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**Poverty Profiling in Addis Ababa
and Dire Dawa city Administrations, Ethiopia**

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**Challenges and Prospects of Entrepreneurship Development and Job
Creation for Youth Unemployed: Evidence from Addis Ababa and Dire
Dawa City Administrations, Ethiopia**

COMMUNITY- BASED MONITORING SYSTEM-ETHIOPIA (CBMS -12658)

**Research Paper 2 – Poverty Profiling in Addis Ababa and Dire Dawa City
Administrations, Ethiopia**

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TABLE OF CONTENTS

Contents	Page
List of tables	3
List of figures.....	4
List of Acronym	5
ABSTRACT	6
1. INTRODUCTION	7
2. OBJECTIVES OF THE STUDY	8
3. POVERTY INDICATORS AND DATA COLLECTION	8
3.1 Poverty Indicators.....	8
3.2. Data collection Instruments.....	11
3.3 Data Collection, Analysis Approach and Study Area	11
4. Review of Related Literature	16
4.1 Food Insecurity.....	16
4.2 Market.....	18
4.3 Government policy and food insecurity	18
4.4 Education	19
4.5 Infant Mortality.....	19
4.6 Adult mortality.....	20
4.7 Maternal mortality	20
4.8 Housing	20
4.9 Social Capital	22
5. RESEARCH OUTPUTS AND PRESENTATIONS	23
5.1 Descriptive Research Outputs.....	23
5.2 Model Results.....	32
5.2.1Poverty Comparison of the Study Area	32
5.2.2 Poverty Line Determination.....	32
5.2.3 Poverty Index Comparison of the study Area	32
5.2.4 Poverty Comparison of the two City Administrations.....	32
4.2.5 Poverty Decomposition of Urban and Rural.....	33
4.2.6 Inequality Index Comparison of the Study Area	34
5.2.7 Inequality Analysis of Urban and Rural.....	35

6. RECOMMENDATIONS	56
References	57
Annex.....	60

List of tables

Table 1: Core Poverty Indicators	8
Table 2: Magnitude and proportion of children aged 0-5 years old who died during the past 12 months, by site.....	23
Table 3: Death profile and sex during the past 12 months, by site	24
Table 4 : Magnitude and proportion of pregnancy- related death, by site.....	24
Table 5: Magnitude and proportion of household who do not eat food three times a day, by site	24
Table 6 : Magnitude and proportion of substandard houses(Considering Wall Materials), by site	25
Table 7: Magnitude and proportion of houses not privately owned, by site	Error! Bookmark not defined.
Table 8: Magnitude and proportion of households who do not have private toilet, by site.....	27
Table 9 : Magnitude and proportion of households who do not have access to pure water, by site	27
Table 10: Magnitude and proportion of children 7-14 years old not attending school, by site	28
Table 11: Magnitude and proportion of individuals aged 15-18 not attending school, by site	28
Table 12: Magnitude and proportion of households who are income poor, by site	29
Table 13: Magnitude and proportion of food poor households, by site.....	29
Table 14: Magnitude and proportion of households active in social engagement, by site	30
Table 15: Magnitude and proportion of households involved in economic production in the past 12 months, by site	30
Table 16 Poverty and Inequality of the Sample Household Based on Administration	32
Table 17 Poverty and Inequality of the Sample Household Based on Urban_Rural Dwelling.....	33
Table 18 Comparison of Income Distribution Based on Administration	35

Table 19 Comparison of Income Distribution Based on Urban-Rural Comparison	36
Table 20: Poverty by Administration.....	60
Table 21:Poverty by Rural-Urban.....	62
Table 22: Income Inequality by Administration and Rural-Urban	63
Table 23: Core Poverty Indicators	64

List of figures

Figure 1: Map of Melka Jebdu(Kebele 01),Dire Dawa	13
Figure 2:Map of Wereda 10, Addis Ketema Sub city,Addis Ababa.....	15
Figure 3: Map of Gedenser Rural Village, Dire Dawa	15
Figure 4 Lorenz Curve of project sites (Addis Ababa and Dire Dawa)	34
Figure 5 Lorenz Curve of Urban and Rural dwellers	36
Figure 6:Poverty map of Wereda10,Addis Ketema Sub city, Addis Ababa	37
Figure 7: Poverty map of Melka Jebdu, Dire Dawa	38
Figure 8: Poverty map of Gedenser, Dire Dawa	39
Figure 9: Eating Frequency of Residents of Wereda10,Addis Ketema Sub city, Addis Ababa	40
Figure 10:Eating Frequency of Residents of Kebele 01(Melka Jebdu),Dire Dawa.....	41
Figure 11: Eating Frequency of Residents of Kebele 01(Melka Jebdu),Dire Dawa.....	41
Figure 12:Food Poverty of Households of Wereda10,Addis Ketema Sub city, Addis Ababa.....	42
Figure 13:Food Poverty of Households of Kebele 01(Melka Jebdu),Dire Dawa	42
Figure 14:Food Poverty of Households of Gedenser,Dire Dawa	43
Figure 15:Production involvement indicator in Households Wereda10,Addis Ketema Sub city, Addis Ababa.....	43
Figure 16:Households Production involvement in Kebele 01,Dire Dawa.....	44
Figure 17: Households Production involvement in Gedenser, Dire Dawa	44
Figure 18:Students aged 7-14 Enrollment in Private School Wereda10,Addis Ketema Sub city, Addis Ababa.....	45
Figure 19: Students aged 7-14 Enrollment in Private School Kebele 01,Dire Dawa.....	45
Figure 20: Students aged 7-14 Enrollment in Private School Gedenser,Dire Dawa	46
Figure 21 : Students aged 15-18 Enrollment in Private School Wereda10,Addis Ketema Sub city, Addis Ababa.....	46
Figure 22: Students aged 15-18 Enrollment in Private School Kebele 01,Dire Dawa	47
Figure 23: Students aged 15-18 Enrollment in Private School Kebele 01,Dire Dawa	47
Figure 24:Social Capital Wereda10,Addis Ketema Sub city, Addis Ababa	48
Figure 25:Social Capital Kebele 01,Dire Dawa	48
Figure 26:Social Capital Gedenser,Dire Dawa.....	49
Figure 27: Substandard houses Wereda10,Addis Ketema Sub city, Addis Ababa	49
Figure 28: Substandard Houses Kebele 01,Dire Dawa	50
Figure 29:Substandard Houses in Gedenser, Dire Dawa.....	51

Figure 30: Tenure Status of Wereda10,Addis Ketema Sub city, Addis Ababa	51
Figure 31:Tenure Status of Households in Kebele 01,Dire Dawa	51
Figure 32:Tenure status of Households in Gedenser, Dire Dawa	52
Figure 33:Toilet Ownership in Wereda10,Addis Ketema Sub city, Addis Ababa	52
Figure 34:Toilet Ownership in Kebele 01,Dire Dawa.....	53
Figure 35:Toilet Ownership in Gedenser,Dire Dawa	54
Figure 36: Household’s Access to Clean Water Wereda10,Addis Ketema Sub city, Addis Ababa	54
Figure 37:Household’s Access to Clean Water Kebele 01,Dire Dawa	55
Figure 38: Household’s Access to Clean Water Gedenser, Dire Dawa	55

List of Acronym

- FGT-Foster Greer and Torbek
- CBMS-Community-Based Monitoring System
- HPQ-Household Profile Questionnaire
- YEE-Youth Employment and Entrepreneurship
- CPQ-Community Profile Questionnaire
- MoFED-Ministry of Finance & Economic Development
- CPI-Consumer Price Index

ABSTRACT

This paper has tried to investigate the general poverty profile of the three project sites in Ethiopia. In addition, its objective is to generate poverty maps for the sites.

Data from 5,619 households were collected and analyzed to determine the poverty level and income inequality problems in the area. Two of the project sites were in Dire Dawa while one was in Addis Ababa. One site is rural in nature while the other two are urban.

Some of the core indicators used to identify or investigate poverty profile are: health and nutrition, housing detail, sanitation and water supply, education and social engagement.

The results and discussion of all these indicators are presented in tabular, map and model output forms.

This paper has used the Foster Greer and Torbek (FGT) poverty analysis model to determine the percentage of poor and non-poor in the areas. Further Gini coefficient and Lorenz curve were also utilized to check the presence of income inequality.

Although other indicators show mild problems, the indicators related to housing, toilet facility and social engagement indicate that the project areas have severe problems..

Meanwhile, policy recommendations have been made to address these specific problems. Some of the recommendations include the following: pro-poor rural development income distribution intervention for urbanites, social capital inducement, and investments in housing and sanitation facility.

1. INTRODUCTION

Poverty is generally considered as a situation in which the underprivileged do not have adequate food and shelter, lack access to education and health services, are exposed to violence, and find themselves in a state of unemployment, vulnerability and powerlessness.

Poverty is multidimensional and has to be looked at through a variety of indicators such as levels of income and consumption, social indicators and indicators of vulnerability to risks and socio-political access and participation. The most common approach to the measurement of poverty is based on incomes or consumption levels. It is widely understood that an individual is considered poor if consumption or income level falls below some minimum level necessary to meet basic needs, i.e., poverty line. The nature and level of basic need satisfaction varies with time and societies and the poverty line to be established should be appropriate to the level of development, societal norms and values (World Bank Poverty Net).

Information on consumption and income is obtained through census surveys where households are to give feedback on their spending habits and sources of income, the nature of their basic needs and their perception of poverty. Income and non-income indicators like social indicators for education and health, access to services and infrastructure are used for data gathering and assessment of trends on the poverty situation of a country.

The study of poverty also includes developing indicators to track other non-income dimension of poverty such as risk, vulnerability, social exclusion and access to social capital. This facilitates comparison of a multidimensional concept of poverty. Participatory approaches help illustrate the nature of risk and vulnerability, how cultural factors and ethnicity interact and affect the livelihood of the poor and how social exclusion sets limits to people's participation.

A typical poverty scenario as described above is reflected in the socioeconomic condition of Ethiopia. In that respect, Ethiopia has carried out several economic reform programs in order to achieve economic stability and renewed growth in the fight against poverty. Though the programs have resulted in improved macro-economic performance, they have had a limited impact on the poverty situation at the household level. In fact, the poverty situation in Ethiopia over the past decade has been aggravated by the Structural Adjustment Program (SAP) and other reform measures as well as by the irregularity of natural conditions, war and other human and environmental factors. As a result, almost half of the Ethiopian population are believed to be living below the poverty line.

2. OBJECTIVE OF THE STUDY

- ❖ To develop the poverty profile and present policy recommendations for all project sites.

The specific objectives include:

- ❖ To prepare community poverty and household level poverty profiles and maps of Addis ketema Sub city Wereda 10 (in Addis Ababa) and kebele 01 city administration & Gedenser rural administration (in Dire Dawa).
- ❖ To provide relevant information to governmental and nongovernmental institutions who could make use of the data to develop new policies.
- ❖ To recommend and follow up new policy directions to secure low rate of unemployment in the areas.
- ❖ To check if there is new policy impact from these policies and if the life of the society is improving.

3. POVERTY INDICATORS AND DATA COLLECTION

3.1 Poverty Indicators

The final list of indicators used to track poverty in the project sites includes around 13 with 7 sectors. The poverty indicators include: Proportion of children under five years old who died in the last 12 months; Proportion of women who died due to pregnancy-related causes in the last 12 months; Proportion of household members who do not eat food three times a day; Proportion of households living in substandard houses; Proportion of households who do not have their own private house, and others. Attached to the core indicators are indicators from the sectors such as health and nutrition, housing detail, sanitation and water supply, and education

Table 1 shows details of the core poverty indicators.

Table 1: Core Poverty Indicators

Basic needs	Computed figures by site	Total
Health and Nutrition	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Housing detail	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Sanitation and water supply	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Education	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Income	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Production	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser
Social engagement	Wereda 10 Kebele01 Gedenser	Wereda 10+Kebele01+ Gedenser

3.2. Data collection Instruments

The main instrument or tool of data collection used was the questionnaire. The project has developed three types of questionnaires: Household Profile Questionnaire (HPQ), Youth Employment and Entrepreneurship questionnaire (YEE) and Community Profile Questionnaire (CPQ).

All the questionnaires are not self-administered by the respondents; they are enumerator-assisted, meaning that the respondents are not directly involved in encoding their response on the instruments.

The HPQ was 16 pages on paper and its number of pages on the digital format was 15. This instrument has around 100 questions formatted to consist of the entire questions to cover the core poverty indicators.

The community profile questionnaire was composed of questions related to village level education, aid, health sector, natural disaster, and crime issues. It has around 4 pages and 20 questions.

3.3 Data Collection, Analysis Approach and Study Area

Data enumerators are selected on the basis of their experience and skills related to tablet utility. For the Dire Dawa project sites, university and college students were used for data collection purpose whereas in Addis Ababa, individuals who completed education were engaged for the survey work.

The total number of data enumerators used to handle the case of Addis Ababa and Dire Dawa was 11 (6 for Addis Ababa and another 5 for Dire Dawa).

Both descriptive and inferential statistics are used. Frequency distribution tables which show the indicators' corresponding percentage figures are used.

In addition, the poverty and inequality profiles of the selected areas are also analyzed. For the analysis of poverty and inequality, Foster, Greer and Thorbecke (FGT) (Foster et al., 1984) and Gini-coefficient were utilized (World Bank, 2005). The former was used for the determination of poverty line; if a household spends below the poverty line, it is considered as poor because that expenditure is insufficient to meet the food and other basic needs requirement considered as a minimum subsistence level. The mathematical notation of poverty can be expressed as:

$$P_{\alpha} = \frac{1}{N} \sum_{i=1}^H \frac{G_i^{\alpha}}{Z_i^{\alpha}}, (\alpha \geq 0)$$

Where,

P_{α} = Poverty measure

G_i = The difference between income or expenditure and per capita and poverty line

H = the number of poor (those with incomes at or below Z)

N =Total population

H = The number of poor (those with incomes at or below Z)

α = Weight attached to the severity of the poverty

The commonly used values of α are 0, 1, and 2. When we set α equal to 0, P_0 indicates the headcount ratio, which measures the percentage of population that falls below the stated poverty line for their living.

On the other hand, when we set α equal to 1 and 2, we obtain the poverty gap and severity of poverty index, respectively. They are also denoted by P_1 and P_2 . The latter two, unlike the head count measure, have the advantage of giving more weight for the poorest segment of the group.

Gini-coefficient is the most widely used single measure of inequality (World Bank, 2005). It is an extension of the Lorenz curve analysis of inequality. Gini-coefficient provides a numerical value of the quotient of area A and the summation of area A and B i.e. $\frac{A}{A+B}$. The higher the value means the farther the curve is from the perfect equality line that indicates there is unequal income distribution for the group or the country. Its graphical representation is discussed in the discussion part.

For the descriptive and inferential analysis of the study, STATA statistical package has been employed.

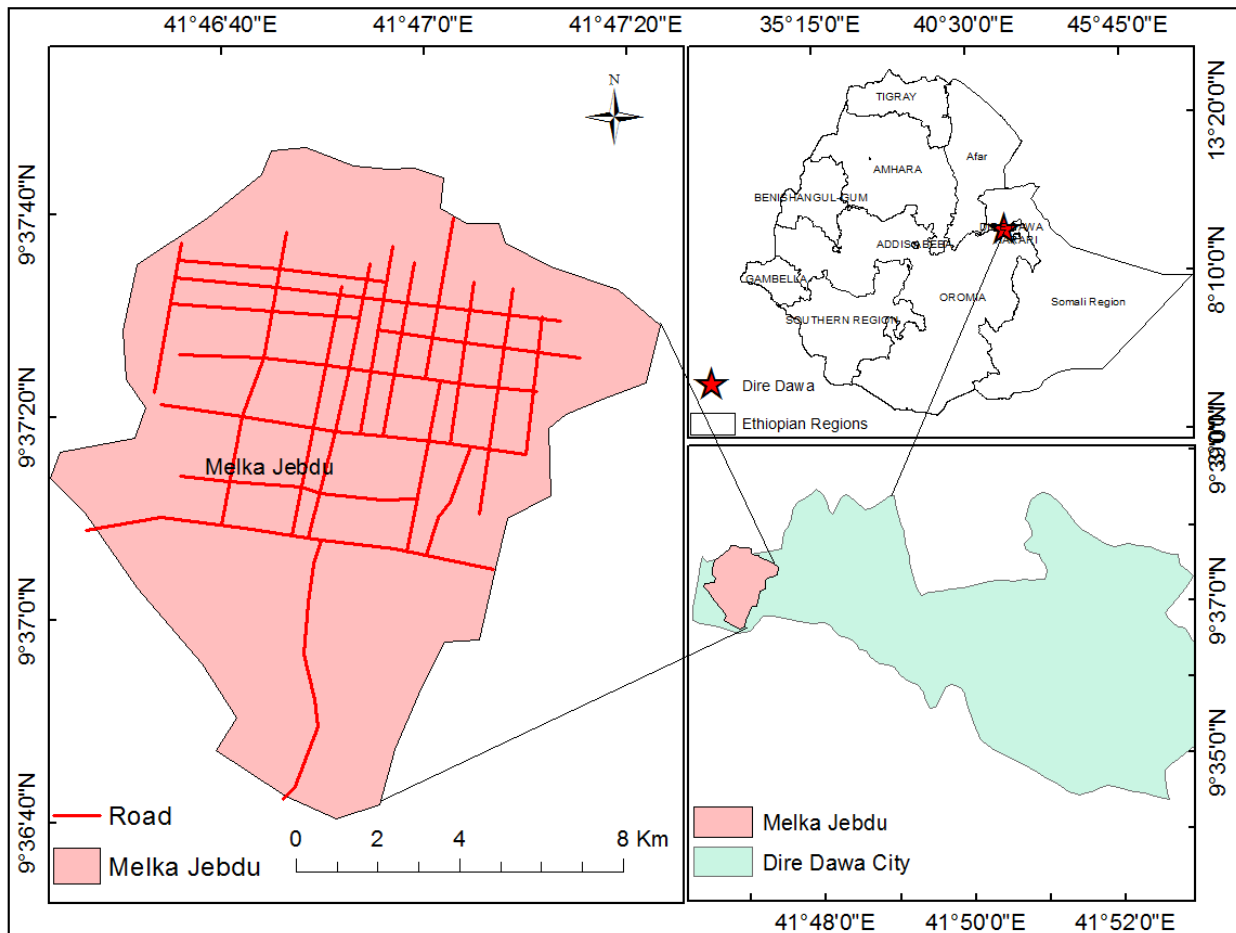
The data have been collected from the total population of around 20,741 both in Dire Dawa and Addis Ababa. The enumeration covered 190 in Gedenser, 3,459 in Melka Jebdu (Kebele 01) and 1,880 households in Wereda 10. Total enumerated households by the CBMS census survey number 5,619. On the CBMS portal (CBMS.disu.edu.ph/portal), the total number of households is 5,619. Meanwhile, we came to know that one household is believed to be omitted from Gedenser and that value has been added later on by the supervisor of Dire Dawa site revisiting the area.

The number of months that CBMS Ethiopia has spent in data collection was around 4 months.

The questionnaires are not limited to explicitly declared indicators.

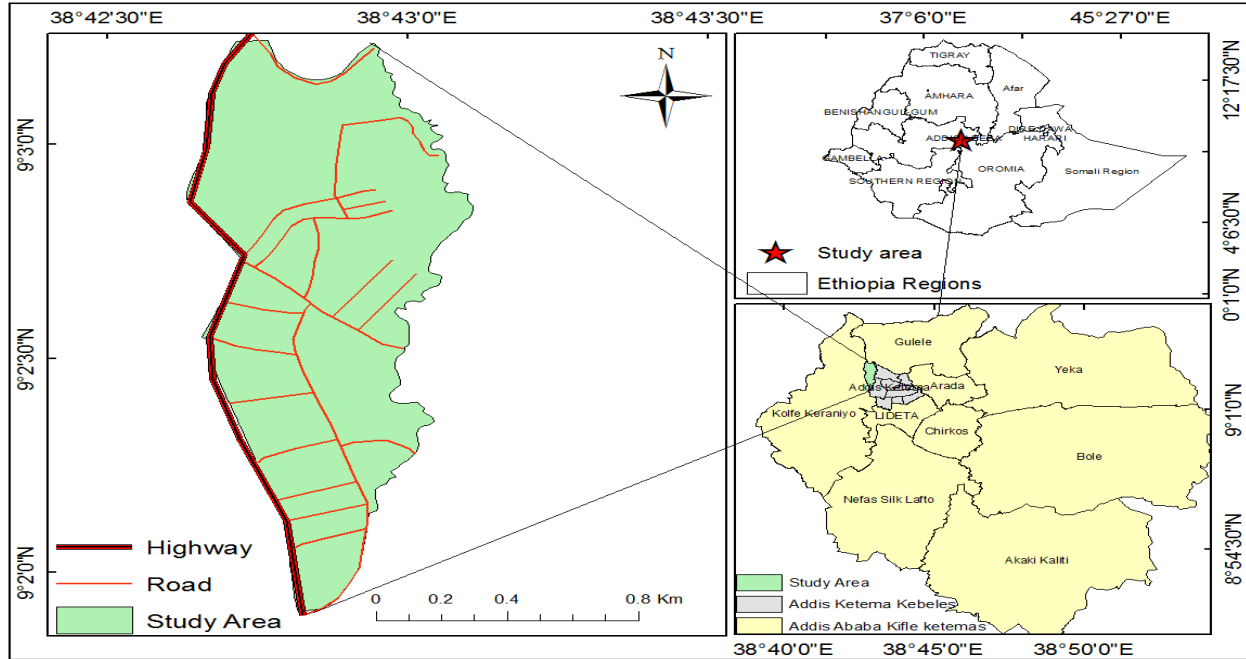
Prior to data collection, related training on tablet data collection was provided for the enumerators of both the Dire Dawa and Addis Ababa sites..

