to see the option of selecting housing design typologies. The typologies were selected by MUDH. .Other self-help housing cooperatives didn't face such a kind of problem. The designs of other self-help cooperatives are better than ours since they had given a chance of selection of design typologies.”

BOX 1: View on typologies

Self-help cooperative housing

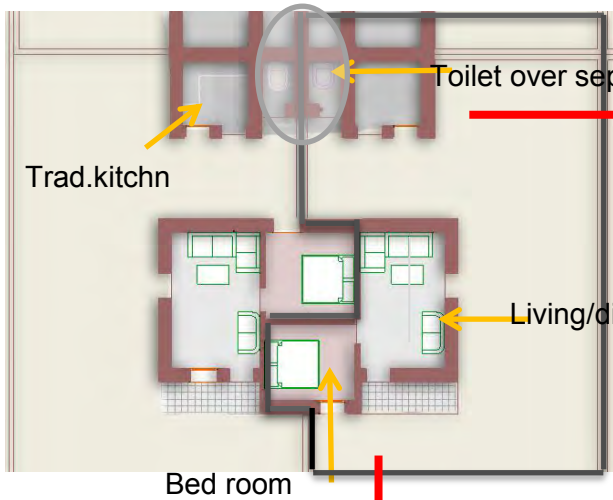


FIGURE 6: Typical floor plan of duplex house



FIGURE 7: Typical service core of the cooperatives

Source: site photo by the researcher



FIGURE 8: Main core house

Source: Site Photo by the Researcher

The septic tank was provided in a communal way. It was provided as one septic tank for four households. The service core was constructed over septic tank at the junction of the four plots as shown in the figure above.

Self-help cooperative housing

Some of the respondents constructed their own septic tank by filling the septic tank constructed by the cooperative. At the initial stage of the project the fence was not provided. But now all households have fences constructed from hollow concrete block (HCB) and stone masonry with no mortar.

Construction materials

TABLE 6 : Construction material

main core		service core
Wall material	Local stone with mud as mortar	Local stone with mud as mortar
Roof material	Corrugated iron sheet	Corrugated iron sheet
window	Plywood	Plywood
Door	Plywood	Plywood
Ceiling	No	No
Floor finish	Compacted earth	Compacted earth
Wall finish	No	No

Ato Mellaku, member of Abyot Fana housing cooperative, said "use of the local material reduced the cost of houses. But we have a difficulty in maintaining, adding and extending of the houses. Since the stone is attached by mud as mortar, it was difficult to touch the main core house. But we had extended and added rooms on the service core. The material of the partition was clay and it was 180cm height. There was a hole between the two households at the time of construction. We don't know why they make open between two households but the cooperatives fills the gap by its own.

BOX 2: View on local material

Infrastructure: The infrastructure was supplied by the municipality. Road, electricity and water were provided at the initial stage of the housing development for the neighborhood. Electric meter and water meter for each housing unit was provided by the cooperative. The cooperative aimed at to improve the local roads by cobble stone.

Finance

The finance of the construction of houses was provided by former Housing and Saving Bank (now Construction and Business Bank). The self-help housing cooperatives had taken loan from HSB with an interest rate of 4.5%. For aided self-help with the same interest rate but there is no

Self-help cooperative housing

compound interest. The following were expected from the cooperatives in order to get the loan for construction.

- Certificate of registration
- Bylaws of the cooperatives
- Members age, salary and income from the employer office
- Marriage certificate for married
- Land title deed of cooperative

For aided self-help cooperatives all works are done in collaboration with the government .The construction materials were subsidized for both types of housing cooperatives. But technical assistance for aided self-help cooperatives was one of the means to minimize the cost of the construction of houses.

Loan repayment: The total cost of one house was 6000 Eth. Birr .This cost was with a subsidy of the construction materials and the technical assistance given by the government. The households in the aided self-help cooperatives repaid the loan without compound interest. They can also repay the loan at any time in the year. But self-help housing cooperatives had repaid the loan monthly since the loan was given them with the compound interest. The amount of money the beneficiaries of the three aided self-help housing cooperatives had repaid monthly was 30-40 Eth.Birr. The total cost of each household's house was from 5000 to 6000 Eth.Birr.

Tenure

The members of cooperative were kebele dwellers, renters from private and those who were living with their family before they came to the cooperative houses .The tenure type of the cooperative is critical for the proper functioning of the housing development. Since the type of tenure will affect the housing condition and the way the households invest on the extension. Therefore, it has to be decided before constructing the houses. The cooperative tenure type arranged by MUDH was incremental .It was a type of limited like mortgages. The cooperatives took the loan and each individual member of the cooperatives repaid his own share for 20 years. The tenure became gradually changed from cooperative to individual tenure for each housing units as the loan repaid. But in between if the member couldn't finish the loan, He could sell the house to another person with the agreement of the cooperative (see appendix 5).The new member had to accept all the agreements and he will continue repaying the remaining loan.

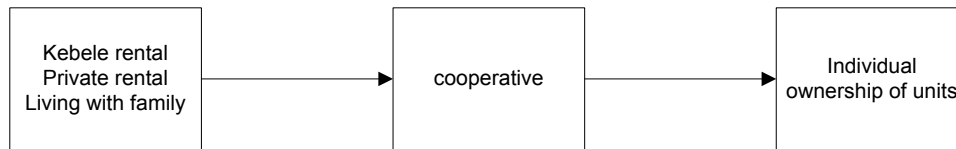


FIGURE 9: Tenure transformation

4.4. Construction of the houses (Implementation stage)

The construction of self-help and aided self-help houses were in different ways. The self-help houses were constructed taking loans directly from HSB (Housing and Saving Bank) and hiring contractors. But houses of aided self-help housing cooperatives were constructed in collaboration with government. The beneficiaries had given training about the role of each organization. Ministry of Urban Development and Housing (MUDH) assigned supervisor who follows and supervises the whole construction process. The cooperative had the major responsibility in following the whole process. The works were mostly done by the cooperative committees. The construction was done by hired contractor selected by each of the cooperatives with the approval of MUDH. As Ato Zewge former executive committee member of Abyofana housing cooperative said *the “aim was to make the beneficiaries participate when they construct the extensions”* “The sweat equity of the beneficiaries in the first phase of construction was minimal it was only site clearing.

Ato Aragaw Alemu, former executive committee member of Dilbetigl Ras agez housing cooperative, said
”Since the site was full off trees before the construction of houses, the cooperative members cleared the site. The city council bulldozers the site. After that the contractor started to build the houses with the follow up of the supervisor assigned by MUDH. One of the main problems in the construction of houses was getting construction materials which was difficult....”

BOX 3: View on construction of core

4.5. Transformation/Implementation and maintenance/ stage

A core house scheme is the next affordable scale after the sites and service scheme. It was designed for low income households who wouldn't build the full parts of the house. The design was prepared assuming the core will be expanded in the future.

When the family of the beneficiaries increases and when the financial capability or income of the residents increased the households would expand the core house. Core housing requires design, site layout, services, materials and construction methods. All these affected how the residents were able to extend or add the rooms on the core houses. The self-help cooperatives main core house has sharing wall with the next with one side. It has no difficulty for expansion and division. But the typical core house/main house designed for the three aided self-help cooperatives was duplex type which has shared walls with the next core house by three sides through the bed room.

" Ato Demeke, one of the member of Abyot Fana housing cooperative, saidThe houses were designed as core housing in order to be expand in the future as the financial capacity or the income of the beneficiaries became strong enough. But the houses shares two sides in one room and one room of one household extrudes with the next neighbor in one duplex block. What will be done for the future will be based on an agreement of the two households, better to be maintained and construct again. We had left the houses as it is. Because when you demolish the bed room of the neighbor will be demolished. The extensions we made are on the service core....."

BOX 4: Extension and addition

Extension and addition of rooms: having the above challenges, the households took their decision in order to fulfill their need .The rooms extended were not extension of the main core house as anticipated by the government rather all the added rooms are detached from the main core house but within the plot. But the kebele decided that there has to be an agreement between two neighbors living in one duplex block, in order to rebuild the main core house (See Appendix 4). Because of this reason, the only thing which made on the main core was maintenance using painting, pointing and some extensions to the front side or making the corridor as part of the living and dining room. One duplex house has two interlocked main core houses for two households. This can be seen in the figure below.

Self-help cooperative housing

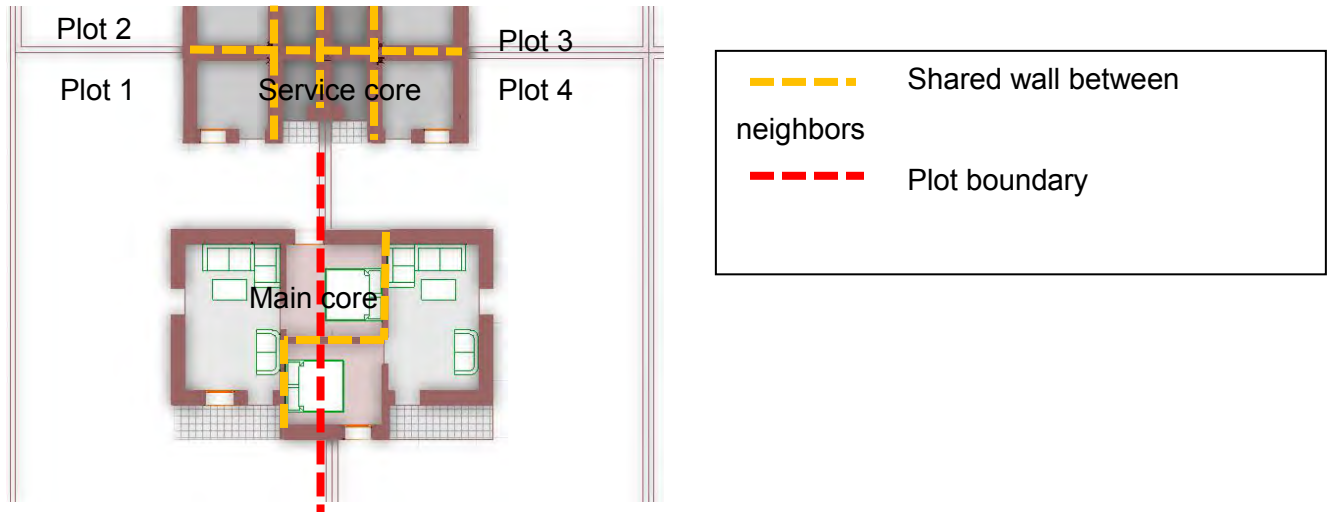


FIGURE 10: Shared wall and plot boundary

The maintenance of the main core house was in the form of painting and pointing as it can be seen in the figure below



FIGURE 11: Maintenance in the main core house

Source: Site Photo by the Researcher

The main reasons of transformation were for income generating and response for the growth of family size. The additional rooms were constructed with mud and hollow concrete block (HSB) wall. There was no any plan given to them which shows how the house was expanded.

