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Urban Horizontal Expansion and Its Effect on Rural Community Livelihood: The Case of Sheger City (Oromia Special Zone Surrounding Finfinne OSZSF) Towns and Addis Ababa City Administrations Continuum Areas

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Abstract

This study focusses on assessing and analyzing the Urban Horizontal Expansion and Its Effect on Rural Community Livelihood in the Oromia Special Zone Surrounding Finfinne (OSZSF) Towns and Addis Ababa City. The proposed methodology basically adopts a multiple case study research approach taking the cases of selected peri urban areas of Sheger and Addis Ababa city administrations that had continuum to boundaries of Sheger city administration Methodologically, the study take the urban fringe areas from both sides that mean from Addis Ababa city government spatial boundary perspective and from that Sheger city adminstrations (Sebeta, Burayu, Akaki, Koye Feche and Laga Tafo areas) that had direct boundary contact to the city of Addis Ababa.The results of the study indicated that compensation schemes envisaged for the loss of assets excluded youth and women. The dislocation program implemented is not rehabilitative and negatively affected the livelihood of the dislocated farming community. Furthermore, the study revealed that women and children are major victims to livelihood crisis. The coping mechanism/strategy adopted by the majority of the dislocated farmers is casual that is directly or indirectly dependent on agriculture, which is being vanished in the area. Dislocation program that may be proposed in the future needs comprehensive planning and implementation to ensure community participation and create alternative livelihood. Over the last two decades there is rapid Land use land cover change in the former Oromia special zone surrounding Finfine which is recently re-named as Sheger city administration. In this area there was very fast growth of urban built up area of which majority of them were occupied in informal ways and resulted in rapid land use land cover change in the last 20 years. The rapid built up area expansion has brought the rapid conversion of the land use and land cover from vegetation and agriculture towards urban built up area. Therefore, to succeed a sustainable urban development program, this study recommendations are the governments provide the expansion of rural area infrastructure, create job opportunity, and create awareness for rural society; and there should exist effective mechanisms for increasing agricultural productivity within a limited land size to farmers., to implement a comprehensive government's policies, challenges, and future actions required to integrate and balance the development of urban region infrastructure. Furthermore, addressing the growing socioeconomic and infrastructure gap between urban and rural sections of an urban region and in achieving the government's development plan's objectives of integrated and balanced development in OSZSF towns and Addis Ababa City.

Key words: *Urban Expansion, dislocated farmers, Livelihood, Prei-urban*

1. Introduction

Urban expansion is a recent phenomenon in the contemporary world, caused by the increasing of urban population and the movement of urban expansion to the fringe of agricultural communities. This has led to urban concentration and growth of large cities, variations in land use, transformation from rural to metropolitan form of organization and government, and urban sprawl problems in urban areas. Benhart (2004) argues that this process of urbanization has had a negative impact on the lives of displaced and dislocated populations, as well as the way of population living in urban and the number and size of cities. Allen, da Silva, & Corubolo (2009) suggest that peri-urban is a dominant urban form and spatial planning challenge of the twenty-first century. It is characterized by a relatively low population density by urban standards, scattered settlements, and high dependence on transport for commuting, fragmented communities and lack of spatial governance. This area is also a region of change where the city's influence continues beyond the stipulated administrative boundaries and the rural area gradually adopts urban grace and utility. Urbanization is driven by a combination of factors, including a surplus of births over deaths in urban areas, migration from rural to urban areas and from abroad as well as the urbanization of formerly rural areas. This trend has led to the growth of mega-cities (Unwin, 2017).

In Ethiopia, rapid urbanization results in land expropriations, which often come at the expense of farmland and forests (Admasu et al, 2020). Moreover, land expropriations will likely increase in the future, as Ethiopia could be a rural-population-dominant country that needs more urbanization to achieve its policy objectives (Fetene et al, 2019) Ethiopia's high rate of land transformation in peri-urban areas is expected to continue (Agegnehu and Mansberger , 2020). Thus, expropriation is becoming a major concern in Ethiopia. It has an effect on the livelihoods of different segments of the population in various areas (Le and Nguyen, 2020). Especially in peri-urban areas, the livelihood of farmers is affected by expropriation without fair and comparable compensation.

According to Tura (2018) Expropriation of land and the upcoming large-scale land transfer to investors in Ethiopia have far-reaching negative consequences for rural communities' livelihoods and the environment. Development-induced displacement is becoming a major concern in Ethiopia, with different levels of concern in different parts of the region in most cases; municipalities in Ethiopia expropriate land to resolve issues such as housing, urban infrastructure, investment, and so on. Some Ethiopian municipalities engage in extensive land expropriation, well beyond what they need (Siltan, 2019).

However Livelihood is an array designed to assist people to convert available assets into a sustainable and resilient means of earning a living. Livelihood attempts to take advantage of the "window of opportunity" and increase income-generating activities. A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers & Conway, 1991).