Figure 1: Map of Melka Jebdu(Kebele 01),Dire Dawa



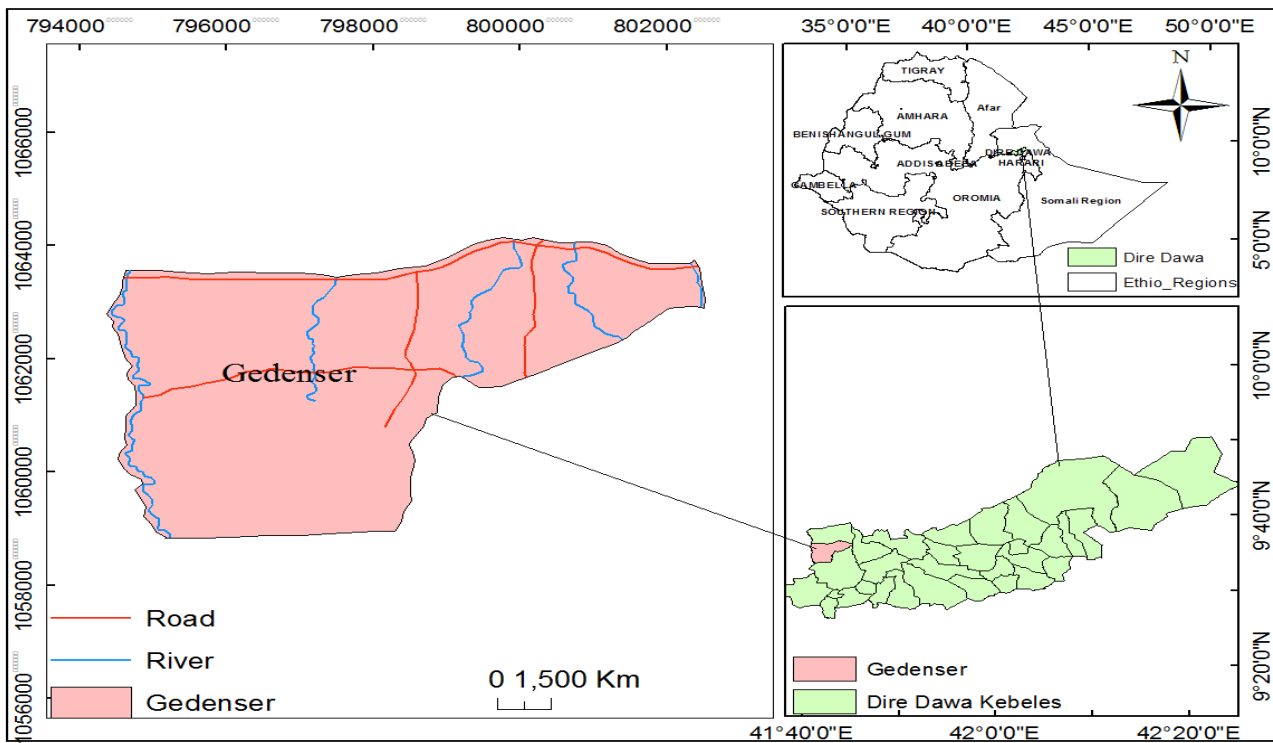
Source: Extracted using arc GIS,2015

Figure 2: Map of Wereda 10, Addis Ketema Sub city, Addis Ababa



Source: Extracted using arc GIS,2015

Figure 3: Map of Gedenser Rural Village, Dire Dawa



Source: Extracted using arc GIS,2015

4. Review of Related Literature

The following literature related to the core poverty indicators were reviewed.

4.1 Food Insecurity

Food insecurity incorporates low food intake, variable access to food, and vulnerability – a livelihood strategy that generates adequate food in good times but is not resilient against shocks. Structural factors contributing to chronic food insecurity include poverty (as both cause and consequence), the fragile natural resource base, weak institutions (notably markets and land tenure) and unhelpful or inconsistent government policies.

Ethiopia has been structurally food deficit since at least 1980. The food gap rose from 0.75 million tons in 1979/80 to 5 million tons in 1993/94, falling to 2.6 million tons in 1995/96 despite a record harvest (Befekadu and Berhanu 2000:176).

Food insecurity in Ethiopia is related to the following issues:

- Landholdings are too small - although (or because) unusually evenly distributed - to allow most farming households to achieve food production self-sufficiency;
- Population increase reduces landholdings further and places intolerable stress on an already fragile natural resource base;
- Soil fertility, already very low, is declining due to intensive cultivation and limited application of yield-enhancing inputs;
- Recurrent droughts add food production shocks to abnormally low yields;
- Limited off-farm employment opportunities restrict diversification and migration options, leaving people trapped in increasingly unviable agriculture.

The entire Ethiopian economy is dependent on low productivity rainfed agriculture, and rainfall is the single most important determinant of Ethiopia's economic success or failure from year to year. The implications for food security in the longer term are twofold.

Another indicator of the interconnectedness of food insecurity and poverty is that the government calculates poverty lines based on a food consumption norm of 2,200 kcal per adult per day. Using a 'national minimum consumption basket', the Welfare Monitoring Unit finds that 50 percent of the population are living in 'food poverty' (52% of rural population and 36% of urban Ethiopians, Government of Ethiopia 1999:15). Food insecurity is also differentiated by wealth. A survey of food consumption in rural Ethiopian households found that transfers - food aid from government, donors or NGOs, plus gifts from other households plus - were the second

most important source of food, after production and ahead of purchases, for all but the wealthiest 25 percent of the sample (Tekabe 1998:8).

Most Ethiopians are 'sub-subsistence farmers' who have been forced to diversify into off-farm incomes to bridge their annual consumption gap, while some are effectively landless and depend entirely on non-agricultural sources of food and income, including food aid.⁶ The typical rural livelihood strategy combines crop and livestock agriculture, off-farm income-generating activities (daily labor, petty trading, seasonal migration) and dependence on food aid (mostly delivered with a work requirement). The main problem with available off-farm economic activities, apart from their low returns, is that most are directly or indirectly affected by rainfall, which limits their risk-spreading potential.⁷ In areas where farming is unable to generate viable livelihoods, this cannot be solved

through land redistribution or intensification. The solution is not to focus policy attention on agriculture but to promote non-covariate non-agricultural livelihood options.

Off-farm employment opportunities in rural Ethiopia are limited in both availability and income-generating potential. Only 44 percent of rural households surveyed by the Ministry of Labour in 1996 reported any non-agricultural sources of income, and these contributed only 10 percent to household income (Befekadu and Berhanu 2000:179). Another survey in Hararge Region confirmed that off-farm activities generated only petty incomes: women collect and sell firewood and forage, men and women seek irregular, low-paid work as farm laborers, and some men migrate seasonally (ICRA et al. 1996:28). In an Amhara Region survey, 25 percent of households had one or more members migrating during the dry season in search of work, mostly to nearby rural areas. One in three migrants had difficulty securing employment, while half brought back no food or income for their families (FSCO 1999:24).

Human capital is extremely low in Ethiopia, which is both a cause and a consequence of food insecurity, due to adverse synergies between poor education, health and nutrition status, and labor productivity. Illiteracy constrains access to skilled and semi-skilled off-farm employment - literacy rates in Ethiopia are just 36 percent for males and 17 percent for females (CSA 1999:91) - perpetuating dependence on low-input, low-output agriculture. Ethiopian children display some of the highest malnutrition levels in the world – 55 percent being stunted and 45 percent underweight in 1998 (CSA 1999:135) - which undoubtedly affect their cognitive development.

'Food economy baseline assessments' conducted by Save the Children UK in rural Ethiopia have consistently identified three critical determinants of relative wealth and household food

security status: farm size, availability of family labor, and access to draught power (Boudreau 1998; Chapman and Haile Kiros 1999; Haile Kiros et al. 2000).

4.2 Market

Access to productive assets can derive from individualized ownership, but households that do not own key productive assets can also access them through informal sharing arrangements (e.g., yerbee for livestock), and markets (leasing land, hiring agricultural labor). Conversely, institutions and social relations can also impose barriers to resource access: for instance, inflexible land tenure systems prevent people from settling and farming where they choose, and patriarchal norms exclude women from lucrative income-earning opportunities (gendered labor market segmentation). These institutional rigidities need to be addressed, and input and output markets must be promoted.

4.3 Government policy and food insecurity

A crucial factor for food security is policy stability and continuity. Uncertainty over the nature and extent of future state interventionism in the economy inhibits investment and contributes to risk-averse behavior by farmers. Quite apart from the recurrent droughts and conflicts that have devastated rural Ethiopia for centuries - and continue to do so in the year 2000 - agriculture in Ethiopia has undergone three radical transformations in the past three decades alone. The overthrow of Haile Selassie following the 1974 famine was followed by the replacement of a landowner-dominated semi-feudal agrarian system with a “socialist transformation of agriculture” by the Derg. The Land Reform proclamation of 1975 nationalized all land, abolished landlordism and tenancy, and redistributed land to farmers on the basis of household size. This was followed by the formation of Peasant Associations and service cooperatives, state and cooperative farms, and a marketing parastatal. Villagization and forced resettlement programs were initiated that were intended to support the establishment of large-scale Soviet-style mechanized farms, but succeeded only in creating social and economic upheaval in the Ethiopian countryside.

In 1990, the Derg government took Ethiopia’s first steps toward agricultural liberalization, reversing its policies of the 1980s. The twin goals of the Transitional Government of Ethiopia which followed the overthrow of the Derg in 1991 were improved food security and market-led economic growth. The transition from a “command economy [to] an economic system driven by market forces” (TGE 1993) was continued by the EPRDF-led government after its election in 1995. Included in the implementation of these objectives were market liberalization, decentralization to a federation of autonomous regions, and measures to raise agricultural

production through yield-enhancing technologies. These policy shifts can be seen positively, as removing the constraints on peasant farming that heavy state interventionism brought with it, or negatively, as dismantling the state institutions that had provided vital inputs and services to farmers. The removal of constraints and impositions on peasants has been associated with the phasing out of fertilizer subsidies (under World Bank pressure) and restricted access to agricultural credit except on unfavorable terms.

Vulnerability to food insecurity in Ethiopia is a complex product of shocks (drought, war) plus low resilience (due to poverty, weak infrastructure and institutions, a constraining rather than enabling policy environment). Donors and federal and regional governments should adopt locally differentiated strategies, reflecting the differentiated nature and distribution of chronic and transitory food insecurity in Ethiopia. The government persists in seeing agricultural intensification as “the only source of hope”, while donors in Addis Ababa are beginning to argue for an institutionalized safety net program for the millions of Ethiopians who depend on food aid every year.

4.4 Education

The majority of Ethiopians have little or no education, with females being far less educated than males. Fewer than one-third of children who should be attending primary school are currently attending school at that level, and only 12 percent of youths who should be attending secondary school are in school at that level. (Ethiopia, 2000)

Survey results show that 75 percent of women aged 15-49 are illiterate compared to 47 percent of men aged 15-59. Rural women are two and a half times more likely to be illiterate than urban women. Nine percent of women have had secondary school education or higher compared to 15 percent of men. The level of illiteracy among women has declined over the years from 94 percent among women aged 45-49 to 66 percent among women aged 15-19. Illiteracy among women ranges from a low of 24 percent among those residing in Addis Ababa to a high of 88 percent among those in the Somali Region.

(Ethiopia, 2000)

4.5 Infant Mortality

Nearly one out of 10 babies born in Ethiopia does not survive to celebrate its first birthday. Under-5 mortality is also high: one out of every six children dies before the fifth birthday. Survey data show that mortality has declined during the past 15 years, the decline having become even more pronounced during the last 10 years. Under-5 mortality is 21 percent lower now than it

was five to nine years ago, with the pace of the decline in infant mortality (25 percent) somewhat faster than for child mortality (18 percent).

Mortality is consistently lower in urban areas than in rural areas, with infant mortality in urban areas at only 97 deaths per 1,000 live births, compared to 115 per 1,000 in rural areas.

4.6 Adult mortality

Direct estimates of male and female adult mortality were obtained from information collected in the sibling history of the Ethiopia DHS. In the seven years preceding the survey, there were more male than female deaths (1,229 compared to 1,039, respectively). The male mortality rate of 8.0 deaths per 1,000 population is 16 percent higher than the female mortality rate of 6.7 deaths per 1,000 population.

4.7 Maternal mortality

Maternal mortality in Ethiopia is high in relation to that of developed countries. During the seven years preceding the survey, there were 263 maternal deaths. The maternal mortality rate for the period 1994-2000 is 1.68. Maternal deaths accounted for 25 percent of all deaths to women aged 15-49—that is, one out of four Ethiopian women who died during the seven years preceding the survey from pregnancy or pregnancy-related causes. The maternal mortality ratio, which measures the obstetric risk associated with each live birth for the period 1994-2000, is 871 deaths per 100,000 live births.

4.8 Housing

Housing is one of the basic needs of mankind and it is important for the physical survival of human beings. Furthermore, adequate housing has a vital importance for social welfare and for the development process of a given country as a whole (Olayiwola, et al., 2005:1).

According to John and Daniel (2007:137), adequate housing stimulates both physical and economic improvement of the population. It is mainly due to the fact that where we live affects so much of our daily lives. Besides, the cost of housing is large in the household budget.

The results of the population and housing census of 2007 show that Ethiopia's urban population constitutes about 16 percent of the total population (CSA, 2008:21). This shows that Ethiopia has low urban population ratio than most developing countries. Even with this low level of urbanization, most urban centers suffer from a variety of urban problems, including inadequate infrastructure, housing and services, high unemployment and weak institutional mechanism for good urban governance and sustainable urban development (Tegegne & Mulat, 2005:60).

According to MOWUD (2008:1), housing shortage is one of the major problems that the country faces in almost all urban areas. Recent estimates concluded that the housing shortage is currently between 900,000-1,000,000 in urban centers of the country. In addition to the shortage, the existing houses are below qualitative standard and lack adequate space. The problem is aggravated due to the country's low investment in the housing sector.

The country's investment in housing construction is below 3 percent of GDP which is lower compared to the 6 percent recommended by the United Nations for developing countries (Mehret, 1999:8).

Many of the housing units constructed in the country are of poor quality due to old age, limited variety and poor workmanship. The scarcity of shelter-related infrastructure, especially lack of adequate water supply and sanitation, has also contributed to the poor housing condition in the country (TSION, 2007:329). One of the reasons for this problem is that there is a huge gap between the housing need and the housing supply in the country (Mehret, 1999:8).

As the housing supply remains at low growth rate, housing demand in Addis Ababa has been increasing due to high population growth, migration to the city from all over the country and the deterioration of the existing housing stock due to poor maintenance. In addition, other factors that aggravate the demand for housing include the progressive increase in the demand for housing, lack of alternative investment, and speculation (World Bank, 2009:2).

Ethiopia's urban centers are characterized by poorly developed economic base. Like most urban centers of developing countries, most cities and towns in Ethiopia face a plethora of problems, including an acute and ever-worsening housing shortage (Solomon & McLeod, 2004).

The housing situation of Ethiopian cities is a manifestation of the interplay of urbanization and demographic factors. Over-crowding of dwelling units and the growing of squatter settlements resulted from high rates of population growth and migration to urban areas. Insufficient housing production has become a distinguishing characteristic of Ethiopian cities. Although the extent of such problems differs from one urban area to another, high density, sanitation problems, unsafe living conditions, and insecurity of tenure are some of the common constraints of urban areas (UN-Habitat, 2007; Tebarek, 2013).

The majority of urban houses in Ethiopia are below standard in terms of quality and lack adequate space. The provision of water supply, electricity, and drainage is very minimal. The lives and health of people living in housing of such poor quality and with such inadequate provision for water, sanitation, and drainage are under continuous threat (Engelman, 1997; Gebeyehu, Marco and Behailu, 2001).

4.9 Social Capital

Social capital has been studied by sociologists, economists, development practitioners, and political scientists. The literature has resulted in a range of applications (Portes 1998). Participatory approaches to development have been included in developed and developing countries alike. The prominence of social capital in development policy provided by organizations such as the World Bank has been both praised and harshly criticized (Putnam 1993; Woolcock 1998; Cleaver 1999; Fine 1999).

The conceptualization of social capital emerged out of debates regarding the determinants of social action within the social sciences. Historically, classical and neoclassical economists tended to pursue the “under-socialized concept of man,” operating under the assumption that action is determined through calculated, rational self-interest of benefits versus consequences. This approach is criticized due to the lack of acknowledgement of the effect social structure and social relations may have on the actor (Granovetter, 1985). Weber (1968) contended that economic action is considered social if the behavior of others is taken into account. The under-socialized perspective has potential pitfalls due to its inability to address the social nature of economic action (Granovetter, 1985).

Contemporary scholars such as Bourdieu (1986) and Coleman (1988) described social capital as the social context in which actors use groups and networks to access specified benefits. The definitions and articulations of social capital by Bourdieu (1986), Coleman (1988), and Portes (1998) emphasize the importance of social capital as an opportunity to access benefits found within embedded social structures. These potential benefits of social capital can include monetary support or non-monetary support (Bourdieu 1986; Portes 1998).

5. RESEARCH OUTPUTS AND PRESENTATIONS

The following tables are generated from the household profile questionnaires collected in three project sub-sites (Wereda 10, Melka Jebdu and Gedenser).

Gedenser and Melka Jebdu are located in the eastern part of Ethiopia under the Dire Dawa administration council. However, Wereda 10 of Addis Ketema Sub-city is the area in the Addis Ababa administrative region.

Gedenser is the only rural site from which CBMS Ethiopia collected data.

The aforementioned indicators have been considered to generate research output tables and model values

5.1 Descriptive Research Outputs

This part presents tables to show analysis reports.

Table 2: Magnitude and proportion of children aged 0-5 years old who died during the past 12 months, by site

Site	Magnitude	Proportion
Wereda 10	2	0.4
Gedenser	0	0.0
Kebele 01	4	0.96
Total	6	0.53

Source: CBMS-Ethiopia Census, 2015

Table 2 shows the total number of death for children aged 0-5 years old in the project sites in the past 12 months. Out of the total 154 death occurrences in the project sites, six were identified to be aged 0-5 years old. This translates to 0.5 percent of child deaths in the project site. It was observed that 66.67 percent (4 deaths) of the deaths are male infants and 33.37 percent (2 deaths) are female infants.

A total of 154 deaths happened in the area during the specified period of time. Of this, around 0.53 percent is infant mortality with the age of less than 5 years old. A higher rate of infant mortality (mostly male infants) at 75 percent is observed in Kebele 01(Melka Jebdu) than in any other site. In Wereda 10, meanwhile, there is a 50-50 percent sex differentiation in terms of infant mortality.

Table 3: Death profile and sex during the past 12 months, by site

Site	Male		Female	
	Magnitude	Proportion	Magnitude	Proportion
Wereda 10	40	54.05	34	45.95
Gedenser	1	100.00	0	0.00
Kebele 01	56	70.89	23	29.11
Total	97	62.99	57	37.01

Source: CBMS-Ethiopia Census, 2015

As shown in Table 3, more than half (62.99%) of the deaths happen to male residents of the area and 37.01 percent to female residents. Based on the validation workshop conducted in the areas, deaths are related to respiratory infections and food poison.

Similarly, in Kebele 01 (Melka Jebdu) area of Dire Dawa project sites, males are highly prone to death than females as shown in the above table. Specifically, 70.89 percent of the total deaths are male and 29.11 percent are female.

Table 4 : Magnitude and proportion of pregnancy-related death, by site

Site	Magnitude	Proportion
Wereda 10	0	0.0
Gedenser	0	0.0
Kebele 01	2	5.26
Total	2	2.1

Source: CBMS-Ethiopia Census, 2015

In the overall project site, the level of death related to pregnancy is almost negligible at 2.1 percent.

In Melka Jebdu (Kebele 01), only 5.26 percent of the deaths scored in the last 12 months are related to pregnancy. Pregnancy-related deaths refer to those that happen during pregnancy and post-birth time. As compared to national pregnancy-related deaths, 2.1 percent is relatively small. In Wereda 10, in the meantime, almost 100 percent of the deaths that occurred in the past 12 months were not totally related with pregnancy.

Table 5: Magnitude and proportion of households who do not eat food three times a day, by site

Site	Magnitude	Proportion
Wereda 10	201	10.69
Gedenser	143	75.26

Kebele 01	1007	28.37
Total	1351	24.04

Source: CBMS-Ethiopia Census, 2015

To sustain life on a regular basis, human life needs to have a minimum of three meals per day. In this connection, 24.04 percent of the total households living in the projects sites (including Gedenser, Melka Jebdu and Wereda 10 /Addis Ketema) have a problem of not eating three meals per day. Of the entire 5,619 households observed in the project sites, around 1,351 households are prone to this problem.

In Wereda 10 of Addis Ketema sub city of Addis Ababa, 10.69 percent of the households suffer shortage to feed their members three times per day. Ethiopians have the norm of eating three meals per day (Breakfast, Lunch and Dinner) but around 201 households cannot sustain this.

In Gedenser, around 75.26 percent of the households cannot sufficiently eat three times a day. As compared to other places within the delimitation of the current study of CBMS-Ethiopia, Gedenser shows a high severity among the households.

In Kebele 01(Melka Jebdu), Dire Dawa, around 71.63 percent of the households can securely eat three times a day, which means that 28.37 percent of the total 3,547 households in the area or 1007 households are not able to eat three times a day.

Table 6 :Magnitude and proportion of substandard houses(Considering Wall Materials), by site

Site	Magnitude	Proportion
Wereda 10	1476	78.51
Gedenser	178	93.68
Kebele 01	1054	29.70
Total	2707	48.18

Source: CBMS-Ethiopia Census, 2015

The enumeration survey in the overall project sites indicates that 48.18 percent of the households live in substandard houses. Substandard houses are houses made up of materials other than hollow cement block (HCB) and clay bricks. These substandard houses made of mudplay wood metal sheets represent around 48 percent..

More than half of the households are residing in makeshift houses in Wereda 10, Addis Ketema sub city. Specifically, about 78.51 percent of the households are living in the substandard houses. Generally, as Table 6 depicts, it is possible to say that around half of the households in

the total area are critically suffering from housing standard problems. The situation can be considered as a serious issue because all these problems are happening in the capital city of the country.