4.6. Summing up

Since the project of aided self-help cooperatives were designed with participation of actors in different stages. It could be seen in two phases with different stages of the development of cooperative housing. The main objective of the project was to house the low-income using aided self-help cooperative as with core housing approach .The housing development had two phases. The first phase of the housing development was controlled by the government and the second was controlled by the low income households.

Initiation stage/origin of the project: the initiation of aided self-help cooperatives was triggered by Ministry of Urban Development and Housing (MUDH). The role of each actor was formulated by MUDH. The cooperative had set criteria to be a member since the houses developed was in subsidized basis. The criteria were a member has to be civil servant and the income of the member had to be below 250 Eth.Birr. The beneficiary has not had a house by his name. The main tasks of MUDH were the following: select the site, plans the dwellings, arrange the financing, organization and administration procedures before selecting the participants. The tenure type of the cooperative was also arranged by MUDH.

Designing and planning stage: The activities in this stage include the financial arrangement, design preparation and etc. The designs of typologies were designed by Ministry of Urban Development and Housing (MUDH). The finance was arranged as such the total cost of the houses was calculated including supervision. The money was released in different stages of housing construction. It was for foundation, for door and window, for wall/block work and for finishing. The total cost of each house including the service core was 6000Eth.Birr and the loan repayment per month was 36-40 Eth. Birr and the year the loan repaid was from 1986 -2001.

The selection of the typologies was not done by the cooperatives members. One typology design was given for the three aided self-help cooperatives where a duplex one story type core house and service core within individual plot size of 250m² each. The main core house has two rooms /living dinning and bed room/ and the service core has two rooms. The bed room of one main core house extrudes the other plot. The typologies were designed with local materials of stone for wall, corrugated iron sheet for roof and plywood for doors and windows.

Implementation Stage: Since the aided self-help cooperative was approached through core housing scheme, the construction of the houses will be assumed to be performed in two phases. Therefore, the implementation stage has two phases. The first phase is where the financed and Ministry of Urban Development and Housing (MUDH) led core housing construction. The second phase is the construction of extensions where the self-help concept becomes stronger.

The first phase of the core house construction: The construction was held by the local contractors hired by the cooperatives with the approval of the agreement by Ministry of Urban Development and Housing (MUDH). The cooperatives tried to minimize the cost by contributing their labor in clearing the site and removing plants at the site. After that the municipality defined the local roads. The total time of construction was three years. Each aided self-help cooperative had one supervisor hired by MUDH.

The second phase of construction/transformation: The second part of construction was the anticipated extension and addition of rooms to the main and service core. The main core house one room penetrates the other plot. The room of one's core house has partially found in others plot. The residents fear to touch the main core. As a result, the second stage was not gone as it was anticipated. The households extend the service core as it was designed. And most of the transformations were happened in the open land inside the plot. The additional rooms were constructed while repaying the loan.

The transformation happened in the service core but not in the main core house as it was anticipated by the government. The main reason the respondents raised was they fear to touch the main core due to the bed room of the neighbor found inside their compound. And there is also a trend in transforming the service quarter rather than the main house in the area under study.

Chapter five

5. Analysis and finding

This chapter has two parts. The first part aims to analyze the potentials and limitations of aided self-help cooperative housing found in Bahir Dar using the housing development process as unit of analysis. The second part will present the synthesis of findings from the analysis. The main factors analyzed here are those elements which give the housing process overview. The potentials and limitations could be traced from the housing process. Based on this, the analysis will give emphasis on socio economic profile of members of the cooperatives, core house provision, collective ownership, collective action and participation in different stages of the housing development.

5.1. Data analysis of the case study

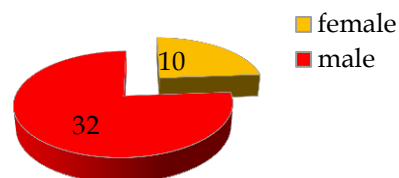
5.1.1. Socio-economic situation of the respondents

- Demographic data

The study found out that the proportion of women headed households to that of men headed households was slightly lower. Out of the total 42 households interviewed 10 were female headed and the rest were male headed (see table 7). But at the initial stage of the project the proportion of female was 5% and that of male was 95%. This shows the percentage of female increased as time goes on. This was mostly because of death of their husband. And the increase of female headed new comer households.

Table 7 : Demographic data

Sex of household head	Frequency	Percent
male	32	76.2
female	10	23.8
Total	42	100.0



Self-help cooperative housing

- Household size

The household size of the respondents shows 27 households of the respondents had 4-6 family members as it could be seen from the table below. The average household size in the study area was four and national average household size is 5.5, the study area has lower average household size than the average national.

TABLE 8: Household size

Household size	Frequency	Percent
1-3	12	28.6
4-6	27	64.3
7-8	3	7.1
Total	42	100.0

- Educational status

At the initial stage of the project all of the beneficiaries were civil servants. As one part of the criteria to be a member of the cooperative, the beneficiary income had to be below 250 Eth. Birr. They were teachers and soldiers. From the total of 42 respondents 8 of them or 19% had upgraded their position to become degree holders 14 of them or 33.3% became diploma holder and the remaining 20 or 48% are certificate holders and others.

TABLE 9: Educational status.

Educational status	Frequency	Percent
Degree	8	19
Diploma	14	33.3%
certificate and other	20	48%
Total	42	100.0

Self-help cooperative housing

- Income

This section sets out to understand the beneficiaries' income. This will help us to see the affordability of the housing units. At the initial stage of the project all the beneficiaries of the three cooperatives were civil servants with an income below 250 Eth,Birr. The current average household monthly income of all households is 1200 Eth. Birr. According to the 2006 integrated Development Plan of Bahir Dar City Administration, those residents whose income below 540 Ethi.Birr are considered as low income households. Therefore the beneficiaries were transferred from low income to middle income .The study found out that 78.6% of the households earn 1000-1500Eth.Birr as the table shows below

Table 10: Income of residents

Income	Frequency	Percent
500-900	6	14.3
1000-1500	33	78.6
1500-3000	3	7.1
Total	42	100.0

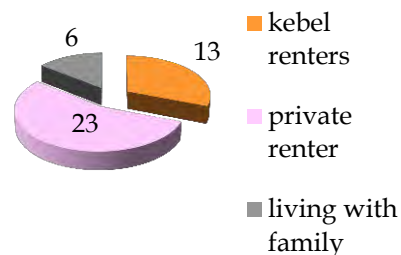
Average income of the respondents is 1200 Eth. Birr

- Former living situation

This section sets out to understand where the members have come from .This will help us how the tenure of the beneficiaries was transformed and their security of tenure is improved. Out of 42 respondents 31% of the beneficiaries or 13 households were *kebele* renters and 54 % of the beneficiaries or 23 households were private renters.14.3% of the beneficiaries or 6 households were living with their family until they entered to the core cooperative houses. This shows the majority of the beneficiaries were private renters (See table 11)

TABLE 11: Former living situation

Former living situation	frequency	percent
Kebele renters	13	31
Private renters	23	54
Living with family	6	14.3
Total	42	100



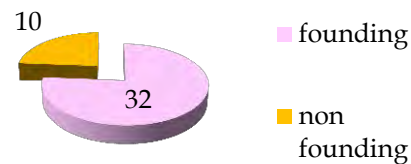
Self-help cooperative housing

- Founding members

This section sets out to understand how many members of the cooperative leave the cooperative and the reasons of leaving and its implication. Out of 42 respondents of the three cooperatives the founding members were 32 households and non-founding members were 10 households. Non-founding members were those who replaced the founding members who left the cooperative because of different reasons. The main reason was the change of work place and very few of them sold their housing unit due to the inability to repay the loan. The replaced or non-founding members became part of the cooperative member based on the agreement of the cooperative by the general assembly.

TABLE 12: Founding members

Founding members		
	Frequency	Percent
non founding members	10	23.8
founding members	32	76.2
Total	42	100.0



5.1.2. Current characteristics of the neighborhood

This section aims to analyze the current situation of the neighborhood to see the improvements made in the neighborhood and the services are found in the area.