Therefore, this study examines the magnitude and rates of urban expansion and land use land cover changes in Sheger and Addis Ababa city administrations, as well as the relationships between the rate of urban increase and socioeconomic development of the peri urban community. It also looks at the livelihood strategies developed by the government body or other stakeholder to cope with new development challenges of rural or Peri urban communities, and identifies major social, economic, environmental and political issues to create adaptive and workable strategies through bring holistic urban-urban and rural urban linkage of the two spatial segments.

2. Research Methodology

2.1 Research Approach

The research used a qualitative and quantitative approach to assess and understand the effect of urban horizontal expansion on peri urban community livelihood of the target study area.The aim of using a qualitative research approach helps to study/generate a complete and in depth information for the researcher whereas Quantitative research approach support the researcher to generate statistics or figures that focuses on the extensive information in a detailed manner and the spatial extents of land use changes by using GIS. The research looks for a qualitative understanding of a place (rural-urban fringe) processes and perceptions associated with it. In-depth interviews with diverse individuals and groups were done, documents review and, casual and participants observations were also employed to have adequate data.

2.2 Research Design

Descriptive and explanatory research methods were employed to conduct this research. This method of research makes the study to be easily described. Therefore gathering the appropriate data, which helps to assess the situation explained above, is necessary in order to address the objective of the research.

2.3 Sources of Data

The sources of all required necessary data needed to meet the objective of the study was use both primary and secondary data sources to identify the problems in the study area.

2.4 Sampling Frame

The sample frame contains a list of items from which the sample is extracted. In this study, the sampling frame for the study is the total list of HH of the peri urban community of the study region and the selected officials from relevant offices were the sample frame of the study area.

2.5 Sampling Unit

The sampling units were draw from the sampling frame. Sampling units are a unit or sets of units considered for selection at a stage of sampling. In this study, the sampling units are the HH heads of the peri urban community of the study region and the officials and experts working in those two administrative of Addis Ababa and Sheger city Administration.

2.6 Determining sample size

Sample size is actually the total number of units, which is select for the analysis in the research study. The researcher purposely designed its frame to the Akaki Kalit, Lemi Kura , Kolife Keranyo, NefasSilk Lafto and Yeka sub cities of Addis Ababa and Sebeta, Burayu,Kakai and Goyefeche and Laka Tafo areas of Sheger city which was highly affected by the rapid urban expansion with in these twenty years. The researcher interest is to focus on those community displaced due to urban expansion to get right information from the right person so the sample households from the those areas was select by purposive sampling to purposively examining the livelihood situation of those displaced community from their potential farm land due to urban expansion. After identifying those communities a sample required form purpose of the study was selected by using simply random sampling procedures. This sampling technique was also used to select sample units of key informant from professionals and administrators who have an experience and knowledge of subject matter.

The sample size was determined based on the formula derived by Cochran (1977) to calculate a sample size when information about the population is not available. This formula was commonly used by many researchers to determine representative sample size with the desired degree of accuracy of the population. The formula for the unknown population is very straight forward and easy to compute and it is presented as:

$$n = \frac{z2pq}{d2}$$

Where: no = the desired sample size, z = the standard deviation at the required confidence level (the value of the standard variants at a given confidence level and to be worked out based on a table and Normal Curve; (Z statistic =1.96), p = the population proportion to the specified category in the largest estimated (0.5), q = 1-p, d= the level of statistical

significance (0.5) and d = the margin of error required (0.05)

To come up with sample size, Kothari (2004) advises researchers to take the value of p =0.5 where 'n' would be the maximum and the sample would yield at least the desired precision. This would be the most conservative sample size, assuming 95% confidence level. Using a 0.05 level of statistical significance, 0.95 proportion of significance, the value of z is 1.96.

Therefore, 384 sample respondents or households were taken from each site based on quota sampling and total of 1536 samples are designed and collected.

2.7 Methods of Data Analysis

Following the data collection in the field using different tools, editing, data entry, and cleaning process of all questionnaire was made. After completing and cross checking the data, it was organized in line with the objectives and research questions of the study and then analyzed through both quantitative and qualitative ways. The data collected through the qualitative tools was organized thematically and presented in a narrative form, whereas the information obtained through questionnaires was analyzed and interpreted using statistical tools. Then, the qualitatively and quantitatively analyzed data was triangulated for the purpose of validation.

Descriptive Analysis; was used to describe the extent of urban expansion and the amount of farmland converted to build up area line with the major aggravating factors for the rapid urban expansion. Moreover the method of land acquisition system and land expropriation, its legality, gap observed and impact it brought on those expropriated and displaced farmers and the livelihoods status of farmers whose land is expropriated was analyzed in advances by using descriptive analysis.

Socio Economic Analysis: Casual study was employed to identify cause-and-effect relationships between rate of urban expansion and rate of socio economic development of the peri-urban community. The gain-loss of the target groups concerning capital accumulation would be analyzed. The level of social and physical infrastructure provision was assessed to examine the extent of socio economic integration of those spatial areas which is the most continuums of the two regions.