In Kebele 01(Melka Jebdu), 29.70 percent of the households live in substandard houses which represent 1,054 households..

Gedenser, located in a remote part of Dire Dawa, only has around 6 percent of its residents living in non-substandard houses. This means that a large 93.68 percent of residents live in substandard and less quality houses. Most of these houses are made up of wood and grass. Based on the validation workshop and empirical evidence, the weather condition in the area has forced the residents to construct their houses using less-grade materials.

Also according to the validation workshop conducted with stakeholders of Wereda 10, Addis ketema Sub city Administration, majority of the houses are substandard because the people residing in the area are leading a subsistence way of life. The stakeholders, specifically the mayor, firmly said that the area is a commercial center where the buildings to be constructed as per the master plan is G+1 above. However, the original settlers could not afford such materials.

Table 7: Magnitude and proportion of houses not privately owned, by site

Site	Magnitude	Proportion
Wereda 10	1206	64.15
Gedenser	3	1.58
Kebele 01	396	11.16
Total	1605	28.56

Source: CBMS-Ethiopia Census, 2015

Among the total households in the overall project site, 28.56 percent do not own the house where they reside. It is rented either from the state or other owners.

House ownership is a critical issue among the residents of Wereda 10, Addis Ketema where 64.15 percent of the houses are not privately owned, i.e., they are either rented from the state or from private owners. The validation workshop confirmed that the basic reason for this is that most of the time, households cannot afford to own houses in the area and most of the people reside in the area on a temporary basis.

In Kebele 01(Melka Jebdu), 88.87 percent are residing in their privately owned houses while 11.16 percent are living in houses rented either from individuals or from the state. Thus, even if

the houses in this site are substandard, almost majority of the residents, however, prefer to secure house ownership

In Gedenser, almost all the houses are privately owned, with only a few being rented. House ownership though is a bigger concern in urban areas than in rural areas but a much bigger issue is in terms of the quality of the houses.

Table 8: Magnitude and proportion of households who do not have private toilet, by site

Site	Magnitude	Proportion
Wereda 10	1242	66.06
Gedenser	190	100.00
Kebele 01	3231	91.04
Total	4663	82.99

Source: CBMS-Ethiopia Census, 2015

In the overall project site, 82.99 percent of the toilets at the household level are not privately owned, meaning that households are either sharing toilets or have no access to safe toilets. According to the validation workshop, the area is overcrowded where getting free space is critically impossible. Hence, people prefer to share toilet to get more space to construct slum houses for rent.

Table 8 shows that in Wereda 10, only 33.94 percent of the toilets are owned privately while 66.06 percent are shared. Interviews conducted on the spot indicate that there are currently a few shared toilets being constructed to alleviate the problem.

In Melka Jebdu, almost entirely all the toilets are shared at 91.04 percent. On the other hand, of the total 3,548 households in Kebele 01, around 318 own toilets privately. In contrast, in Gedenser, 100 percent of the toilets used by households are not private, meaning that households either share toilets with others or use the dense forest as toilets.

Table 9 :Magnitude and proportion of households who do not have access to pure water, by site

Site	Magnitude	Proportion
Wereda 10	4	0.21
Gedenser	1	0.53
Kebele 01	14	0.39
Total	19	0.34

Source: CBMS-Ethiopia Census, 2015

Of the total 5,619 households comprising the project site, only 19 face the critical problem of not being able to access pure water. They are exposed to rain water, unprotected spring or other unsafe sources of water for cooking or drinking purposes.

In Wereda 10, almost all households have access to pure water. Of the total 1,880 households covered by the census, only four cannot access pure water.

Similarly, Table 9 indicates that in Kebele 01(Melka jebdu), only 0.39 percent of the total households have a problem regarding access to pure water.. Majority of the households are free from the problem of access to pure water. This is also reflected in Gedenser in the same table where only one household suffers from this problem.

Table 10: Magnitude and proportion of children 7-14 years of age not attending school, by site

Site	Magnitude	Proportion
Wereda 10	28	3.53
Gedenser	10	8.70
Kebele 01	148	7.24
Total	186	6.30

Source: CBMS-Ethiopia Census, 2015

The age which has been included in Table 10 is the age when the individual is anticipated to attend elementary and junior school. In Wereda 10, at this age level, 96.47 percent of them are attending school. Few of them – at 3.53 percent-- are out of school.

Among children aged 7-14 years old, around 92.76 percent are attending school. In Kebele 01, 7.24 percent or around 148 children are out of school. In Gedenser, school attendance for children aged 7-14 is 91.30 percent, with around 8.7 percent being out of school.

The validation workshop confirms that female children are made to serve their parents rather than allowed to go to school at an early school age.

Table 11: Magnitude and proportion of individuals aged 15-18 not attending school, by site

Site	Magnitude	Proportion
Wereda 10	195	22.54
Gedenser	11	28.21
Kebele 01	61	8.21
Total	267	16.21

Source: CBMS-Ethiopia Census, 2015

As far as education is concerned, the group which needs emphasis is the age group of 15-18 years old. This is the age level where one is anticipated to attend high school and preparatory school. In wereda 10, there are 865 individuals aged 15-18. Of them, 77.46 percent are attending while 22.54 percent are not attending school.

School attendance for Kebele 01 (Melka Jebdu) individuals aged 15-18 years is favorable at 91.79 percent, with only 8.21 percent being out of school.

In the tiny and less populated rural village of Gedenser in Dire Dawa, the number of people aged 15-18 years is 39. Out of this, 28.21 percent are not in school.

Table 12: Magnitude and proportion of households who are income poor, by site

Site	Magnitude	Proportion
Wereda 10	388	20.64
Gedenser	104	54.74
Kebele 01	903	25.44
Total	1395	24.83

Source: CBMS-Ethiopia Census, 2015

Table 12 was constructed based on income per head of household members per year. According to MoFED (2012), the overall income poverty threshold per individual per year in Ethiopia is Birr 3781. The absence of up-to-date figure forced us to use consumer price index (CPI). The World Bank (2016) issued data of inflation for years 2013, 2014 and 2015 as 8.08, 7.39 and 10.13 percent per annum, respectively. Taking this inflation factor into consideration, the income threshold has thus risen to Birr 4833.04 per annum. Hence, the table above equates household members' annual income share with Birr 4833.04. On this basis, 20.64 percent of households in Wereda 10 of Addis Ketema sub city can be considered as poor. Meanwhile, 25.44 percent of households in Kebele 01 (Melka Jebdu) are still facing overall poverty. The figure is especially high in the rural administration area of Gedenser at 54.74 percent.

Table 13: Magnitude and proportion of food-poor households, by site

Site	Magnitude	Proportion
Wereda 10	238	12.66
Gedenser	92	48.42
Kebele 01	765	21.56
Total	1095	19.48

Source: CBMS-Ethiopia Census, 2015

Table 13 shows food poverty proportion of households in the three project sites. According to MoFED (2012), food poverty threshold in Ethiopia is Birr 1985. Again, the absence of up-to-date figure forced us to use CPI. With the World Bank (2016) issuance of inflation data for years 2013, 2014 and 2015 as 8.08, 7.39 and 10.13 percent per annum, respectively, we can say that the food threshold has risen to Birr 2537.32 per annum. Hence, food poverty prevails highly in the rural administrative area of Gedenser at 48.42 percent, followed by Kebele 01 (Melka Jebdu) at 21.56 percent.

Table 14: Magnitude and proportion of households active in social engagement, by site

Site	Magnitude	Proportion
Wereda 10	1361	72.39
Gedenser	26	13.68
Kebele 01	837	23.58
Total	2224	39.58

Source: CBMS-Ethiopia Census, 2015

Social capital is one of the indicators considered in our analysis. In Ethiopia, the core social area of engagement are 'Equb' and 'Idir'. Out of the total households in the project sites (including sites in Addis Ababa and Dire Dawa), 60.42 percent are not socially active. This implies that they neither participated in edir nor equb. Conversely, 39.58 percent involve actively in social engagements.

Similarly, in wereda 10 of Addis Ketema Sub city, 72.39 percent are socially active as they participate in social programs like equb and edir. However, 27.64 percent are still not socially active nor participate in social programs.

In Melka Jebdu area, meanwhile, 76.42 percent of the households are not socially involved while 23.58 percent are actively engaging. This translates to 837 socially active households from a total number of 3,550 households.

Compared to the previous two project sites, the scenario in Gedenser with regard to social capital is strongly unique. In both sites, households were active in social involvements. But in Gedenser, they are not. As Table 14 shows, only around 14 percent are socially active while about 86 percent of the households are not socially active.

Table 15: Magnitude and proportion of households involved in economic production in the past 12 months, by site

Site	Magnitude	Proportion
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Wereda 10	29	2.00
Gedenser	37	20.00
Kebele 01	114	3.00
Total	181	3.00

Source: CBMS-Ethiopia Census, 2015

Table 15 shows to what extent households in the overall project site are involved in economic production activity. Observations indicate that 5,619 households exist and 97 percent of them do not directly involve in economic production activity. Households with at least one of its members directly involved in agriculture, manufacturing and service sector are only 3 percent of the total number of households.

In Wereda 10, only 2 percent are involved in direct economic production activities like agriculture, manufacturing and service sectors and 98 percent are not directly involved.

Kebele 01 (Melka Jebdu), with a total number of households of 3,549, has only 3 percent of the households involved in direct production while 97 percent are not.

Gedenser, the tiny and less populous rural area of Dire Dawa, meanwhile, involves 20 percent of its households directly in production activity, mostly in agricultural sector. Thus, as far as direct involvement in production activity is concerned, Gedenser is the best.

5.2 Model Results

5.2.1 Poverty Comparison of the Study Area

In order to measure the extent of poverty among different groups included in the study area, (disaggregated by administration viz Addis Ababa and Diredawa as well as disaggregated by rural and urban dwelling), the Foster, Greer and Thorbecke (FGT) model is used.

5.2.2 Poverty Line Determination

Due to the absence of the latest (2015) threshold report, the study is forced to take the poverty line estimated by MoFED (2012) as a basis of analysis. However the figures were not directly taken but inflated by CPI of consecutive years (2013, 2014 and 2015). As stated In this analysis of poverty or according to MoFED (2012), it has been reported that household expenditure on basic needs, including those on food, clothing, housing, education and medical care, is 3,781.00 Birr per annum per adult equivalent. This estimation is considered because of the fact that it is a better poverty line that is relatively closer to the different areas' basic expenditures. The World Bank (2016) data of inflation for years 2013, 2014 and 2015, which are 8.08, 7.39 and 10.13 percent per annum, respectively, were considered. Accordingly, the poverty line employed in this analysis is 4,833.04 Birr per annum per adult equivalent.

5.2.3 Poverty Index Comparison of the study Area

By taking the poverty line into account, the FGT model is used to scrutinize the level of poverty in the households included in the census depending upon their groups; Addis Ababa city administration's dwellers, Dire Dawa City administration dwellers, urban and rural dwellers.

5.2.4 Poverty Comparison of the two City Administrations

The estimation result of the FGT model for all the three indices are presented together in Table 16. The estimated results are also attached in the Annex.

Table 16. Poverty and Inequality of the Sample Households Based on Administration

Household group	Head count ratio (P_0)	Poverty gap index (P_1)	Severity of poverty Index (P_2)
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Addis Ababa (n=1880)	0.14	0.03	0.015
Dire Dawa (n= 3739)	0.49	0.18	0.103
Over all sample (n=5619)	0.38	0.13	0.073

Source: CBMS-Ethiopia Census, 2015

As Table 16 clearly shows, the overall sample yields the head count ratio of 0.38. It explains that around 38 percent of individuals in the overall sampled households spent less than what they would need to meet the minimum living standard requirement. By decomposing the result into the two city administrations, from Addis Ababa city administration, dwellers (14%) spent below poverty line for their basic needs. On the other hand, from Dire Dawa city administration, dwellers more than 49 percent of the sample households are living below the national poverty line, i.e., they are unable to fulfill the basic needs for their survival.

Poverty gap index and severity of poverty are then estimated and the results also reinforce the severity of poverty among Dire Dawa dwellers than those who live at Addis Ababa city Administration. From the overall sample estimate of poverty gap, on average, 13 percent of the poverty line amount or 628.30 Birr is required to take out the poor above the said poverty line in the study area. For Dire Dawa dwellers, they require more than this amount. For them, on average, 18 percent of the poverty line (or 869.95 Birr) is required to break the poverty trap. In contrast, Addis Ababa dwellers require only 3 percent (or 144.99 Birr) on average to come out of poverty.

Though it lacks intuitive appeal (World Bank, 2005), similar results are also obtained from the severity of poverty index which is presented on the right most column of Table 16. Poverty is most severe for Dire Dawa dwellers.

4.2.5 Poverty Decomposition of Urban and Rural

In addition to the above decomposed poverty analysis, effort has been made to analyze the poverty status of the urban and rural dwellers who are covered in this study. It has been found that the poverty status of the rural dwellers is more severe than their urban counter part.

Table 17. Poverty and Inequality of the Sample Household Based on Urban-Rural Dwelling

Household group	Head count ratio (P_0)	Poverty gap index (P_1)	Severity of poverty Index (P_2)
-----------------	-------------------------------	--------------------------------	--

Urban (n=5429)	0.36	0.13	0.07
Rural (n= 190)	0.77	0.28	0.13
Over all sample (n=5619)	0.38	0.13	0.07

Source: CBMS-Ethiopia Census, 2015

As explained before, around 38 percent of individuals in the overall sampled households spent less than what they would need to meet the minimum living standard requirement. However, the severity of poverty is relatively worse for the rural village included in this study viz. Gedenser rural village in Dire Dawa city Administration. From the decomposed result presented in the above table based on their area of dwelling, 36 percent of the urban dwellers in both Dire Dawa and Addis Ababa together spent below poverty line for their basic needs. On the other hand, from rural Dire Dawa city administration dwellers, 77 percent of the sample households are living below the national poverty line, i.e., they are unable to fulfill the basic need for their survival.

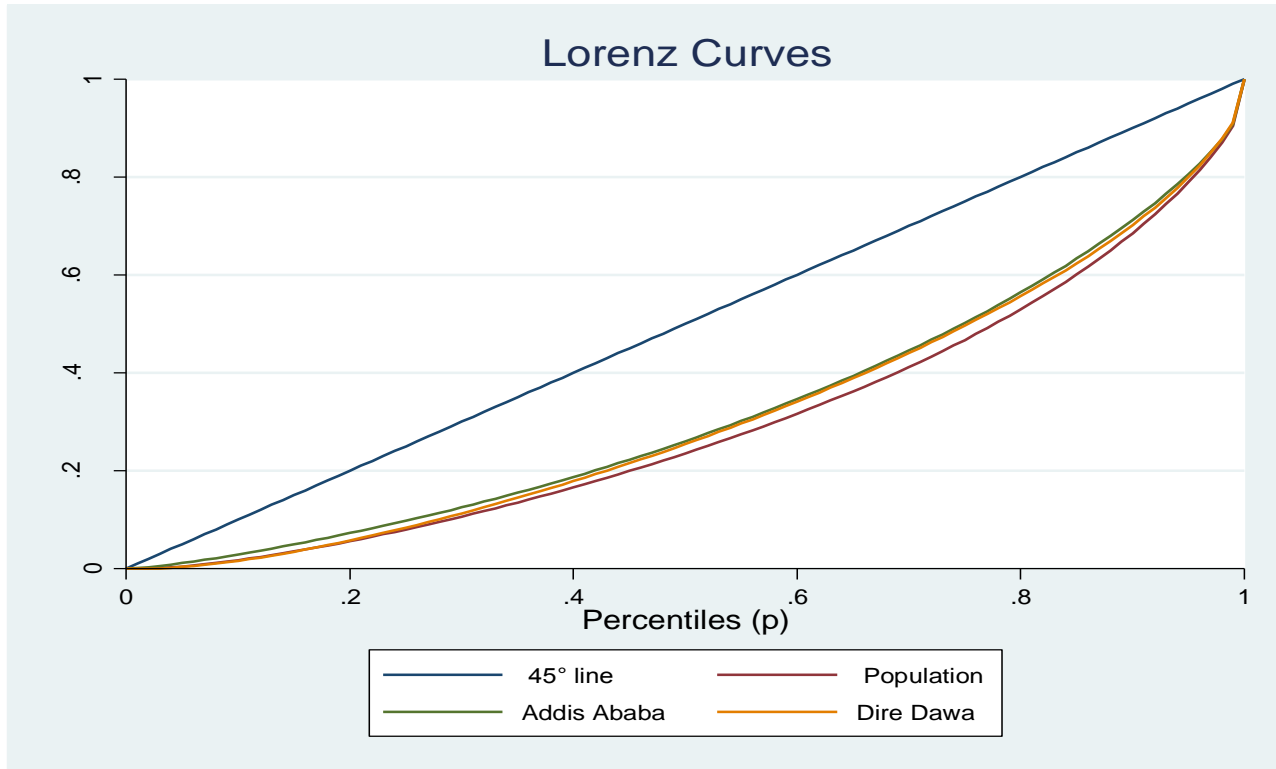
Poverty gap index and severity of poverty are then estimated and the results also reinforce the severity of poverty among rural Dire Dawa dwellers than those who live in the urban area. From the overall sample estimate of poverty gap, on average, 13 percent of the poverty line amount or 628.30 Birr is required to take out the poor above the said poverty line in the study area. For rural Dire Dawa dwellers, though, they require more than this amount. For them, on average, 28 percent of the poverty line (or 1,353.25 Birr) is required to break from the poverty trap. In contrast, the urbanites require only 13 percent (or 628.30 Birr) on average to come out of poverty.

Though it lacks intuitive appeal (World Bank, 2005), similar results are also obtained from the severity of poverty index which is presented on the right most column of Table 17. Poverty is most severe for rural dwellers than the urbanites in the two city administrations.

4.2.6 Inequality Index Comparison of the Study Area

Similar result is also obtained based on the inequality measurement. However, the graphical measure of the Lorenz curve, as explained in the methodology part, is difficult to interpret in terms of the difference in income distribution for the groups; namely, Addis Ababa City administration dwellers and Dire Dawa city administration dwellers in as much as their Lorenz curves cross each other as depicted in Figure 4.

Figure 4. Lorenz Curve of project sites (Addis Ababa and Dire Dawa)



But the Gini coefficient measurement, which is the quotient of A and A+B for each group considered, clearly indicates that income inequality is relatively severe in Dire Dawa.

Table 18. Comparison of Income Distribution Based on Administration

Household group	Gini Coefficient Index
Addis Ababa (n= 1880)	0.36
Dire Dawa (n =3739)	0.37
Over all sample (n=5619)	0.40

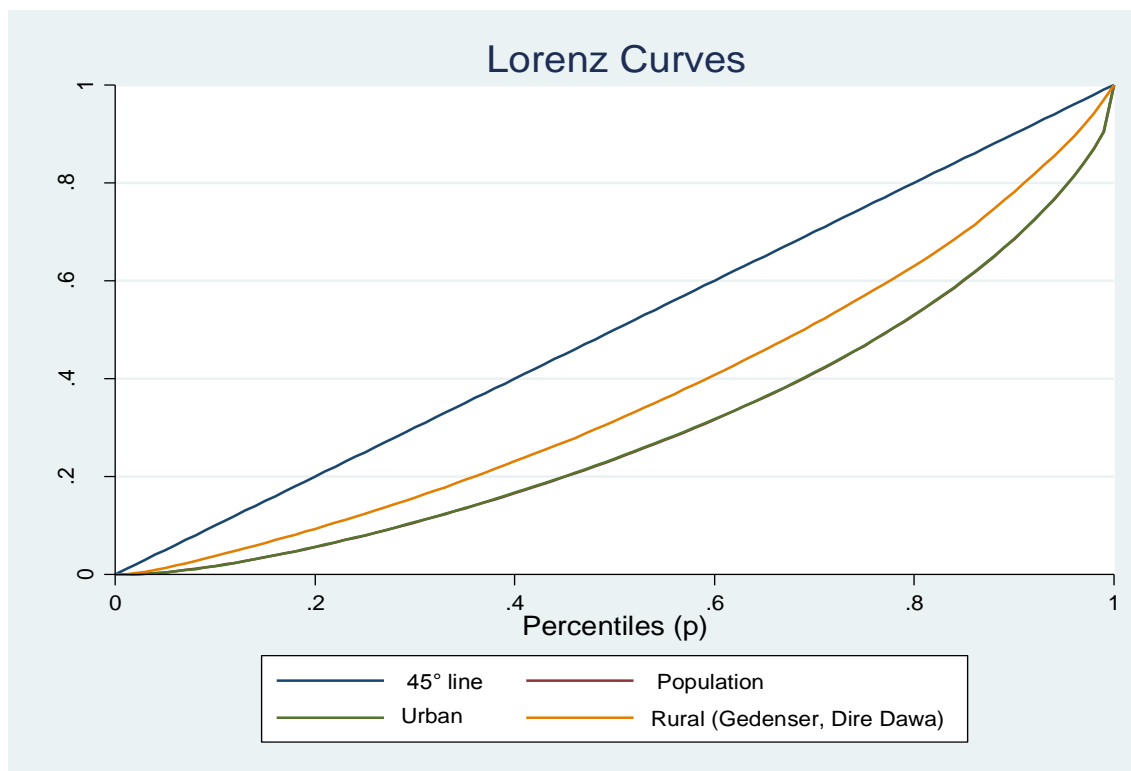
Source: CBMS-Ethiopia Census, 2015

5.2.7 Inequality Analysis of Urban and Rural

Similar result is also obtained based on the inequality measurement. However, the graphical measure of the Lorenz curve, unlike the above analysis and graphical illustration, clearly shows that the income inequality is severe in urban areas of the two city administration as compared to the income inequality in the rural village of Dire Dawa which is included in this study. As Figure

5 clearly indicates, the Lorenz curve of Gedenser, Dire Dawa (Rural area of this study) is closer to the perfect equality line than that of the urbanites' Lorenz curve.