- Facilities within and in close proximity to the area

Facilities which are found around the area are school, kebele administration, market and commercial facilities in a nearby area. (See figure 12)

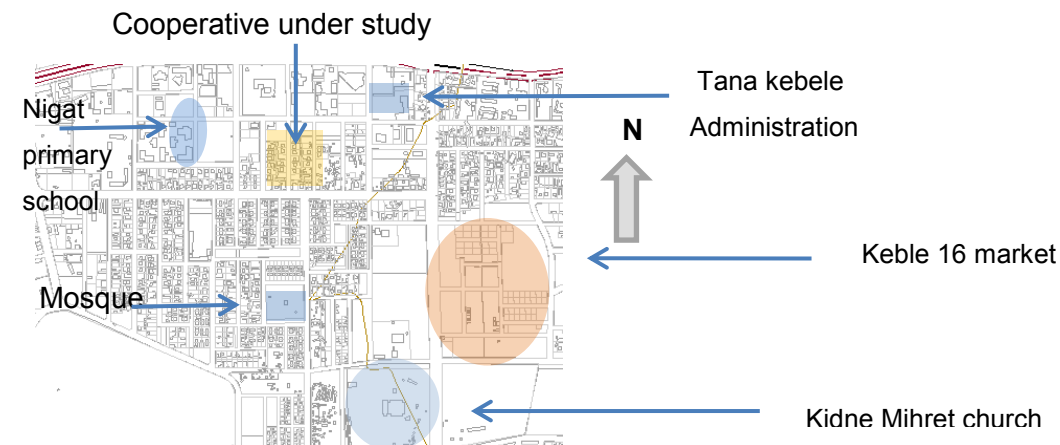


Figure 12: Services around the neighborhood

Self-help cooperative housing

- Social organization

“*Iddir*” and “*Equb*” are the most common form of traditional social organizations in Amhara region. In the study area, all of the cooperative members were members of one community based organization called *iddir*. Tana “*Iddir*” is the strong traditional organization found in the study area. The residents of the cases have “*Equb*”⁵ for saving money. These social institutions created strong social tie in the community.

- Solid waste

The solid waste disposal system was under the city wide approach .The city of Bahir Dar disposes the solid waste through private company every week in each area. The residents of the city dwellers pay 10 birr per compound for the company in every week. As part of the city the residents of the study area households use this system for solid waste disposal.

- Transportation mode

Since the terrain of the city is a plain, it is suitable for bicycle transportation. As part of the city dwellers the residents of the case area use bicycle as a means of transportation.80% of the residents of the case area use bicycle for transportation to come and go to home and work place .Others use Bajaj as means of transportation.

- Housing condition

Even though the houses are more than 20 years of old, the housing condition of the units is found in a better condition as compared to *kebele* houses found in the inner city. This is due to the beneficiary household’s maintenance of the house with the hope of ownership.



FIGURE 13: Housing conditions

Source: photo by the researcher

⁵ *Equb* is local money saving method by which total monthly contributions of members are given to each member by draw

5.1.3. Core house provision and collective ownership

Core house provision

This section will focus on spatial analysis of the typologies and the extent to which beneficiaries of the aided self-help Project were satisfied with the layout or design of the typologies.

- The design of the typology provided

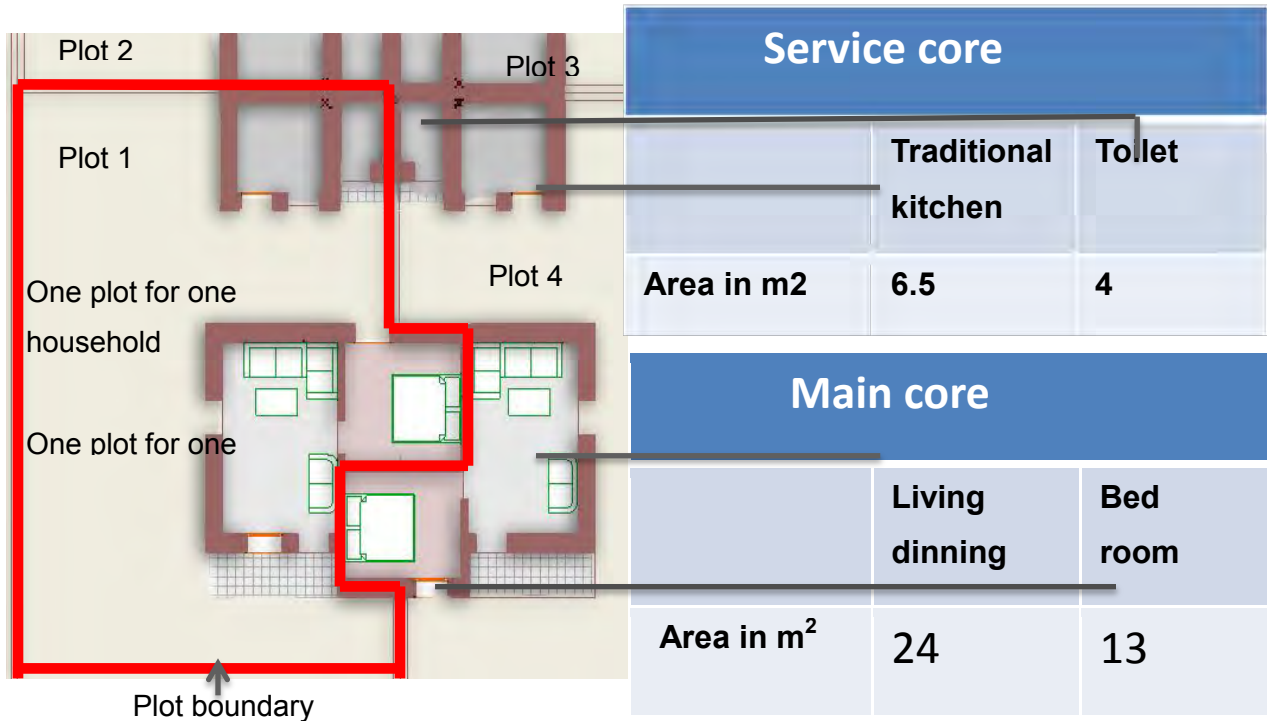


Figure 14: Typologies of the core house duplex

- View of respondents towards core house provision:

34 out of 42 respondents see the core housing provision as positive as one strategy in terms of the cost reduction of the house through space reduction and using of the local material for construction, especially the stone.

The reflection of the following interview shows this.

“.....most of the members of the cooperative had not large family size in the initial construction of the core houses. They were new couples who didn't have children. Therefore at that time the core house provided was enough to accommodate the family. This makes the finance required for the construction of the core units reduced and also the cost of long time repayment per month reduced. ... ” (Interview with Ato Melaku, 12/12/2011)

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The provision of less expensive cooperative core house unit reduced the finance of the construction of housing units. This ultimately reduced the amount of monthly repayment of beneficiary households.

Therefore the provision of core house unit rather than complete unit has two advantages for the beneficiary household. The first is giving opportunity of affordable house which requires minimum finance .The second is giving opportunity of participation or involvement of beneficiary households in the second phase of the housing development (construction of extension). This could be reinforced by the words of the following interviewee.

“.....the core housing units gave us an opportunity of home ownership since it was constructed based on our income capacity to repay the loan by calculating our retirement period. It also gave us opportunity to develop skill of management through participation in the construction of the core units.....” (Interview with Ato Aragaw, 25/11/2011). The core house provision gave the beneficiary household minimum security of tenure and opportunity of investment on housing.

- How the core expands

The anticipated core housing expansion direction is as shown the in figure 15. The space provided for extension or addition of rooms seems only for two rooms as it can be seen in the figure below.

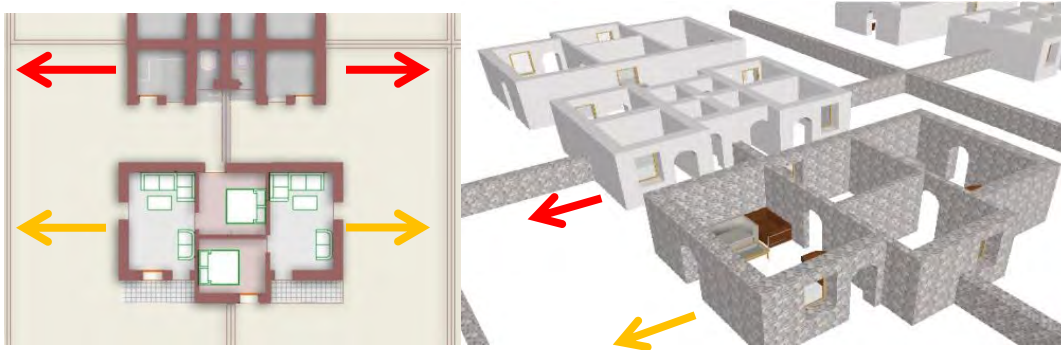


FIGURE 15: Anticipated direction of extension

- *View of respondents towards core expansion direction*

34 out of 42 respondents knew how the core house expands .And 8 out of 42 respondents expressed that they have no any idea how the main core expands. Out of the 8 respondents who didn't know the direction of the main core 6 were non founding members.

Self-help cooperative housing

TABLE 12: View of respondents towards main core expansion direction

View of respondents for direction of expansion of the core units	Frequency	percent
Know the direction	34	80.9
Didn't know the direction	8	19.04

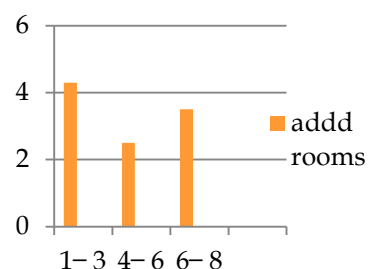
The result in the table reveals that the cooperative members who were not founding members didn't know how the core expands.

- Extension and addition

Even though 34 out of 42 respondents had known the direction how the main core house expands, the additional or extension rooms are added on the service core and the open land inside the plot. This is because there was a habit of adding additional rooms on the service core in the area. All the households added at least one room in the service core. 80% of the households constructed additional rooms on the open space inside their plots. 80% of the additional rooms were constructed as mud wall houses and the remaining rooms were constructed by hollow concrete block with cement screed floor finishing. Since the beneficiaries were civil servants the additional rooms were constructed by hired local skilled labors with the aid of the beneficiary. And all beneficiary households constructed fences for their houses. 75% of the households used stone masonry without mortar as fence material.