Livelihood Framework Analysis was conducted; in a broad term, a livelihood framework can be conceptualized from four main components. These are livelihood assets, livelihood strategies, livelihood outcomes and external environment. Thus, the overall discussion and analysis on livelihood situations of the farmers will be made by identifying the possible livelihood strategies developed by the two government segments or structure of two independent regions (Oromia region and Addis city administration)

Spatial analysis: the twenty years land use land cover change of the study area was analyzed by using Arc GIS 10.4 and ERDAS 2019 software. Maps were produced that clearly illustrating the facts of each change.

3. Result and Discussion

3.1 The magnitude and rates of urban expansion

To understand the magnitude and rate of urban expansion, the study used last twenty years Land use land cover changes data exploration by using GIS and USG, Earth Explorer, Satellite imagine and different spatial analysis tools. The spatial data were collected from USGS EARTH EXPLORER, Satellite images, and Ethiopian geo spatial institute. After the necessary pre-processing was made on the spatial data, images were classified by using arc GIS 10.5, ERDAS IMAGING 2014, and by a post-classification method. The time-series land cover/land-use database, interpreted from remote sensing imagery, was examined from the aspects of spatial pattern and temporal process and analysed using descriptive statistics, inferential statistics, as well as Spatial and qualitative analysis tools. Over the last two decades there is rapid Land use land cover change in the former Oromia special zone surrounding Finfine which is recently re-named as Sheger city administration.

In this area there was very fast growth of urban built up area of which majority of them were occupied in informal ways and resulted in rapid land use land cover change in the last 20 years. The rapid built up area expansion has brought the rapid conversion of the land use and land cover from vegetation and agriculture towards urban built up area.

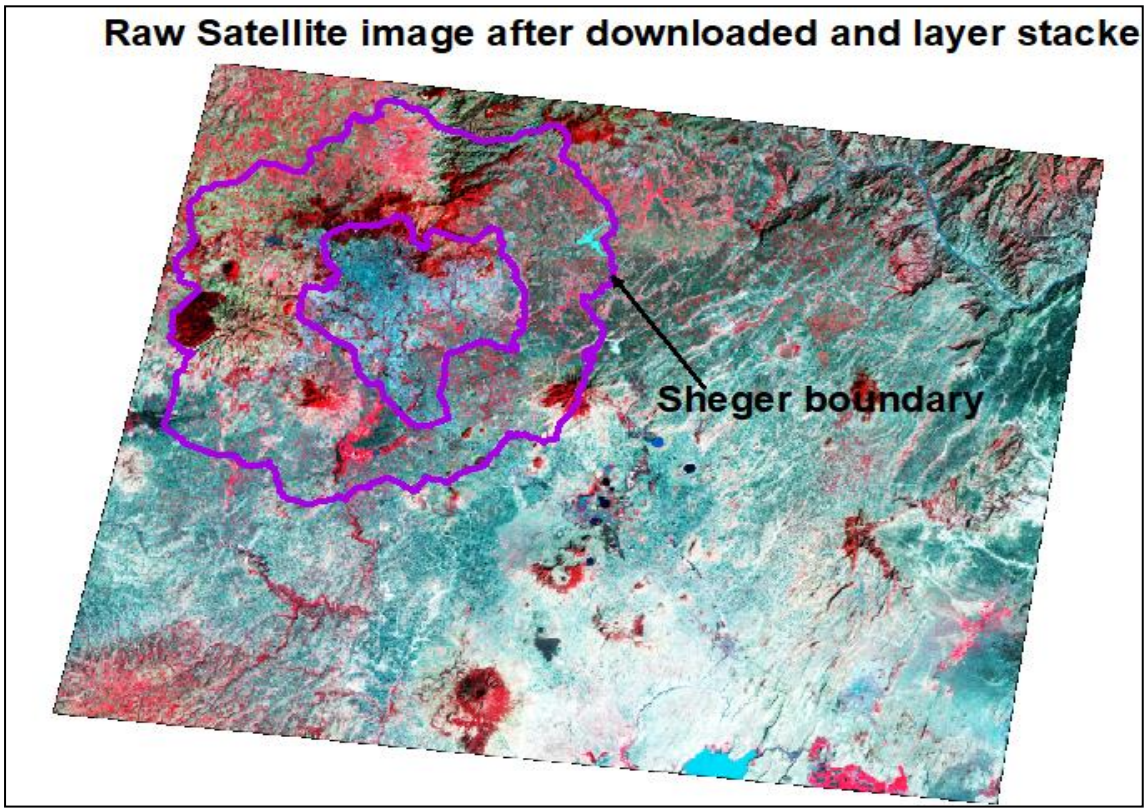

Figure 1: The magnitude and rate of urban expansion, Source: GIS data developed by the Researchers, 2023

In this paper the urban expansion induced Land use land cover change was analyzed for the last 20 years starting from 2000 to 2022 with the help of satellite image which was obtained(downloaded) from USGS EARTH EXPLORER WEB SITE. The downloaded satellite images were analyzed using ERDAS IMAGINE 2014 and ARC GIS 10.5 soft wares .The analysis has included all from layer stacking of the images, Corrections of the images, enhancement of the images to increase its interpretability, classification of the image through collecting signatures from the image, change matrix generation and accuracy assessment. The full information about the satellite images is described in the following table 1.