Figure 5. Lorenz Curve of Urban and Rural dwellers



In addition, the Gini coefficient measurement, which is the quotient of A and A+B for each group considered, clearly indicates that income inequality is severe with urban dwellers. However, the rural dwellers have relatively lower income disparity since the lower the indices, the better income disparity is as clearly shown in Table 19.

Table 19. Comparison of Income Distribution Based on Urban-Rural Comparison

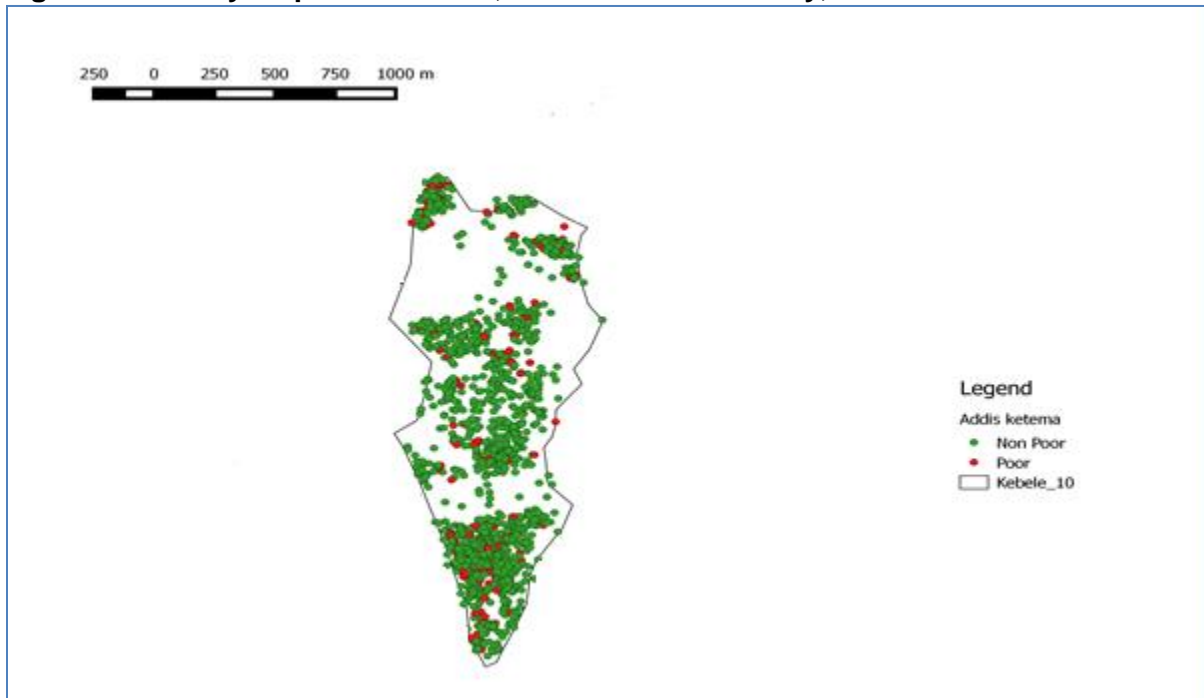
Household group	Gini Coefficient Index
Urban (n=5429)	0.41
Rural (n =190)	0.27
Over all sample (n=5619)	0.41

Source: CBMS-Ethiopia Census, 2015

5.2.8 Poverty Map

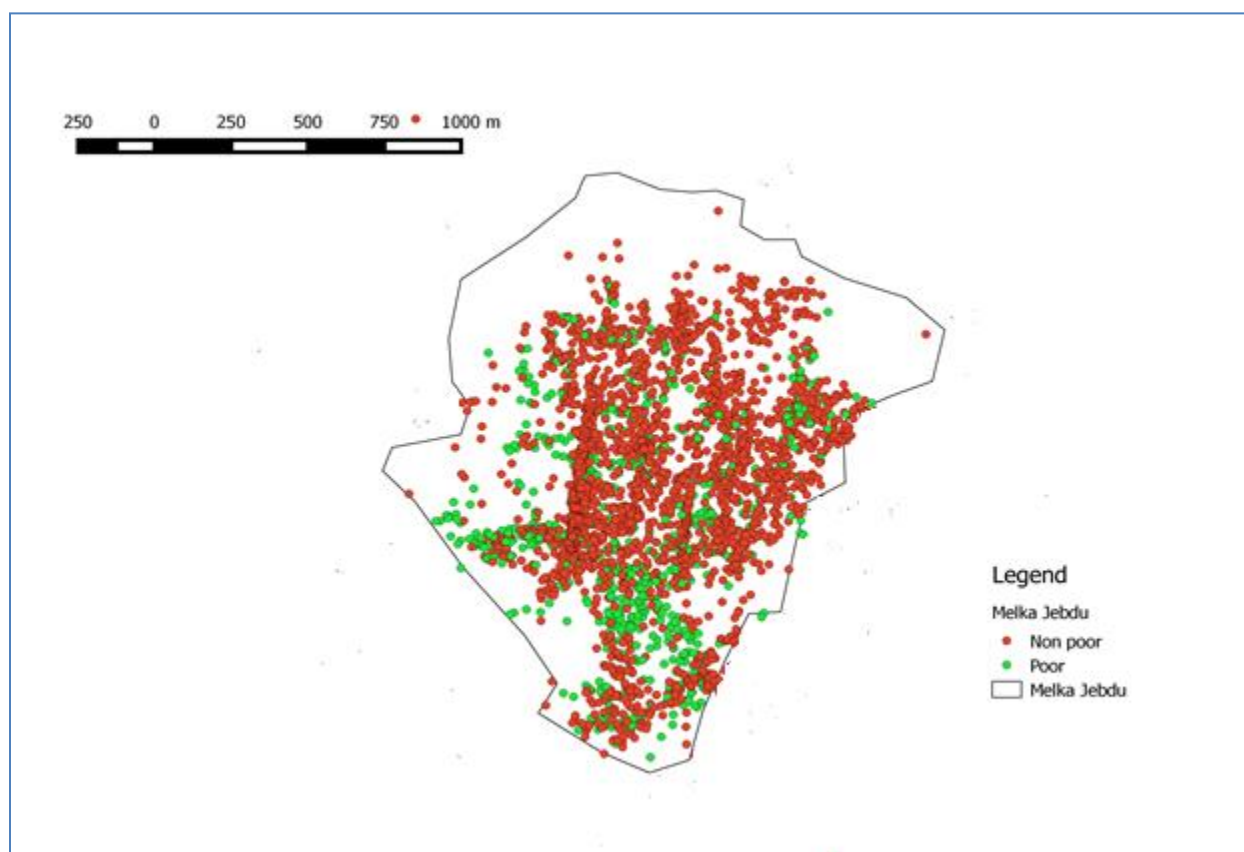
Figure 6 below is the poverty map for wereda 10. As it is clearly depicted in the legend, the green dot indicates the distribution of non-poor households in the village. Rough observation of this map indicates poverty less prevails at the house level in this village. Red dots are observed to be few. This has been fully supported by the FGT analysis where around 22 percent of the households in the area are poor.

Figure 6: Poverty map of Wereda10, Addis Ketema Sub city, Addis Ababa



Source: CBMS-Ethiopia Census, 2015

Figure 7: Poverty map of Melka Jebdu, Dire Dawa

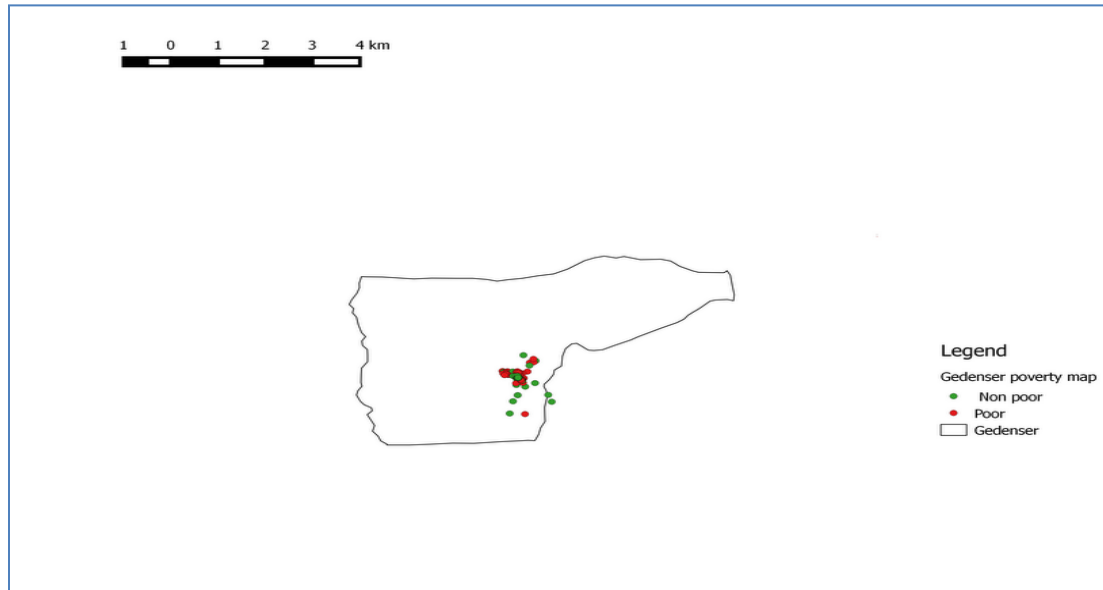


Source: CBMS-Ethiopia Census, 2015

Figure 7, meanwhile, depicts the distribution of poverty in Melka jebdu. Majority of the households in the area are poor. This has been also indicated or supported by the FGT analysis made in the previous section of this paper.

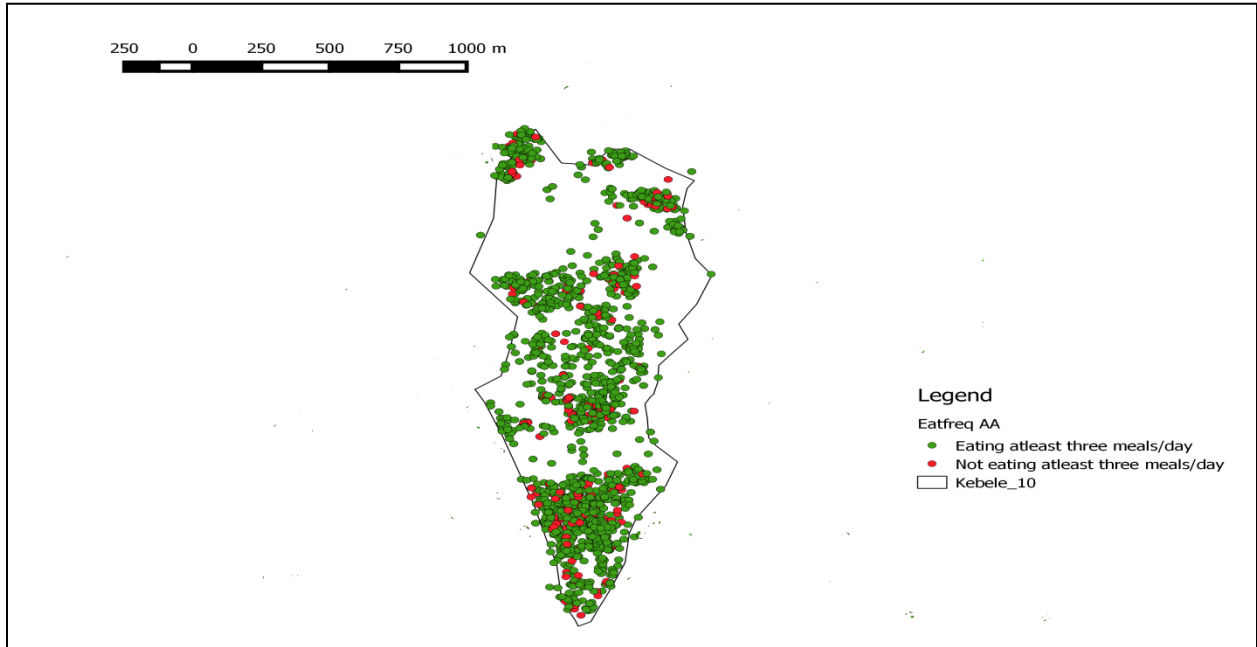
Figure 8 shows that poverty prevails in Gedenser, small village in Dire Dawa. This village is known to have 190 households which are vastly poor.

Figure 8: Poverty map of Gedenser, Dire Dawa



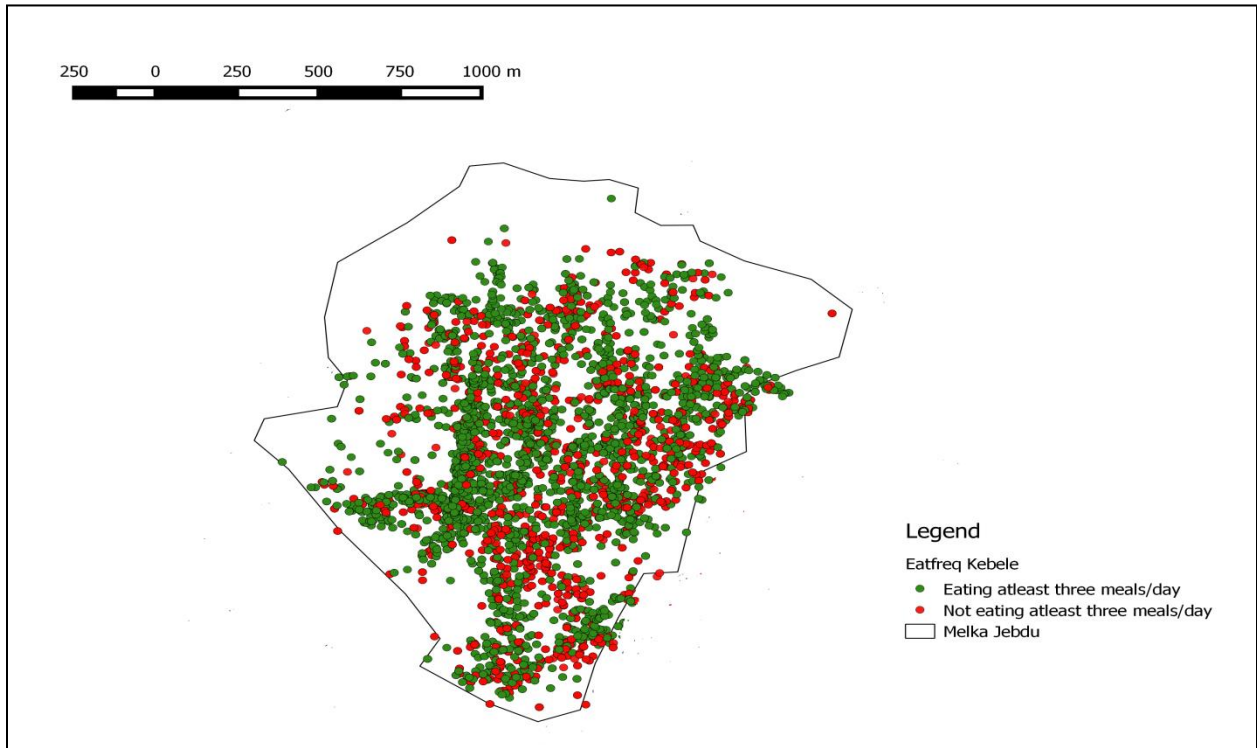
Source: CBMS-Ethiopia Census, 2015

Figure 9: Eating Frequency of Residents of Wereda10, Addis Ketema Sub city, Addis Ababa



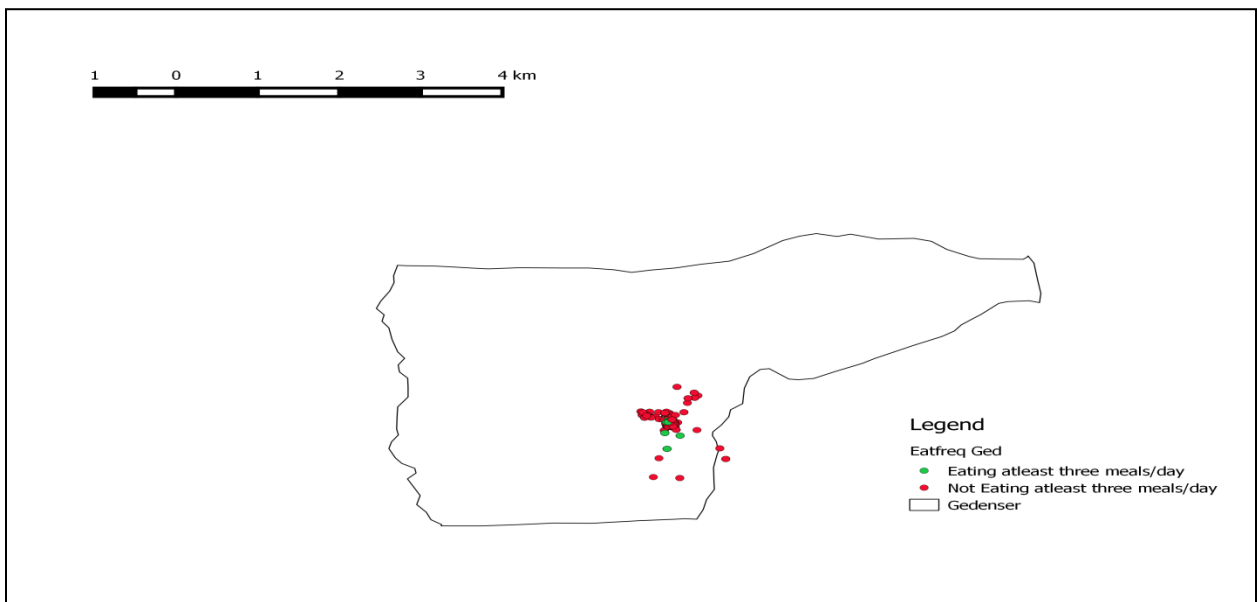
Source: CBMS-Ethiopia Census, 2015

Figure 10: Eating Frequency of Residents of Kebele 01(Melka Jebdu),Dire Dawa



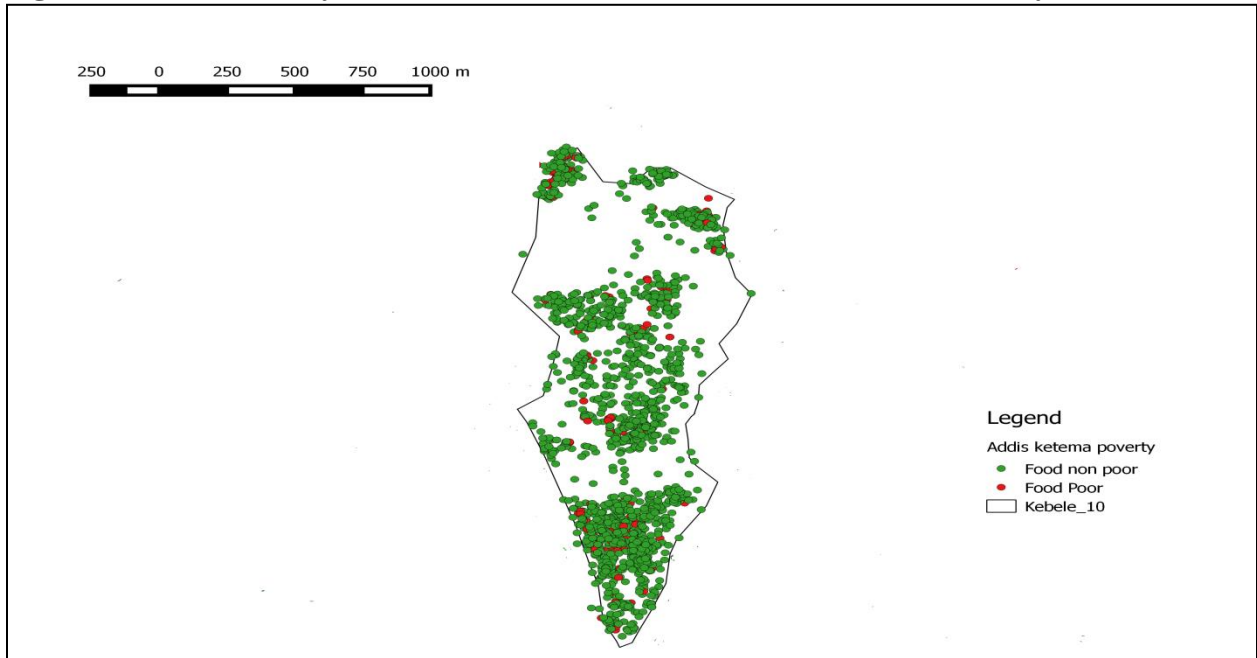
Source: CBMS-Ethiopia Census, 2015

Figure 11: Eating Frequency of Residents of Kebele 01(Melka Jebdu),Dire Dawa



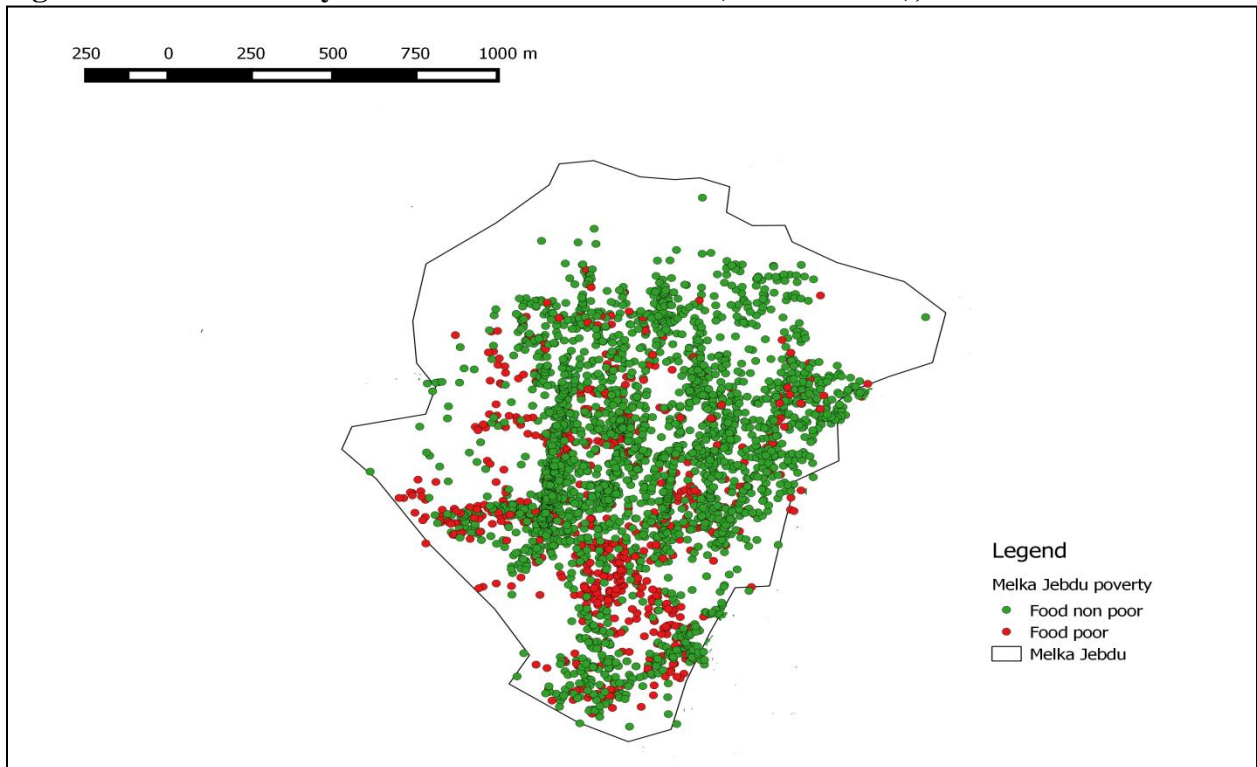
Source: CBMS-Ethiopia Census, 2015

Figure 12: Food Poverty of Households of Wereda10,Addis Ketema Sub city, Addis Ababa