TABLE 13: Number of additional rooms

Number of rooms added	frequency	percent
1-3	30	71.4
4-6	10	23.8
6-8	2	4.7



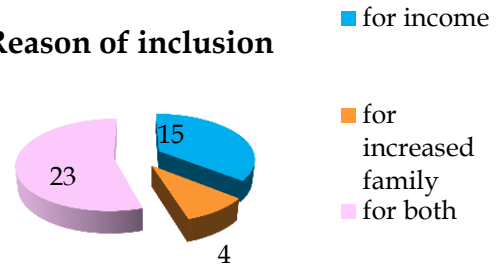
The additional rooms were constructed for purpose of income generating and as a response to family increase. 35.7% of the added rooms were added for income generating purpose only. 9.5% of the added rooms were only for the increase of family and 54% of the added rooms were added for the purpose of the above two reasons as it can be shown in the table below. The project assumes extension of units for an increase of family size.

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TABLE 14: Reason of extension and addition

Reason of extension		
	Frequency	Percent
for income source	15	35.7
due to increase of family	4	9.5
for both	23	54.8
Total	42	100.0

Reason of inclusion

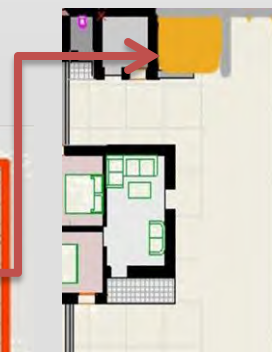


W/ro Abosent yohans, her husband Asr aleqa Atnafu, was one of the executive committee member of Tateq lesra housing cooperative. “We added the additional rooms while repaying the loan. I had repaid the entire loan. Now I am using these rooms for incoming generating. The rooms are used as rental unit and for selling of local drinks such as “*tella*”. Our source of income was salary of my husband but he has died before 6 year.”



BOX 5: Cas1 for Extension

Ato Asrat Enyew founding member of Ras agez cooperatives, “I am a teacher in Fasilo junior and secondary school .I used to live in the cooperative housing with four family members. I have added one room on the service core as a response to increase of my family.”



BOX 6: Case 2 for Extension

Sharing of wall, roof and foundation

The shared wall concept was used to reduce the cost of the house in the main and service core. The main core was designed as duplex in order to minimize the cost of the house as compared to detached house. The service core has a two side common/shared wall from the back and from the side .This sharing of wall further reduced the total cost of the houses. The service core was designed as a quadrplex (services of four households share the common wall) which decreases the cost of construction of the house.

- View of respondents towards communal elements

The view of respondents towards the design of typologies is as follows: 85% of the respondents see the shared wall concept as positive in terms of affordability and 15% of the respondents totally disliked the sharing wall concept. But all of the respondents didn't deny the cost reduction of shared wall. The reflection of the following interviewee shows this

".....The shared wall reduces the cost of construction but the bed room of one house extrudes the other plot." (Interview with Ato Demeke, 4/12/2012)

Overall the sharing of wall, foundation and roof make the cost of construction decreased. The respondents dislike the way the main core house design and the three shared wall which two neighbors share.

Communal septic tank and communal service provision

- Communal Septic Tank

The cooperative used one septic tank in communal way for four households where pit latrines for each household are over the septic tank .One fourth of the septic tank was found in each households plot as it can be seen in the figure below. Each household has its own pit latrine with shared wall with the back and side neighbor. Therefore the communal septic tank decreases the cost of the house in two ways. The first is using the septic tank itself in a communal way. The second is sharing of walls over the septic for each pit latrine as shown in the figure below.



Figure 16: Communal septic tank

- View of respondents towards communal septic tank

Out of 42 interviewed households only 4 of them fill their part of pit latrine and construct their own separate toilets. The remaining 38 of the interviewed used the toilet constructed by the cooperative sharing with their neighbor. Even those who constructed their separate toilets on their plot suggested the communal septic tank was good as a cost reduction strategy. The main reasons for filling the existing toilet and constructing new toilet is an increase of income and the demand for new septic tank. Overall the beneficiaries see the communal septic tank was good in decreasing the cost of the house at the initial stage of the project and also appreciated the flexibility which could be changed to individual toilet as they want. This could be seen in the following words of the interviewee.

“.....The provision of communal septic tank, one for four households, is a good strategy for decreasing the total cost of the house and it is also reducing the operation cost since we all share the payment of removal of the waste.....” (Interview with Ato Asrat, 4/12/2011)

Overall usage of the communal septic tank has two benefits for the households in decreasing the cost. One is in decreasing of the cost of construction through sharing rather than giving septic tank for each household. The second is in decreasing the operation costs through sharing of cost of removing the waste.

- Communal service provision:

There was shortage of electric meters at the initial stage of the project. Due to this reason and for cost reduction purpose the cooperative used one electric meter for four households at the time of the construction of the core units. And the water meter also used in the same way. This could be seen in in one of the interviewees held in the site.

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“.....The main reason for the provision of communal services, one for four households, was shortage of materials of services but in the mean while using in a communal way decreases the total cost of construction of the core houses”(Interview with Ato Zewge, 4/12/2011).

All these create easy access to infrastructure and services for the households.

- Home ownership and security of tenure

One of the most tangible benefits of cooperative living is the sense of ownership that residents gain from living in a housing cooperative. Through long term payment mortgage system all the cooperative members became house owners. Housing has a character of non-mobile commodity due to infrastructure and land. This makes us to raise the question of tenure. The main issue is getting security of tenure with affordability. Cooperative housing with schemes of core housing makes the beneficiary households to gain affordable housing with security of tenure. The same is found in the study. All the beneficiary households owned their unit through long term repayment of the loan.

5.1.4. Collective action and participation

Bulk purchase of building materials

Materials for the construction of the houses were bulk purchased through the cooperative committee. The cooperative committee had a responsibility of purchasing building materials. At the time of the construction of the houses there was lack of material provision. The cooperatives solve the problem through bulk purchase as the following interviewee shows.

“..One of the main problems we face in the construction of core housing units were lack of construction materials especially electric meter. But the cooperative purchased building materials in bulk and communal provision, one for four households, solve the problem we face...” (Interview with Ato Aragaw, 25/11/2011)

The purchase of building materials in a bulk reduced the cost of the construction of the core house units. This great volume of purchase of material lowers the total cost of the construction of the core unit. The construction materials for the sixty housing units were sold in three different committees. Each of the three committees represented twenty households. For example the water tap and other materials are bulk purchased by the cooperative. At the initial stage of the project there was shortage of electricity meters. The cooperative used 1 electric meter for every

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four household. Later the cooperative purchases electric meter for all household members. Now all the households have water meter and electric meter.

Labor Cost/Sweat Equity

Before the construction of the core house units, the site was full of eucalyptus trees. The trees were cut by the cooperative members and the whole site was cleared by the households themselves. The households contributed labor for the construction of the core units even though it was minimal. But some members of the cooperative especially teachers contribute their labor for the construction of the core unit in the shift time when they were not teaching. The word of the following interviewee reinforces this idea.

“.....I am a teacher in Fasilo junior and senior secondary school. I used my extra time for contributing labor for the construction of the core units. When I had a class in the afternoon, I use morning time for the construction of the core housing for cooperatives.....” (Interview with Ato Kebede, 25/11/2011)

The labor contribution of each household in site clearing and the contribution of labor by some teachers in the construction of the core units further reduce the construction cost of the core house units. The households also contributed labor in the construction of the extension of the houses.

Management cost

The cooperative followed the whole work of the core housing development, from site clearing to completion of the project. This was done by selected cooperative committees. Drainage, leveling, installation of general networks and individual water tube connections for water, and electricity were administered by the cooperative committees of the three cooperatives with the assistance of the government assigned supervisor. The cooperative hired local contractor for the construction of the houses with the approval of Ministry of Urban Development and Housing (MUDH). The administrative and managerial costs were reduced through Self-management. This self-management gave the beneficiaries skill of management. These skills transferred to the construction of the additional rooms or extensions. Since the houses were constructed by local materials (stone) the cooperatives hired local contractors. The hiring of local contractor by the cooperative creates job opportunities for the local people. Overall self-management of the cooperative creates opportunities to make the house affordable to the beneficiaries.

Collective approach for loan to access finance for housing

Low-income households typically have little access to formal housing finance due to lack of collateral. But in cooperative housing collective pooling of resources and collective loans increases the creditworthiness of low-income households. This is also true in the case under study. The households took the loan in a cooperative way and individual households take their own equal share.

Level of participation in the housing development

The cooperative housing was developed by the concept of self-help with the assistance of government. In order to evaluate how the housing development is self-help it is better to see the participation of the beneficiary households in each stage of the two phases of the housing development.

The aided or assisted self-help housing has two phases. The first phase is the construction of core housing by the government and the beneficiaries. The second phase is the construction of the addition and extension through the full control of beneficiaries. The concept was to give the low income households unfinished partial houses and make them finish by themselves or by local contractors. Therefore, the beneficiaries' participation in the total housing development can be seen in two phases. The first phase was the planning, designing and construction of the core house units. The second phase or the assumed continuation of the first phase was the extension or expanding of additional rooms. The participation of beneficiaries in the first phase of the housing development was as follows:

Initiation stage: the initiation (organization of cooperatives) of the project was done by the government. The type of participation in this stage was *none*⁶.

Planning stage: Budget and resource allocation was done by government, taking information from the beneficiaries indirectly. The type of participation in this stage was *indirect participation*⁷.

Design stage: Technical expertise and details were done in this stage. The technical expertise was done by MUDH. But they have showed the community how the design and details worked. The participation of the beneficiaries at this stage was *consultative*⁸.

⁶ None : No involvement from the community

⁷ Indirect participation : No direct involvement from the community but the outsider receives information about the community from secondary sources

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Implementation stage: this stage can be seen in two phases: the first phase was the construction of the main and service core houses. And the second phase was the construction and management of the extensions or added rooms.