Table 1: Satellites information

No	Path	Row	Spatial resolution	Date acquired	Projection	Sensor
1	168	54	30m	27/1/2000	UTM zone 37	Landsat TM
2	168	54	30m	15/01/2011	UTM zone 37	Landsat ETM+
3			10m	10/2/2022	UTM zone 37	Sentinel 2A

Source: GIS data developed by the Researchers, 2023

3.2 Sheger Urban Expansion and LULC between 2000 and 2011

Based on the obtained information from classified image agriculture has occupied about 140,839 hectares of lands in the year 2000 in the current sheger city

administration boundary which was decreased to 133,881 hectares due to built up area expansion. From the total land occupied by agriculture in 2000, about 130,147 hectares of land remained agriculture up to 2011 whereas about 10,692 hectares were changed to other land use and land cover.

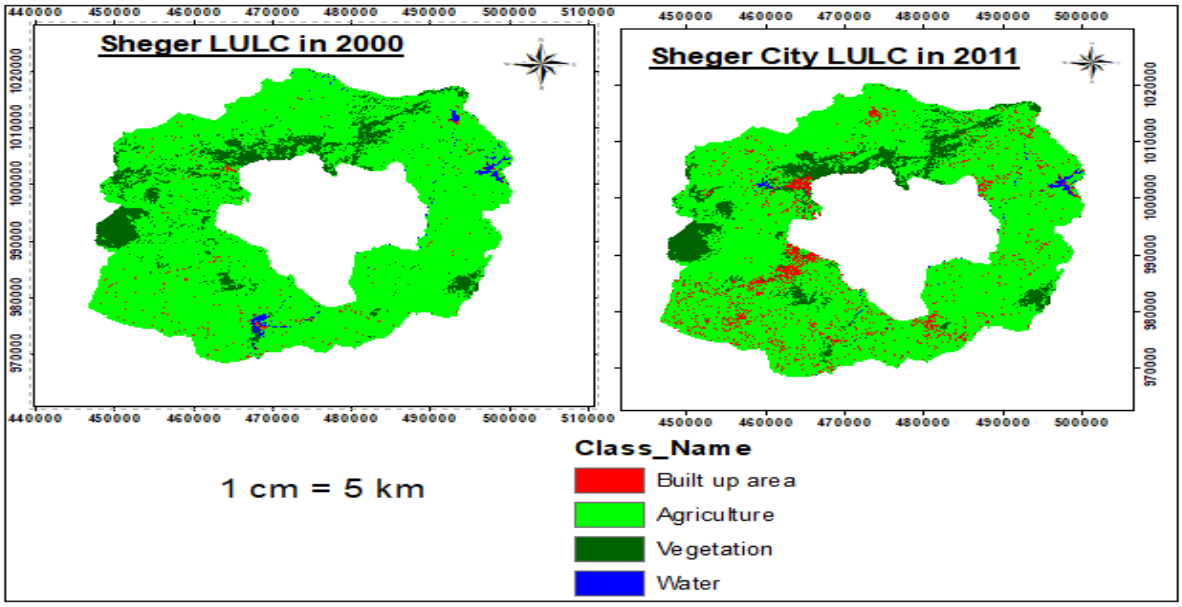

Figure 2 : Sheger Urban Expansion and LULC between 2000 and 2011; Source: GIS data developed by the Researchers, 2023

Among the changed land use and land cover, 7765 hectares of lands are changed to build up area, 2685 hectares of lands area changed into vegetation and 242 hectares of lands are changed into water bodies (Table 2).

Table 2: Land use Land Cover Change Matrix between 2000 and 2011

		2011				
		Agriculture	**Built up area**	**Vegetation**	**Water**	**Grand Total**
2000	Agriculture	130147	7765	2685	242	140839
	Built up area	0	1412	0	0	1412
	Vegetation	2947	155	14099	97	17298
	Water	787	68	40	448	1343
	Grand Total	**133881**	**9400**	**16824**	**787**	**160892**

Source: GIS data developed by the Researchers, 2023

On the other hand between these two time periods agriculture has received about 3,734 hectares of lands from other land use and land cover. It has got 2947 hectares of lands from vegetation and 787 hectares of lands from water bodies. Built up area which cover about 1412 hectares of lands in 2000 has increased to 9400 hectares in 2011.Built up area has not lost any land to other land use and land cover but it gained about 7,988 hectares of lands from other land use and land cover. It gained about 7765 hectares of lands from agriculture, 155 hectares of lands from vegetation and about 68 hectares of lands from water bodies. Vegetation which covered about 17,298 hectares of lands in 2000 was decreased to 16,824 hectares of lands. From the total land occupied by vegetation in 2000, about 14099 hectares were remained unchanged and about 3,199 hectares of lands were changed to other land use and land cover.