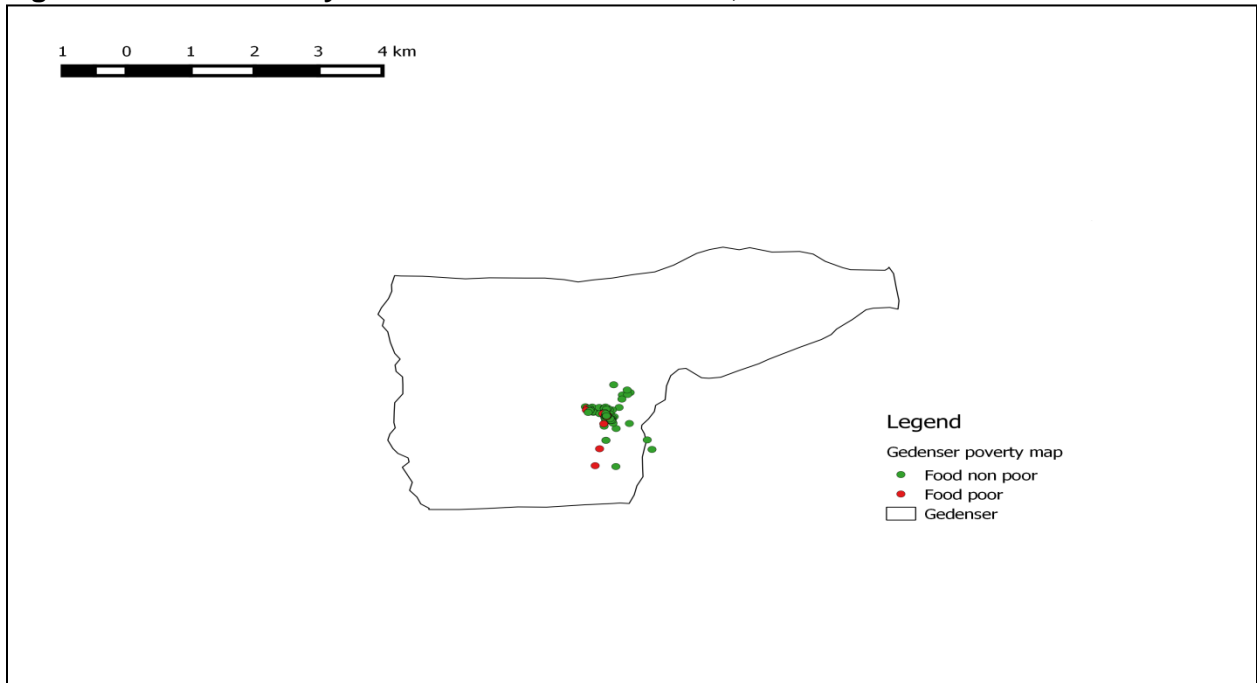
Source: CBMS-Ethiopia Census, 2015

Figure 13: Food Poverty of Households of Kebele 01(Melka Jebdu),Dire Dawa



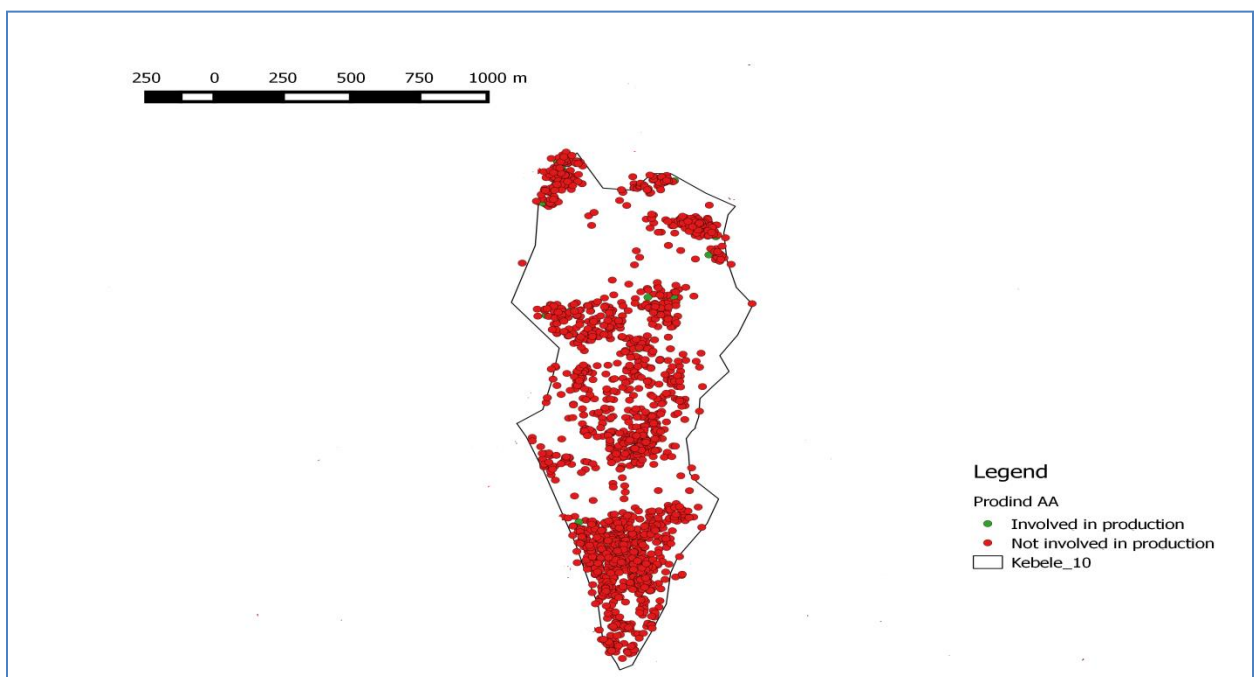
Source: CBMS-Ethiopia Census, 2015

Figure 14: Food Poverty of Households of Gedenser, Dire Dawa



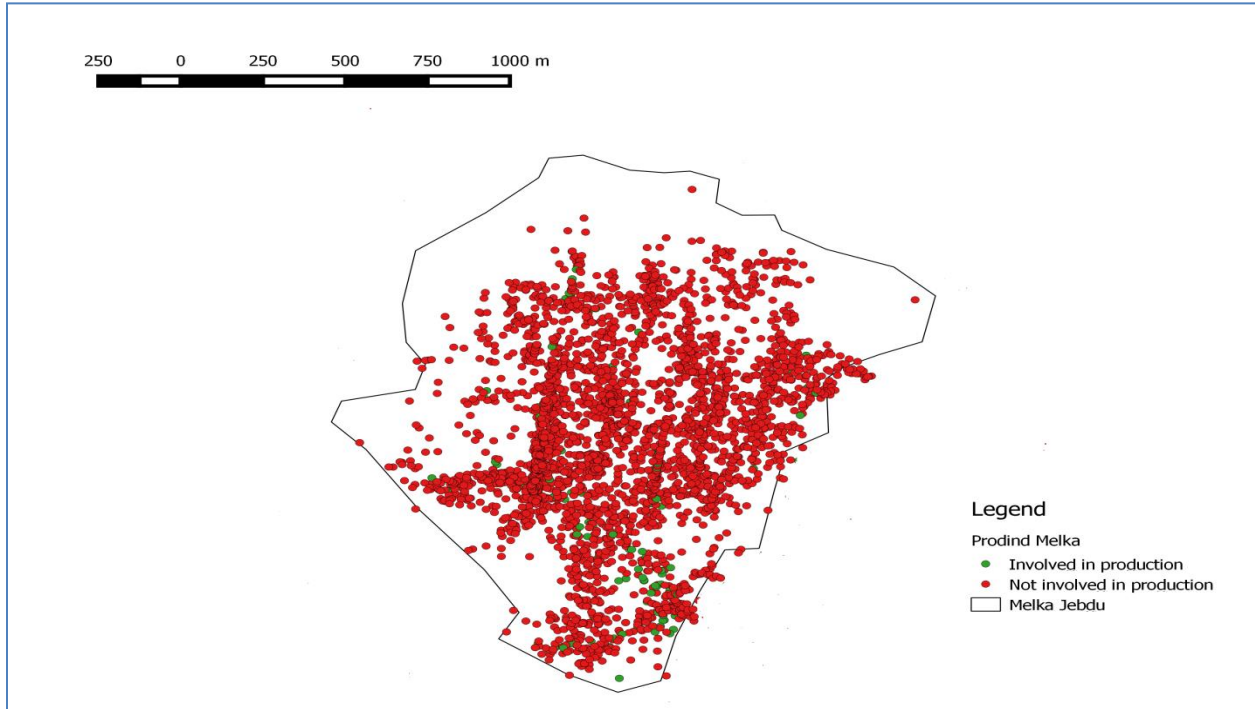
Source: CBMS-Ethiopia Census, 2015

Figure 15: Production involvement indicator in Households in Wereda10, Addis Ketema Sub city, Addis Ababa



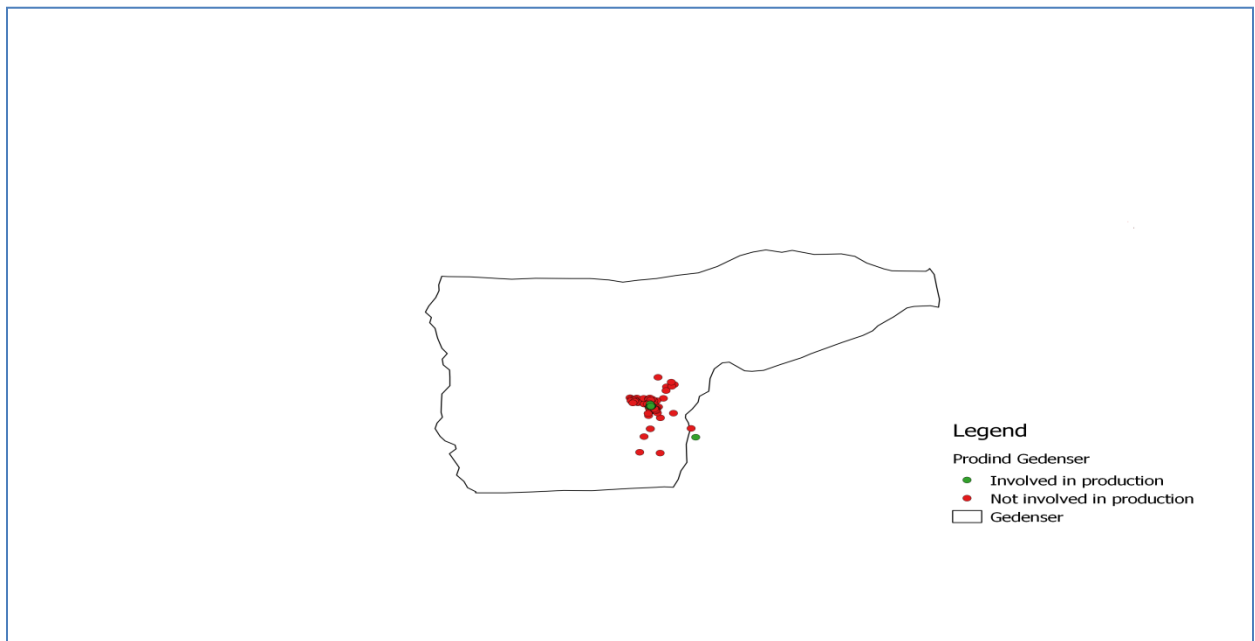
Source: CBMS-Ethiopia Census, 2015

Figure 16: Households Production involvement in Kebele 01, Dire Dawa



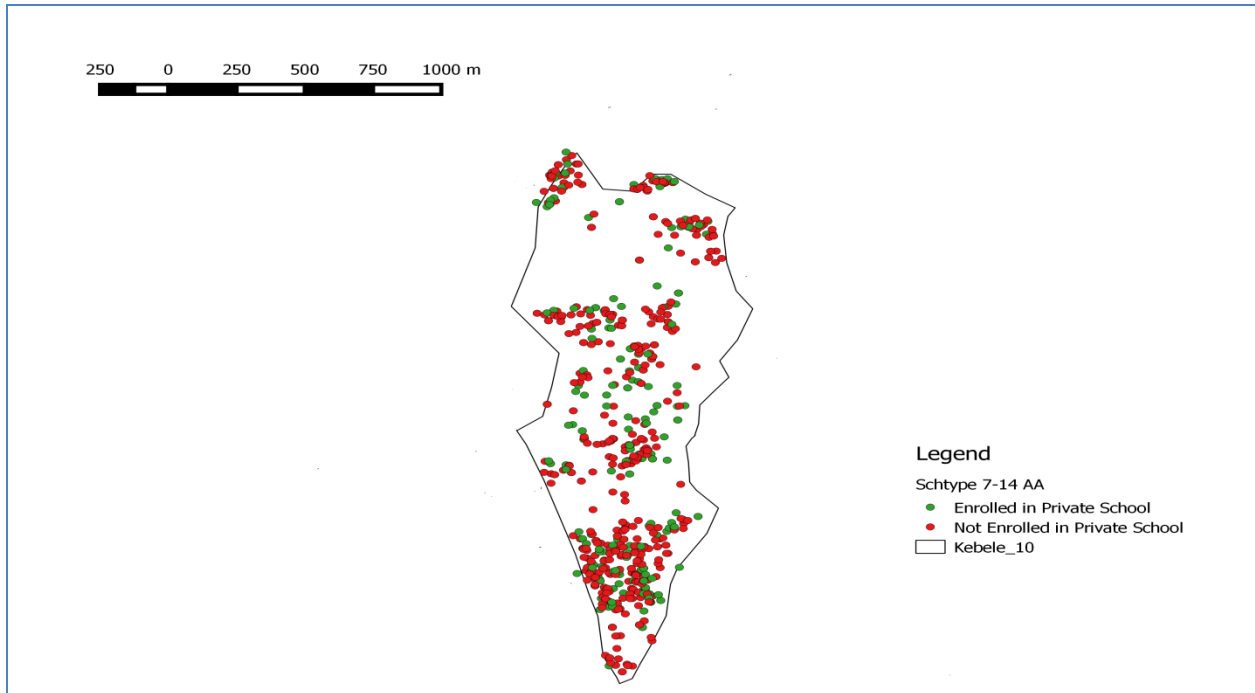
Source: CBMS-Ethiopia Census, 2015

Figure 17: Households Production involvement in Gedenser, Dire Dawa



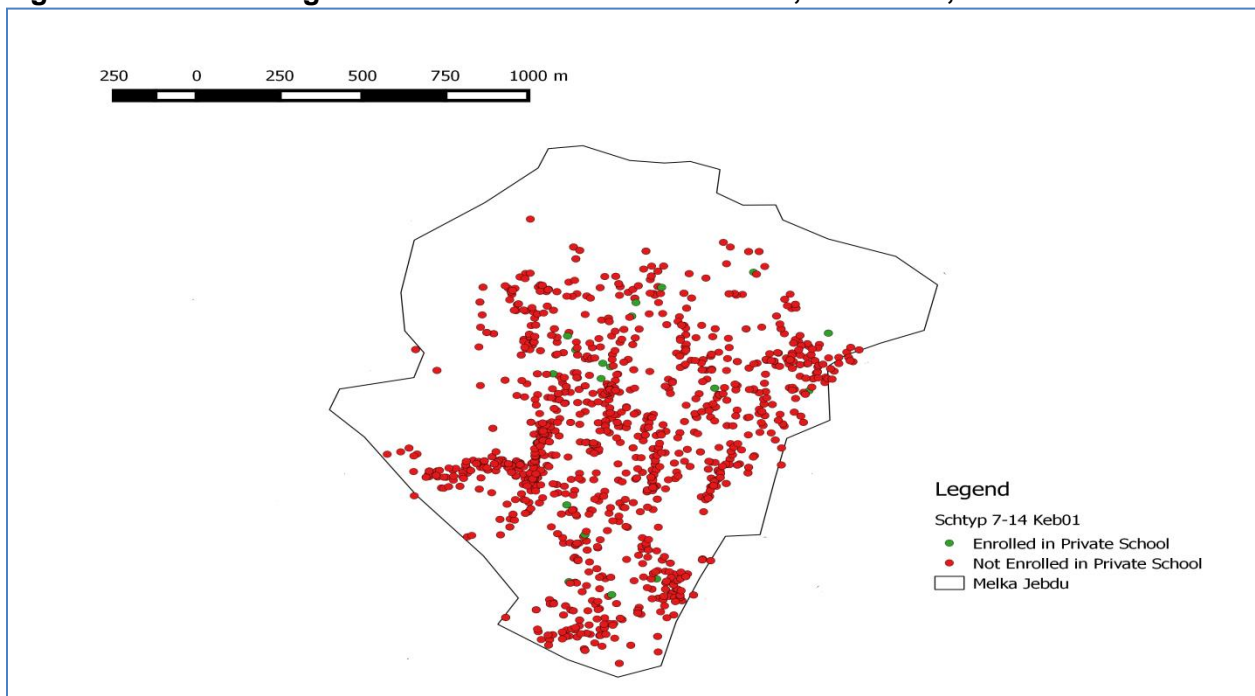
Source: CBMS-Ethiopia Census, 2015

Figure 18: Students aged 7-14 Enrolled in Private School, Wereda10, Addis Ketema Sub city, Addis Ababa