In the first phase of implementation stage the participation of the cooperatives was limited to hiring of local contractors with the approval of MUDH , purchase of construction material and managing of the construction process through their committee .Based on this the participation of the beneficiaries in the first phase of implementation was *shared control*.⁹

The second phase of implementation stage: This was the stage where the beneficiaries had authority over housing themselves. In the second phase of housing development all the beneficiaries participated. Since every household had added at least one room either for family increase or for income generation. All the houses were constructed by local contractors/skilled labors with the aid of the beneficiaries. Even though the beneficiaries" sweat equity was minimal, they were decision maker in the construction of the extensions or added rooms. The type of participation was *full control*¹⁰.The following table shows the overall participation of beneficiaries in the housing development.

TABLE 15: Evaluation of participation based on model of Hamdi and Geothert (1997)

	initiation	planning	Design	Implementation		maintenance
				Core con.	Exten. con	
none						
indirect						
consultative						
Shared control						
Full control						

The government prepared the design of typologies, selected the site, and plans the dwellings; arranged the financing, organization and administration procedures before selecting the participants. The beneficiaries" participation was, on site clearing in the initial housing development, management maintenance, hiring and paying of contractors and purchasing of

⁸ Consultative: Information is received directly from the community by the outsider

⁹ Shared control: Community and outsider interact as far as possible

¹⁰ Full control: The community dominates and the outsider is only a resource

construction materials. Overall the collective action and participation of beneficiaries had economic and social benefits for the households. The economic benefits were reducing cost of the house through bulk purchase materials, managing the housing development through selected committee, labor contribution and taking loan in a cooperative way. The social benefits were the development of community spirit, job opportunity and skill and capacity development.

5.1.5. Affordability and cost recovery

The total housing development under study used two sources of finance. The first was the external financial source/government for the construction of the core. And the second was the internal financial source for the construction of extended rooms. In order to evaluate the affordability of the houses, it is better to see the cost of the unit and income of beneficiaries at the time of the core construction and the loan repayment amount per month in relation to their income. The cost of each core house was 6500 Eth. birr and the monthly repayment of each household was from 35- 40 Eth. birr for 15-20 years. Their salary at that time was maximum 250 Eth. Birr. The total income percent for the core house repayment was 16 %. All households repaid the loan but while they were repaying the loan they were also constructing additional rooms as a response to family increased and for income generating. The entire loan was collected by Rental Housing Agency. The cost of the houses was recovered. The core house was affordable to them. The additional rooms could be constructed by the 10% income saved. This shows the house was affordable based on the cost to income ratio. The affordability of the housing development can be seen from a different measure as follows. There are different measures which make the house to be constructed affordable to the low income (Federal Affairs Minister, 2006).The measures in different developing countries take in order to have better affordable housing are:

- ✓ Reduction of space standards
- ✓ Reduction of plot size per unit
- ✓ Building at higher density
- ✓ Reduction of construction cost per unit
- ✓ Involving users in construction(self-help)
- ✓ Reduction of infrastructure cost through communal provision of facilities
- ✓ Provision of soft loan

From the above measures the case study had successfully implemented four of the seven measures to make the house affordable to the beneficiaries. The core concept used as a strategy for reduction of space standards. Involving of users in the construction of the core and the extension reduced the management cost of the house. Communal provision of services like septic tank, water meter and electricity meter reduces the construction and operation cost. The provision of low interest loan makes the house affordable to the beneficiaries. The cost recovery was achieved in all the three cooperatives. All the beneficiaries repaid the mortgage loan in the given years.

5.1.6. General life experience of beneficiaries

The main aim of any housing development is to provide beneficiaries with shelter, access to basic human needs, (specifically access to socio-economic needs, such as job opportunities, transport facilities, water, electricity and schools) and security of tenure. "A house can be a home if and only if it gives its beneficiaries with minimum shelter, access and minimum security of tenure" (Turner, 1976; 97).

Against this background, this section will analyze beneficiaries' views with regard to the extent to which the housing Project provided them with basic shelter, access to various socio-economic amenities and security of tenure. The study found out that all 42 respondent beneficiaries expressed their proud to be a member of the cooperative. Out of 42 interviewed 80% of the respondents were happy with the core given to them as the initial housing unit in a cooperative way. In terms of access 90% of the respondents expressed their satisfaction of basic service provision in the cooperative way especially water and communal septic tank. 10% of the respondents expressed their dissatisfaction with basic services. All interviewed beneficiary households expressed their pride of having a house of their own. The security of tenure made the beneficiaries to invest in their housing which ultimately became effect on the housing condition and housing quality. Even though the core houses are more than 20 years after construction, now the housing condition of the core units is found in a better condition than kebele house with the same 20 years old. The beneficiary households argued that the project enabled them to have affordable housing units. This can be assured by the words of one of the beneficiaries:

"...I acknowledges the contribution government played in enabling me to provide housing to my family and my children" (Interview with Ato Zewge, 22/11/2011)

5.1.7. Problems faced in the housing development

In addition to the findings that relate to potentials this study also revealed that there were limitations in aided self-help cooperative housing delivery. Some households take benefits of the collective without paying their responsibility or without participating in the housing development (free rider problem). This is one of the major problems the committees of the cooperatives raised as the following interviewee shows

“.....some households are not willing to take responsibility in the purchase of building materials and in contributing labor for the construction. “

Some respondents expressed their Lack of demand for shared or cooperatively owned properties. Since the cooperative didn't give training and other capacity buildings for the new members who replace the households who sell their unit, the new members didn't know very well how to expand the houses. The other problem, 90% of the respondents raised, was the extrusion of ones room in other plot in the main core.

5.2. Synthesis of Findings

To what extent the low income households benefited from self-help cooperative housing through collective ownership?

The study tried to explore to what extent the low income households have benefited from self-help cooperative housing development in Bahir Dar city. The study found out that collective ownership of elements in a cooperative housing has economic and social benefits to the low income households in the following ways.

1. Less expensive core house provision: The provision of core houses makes reduction of space. This is one of the strategies of making housing affordable to the low income people. In addition to the economic benefit of the core, it fosters the participation of the poor in the construction of the extension. This will have a social benefit in terms of job creation, skill and capacity building in addition to the economic benefit of cost reduction for affordability.
2. The core units were provided in a cooperative way with shared walls, communal service provision and communal septic tank. The shared wall reduced the cost of construction. The provision of communal services and communal septic tank, one septic tank for four households, makes the construction and operation cost lower.

3. Land in a block basis: cooperative housing uses land on a block basis which decreases the cost of the infrastructure given to them. Since the households are duplex type it will take lower cost of infrastructure provision.
4. Home ownership, housing cost and security of tenure: Through long term payment all the cooperative members became house owners. Housing is a character of non-mobility or it is durable. This character of housing pushes us to raise a question of tenure. Level of security of tenure differs in different housing delivery options in relation to affordability. Maximum security is in the owner occupier but the cost of construction and operation is high. So even though there is high security of tenure, it is not affordable. The lowest cost is found in informal settlements/ squatter settlements which is affordable to the low income but there is a fear of eviction. The rental house is not affordable and there is fear of eviction. The study found out that the cooperative tenure at the initial development of the house used for the low income households to decrease fear of eviction and at the same time affordable to them. This has further effect on the condition of the house. Since the households have an ambition of to become owner of the house, they have invested in their houses. This contributed for the better condition of the houses now.

Over all the provision of low cost core house in a cooperative way with shared wall, communal service provision, communal septic tank and cooperative ownership of units in the first phase reduced the construction and operation cost of the houses. This cost reduction contributed for affordability and cost recovery. In addition to the economic benefits mentioned there were also social benefits. These were: creation of job opportunity for local contractors, skill of management, community spirit and capacity development.

To what extent the low income households benefited from cooperative housing through collective action and Participation?

1. One of the objectives of cooperative housing is that the members work together towards a common goal. The study found that the collective action of households pools resource which offers economy of scale on building materials, construction, service provision, management and maintenance. The beneficiaries benefited from the cost minimized through bulk purchase of building materials, labor contribution and collective approach for loan. Even though the participation of households limited to bulk purchase of building material, hiring of contractor and management in the construction of core houses, the core concept made the beneficiaries to have full participation in the construction of the extensions and additions. As the project goes on the self-help concept became stronger

and stronger. The core concept increased the participation of beneficiaries and decreased the cost of the house. All these contributed for the achievement of affordability and cost recovery.

2. Other benefits of collective action to the beneficiaries were management skill and training. This helped them to manage the construction of the extended or added rooms in the second phase.

Overall the collective action and participation of beneficiaries had economic and social benefits for the households. The economic benefits were reduction of cost of the house through bulk purchase of materials, managing the housing development through selected committee, labor contribution and taking loan in cooperative way. The social benefits were the development of community spirit, job opportunity creation, and skill and capacity development.

Having answered sub research questions the following will answer the main research question.

What are the Potentials?

Collective ownership of elements and core house provision

- Collective ownership used as instrument for housing the poor
- Low cost core house provision make the house affordable and encourages the participation of beneficiaries in the housing development
- Provision of Communal service ,water and electric city, reduced the construction and operation costs
- Provision of Communal septic tank also reduced the construction and operation cost
- The shared wall in the main and service core reduced the construction cost

Collective action and participation further reduces the cost of the house

- Involving users as decision makers in the housing development (self-help) reduced the management cost.
- Efficient use of resources reduced the cost of construction. And it also creates employment opportunity for local contractors and beneficiaries.
- Bulk purchase of building materials reduces the construction cost.
- Speculation of land decreased to some extent. This is due to the approval of the cooperative for the replace of leaving members of the cooperative
- Collective approach for loan to access finance for housing makes the poor creditworthiness.
- Labor contribution/sweat equity through group participation in the removing of plants and site clearing reduced the cost.