There were about 2947 hectares changed to agriculture, about 155 hectares changed to built up area, about 97 hectares of lands were changed to water bodies. Water body has

occupied about 1343 hectares of lands but it changed to 787 hectares of lands in 2011.Between 2000 and 2011 about 448 hectares of lands were remained unchanged whereas 895 hectares of lands were converted into other land use and land cover .Therese changes were 787 hectares changed to agriculture,68 hectares changed to built up area and 40 hectares changed to vegetation. Water has also taken 242 hectares from agriculture and 97 hectares from vegetation.

3.3 Magnitude and Rate of urban expansion driven LULC

The magnitude of change is a degree of expansion or reduction in the land use land cover size. Negative value will indicate a decrease in LULC size while a positive value indicate an increase in the size of LULC classes (K M Kafi &H Z M Shafri,2014). The Magnitude of change **(K)** is calculated by a simple equation:

$$K = F - I$$

The percentage of Change **(A)** is calculated by the formula:

$$A = \frac{F-I}{I} * 100 ,$$

where:

K=Magnitude of change,

A=Percentage of change,

F= Amount in hectares in Final year of the study date and

I=Amount in hectares in the initial year of the study

Table 3: Land use Land Cover Change Matrix between 2000 and 2011

LULC	2000	2011	2000 - 2011			
	Area(Ha)	%	Area(Ha)	%	K in (ha)	A in %
Agriculture	140839	87%	133881	83%	-6958	-5%
Built up	1412	1%	9400	6%	7988	566%
Vegetation	17298	11%	16824	10.5%	-474	-3%
Water	1343	1%	787	0.5%	-556	-41%
Total area	**160892**	100%	**160892**	100%		

Source: GIS data developed by the Researchers, 2023

Regarding the magnitude and percentage of change between 2000 and 2011 agriculture, vegetation and water have shown negative magnitude with -5%,-3% and -41% percentage of change respectively whereas built up area characterized by positive magnitude and increased by 566% percentage of change during the study periods.

Generally, the urban built up area expansion was propagating from Addis Ababa towards the remote area of Oromia special zone surrounding Finfine (Currently Sheger city) during the study periods.

3.4 The conversion of LU and Sheger Urban Expansion and LULC between 2011 and 2022

The rampant of built-up area during the 2010 and 2022 was very high compared with the former periods between 2000 and 2011.During this time built up area has encroached into large numbers area of agricultural and vegetation lands. The conversion of land use land cover during this period is shown in the following table 4.

Table 4: The conversion of land use land cover between 2011 and 2022

2011					2022
	Agriculture	**Built up area**	**Vegetation**	**Water**	**Grand Total**
Agriculture	118108	9985	5788	0	133881
Built up area	0	9400	0	0	9400
Vegetation	5611	1051	10162	0	16824
Water	0	0	26	761	787
Grand Total	**123719**	**20436**	**15976**	**761**	**160892**