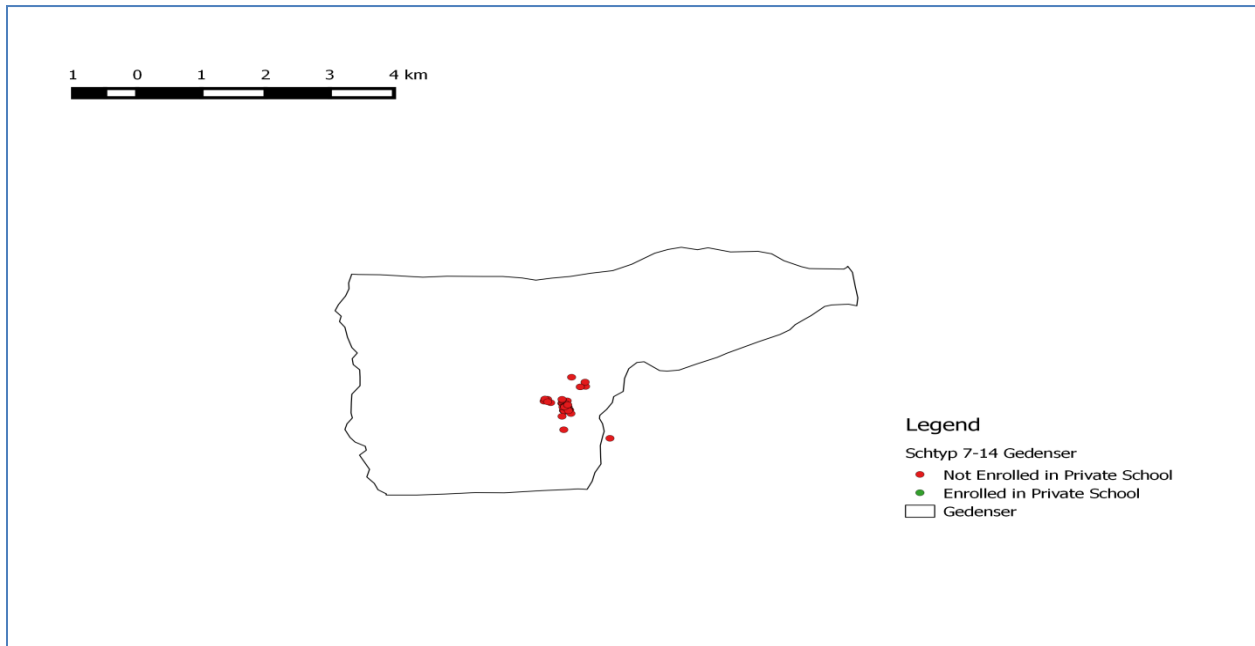
Source: CBMS-Ethiopia Census, 2015

Figure 19: Students aged 7-14 Enrolled in Private School, Kebele 01, Dire Dawa



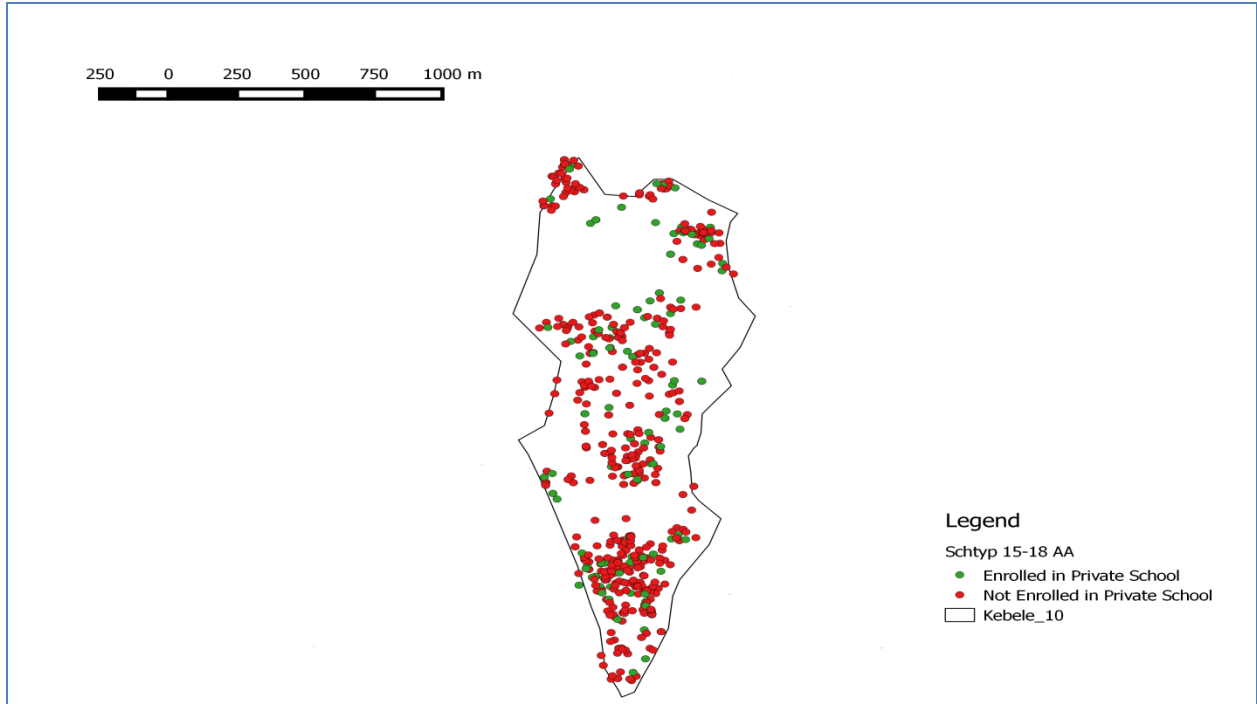
Source: CBMS-Ethiopia Census, 2015

Figure 20: Students aged 7-14 Enrolled in Private School, Gedenser, Dire Dawa



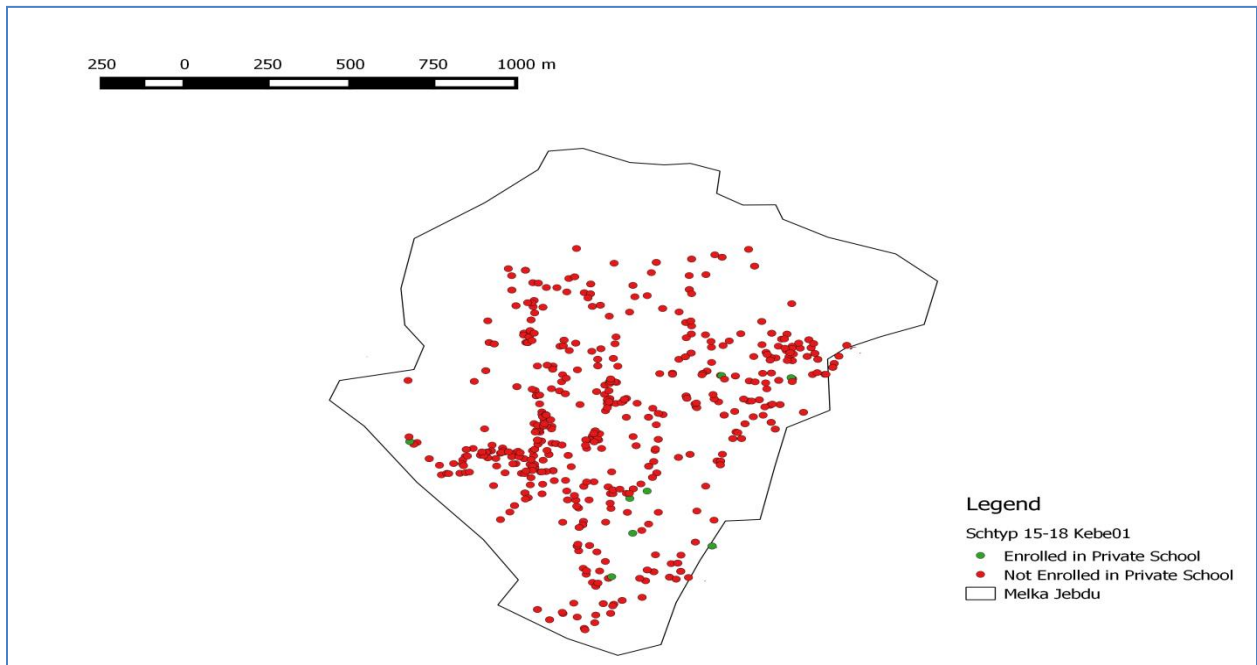
Source: CBMS-Ethiopia Census, 2015

Figure 21 : Students aged 15-18 Enrolled in Private School, Wereda10, Addis Ketema Sub city, Addis Ababa