Self-help cooperative housing

- Opportunity to create income generating units. The cooperatives tried to construct income generating unit even though it was not happen due to land problem.

What are the Limitations?

- Assumption and the reality of housing extension: Even though the government anticipated the main core and service core to be expanded, the reality the study found is, the respondents add rooms only on the service core and open space inside the plot.
- Absence of use and social mixity in designing the typology: The core design didn't include the use and social mixity. The beneficiaries profile in terms of income and type of job was the same. And the design didn't promote use and social mixity.
- The opportunity costs between being involved in the collective action in housing themselves and other productive income earning activities. Since the beneficiaries were civil servants it can't be compare with being involved in the housing construction (free rider problem).

TABLE 16: Summary of findings (Potentials and Limitations)

Potentials	Benefits for both government and beneficiary households	
Core house provision and Collective ownership	Economic benefit	Social benefit
1. Provision of Low cost core houses	<ul style="list-style-type: none"> • Cost reduction of Construction, management, operation and maintenance of the housing development. 	<ul style="list-style-type: none"> • Home ownership and security of tenure • Capacity development • Creating community spirit • Job opportunity for local contractors
2. Shared wall units in the main and service core designs		
3. Communal service provision		
4. Communal septic tank provision		
5. Cooperative house ownership		
6. Taking land in a block basis		
Collective action and participation		
7. Bulk purchase of building materials		
8. Labor contribution/sweat equity through group participation in the removing of plants and site clearing		
9. Involvement of users/participation in the first and second phase of development		

Self-help cooperative housing

10. Collective approach for loan to access finance for housing	<ul style="list-style-type: none"> • The cost recovery and Affordability has been achieved. • Financial burden of the government has been reduced 	<ul style="list-style-type: none"> • Opportunity of participation • Management skill and training
11. Efficient use of local resources		
12. Opportunity to organize income generating units		
13. Speculation decreased to some extent due to the approval of the cooperative when members were leaving the cooperative		
Limitations	Recommendation	
1. The role of design in the housing development was not considered.	<ul style="list-style-type: none"> • Government has to enable housing cooperatives through technical and financial assistance • Promoting mixed income and mixed use developments by cooperatives • The role of design has to be considered .The design must be Flexible design: incorporating the above potentials and tackling the problems 	
2. All the beneficiary members were the same economic and social profile. and the design doesn't consider mixed development(Use and social mixity)		
3. Some households take benefits of the collective without paying their responsibility or without participating in the housing development(Private over collective) free rider problem		
4. Lack of demand for shared or cooperatively owned properties		

Chapter six

6. Conclusion and recommendation

6.1. Conclusion

From the analysis of literature review, contextual background and case study, it is understood that self-help cooperative housing is one means of housing for low income households. The study shows that the development of cooperative housing by itself is not an immediate solution. Rather it requires certain basic elements for the proper functioning of the housing development. Even though there are many elements of cooperative housing, collective ownership, collective action and participation of members of the housing cooperatives are fundamental elements for the proper functioning of cooperative housing for cost reduction. Based on this the following important conclusions were drawn.

- The core house provision and Collective ownership reduced the cost of the house and make affordable to the low income households.
- Collective action and participation of beneficiaries pool resource which offers lower economy on building materials, construction, service provision and management.
- The Core housing promote participation of low-income households in the housing development
- Even though the current scientific knowledge tells us that cost recovery and affordability are some of the limitations of self-help cooperative housing, Cost recovery and affordability were achieved in the area under study through collective ownership, collective action and participation of low income households in addition to the government assistance.

6.2. Recommendations

In this part a number of recommendations will be given in respect of the key findings. The analysis shows the potentials and limitations of cooperative housing in relation to the main issues raised. However the limitations need proper consideration in order to develop self-help cooperative housing on a continuous basis. Lack of flexible design, lack of social and use mixity are some of the limitations identified in the analysis. Based on this the following recommendations are forwarded.

Collective ownership and core house provision

Design is one of the key elements which play part in housing development. If its role is not considered very well, the result will be not good. The case study finding shows that, the role of design for the consolidation of the core has not been considered. As a result the consolidation of the main core house was not as it was intended to be. Some of the recommendations which will solve such problems are as follows.

- The role of design has to be considered .The design must be Flexible design: incorporating the potentials and tackling the limitations(see the proposal below)
- Mixed income and mixed use cooperative housing developments has to be promoted
- Collective ownership of elements has to be promoted in developing cooperative housing for the low income households of the city. This will make it affordable to them.

Collective action and participation

- The government has to enable cooperatives through finance and technique. Since the housing development is for the poor the government can't be ignored totally. But it has to be enabler. This will further promote the achievement of the intended development.
- Giving training to the beneficiaries especially how the core housing concept works
- Promoting existing small scale enterprises and other associations to form saving for housing section to use their existing saving and management potential.

Policy and legal

- Local authority has to formulate supportive regulatory framework. The standards may be incremental like the housing development rather than rigid which expects all at instant.
- Promoting further research on different dimensions of cooperative housing and comparative analysis of different housing delivery options.

Self-help cooperative housing

Table 17: Potentials, limitations and recommendations

Potentials	limitations	Recommendation
Core house provision and collective ownership		
<ul style="list-style-type: none"> • Shared elements • Communal ownership of service provision • Communal septic tank • prevents the speculation of land • provision of low cost core houses • Taking land in a block basis 	<ul style="list-style-type: none"> • Absence of use and social mixity • Design becomes not promoter of housing as process • lack of demand for shared or co-operatively owned properties 	<ul style="list-style-type: none"> • Promoting cooperative housing designs with mixity of use and society • Promoting more collective ownership and sharing elements to lower the cost of individual houses • Supportive regulatory framework with Flexible standards
Collective action and participation		
<ul style="list-style-type: none"> • Collective approach for loan to access finance for housing • Mutual help in some parts of the construction makes further lowering of the cost of the house • Collective action on the cooperatives pools resource which offers economy of scale on building materials like Bulk purchasing of material • Even though state controls over dweller ,the presence of dweller control/self-help in the core construction lower the economic hardship • The horizontal stratification of participation makes the poor control the second phase of construction 	<ul style="list-style-type: none"> • Low-income people face opportunity costs between being involved in the collective and other productive income earning activities(free rider problem) • Lack of skill and training hinder the housing development 	<ul style="list-style-type: none"> • The government should enable cooperatives through finance and technique • Promoting participation of the poor in housing themselves and giving training to the low income • Promoting Multipurpose cooperatives to use existing managerial and saving skill of micro and small scale enterprises(MSCs) • Promoting further research on different dimensions of cooperative housing

6.2.1. Proposal for action

Proposed Strategy

Successful housing supply for low income households depends on strategies applied to increase financial resource and reduction of the cost of the house and infrastructure. From the findings of the study collective action and participation of low income households will decrease the financial burden of government on housing construction. Core house provision and collective ownership will have an impact on the reduction of the construction of the houses. Since we are dealing with the low income housing, the government can't be ignored totally. The government will develop the housing with the partnership of the low income households.

FIGURE 17: Proposed strategy

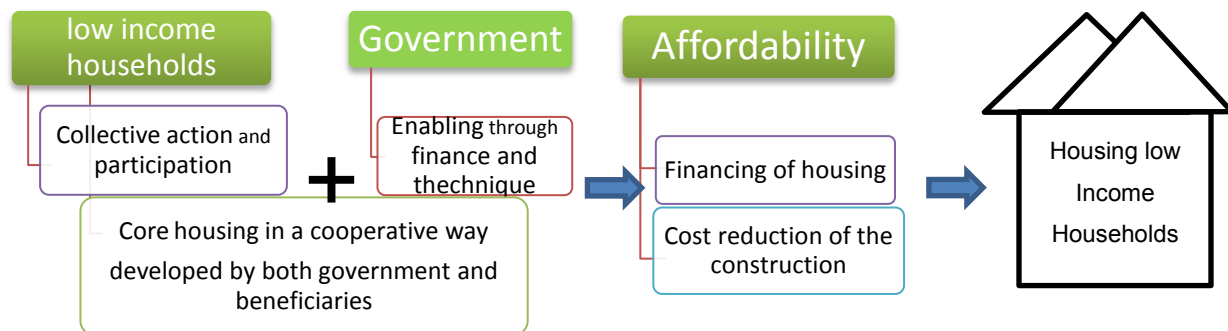


FIGURE 18: Proposed strategy

1. Cost reduction strategy

- Flexible Core house provision
- Collective ownership of elements
- Communal provision and usage of services

This requires design solutions (see the design proposals below)

2 Financial availability strategy

- Collective action and participation
- Since it is low income housing it requires Government intervention in the form of finance and technique

This requires organizing of low income households to create housing cooperative. (See the following section)

How it will be incorporated in the new 40-60 housing scheme program?

The new housing program of 40-60 housing scheme aims to incorporate middle income groups and the low income groups who were not beneficiaries of condominium housing. The program aims the beneficiary to save 10% of the total cost of the house and government subsidized the houses. The design of typology will be all studio types for low income groups (Addis zemen, , june25,2012(Hamlie17/2004. E.C)).The regional government is also preparing to launch the program.

The proposal assumes existing Micro and Small-Scale Enterprises and other cooperatives who are actively engaged in different activities, including construction, will have to create saving for housing part in addition to their major work. The associations have to be encouraged to involve in finance for housing activities. Those Micro and small-scale enterprises who are engaged in construction works will have sweat equity in housing themselves at the same time the design will incorporate income generating unit for the cooperative. Those whose work is not connected with construction will have managing and other administrative controls in the housing development. All works will be done in collaboration with the government.