Source: GIS data developed by the Researchers, 2023

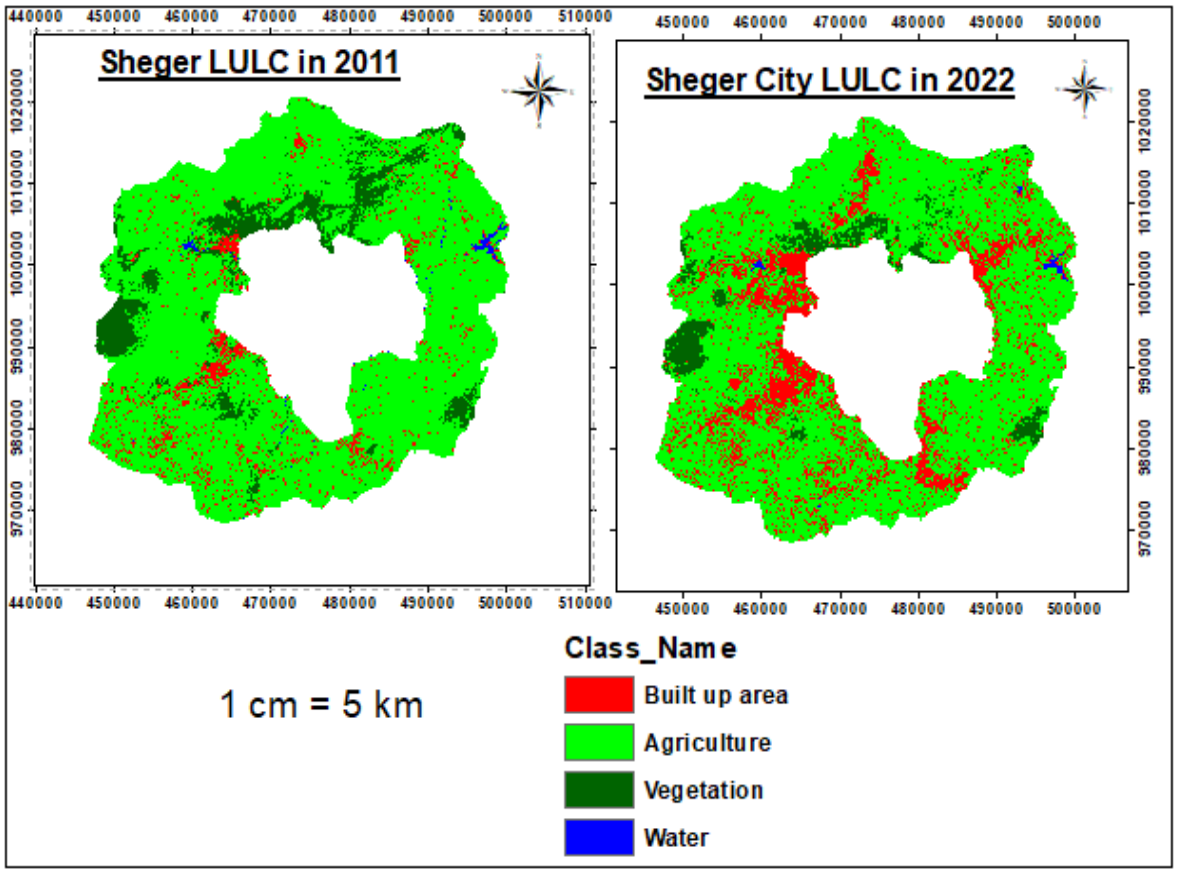

Figure 3 : The conversion of land use land cover between 2011 and 2022; Source: GIS data developed by the Researchers, 2023

During 2011 Agriculture which was about 133881 hectares increased to 123719 hectares in 2022. During this time from the total land occupied by agriculture about 118,108 hectares were unchanged but about 122,073 hectares of agricultural lands were changed into another non-agricultural land use between 2011 and 2022.These are about 9985 hectares of lands were converted to build up area and about 5788 hectares were changed into vegetation. On the other hand agriculture has got about 5611 hectares from vegetation and so that the amount of lost and gain between agriculture and vegetation almost match each other. As general between the two times periods agriculture has lost about 10,162 hectares of lands from which majority of them are lost to urban built up area. Built up area covered about 9400 hectares of lands in 2011 and it sharply increased to 20,436 hectares of lands in the former Oromia special zone surrounding Finfine or the current Shegar city administration.

During this study period built up area has not lost any land use land cover but it gained about 9,985 hectares from agriculture and about 1051 hectares of lands from vegetation lands. In nutshell agriculture has gained about 11,036 hectares of lands and majority these

lands are converted from agriculture to urban built up area. The land occupied by vegetation was about 16,824 hectares of lands in 2011 and then it decreased to 15,976 hectares in 2022.Since only about 10,162 hectares of land remained vegetation, the other about 6,662 hectares of lands were converted to other land use and land cover. These are about 5,611 hectares were altered to agriculture and about 1051 hectares altered to built up area. Water body which occupied about 787 hectares of lands has shown slight decrease in 2022 by about 26 hectares. These 26 hectares were changed into vegetation.

Accuracy Assessment

The accuracy assessment was done by collecting reference data from google earth, after converting the collected points into raster, the accuracy assessment was performed in arc GIS Using combine and pivot table and the result was described as the following tables for all the 2000 year,2011 year and 2022 years.