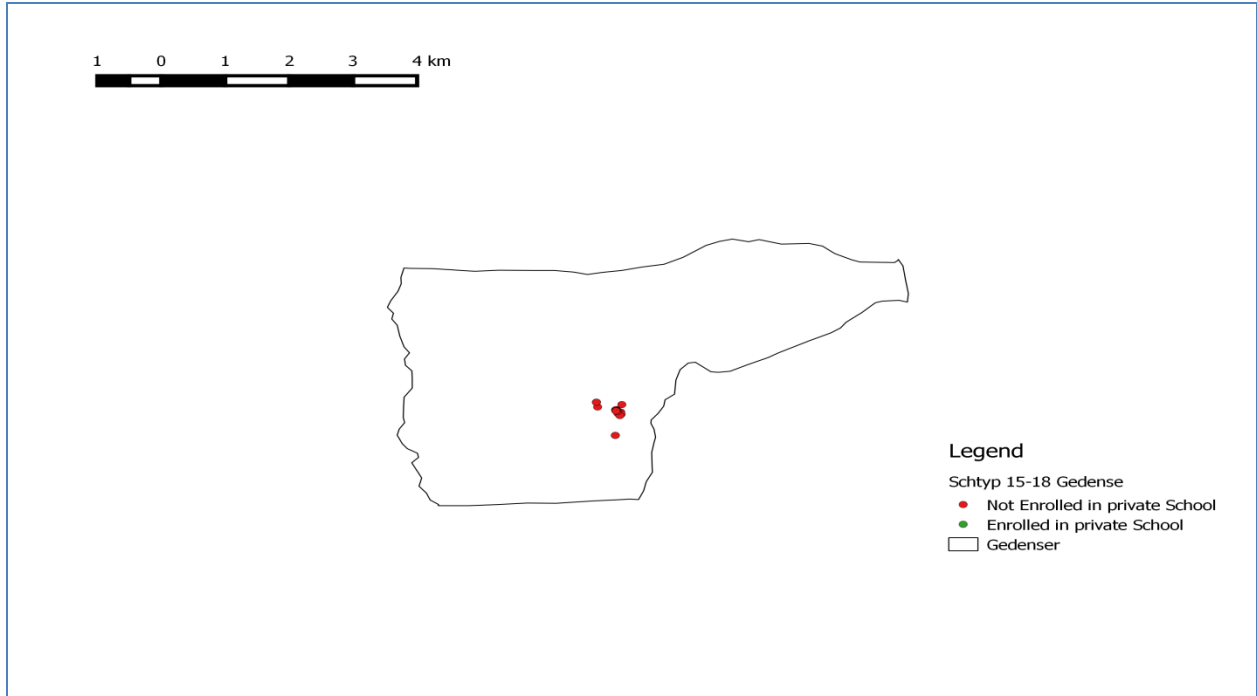
Source: CBMS-Ethiopia Census, 2015

Figure 22: Students aged 15-18 Enrolled in Private School, Kebele 01, Dire Dawa



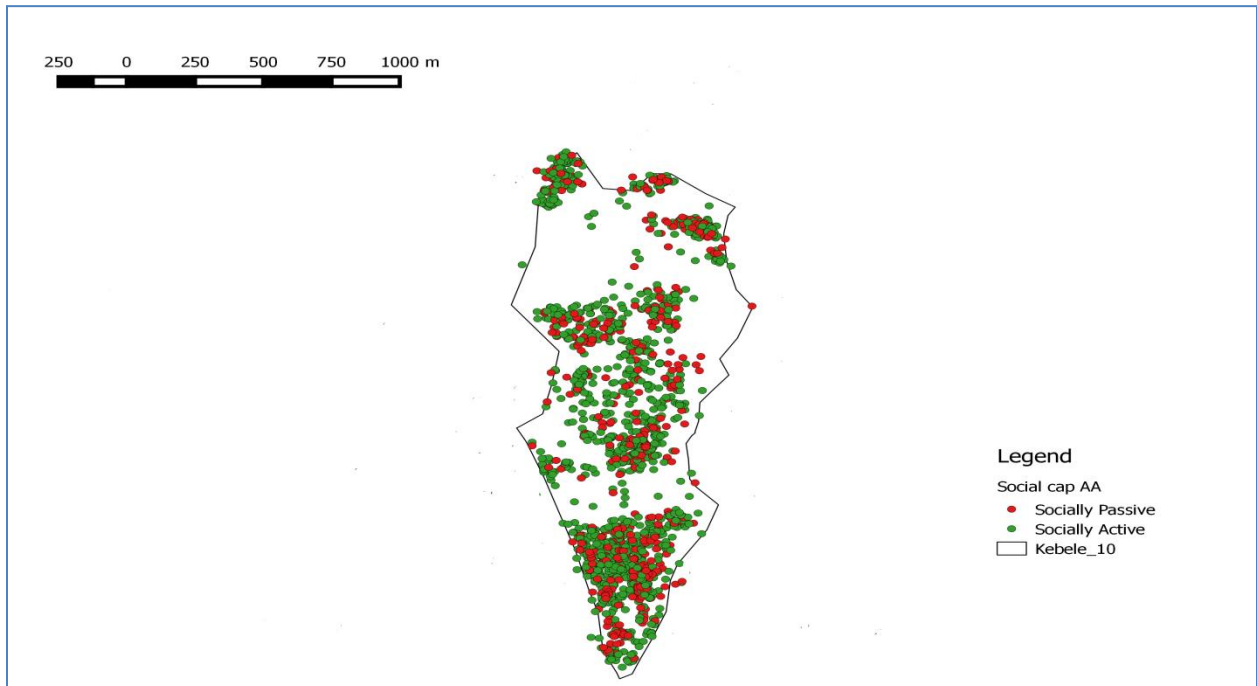
Source: CBMS-Ethiopia Census, 2015

Figure 23: Students aged 15-18 Enrolled in Private School, Kebele 01, Dire Dawa



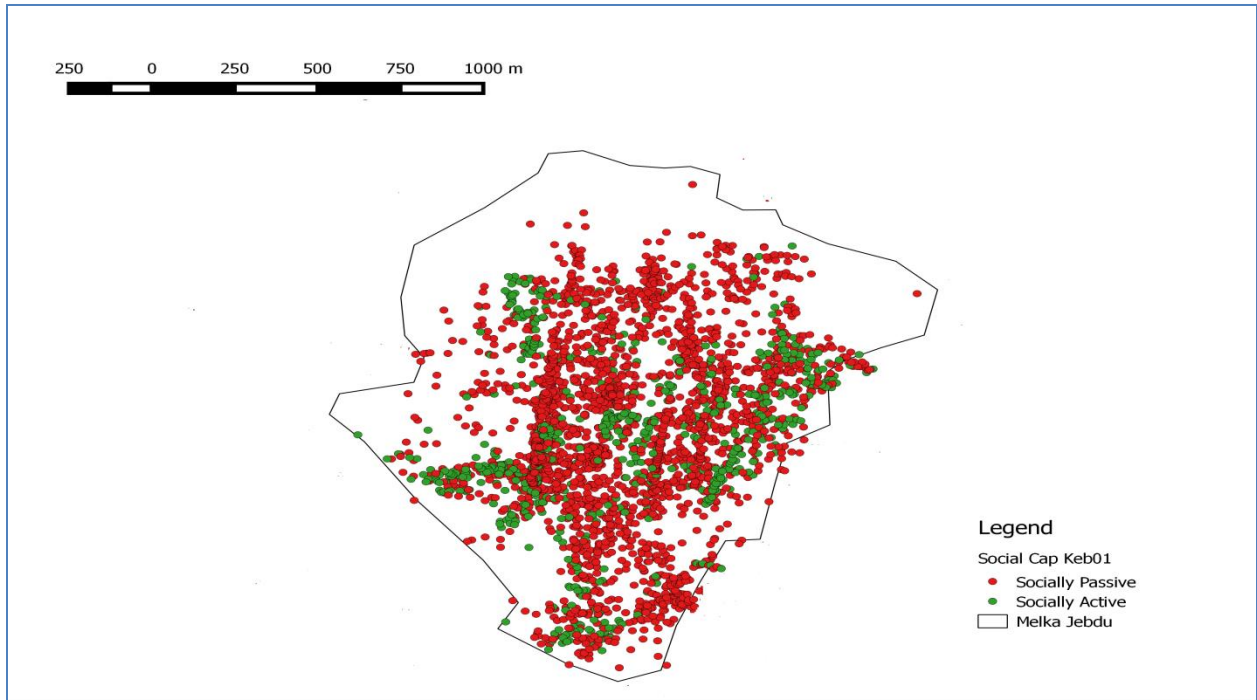
Source: CBMS-Ethiopia Census, 2015

Figure 24: Social Capital, Wereda10,Addis Ketema Sub city, Addis Ababa



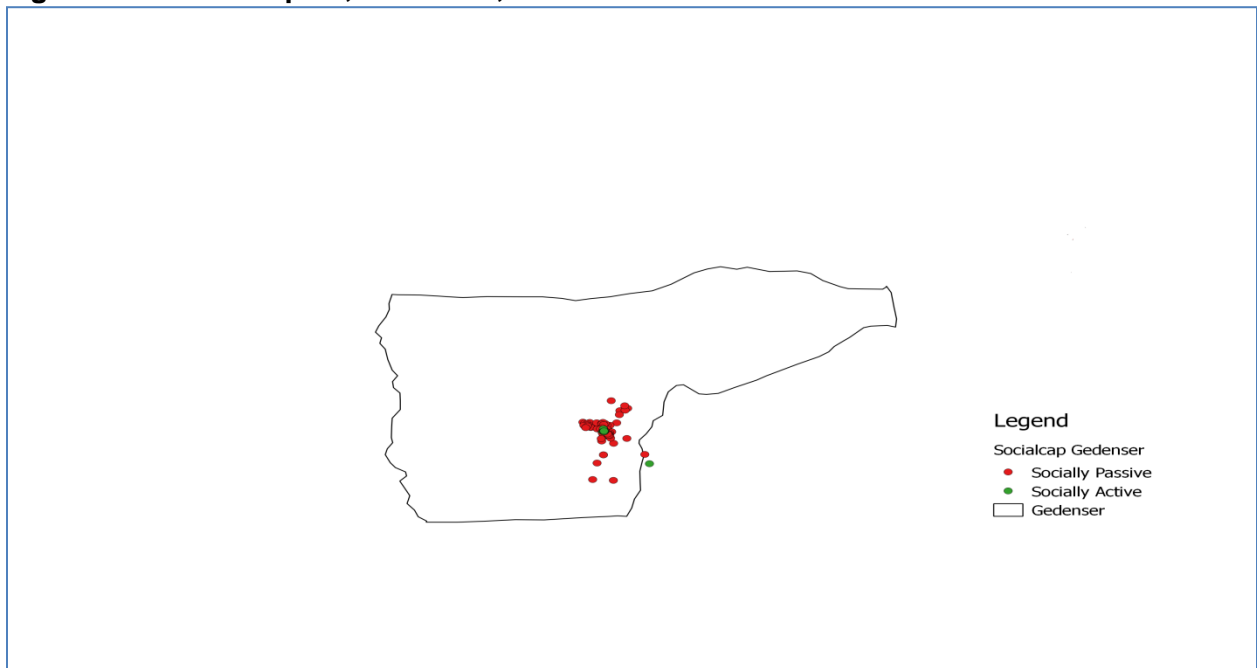
Source: CBMS-Ethiopia Census, 2015

Figure 25: Social Capital, Kebele 01,Dire Dawa



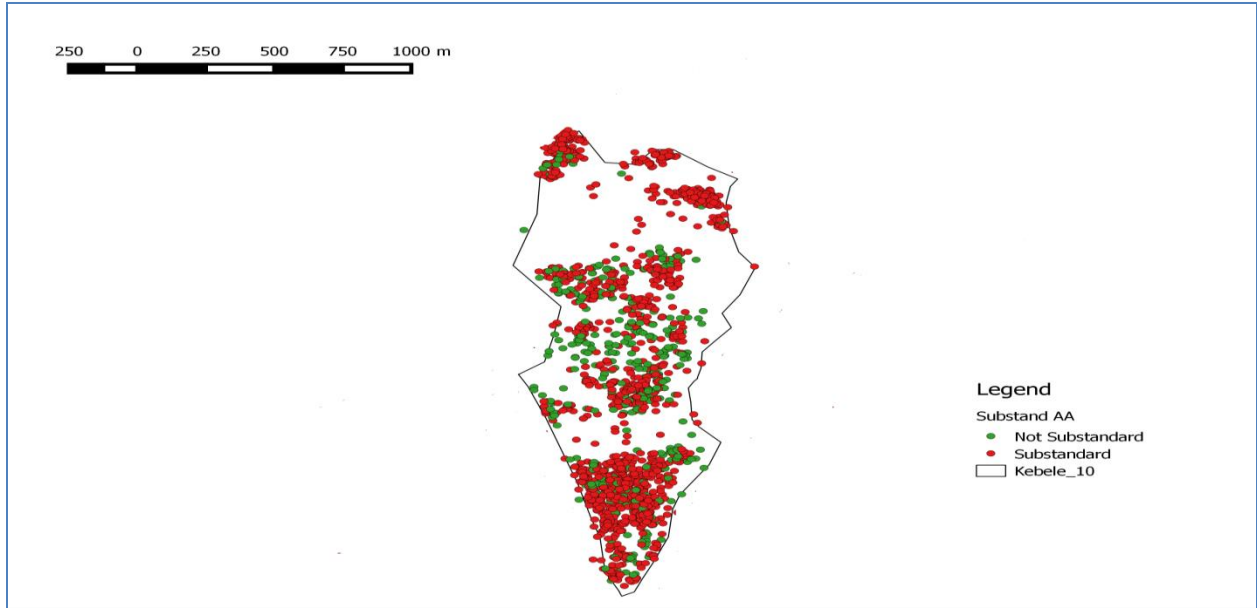
Source: CBMS-Ethiopia Census, 2015

Figure 26: Social Capital, Gedenser, Dire Dawa



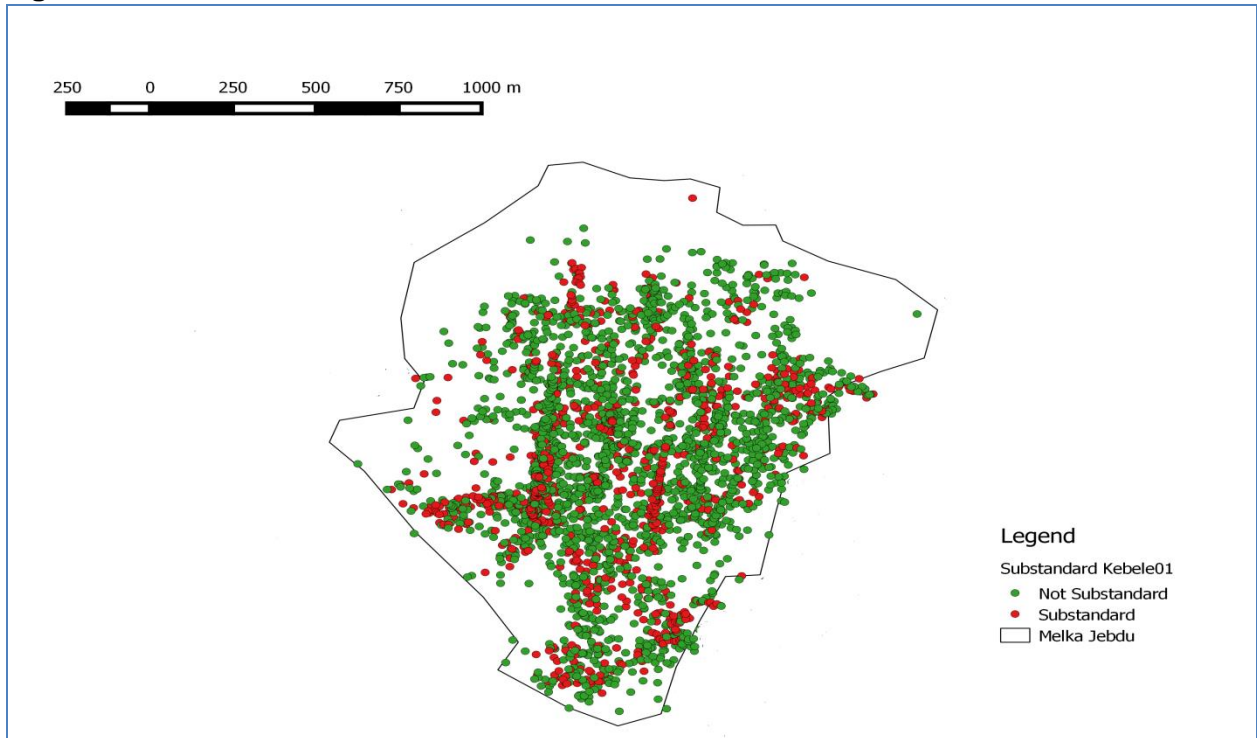
Source: CBMS-Ethiopia Census, 2015

Figure 27: Substandard houses, Wereda10, Addis Ketema Sub city, Addis Ababa



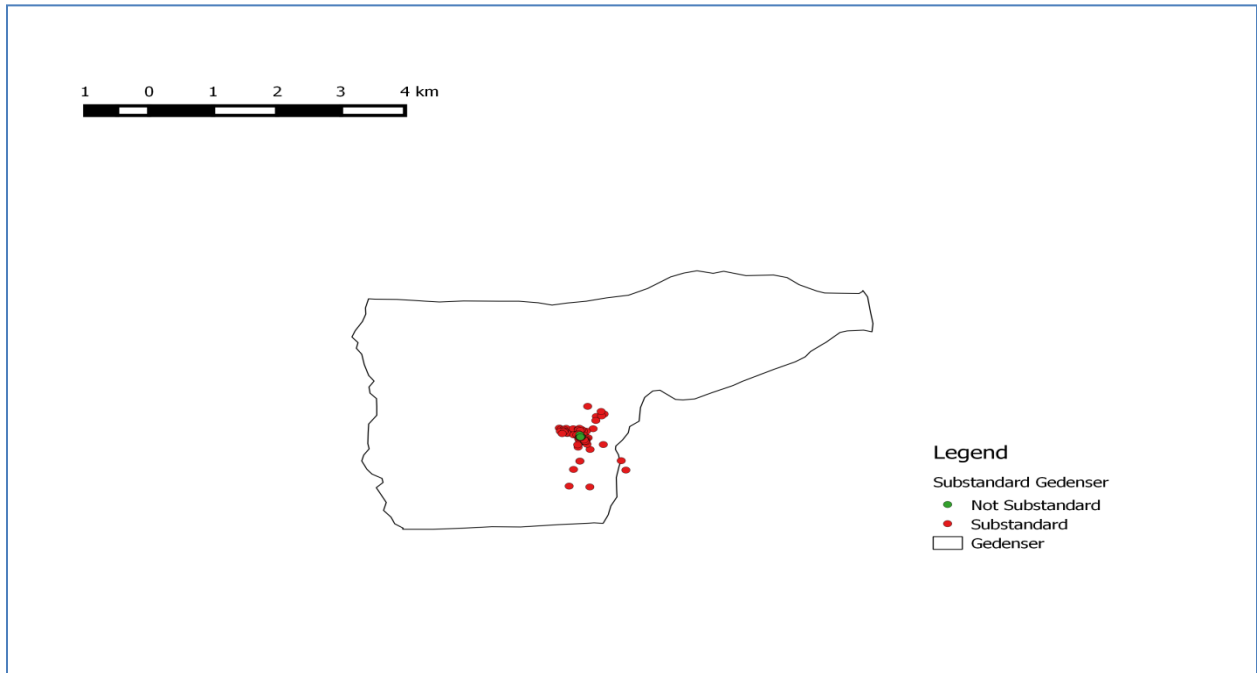
Source: CBMS-Ethiopia Census, 2015

Figure 28: Substandard Houses Kebele 01, Dire Dawa



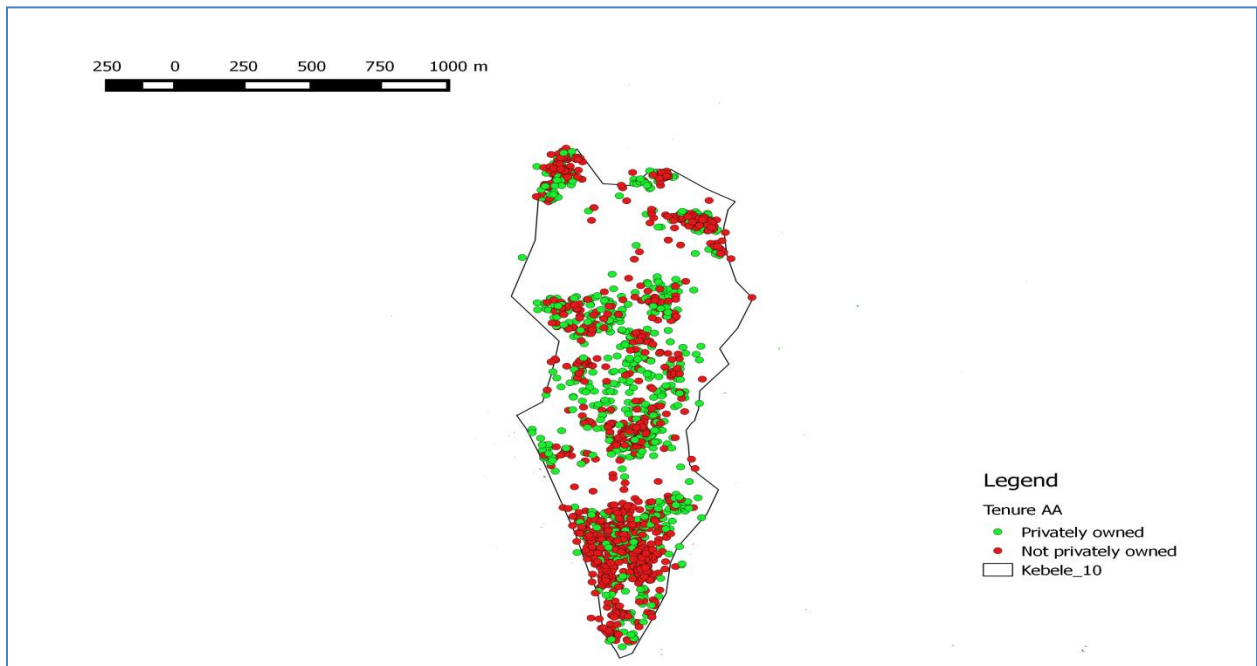
Source: CBMS-Ethiopia Census, 2015

Figure 29: Substandard Houses in Gedenser, Dire Dawa



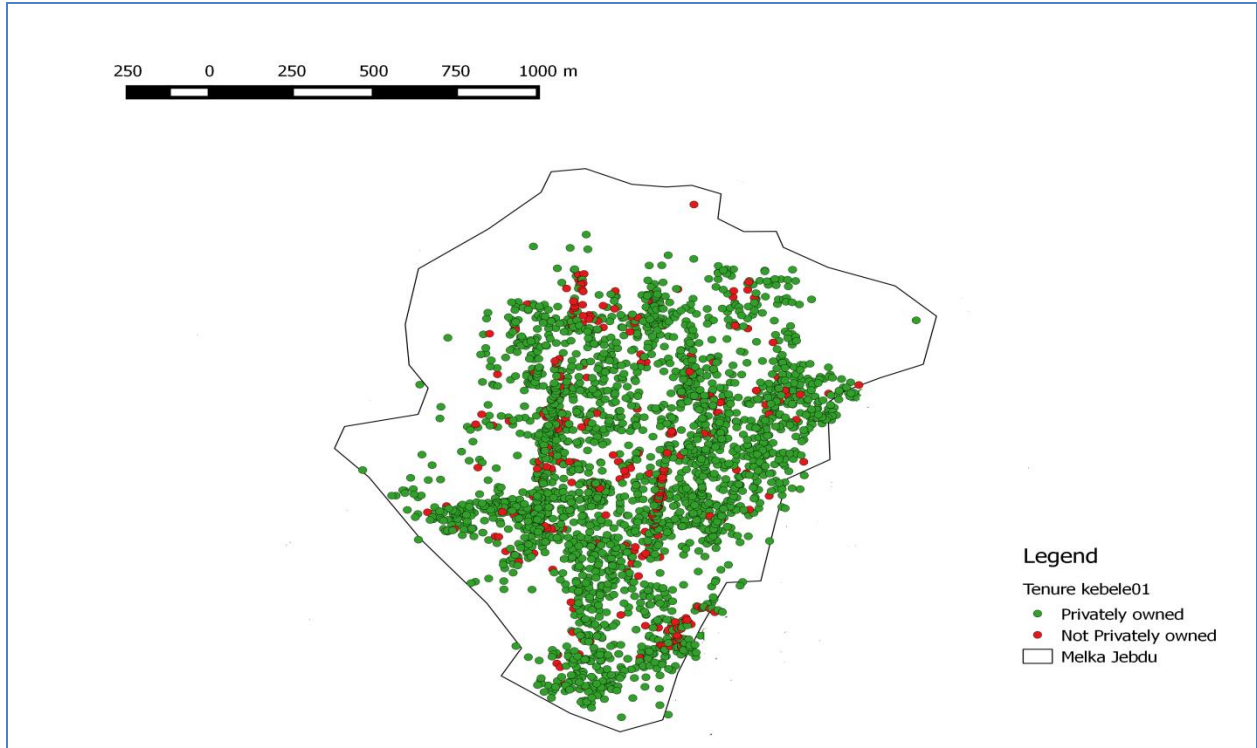
Source: CBMS-Ethiopia Census, 2015

Figure 30: Tenure Status of Wereda10, Addis Ketema Sub city, Addis Ababa



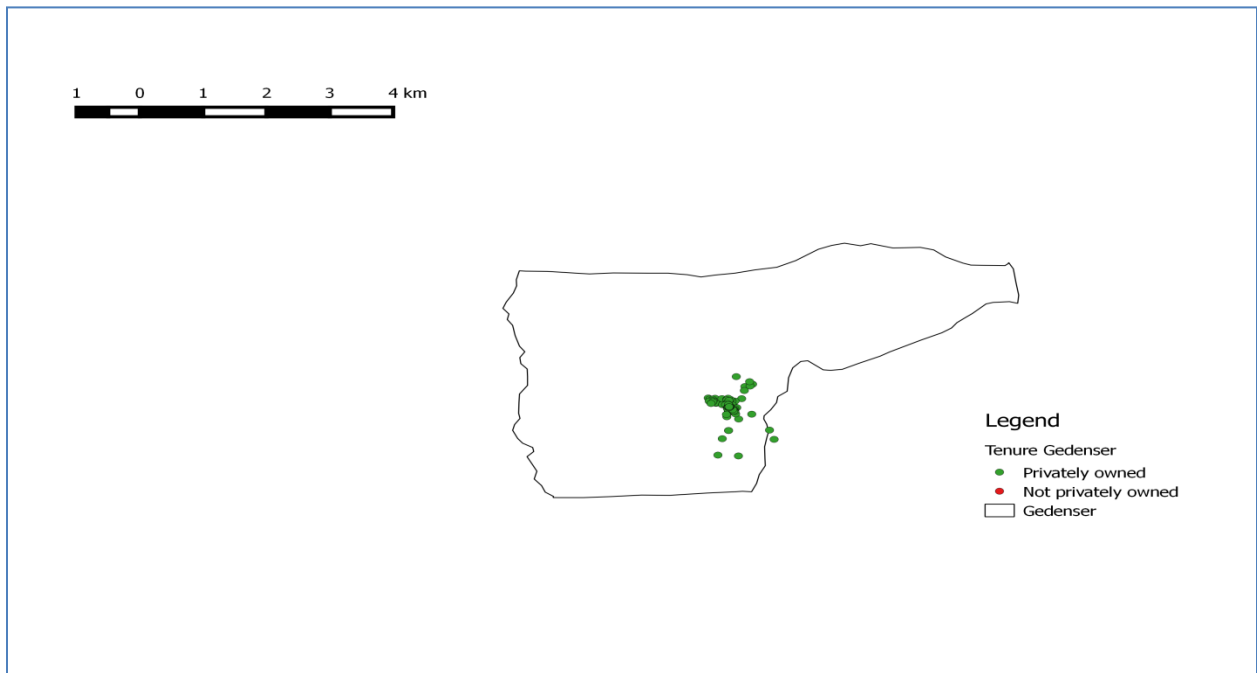
Source: CBMS-Ethiopia Census, 2015

Figure 31: Tenure Status of Households in Kebele 01, Dire Dawa



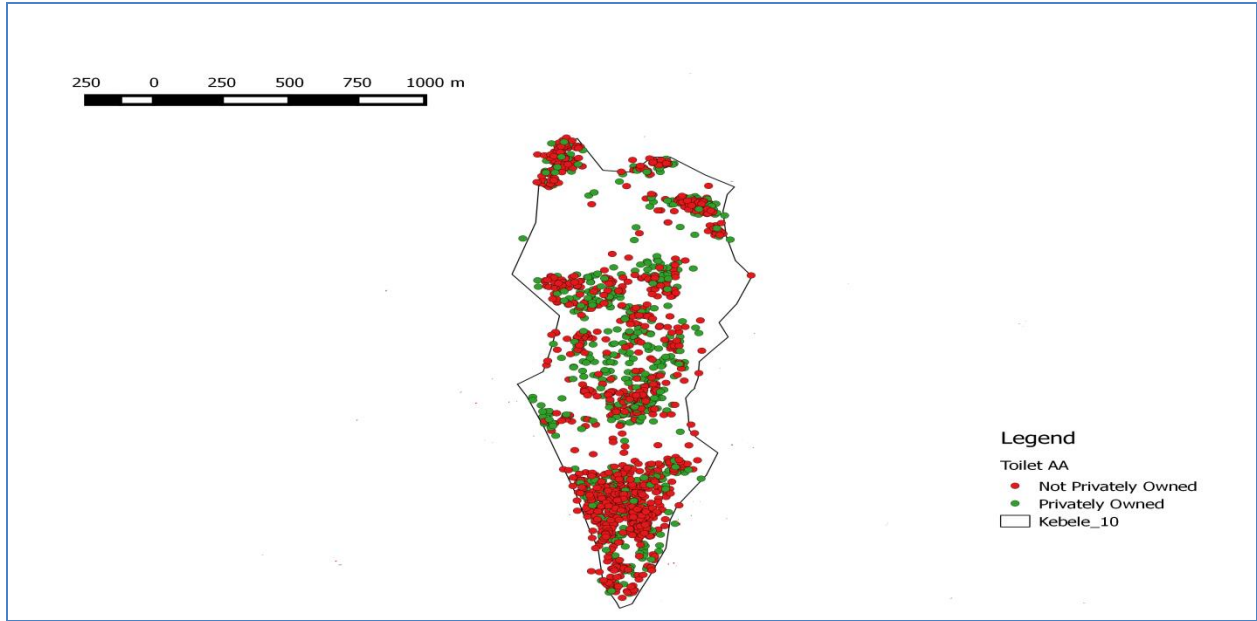
Source: CBMS-Ethiopia Census, 2015

Figure 32: Tenure status of Households in Gedenser, Dire Dawa



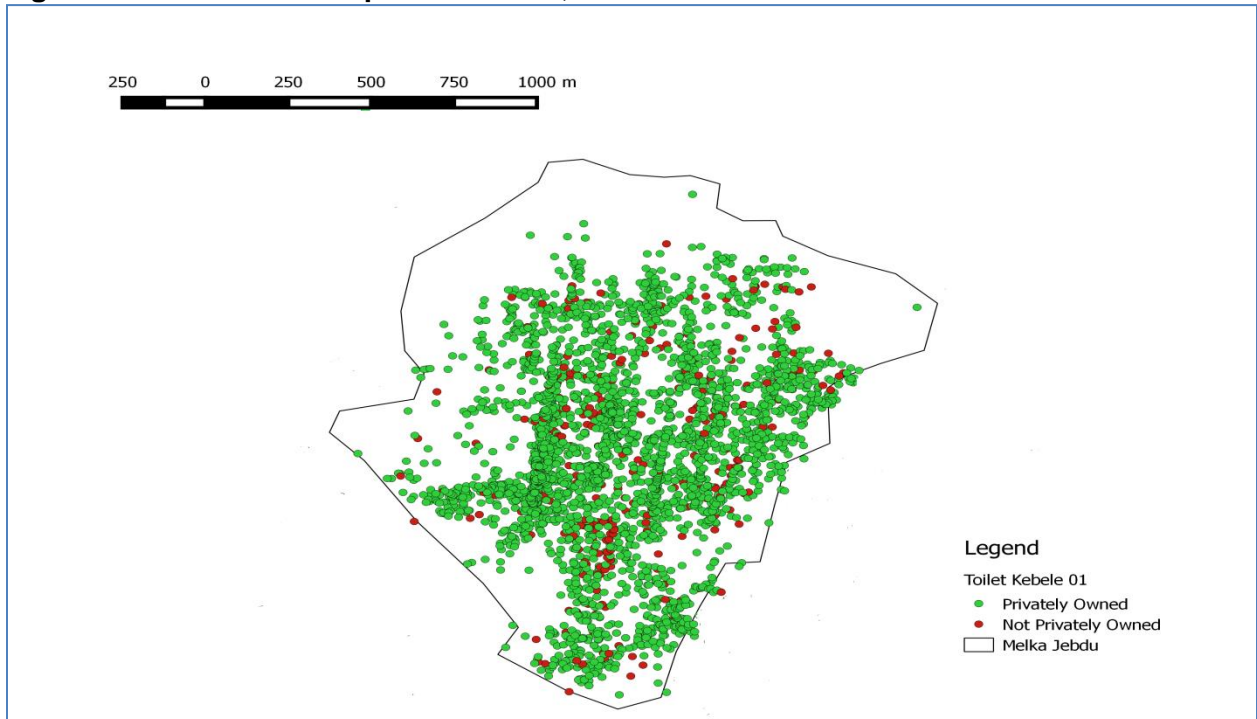
Source: CBMS-Ethiopia Census, 2015

Figure 33: Toilet Ownership in Wereda10, Addis Ketema Sub city, Addis Ababa



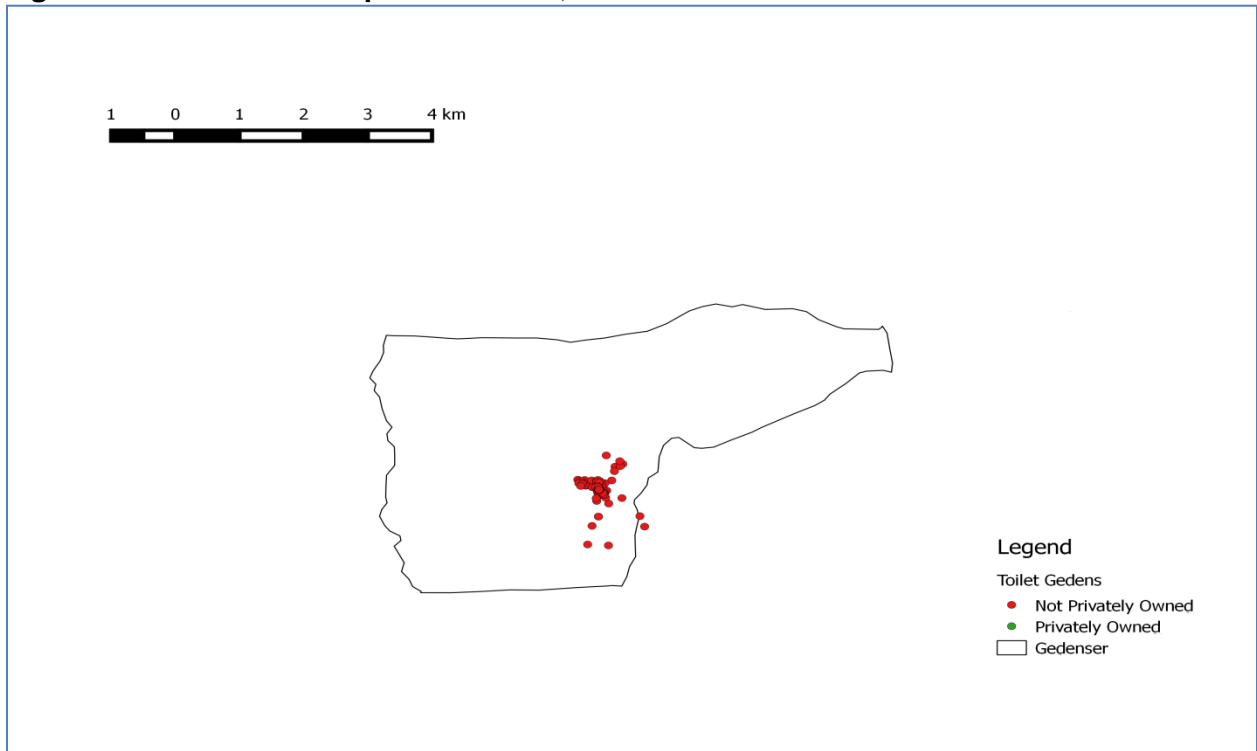
Source: CBMS-Ethiopia Census, 2015

Figure 34: Toilet Ownership in Kebele 01, Dire Dawa



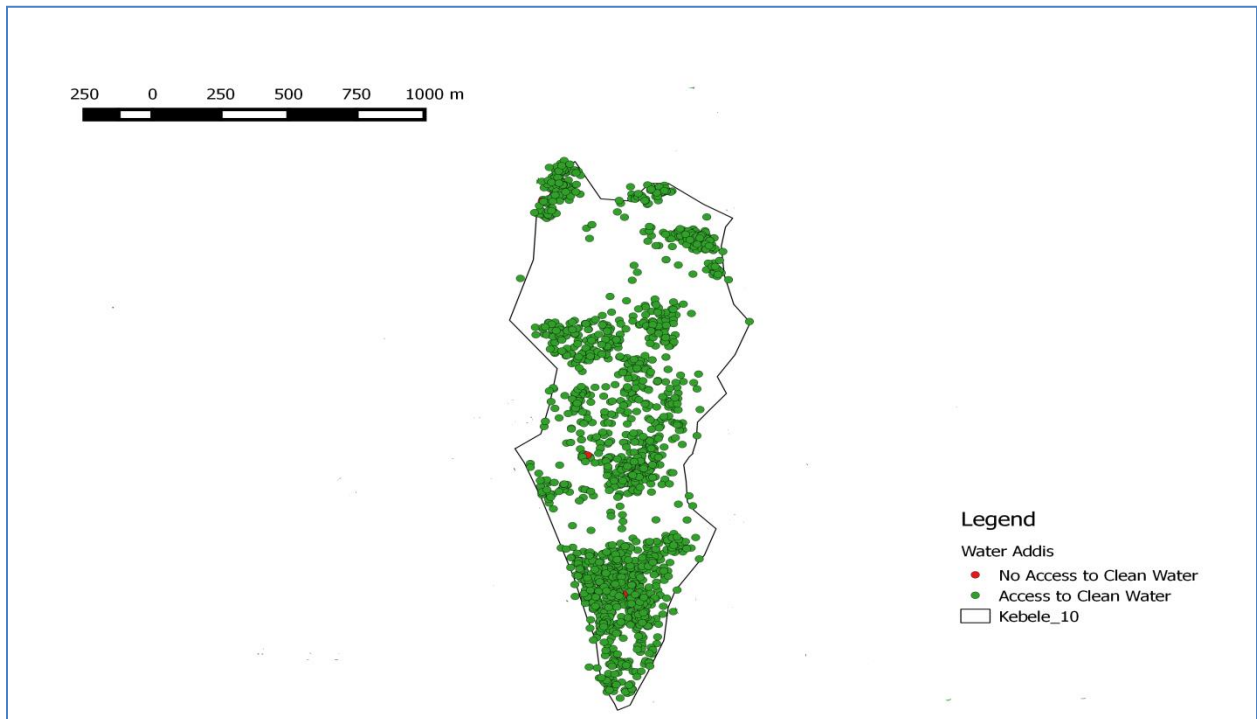
Source: CBMS-Ethiopia Census, 2015

Figure 35: Toilet Ownership in Gedenser, Dire Dawa



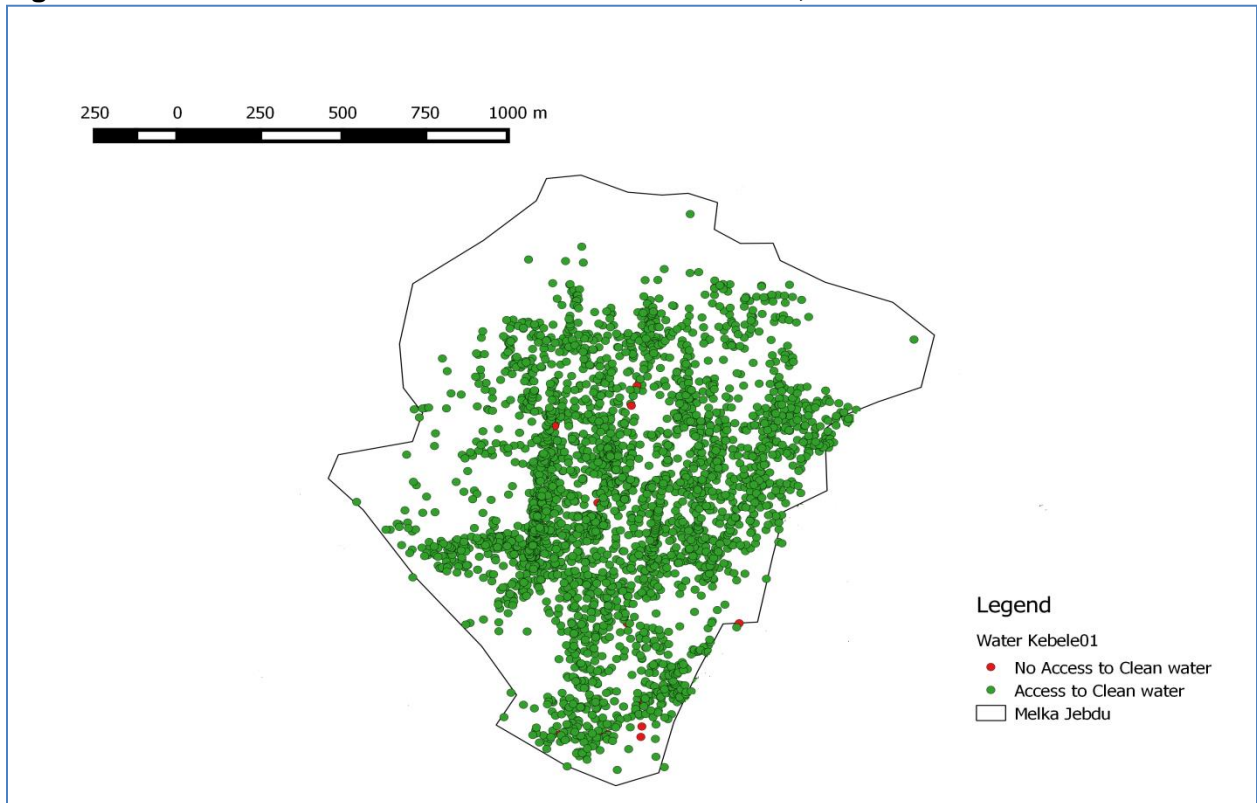
Source: CBMS-Ethiopia Census, 2015

Figure 36: Household's Access to Clean Water Wereda10, Addis Ketema Sub city, Addis Ababa



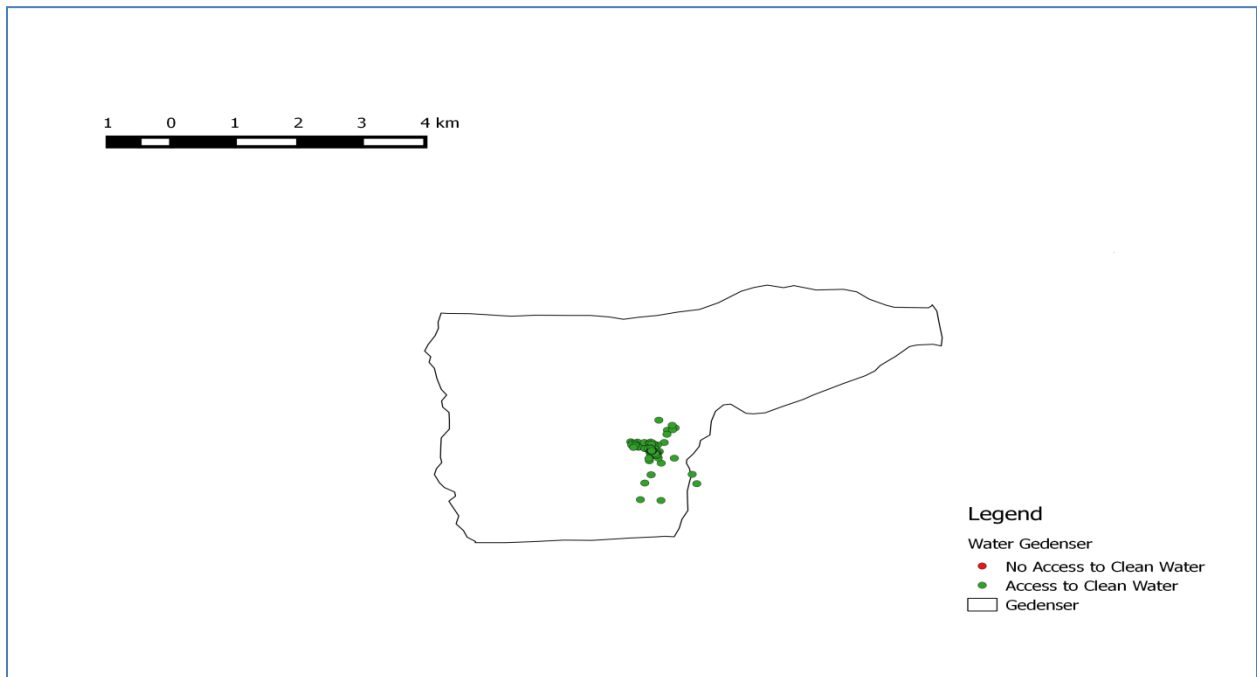
Source: CBMS-Ethiopia Census, 2015

Figure 37: Household's Access to Clean Water Kebele 01, Dire Dawa



Source: CBMS-Ethiopia Census, 2015

Figure 38: Household's Access to Clean Water Gedenser, Dire Dawa



Source: CBMS-Ethiopia Census, 2015

6. RECOMMENDATIONS

Based on the analysis discussed in the previous section through different analytical tools, the following policy implications are hereby presented.

Pro-poor rural development

The disaggregated poverty analysis clearly showed that both city administrations have greater extent of poverty. However, the poverty is more severe for the rural part of the study area, Gedenser, which accounts for 54.74 percent of its population living below the national poverty line. This calls for policymakers to design a pro-poor rural development to reduce, if not totally eliminate, poverty for rural dwellers. In addition, government and non-governmental stakeholders who engage in programs for the reduction of poverty should give due attention to rural dwellers.

Income distribution intervention for urbanites

Despite the fact that majority of the rural dwellers live under severe poverty, the income inequality is not a serious problem as compared to their urban counterpart. Policymakers should therefore design income distribution schemes to narrow the ever-increasing income gap between urbanites. Implementers should also adjust their activities in line with this reality in urban sites of the study area.

Social capital inducement

The finding shows that 60 percent of households in the entire project site are socially passive, i.e., not actively participating in community-based collaborative tasks. Hence, efforts should be made by the government to initiate community residents in the respective project areas to be more involved in community collaborative tasks.

Housing facility

The finding shows that almost half of the households in the overall project site are living in substandard houses. This is particularly prevalent in Addis. Hence, efforts should be made to provide long-term loans in rehabilitating and reconstructing new houses in the area

Sanitation facility

Most of the toilets in the area are shared and less sanitized. Hence, it will be better to have a concerned body or office to work on sanitized toilets especially in Addis Ababa. This will have an environmental implication in the area.

References

- Befekadu Degefe and Berhanu Nega, (2000). **Annual Report on the Ethiopian Economy, 1999/2000**. Addis Ababa: Ethiopian Economic Association.
- Boudreau, T., (1998). **Baseline Report: the Tigray Northern Highlands Food Economy Zone**, SCF-UK, Addis Ababa.
- Bourdieu, P., (1986). "The Forms of Capital." pp. 241 – 258 in *Handbook of Theory of Research for the Sociology of Education* edited by J.E. Richardson. Westport, CT: Greenwood Press.
- Central Statistical Agency. (2008). *Summary and statistical report of the 2007 population and housing census results: Population size by age and sex*. Addis Ababa, Ethiopia.
- Coleman, James S. (1988). "Social Capital in the Creation of Human Capital." *The American Journal of Sociology* 94:S95 – S120.
- Chapman, C. and Haile Kiros Desta, (1999). **The North Wollo East Plan Food Economy Zone: Baseline Report**. Addis Ababa: SCF-UK
- Cleaver, F., (1999). "Paradoxes of Participation: Questioning Participatory Approaches to Development." In *Journal of International Development* 11:597 –612.
- Dire Dawa City Administration Communications Affairs Bureau. (2012). *Historical background of Dire Dawa city*. Retrieved on February 13, 2014 from <http://www.dire-dawa.gov.et/about>.
- Ethiopia.(2000). Demographic and Health Survey:Key Findings
- Engelman, R. (Ed.) (1997). WHY Population Matters: International Edition, pp.25-26.
- Fine, Ben. (1999). "The Developmental State is Dead – Long Live Social Capital?" *Development and Change* 30(19):1 -19.
- Food Security Coordination Office (1999). **Report on Household Survey:Kalu Woreda, Wollo**. Bahir Dar: Amhara Regional State Food Security Coordination Office
- Food Security Coordination Office (2000), **Reconnaissance Survey Report of Potential Resettlement Sites**. Bahir Dar: Amhara Regional State Food Security Coordination Office
- Foster, J., Greer, J., & Thorbecke, E. (1984). A class of decomposable poverty measures. *Journal of Econometrica*, 52(3), 761-766.

- Gebeyehu, A.Marco, B. and Behailu, G. (2001). Housing condition and demand for housing in urban Ethiopia.
- Government of Ethiopia.(1999). **Poverty Situation in Ethiopia**. Addis Ababa: Welfare Monitoring Unit, Ministry of Economic Development and Cooperation (MEDAC)
- Granovetter, M,. (1985). "Economic Action and Social Structure: The Problem of Embeddedness." *The American Journal of Sociology* 91(3):481 -510.
- Gujarati, D.N. (2004). *Basic econometrics* (4thed.). New York, The McGraw–Hill Companies.
- Haile Kiros Desta, et al.(2000). **The North Wollo Highland Belg Food Economy Zone: Baseline Report**. Addis Ababa: Save the Children UK
- John, F and Daniel, P., (2007). *Urban Economic & Real Estate: Theory and policy*. Blank well Publishing Ltd, USA.
- Meheret, A. (1999). *The City of Addis Ababa: Policy Options for the Governance and Management of a City with Multiple Identity*
- MOWUD , (2008). Integrated housing development program. Africa Ministerial Conference of Housing & Urban Development, 28-30,July 2008. Abuja, Nigeria.
- Olayiwola, Adeleye & Ogushakin. (2005). *Public housing delivery in Nigeria: Problem and Challenges of Housing*, Obaferi Awalawa University.
- Portes, A., (2000). "The Two Meanings of Social Capital." *Sociological Forum* 5(1):1 -12.
- Putnam, R.D., Leonardi, R., and Nanetti, R.Y., (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton NJ: Princeton University Press.
- Solomon, M. &McLeod, R. (2004).Homeless International Feasibility study for the application of Community-Led Infrastructure Finance Facility (CLIFF) operations in Ethiopia. United Nation Human Settlements Program (UN_HABITAT) Urban Management Program.
- Tebarek, L. (2013). Inner city Housing and urban Development – Induced displacement: Impact on Poor Female-Headed Households in Arada Subcity of Addis Ababa, Ethiopia. *Journal of Sustainable Development in Africa* (Volume 15, No.2, 2013).