The proposal will be used as one strategy for the new program as a solution to the problem of flexibility of the studio type houses. It will also preserve the social tie which will be broken when turn over the houses will be high due to additional space requirement for the increasing family.(see design proposal below)

Actors and their role

Community/cooperatives

- Legally organized small scale enterprises and other associations to form housing cooperative in order to make financial contribution and labor(as much as possible)
- The cooperatives will save money before construction at least 30% of the total construction cost
- Come up with idea which reduce construction cost of the houses

Self-help cooperative housing

Government/city administration

- Develop rules that encourages housing development through partnership of government and low income households.
- Using the existing cooperative legal frame works for organizing self-help cooperatives in the existing associations and cooperatives
- Giving technical and financial assistance like design and consultancy
- Arrange other non-governmental organizations to provide assistance in the form of aid and soft loan, if there are

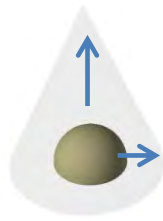
Finance

The strategy proposes internal and external financial sources. The internal financial source is the beneficiary themselves. The beneficiaries have to save 30% of the total cost of the construction of the core. Existing Micro and small- scale enterprises and other associations have to promote to save for housing. The external financial source is the government .since we are dealing with low income housing the government has to give financial support .The government will contribute 70% of the total construction of the core. The beneficiaries will repay the loan on long term basis. The financial institutions should keep the lending rate on housing loans low.

Tenure:

As the strategy indicates the tenure depends on the type of the cooperative. The beneficiaries will have two type of ownership. For income generating units ,which will be constructed on the ground floor based on the type of work of the cooperators, they will have cooperative ownership and for individual housing units they will have owner occupier type of ownership/condominium type/.

Design concept: Since the financial capacity of the low income households is the main factor for the design of typologies, the main concepts of the design revolves on cost reduction and financial capacity consideration. Core housing approaches solves the problem of cost and finance. The design concept is flexible core housing which considers the financial capacity of beneficiaries and at the same time flexible to expand



The core house design which is flexible enough to expand horizontally and vertically

FIGURE 19: Design Concept

Design Considerations

- Innovative designs
- Cost-effective construction techniques
- Participatory design
- Foster communal living and working together to make it affordable,
- Encouraging use and social mixity

Type of core houses proposed:

One room core + services

Two room core + services

Shell core + services

Considering the area which could be applied in the city, the core house type provided has divided into two: Core house apartment type

Core house plot type

The core house apartment type will be used in the area where high density is required. This will be used for housing the low income where inner city redevelopment will happen. And it will be horizontal incremental type .The increment will happen in a cooperative way.

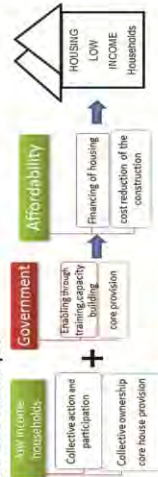
The core house plot type will be used for moderate density/intermediate zone and for the periphery of the city where more informal settlements are growing now. Based on this the first type will expand horizontally and vertically which will be provided in raw core house .The second type is shell core which will be expanded horizontally and could be applied in the periphery of the city. And it also used for regularization of squatter settlements in the periphery and in the lake shore.

proposal for action

Proposed Strategy

Successful housing supply for low income households depends on strategies applied to increase financial resource and reduction of the cost of the house and infrastructure. From the findings of the study Collective action and participation of low income households will decrease the financial burden of government on housing construction. Core house provision and collective ownership will have an impact on the reduction of the construction of the houses

1. Cost reduction strategy
 - ❑ Flexible Core house provision
 - ❑ Collective ownership of elements
 - ❑ Communal provision and usage of services
2. Financial availability strategy
 - ❑ Collective action and participation
 - ❑ Since it is low income housing it requires Government intervention in the form of finance and technique



Actors and their role

Government

- ❑ Develop rules that encourages housing development through partnership of government and low income households.
- ❑ Using the existing cooperative legal frame works for organizing self-help cooperatives in the existing associations and cooperatives
- ❑ Since it is low income housing it requires Government intervention in the form of finance and technique
- ❑ Giving technical and financial assistance like design and consultancy
- ❑ Arrange other non-governmental organizations to provide assistance in the form of aid and soft loan, if there are

Community

- ❑ Legally organized small scale enterprises and other associations to form housing cooperative section in order to make financial contribution and labor(as much as possible)
- ❑ Saving for housing saves money before construction at least 30% of the total construction cost
- ❑ Come up with idea which minimizes use of land and reduce construction cost

Finance

The finance of construction of the initial core house unit will got from the saving of cooperative with the collaboration of the government. The cooperatives will contribute 30% of the total construction of the core house unit. by saving. This will further foster culture of saving for housing rather than to have house at instant. Saving for housing will be formed from existing social institutions and existing smallscale enterprises. The subsidy for small scale enterprises for the major work will be part of their housing development

Legal frame work

- ❑ The proclamation of cooperatives where the cooperatives are now organized by cooperative promotion bureau will be used for the organization of cooperatives
- ❑ The existing integrated plan of the city proposes the cooperative sector for housing the poor
- ❑ The new 40-60 housing development scheme which is proposed for middle income and low income households could be used by decreasing the percentage of the contribution of the households and using core housing development scheme for low income households of the city

Design proposal

- overall concept
- ❑ Since the financial capacity of the low income households is the main factor for the design of typologies therefore the main concepts of the design are:
 - ❑ Core housing approach in cooperative way which considers
 - Flexible to be expand
 - Vertical and horizontal expansion



The core unit which is flexible to expand horizontally and vertically which is provided in cooperative way

Design Considerations

- ❑ Innovative designs
- ❑ Cost-effective construction techniques
- ❑ Participatory design
- ❑ Foster communal living and working together to make it affordable
- ❑ Encouraging use and social mixity

Type of core houses, proposed based on room/size

- ❑ One room core + services
- ❑ Two room core + services
- ❑ Shell core + services

Type of core houses, proposed based on the area which could be applied in the city

- ❑ Core house apartment type
- ❑ Core house plot type

Potentials and Limitations of Self-help Cooperative housing

The cas of Tana kebele, in Bahir Dar



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proposal for action

Design proposal for high Density/Inner city

mejan considerations
 Core housing apartment type
 Horizontal increment
 Flexible to be expand
 More sharing elements to decrease the cost
 service core and habitable room initial core
 the location of the core at center as logical
 solution to for economic reasons

Design concept
 Service and servant space approach
 core house consists of service core and
 habitable room core house
 The habitable room space expandshorizontally
 if financial capacity is strong enough to satisfy
 the needs of the beneficiaries

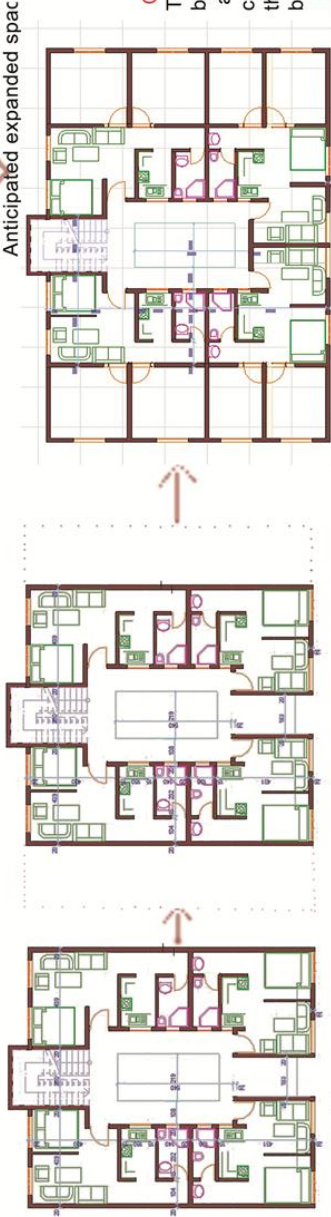
litial core house (service space + Habitable room)



Typology 1

Aeas which could be applied

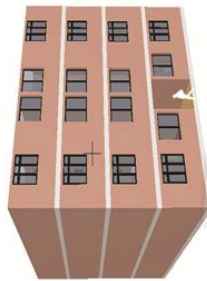
This type of core could be used in the central inner city where kebele houses are predominantly found. The kebeles which are includedare for this proposal willbe Kebele 06,05 ,08 and 12.



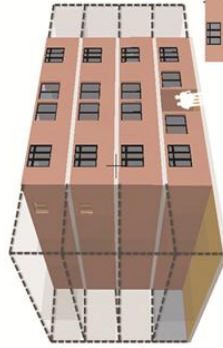
initial core

Anticipated expanded space

Anticipated expanded space



3d view of the initial core



3d view of how it is expand

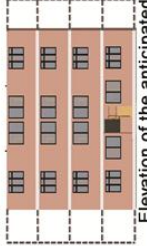
The expanding side of the core doesnt face the road and when the construction of the initial core the space for extension has to be considered



Elevation of the initial core



3d view of the anticipated



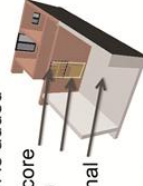
Elevation of the anticipated

Construction and finance
 The construction of the core will be done by the collaboration of the government and the cooperatives. The beneficiaries contribution will be 30%of the total cost of the core house and the remaining 70% will be repaid with the long term payment.

Construction of the anticipated extension
 This will be done cooperatively. The whole extension of one side has to be done with the agreement of the whole membr and it could be phase.developmet first the frame with flexible material usage then to the standard

How it expand

The expanding side of the romm may have a window which could be changed to door when additional room is added



Window in the initial core
 Door when extension added
 The extended additional unit

Potentials and Limitations of Self-help Cooperative housing

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proposal for action

Design proposal for high Density/Inner city

major considerations
 Core housing apartment type
 Horizontal increment
 Flexible to be expand
 Service core and shell type core
 The service core located at center as logical solution to for economic reasons

Design concept
 core house consists of service core and Shell with no partition

Typology 2 shell type core

Central service core
 Shell with no partition except the services
 Flats and services

Areas which could be applied

This type of core could be used in the central inner city where predominantly kebele houses are found .This include kebele 06,05 ,08 and 12.