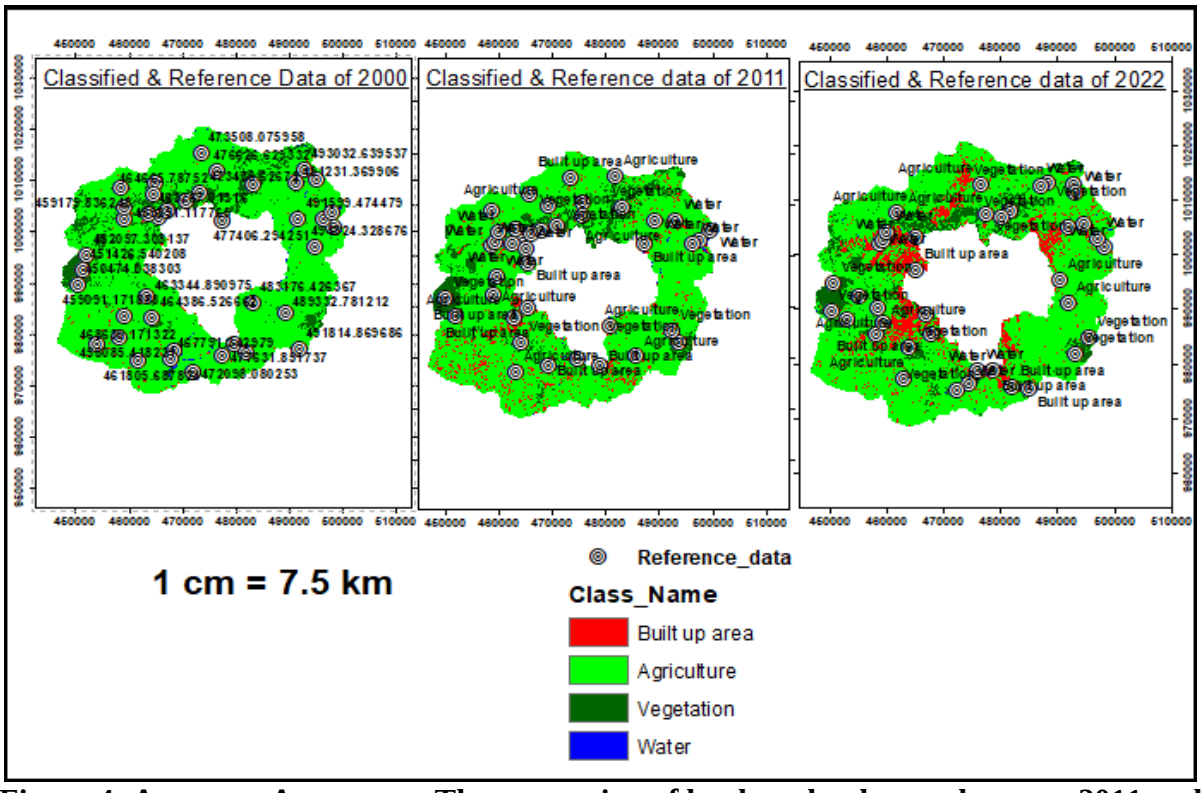

Figure 4: Accuracy Assessment The conversion of land use land cover between 2011 and 2022; Source: GIS data developed by the Researchers, 2023

Table 5: Accuracy Assessment of the conversion of land use for 2000

2000 Classified data	2000 Reference Data					
	Built up area	Agriculture	Vegetation	Water	Total	User Accuracy
Built up area	9	0	0	0	9	100
Agriculture	1	9	0	2	12	75
Vegetation	0	1	10	1	12	83
Water	0	0	0	7	7	100
Total	10	10	10	10	40	
Producer Accuracy		90	90	100	70	

Source: GIS data developed by the Researchers, 2023

Total Accuracy = $\frac{35}{40} * 100$ = 87.5%; Kappa Statistic = $\frac{N\sum dg - \sum rc}{N^2 - \sum rc}$, where: N=Total ground truth, $\sum dg$ = summation of the diagonal, $\sum rc$ = sum of the product of row and column totals for each class. K =

$\frac{40(35)-10*9+10*12+10*12+10*7}{(40)^2-10*9+10*12+10*12+10*7} = \frac{1400-400}{1600-400} =$ 0.83.

Table 6: Accuracy Assessment of the conversion of land use for 2011

2011 Classified data	2011 Reference Data					
	Built up area	Agriculture	Vegetation	Water	Total	User Accuracy
Built up area	10	0	0	0	10	90%
Agriculture	0	10	0	2	12	75
Vegetation	0	1	10	0	11	91%
Water	0	0	0	9	8	100%
Total	10	10	10	10	40	
Producer Accuracy	100%	90	100%	80%		

Source: GIS data developed by the Researchers, 2023

Total Accuracy = $\frac{37}{40} * 100$ = 92.5%; K = $\frac{40(37)-10*9+10*12+10*11+10*8}{(40)^2-10*9+10*12+10*11+10*8} = \frac{1480-400}{1600-400}$ = 0.9

Table 7: Accuracy Assessment of The conversion of land use for 2022

2011 Classified data	2011 Reference Data					
	Built up area	Agriculture	Vegetation	Water	Total	User Accuracy
Built up area	10	0	0	0	10	100%
Agriculture	0	10	0	1	11	91%
Vegetation	0	1	9	0	10	90%
Water	0	0	0	9	9	100%
Total	10	10	10	10	40	
Producer Accuracy	100%	100%	90%	90%		

Source: GIS data developed by the Researchers, 2023

Total Accuracy = $\frac{38}{40} * 100$ = 95%; K = $\frac{40(38)-10*10+10*11+10*10+10*9}{(40)^2-10*9+10*12+10*11+10*8} = \frac{1520-400}{1600-400}$ = 0.93

3.5 The Deriving Forces of Urban Expansion

In this part the major deriving forces for the urban expansion in those study area were identified both by resident's questionnaire and key informants interview of the subject matter. Moreover different existing document were referred to supplement information obtained from questionnaire and key informants interview. Drivers are factors that encourage the rapid land use land cover change and urban expansion. There are varieties of complex factors for land use land cover change and urban expansion. Among those factors the study identified the following major once. According to the result obtained from the interview with key informants the growth of informal settlement as a result of rural to urban migration is a major factor for the urban expansion and land use land cover change in the study region. Due to this informal settlement the peripheral areas of the cities Sheger and Addis Ababa are being changed to build up area and causing the rapid Land use land cover change.