- Tekabe, A. (1998). 'Food security in Ethiopia', paper presented at the CTA conference: Food Insecurity in ACP Countries: From Policy and Programme Interventions to Vulnerable Groups. Leuven, Belgium: CTA. 26-30 October.

- Tegegne, G. & Mulat D., (2005). Micro enterprise performance in small towns, Amhara, region: Implication for local economic development. Shaker Publishing, Netherland.
- Tsion, L. (2007). Sheltering the urban poor of Ethiopia: need for inclusive housing development in Addis Ababa. Shelter for urban poor proposal for improvements inspired, Sweden: Pp156.
- UN-habitat (2007), Situation analysis of informal settlements in Addis Ababa. Nairobi.
- World Bank, (2009). The employment creation effects of Addis Ababa Integrated Housing Program: Report No. 47648 poverty reduction & economic management unit (AFTP2), water & urban development unit (AFTU1), World Bank Institute, Addis Ababa.
- Weber, Max. (1968). *On Charisma and Institution Building*. Translated by S.N. Eisenstadt. Chicago, IL: University of Chicago Press.
- Woolcock, Michael. (1998). "Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework." *Theory and Society*, vol. 27, no. 2, pp. 151–208.

Annex

STATA generated tables based on CBMS data collected in 2015

Table 20: Poverty by Administration

```
. dfgtg Expenditure_per_adultequent, hgroup(admin) alpha(0) pline(4833.04)
```

```
Decomposition of the FGT index by groups
Poverty index : FGT index
Group variable : admin
Parameter alpha : 0.00
```

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.141489	0.334579	0.047339	0.125709
2	0.008039	0.006295	0.002833	0.007208
	0.494917	0.665243	0.329240	0.874291
	0.008178	0.006296	0.006270	0.007208
Population	0.376579	1.000000	0.376579	1.000000
	0.006464	0.000000	0.006464	0.000000

```
. dfgtg Expenditure_per_adultequent, hgroup(admin) alpha(1) pline(4833.04)
```

```
Decomposition of the FGT index by groups
Poverty index : FGT index
Group variable : admin
Parameter alpha : 1.00
```

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.034368	0.334579	0.011499	0.086422
2	0.002717	0.006295	0.000934	0.006885
	0.182723	0.665243	0.121555	0.913578
	0.004310	0.006296	0.003089	0.006885
Population	0.133054	1.000000	0.133054	1.000000
	0.003150	0.000000	0.003150	0.000000

```
. dfgtg Expenditure_per_adultequent, hgroup(admin) alpha(2) pline(4833.04)
```

```
Decomposition of the FGT index by groups
Poverty index : FGT index
Group variable : admin
Parameter alpha : 2.00
```

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.015056	0.334579	0.005037	0.068595
2	0.001841	0.006295	0.000623	0.008301
	0.102819	0.665243	0.068399	0.931405
	0.003447	0.006296	0.002383	0.008301
Population	0.073437	1.000000	0.073437	1.000000
	0.002438	0.000000	0.002438	0.000000

Source: CBMS Ethiopia Census, 2015

Table 21:Poverty by Rural-Urban

. dfgtg Expenditure_per_adultequivalent, hgroup(urban_rural) alpha(0) pline(4833.04)

Decomposition of the FGT index by groups
 Poverty index : FGT index
 Group variable : urban_rural
 Parameter alpha : 0.00

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.362866	0.966186	0.350596	0.931002
	0.006526	0.002411	0.006366	0.005510
2	0.768421	0.033814	0.025983	0.068998
	0.030606	0.002411	0.002122	0.005510
Population	0.376579	1.000000	0.376579	1.000000
	0.006464	0.000000	0.006464	0.000000

. dfgtg Expenditure_per_adultequivalent, hgroup(urban_rural) alpha(1) pline(4833.04)

Decomposition of the FGT index by groups
 Poverty index : FGT index
 Group variable : urban_rural
 Parameter alpha : 1.00

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.127843	0.966186	0.123520	0.928347
	0.003182	0.002411	0.003090	0.006559
2	0.281949	0.033814	0.009534	0.071653
	0.017046	0.002411	0.000891	0.006559
Population	0.133054	1.000000	0.133054	1.000000
	0.003150	0.000000	0.003150	0.000000

. dfgtg Expenditure_per_adultequivalent, hgroup(urban_rural) alpha(2) pline(4833.04)

Decomposition of the FGT index by groups
 Poverty index : FGT index
 Group variable : urban_rural
 Parameter alpha : 2.00

Group	FGT index	Population share	Absolute contribution	Relative contribution
1	0.071293	0.966186	0.068882	0.937982
	0.002482	0.002411	0.002405	0.007056
2	0.134690	0.033814	0.004554	0.062018
	0.012085	0.002411	0.000522	0.007056
Population	0.073437	1.000000	0.073437	1.000000
	0.002438	0.000000	0.002438	0.000000

Source: CBMS Ethiopia Census, 2015

Table 22: Income Inequality by Administration and Rural-Urban

. igini Expenditure_per_adultequent, hgroup(admin)

Index : Gini index
Group variable : admin

Group	Estimate	STE	LB	UB
1: 1	0.363147	0.021302	0.321386	0.404908
2: 2	0.379690	0.014978	0.350326	0.409053
Population	0.407382	0.012224	0.383419	0.431345

. igini Expenditure_per_adultequent, hgroup(urban_rural)

Index : Gini index
Group variable : urban_rural

Group	Estimate	STE	LB	UB
1: 1	0.406144	0.012447	0.381743	0.430545
2: 2	0.272439	0.014781	0.243464	0.301415
Population	0.407382	0.012224	0.383419	0.431345

Source: CBMS Ethiopia Census, 2015

Table 23: Core Poverty Indicators

Basic needs	Core indicators		Computation/formula	Disaggregation
Health and Nutrition	1.	Proportion of children under five years old who died in the last 12 months	Total number of children aged 0 to less than 5 years old who died in the last 12 months divided by (the total number of children aged 0 to less than 5 years old who died in the last 12 months plus the total number of living children aged 0 to less than 5 years old in the last 12 months)	Kebele/woreda
	2.	Proportion of women who died due to pregnancy related causes in the last 12 months	Total number of women who died due to pregnancy related causes in the last 12 months divided by (the total number of children less than 1 year old plus total number of women who died due to pregnancy related causes)	Kebele/ woreda
	3.	Proportion of household members who do not eat food three times a day	Total number of households with all members who do not eat food three times a day past week divided by total number of households	Kebele / woreda
Housing detail	4	Proportion of households living in substandard houses	Total number of houses made up of items other than Stone , mortar reinforced concrete and Brick divided by total number of households	Kebele/Wereda
	5	Proportion of households who do not have their own private house	Number of houses which are rented divided by total number of households	Kebele/woreda
Sanitation and water supply	6	Proportion of households who do not have access to own toilet facility	Total number of households who do not have access to their own toilet facility (none and open air, shared toilets) divided by total number of households.	Kebele/Woreda
	7	Proportion of households who have no access to clean water facility	Total number of households with no clean water (other than piped line water) divided by total number of households.	Kebele/Woreda
Education	8.	Proportion of children aged 7 to 14 years old who do not attend elementary education	Total number of children aged 7 to 14 years old who are not attending school divided by total number of children aged 7 to 14	Kebele/Wereda
	9.	Proportion of children aged 15 to 18 years old who do not attend secondary education school	Total number of children aged 15 to 18 years old who did not attending secondary school divided by total number of children aged 15 to 18.	Kebele/Wereda
Income	10.	Proportion of households with income below the poverty threshold in the last 12 months	Total number of households with income below the poverty threshold in the last 12 months over total number of households.	Kebele/Wereda
	11	Proportion of households with income below the food threshold in the last 12 months	Total number of households with income below the food threshold in the last 12 months over total number of households.	Kebele/Wereda
Production	12	Proportion of households who are engaged in economic production	Total number of households with at least one member who is engaged in economic production (agriculture industry, manufacturing industry, service industry etc) in the past 12 months divided by the total number of households.	Kebele/Wereda
Social engagement	13.	Proportion of households who participate in social engagements	Proportion of households who are engaged in social engagement activities (<i>edir, ekub, mahber</i> , etc) in the past three months divided by the total number of households.	Kebele/Wereda