Initial core (service +shell)

Initial core (service +shell)

Initial core (service +shell)



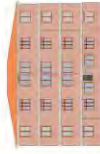
Initial core house (service +shellhouse) service at center to minimize the cost constructed by government



Construction of the habitable rooms from the shell (by the cooperative)



Final out look of the building



Elevation of the anticipated



Elevation of the initial core



Elevation withhabitable room

Construction and finance
 In this case the construction has three phases. The first is the construction of the service and shell core. The second is construction of frontage and habitable room .And the third is the construction of the partitions. The construction of the service and the shell core will be done by the government and the habitable room and the front will be constructed by the cooperative . The beneficiaries will construct the partition walls.

Material for construction
 material for the frontage and external walls will be based on the plan given but the partition walls could be based on the preference of the beneficiary except the service which will be constructed by the government



Potentials and Limitations of Self-help Cooperative housing

The cas of Tana kebele, in Bahir Dar



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proposal for action

Design proposal for low density /periphery

Main considerations

Core housing plot type
Horizontal increment
Flexible to be expand
Shared elements to decrease the cost

Design concept

Core house plot type with flexible for horizontal expansion
As the economy and family of the members of the cooperative strong enough to construct additional units.

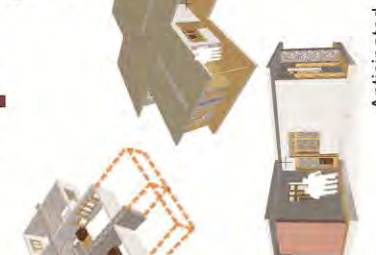
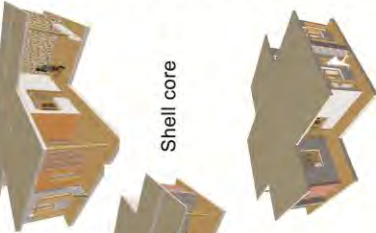
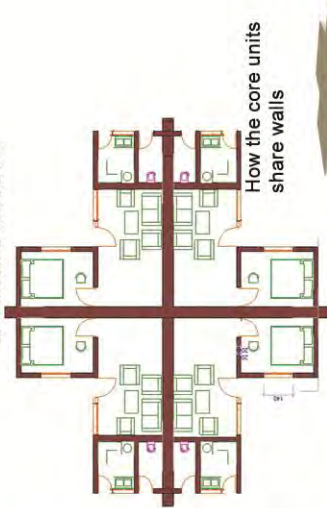
Areas which could be applied
The plot type core house could be applied in the periphery of the city where the density could be low. And for regularization of informal settlements in the periphery of the city which are rapidly growing in the side of the lake and in other areas of the city



Construction of core house
The initial core will be constructed by cooperative in collaboration with the government. The cooperative will construct the service core, the shared wall and shell core. The beneficiaries will extend based on the plan given to them

Initial core provision

The initial core house may be service + oneroom or service + two room core. it depends on the cooperatives financial capacity. If the cooperative has not enough money to construct service +two room core the core may be supplied as shell core which has service and roof cover space where beneficiaries live with temporary materials and incrementally change it to standard as it shown in the figure.



Quadraplex

The core housing units share elements to decrease the cost of construction of the house. They all have their own plot with flexible core to be expanded. The quadraplex decreases cost through communal ownership of wall and septic tank

Potentials and Limitations of Self-help Cooperative housing

The cas of Tana kebele, in Bahir Dar

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Visited websites

- : <http://www.unhabitat.org/>
- : <http://www.ica.org/>
- :<http://www.ica.coop/al-housing>
- :http://www.unhabitat.org/declarations/habitat_agenda.htm
- :http://en.wikipedia.org/wiki/Bahir_Dar

Appendix 1: Semi structured Interview with the three cooperative committee members concerning

1. Criteria to be a member of the cooperative
2. How was process in (initiation, design, programming, implementation and maintenance) the different stages
3. The contribution and participation of residents in the process
4. The Organization and administration of the cooperative
5. Finance of housing
6. Design(typology) and construction
7. Extension of additional units
8. problems faced in the process

Appendix 2: key informants

- Head of Tana keble Administration
- Officer at planning preparation, monitoring and evaluation department of City Administration Housing Development Agency
- Habitat for humanity officers in Bahir Dar
- Committee members of Tana housing cooperative
- Committee members of Abay housing cooperative
- Committee members of the three *Ras agez* housing cooperatives
- Committee members of Andinet housing cooperative
- Committee members Ediget behibret housing cooperative

Appendix 3: Semi structured interview with members of the three cooperatives

Household characteristics

1. Biographical profile

No	Household head name	No of families	sex	Marital status	Educational level	Employment status	Income
1							
2							

Former living situation

2. The home you were living before was:
- 1) Rented from kebele
 - 2) Rented from Rental Housing Agency
 - 3) Rented from a private household
 - 4) with parents

Initiation and joining

3. When you enter to the cooperative? Date of entry-----
4. How you join the cooperative?
- 1) self- initiation, 2) by NGO, 3) Though government
5. What was the criterion to join the cooperative?
- 1) Income criteria 2) Family number 3) Ownership of property 4) other.....
 - 2) Why did you join the co-op?
 - 1. Because rental house is not available
 - 2. Because rental house is expensive
 - 3. Because house ownership is an important asset
 - 4. Other, -----
 - 3) What were your expectations when you joined the co-operative?
 - 1) Getting affordable housing
 - 2) Having decision on your housing
 - 3) Opportunity for job creation
 - 4) other-----

Participation and collective action

- 4) Do you actively participate in any decision of the co-op?
 - 1) Yes 2) No,
- 5) If you do not participate, what is your reason? -----
- 6) How often do you attend co-op meetings regularly?
- 7) Are you a member of executive or any other task committee?
 - 1) Yes, 2) No
- 8) Before the houses were built, did you discuss how the houses should look like?

Self-help cooperative housing

For example house plan, paint, and material etc.?

- 9) How many attended these meetings.....
- 10) Have you got training by the government?
- 11) What was the sweat equity of your family in the construction of the houses.....
- 12) What are the things you work collectively in the housing development?
 - 1) Bulk purchase of materials 2) Labor In a cooperative Way 2) other.....

Design and construction

- 13) What constraints were faced by the co-op in obtaining land? -----

- 14) How long did it take to acquire land after the co-op was established?
-----Years, -----months, -----weeks
- 15) Have you already known your lot?
 - 1) Yes 2) no
- 16) What is the size of individual lots in square meters? -----
- 17) Do you think that the municipality is not effective in providing land for co-ops?
 - 1) Yes 2) no 3) do not know
- 18) If your answer for the above question is “yes”, how is it not effective? -----

- 19) Who prepares the designs of the houses?
 - 1) Municipality 2) Consultant with name.....
 - 3) From members of the cooperative 4) other.....
- 20) Has the progress of the co-op been constrained due to lack of infrastructure services?
 - 1) Yes 2) no
- 21) If the co-op’s progress is constrained due to lack of infrastructure services, please Explain the most determinant services. -----
- 22) How is the construction being done?
 1. By a contractor 2. By members and hired labor 3. Other -----
- 23) If it was by family, how is the construction being done?
 - 1) Mutually 2) Individually
- 24) How much time the construction has taken.....

Self-help cooperative housing

- 25) What do you feel about the progress of the construction work?
1) Progressing well 2) Delayed 3) No progress at all
- 26) If the work is delayed or not progressing at all, what are the main reasons for that?
1. Lack of commitment by the member 2. Financial constraint
3. Lack of building materials supply 4. Lack of infrastructure services in the area

Finance

- 27) Who financed the construction of the cooperative core house
1. Own saving 2. Government 3. NGO 4. Other (specify)
- 28) What is the estimated cost of the housing unit? -----
- 29) Do you feel that the amount is beyond the reach of your income level?
1) Yes 2) No
- 30) If you are paying bank loan for your housing, how much do you pay per month? -----
- 31) How long will it take to finish your loan payment? -----Year, -----month.
- 32) Have you finished your loan repayment? 1, yes 2. No
- 33) Do you think the progress of the co-op is impaired with lack of credit service?
1) Yes 2) No
- 34) Is there a regular auditing of the co-op's finance?
1) Yes 2) No
- 35) Is there any financial deficit or loss faced by the cooperative?
1) Yes 2) No

The physical environment

- 36) How many rooms have the initial core house?
- 37) How many rooms did you have in addition to the core units?.....
- 38) When they are added? For what purpose?
- 39) What building materials are you using for:

wall	floors	roof	Window and door
------	--------	------	-----------------

- 40) What are the communal elements?
1, shared wall 2, common space 3, communal 4.other (specify)
- 41) If there are, did they reduce the total cost of the construction? How...

General life experience

Self-help cooperative housing

- 42) What is the most challenging task in cooperative housing?
1. Coordination and organization of members
 2. Acquiring legal personality
 3. Land acquisition
 4. Others (specify).....
- 43) What do you think is the advantage of getting into cooperative housing?
1. Participation
 2. Access to credit
 3. Cost minimizing
 4. Land acquisition
 5. Others (specify)
- 44) Which of the following problems are faced by your co-op?
1. Scarcity of building materials
 2. Lack of cooperation among members
 3. Other, -----
- 45) What measures do you think will help facilitate/promote cooperative housing?
1. Revise cooperative law
 2. Revise land acquisition
 3. Provide credit service
 4. Revise building standards
 5. Provide infrastructure facilities
 6. Others, -----
- 46) Are you satisfied being a member of the cooperative?
- 47) Are you satisfied with the cooperative housing?