According to the result from interview and focus group discussion, the growth of informal settlement, population growth and other factors are the main driving forces in study area. In those area there was very rapid informal settlement growth as the informal settlers get green cards in a much hidden ways. The land allocated for different activities like for industry and commercial area are also contributing for the land use land cover change. Again the result of the interview and focus group discussion has

revealed that the mismatch between rapid population growth and the housing shortage is pushing the people to get the land informal way and contributing for the land use land cover change. According to Joe et al., (2013) rapid population growth or demographic factor is main driving factor causing the increasing demands for lands for food and fuel was the main force behind rapid land use land cover change.

4. Conclusion

Urbanization is a worldwide phenomenon in both developing and developed countries with an associated number of factors which contribute to the extension of urban areas such as rural to urban migration, natural increase, economic growth and development, industrialization and other manufacturing enterprises.

urban horizontal expansion has many factors and effects on the livelihood of the surrounding or urban periphery residence. The major effects are loss of agricultural land in association with violation of tenure right, loss of farming activity/unemployment and income due to substantial land conversion, loss of homestead and loss of social asset and finally lead to the displacement of farming community from their income generating farm land. From the survey report analysis, I can conclude that urban horizontal expansion has lost their farm land and the compensations paid for their lost land were unsatisfactory. Similarly, most of the households did not get awareness training on urban horizontal expansion and how to use the benefit gained from the government due to their displacement from agricultural land.

Due to the city's rapid expansion in earlier years, a large number of farmers were expropriated. The city was encroaching on nearby rural communities and vacant territory that had previously been covered by agricultural and green areas in all directions. As a result, the city's rapid expansion exacerbates the marginalization of farming communities who rely on agriculture for a living. Farmers in the area found it impossible to feed t heir families, let alone increase output and suppl y for markets, due to the marginalization of agric ultural fields. According to the results of a study of sampled families, the loss of crop lands, on which most farmers rely for their livelihood, accounts for the majority of the total lands lost. This has negative implications for achieving food security in the area. According to the findings of this study, urbanization had a major negative impact on the agricultural community in the outskirts. As a result of their lack of understanding on how to live in a city, most farmers are frustrated and fearful of receiving insufficient attention from city officials.

Furthermore, the expropriated farmers' social capital and value in comparison to the new urban society was quite low. As a result, this study determined that the repercussions of urban growth have had a negative impact on farming, financial, and social capital, as well as the livelihood of the household's community. The majority of farmers in the study area work as day laborers, run small businesses, rent land, and relies on remittances. Farmers are subject to higher costs of production because nearly half of them rent land for agriculture, and essential agriculture production inputs such as fertilizer, seeds, and pesticides are becoming more expensive. Almost all farmers believe that the current scenario will not help their livelihood due to a variety of causes.

Farmers also lack the commercial skills required for a higher quality of life in a city setting. This study revealed that the local government and administration did not actively participate in the farmer's decision-making process. Furthermore, the promised compensation and other services were not fully utilized by farmers. In general, the farming community was not given enough consideration in the urban expansion planning. In terms of policy, the process of urban development and attendant expropriation is being carried out in defiance of what is clearly established in our Constitution. All households, according to the constitution, require protection for their basic livelihood options and rights. The right to work on the property is a core right for the farming community. The city administration was unable to assist the expropriated peripheral farming population in regaining their livelihood status. The government has not taken any systematic initiative to assist the expropriated farming community in coping with their situation.

Generally, in the study area urban horizontal expansion is caused due to rural to urban migration, demographic dynamics/natural increase of population, rapid residential housing construction, explosion of industrialization and manufacturing enterprises, and suitability of topographical features were contributed to the expansion to peri-urban agrarian community. Also it affects the livelihood of agricultural

community by losing the income generating agricultural land in association with loss of farming activity/unemployment and income due to substantial land conversion.

Several related issues on the effect of urban extension on the agricultural community livelihood of peri-urban farming community that affected the essential forms of the community were clearly addressed and the key problems caused by the uncontrolled urbanization process were identified. The community is now at risk of land deficiency and exclusion. This farming community deserves immediate and long term remedies. Therefore, all stakeholders including the community, government, investors, scholars and individuals should work collectively to alleviate the ever increasing challenges of unbridled urbanization in the area.

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