

Impacts of Urban Growth on Bahir Dar City

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Abstract

Urbanization, as a major demographic trend, has become a global phenomenon. The year 2007, being taken as a tipping point where global urban population outnumbered the rural one for the first time, has been followed by increase in the magnitude of regional and global urbanization. Ethiopia, with 17% urban population in 2013, has also been urbanizing fast. Its urban growth implicates, inter alia, increase in urban areas of which Bahir Dar is among the most important ones. The study was, hence, conducted in Bahir Dar city to describe the impact of urban growth by purposively selecting four kebeles and 280 household respondents and by recruiting seventy informants. The study used multiple research methods including depth-interview, FGD, survey, and observation. Bahir Dar has been urbanizing fast. Its population size increased from 167,261 in 2005 to 249,125 in 2013 and total area from 28 Km² in 2005 to 286.6 Km² in 2006 and then after. According to the city administration, Bahir Dar is also witnessing high rate of urbanization, 6.4 percent in 2013. Built up area has also shown large increase, especially, over the past three decades. Focusing on urban growth in the city in the post revolution period, especially since the city's designation as the capital of Amhara region in 1993, the study found that urban growth has been resulting in negative impacts including housing problem, informal settlements, pollution of ecosystem and water bodies, farm land encroachment, flooding, unemployment, poverty, and crime and so on.

Key words: Bahir Dar; City; Urban Growth; Impacts

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1. BACKGROUND OF THE STUDY

Urbanization is the process whereby large numbers of people congregate and settle in an area; urban areas are generally characterized as relatively dense settlements of people (Orum, 2005; Flanagan, 2010). Urbanization is a major phenomenon taking place globally. The 21st century is marked by high level of global urbanization (Hall and Pfeiffer, 2000). The urban global tipping point was reached in 2007 when for the first time in history over half of the world's people were living in urban areas (Potsiou, 2010; United Nations, 2014). Globally, urban population is expected to increase by 72% by 2050, from 3.6 billion in 2011 to 6.3 billion in 2050. By mid-century the global urban population will likely be the same size as the world's total population was in 2002 (United Nations, 2012).

In regard with the rapid global urbanization since 1800 (Davis 1955; United Nations 2012), Africa has been urbanizing faster than any other continent with 3 to 5 percent annual growth rate albeit regional and country level variations exist. Overall the urban population is expected to more than double from 300 million in 2000 to 750 million in 2030 The rate of increase in urban land cover in Africa is predicted to be the highest in any region in the world: 700 percent over the period 2000–2030 (Cities and Biodiversity Outlook, 2012).

Throughout most of its history, Ethiopia remained a land of small villages and isolated homesteads. The reason for the absence of large settlement of urban areas for long time is given by Richard Pankhurst as the continuous move of the royal camp. And yet, it can be concluded

that modern Ethiopian urbanization has been flourished during the twentieth century because of political stability and the modernization of the country. Most cities in the country flourished around some economic center such as railway, factory, or trade route (Daniel, 2011). According to recent estimates, the urban population of Ethiopia is expected to triple between 2010 and 2040, growing at an average rate of 3.5% per annum (United Nations, 2012) while the growth rate was reported in 2010 to be 4.3 by CIA World Fact Book and the Ethiopian Central Statistical Agency (Zenebe, 2010). Ethiopia is now one of the most rapidly urbanizing countries in the world. Among the 80 countries that had more than 10 million people in 2010, it had the 15th highest rate of projected urban population growth between 2010 and 2040. This percentage of urban population is projected to change from 16.8 in 2010 to 29.4 in 2040 and 35.5 in 2050 (United Nations, 2012).

Preliminary city-level population projections suggest that some of its larger cities including Bahir Dar, Mekele, Hawassa, and Adama are expected to much more than triple their 2010 population by 2040 (Angel et al., 2013). Bahir Dar is one of the cities in Ethiopia that have changed a lot in demographic and spatial terms in the past years. Being established as an urban area during the Italian occupation in the 1930s, with population size of 249, 125 in 2013 (Bahir Dar City Administration (BDCA), 2013) the city has transformed itself into one of the largest cities of the nation. The city also exhibits one of the rapid rates of urbanization in the country. Different sources show variegated estimates and projections of growth rate in the city. The 2007 CSA census result estimated a 5.5 percent annual growth rate (Birhanu et al. 2012) while Bahir Dar city administration (BDCA) reported a 6.4 percent rate of urbanization.

The city's ever expanding nature has helped establish itself as one of the most renowned cities in the country. In regard to urban growth, as elsewhere, the process in Bahir Dar city is also accompanied by duality in consequences. In general, this study focused on the impact of urban growth on Bahir Dar city. It specifically aimed at studying the negative consequences of urban growth in the city.

2. METHOD OF THE STUDY

2.1 Description of the Study Area and Study Population

Bahir Dar city's absolute geographical location is at about 11°37' north latitude and 37°25' east longitude. As of the relative location, it has a road distance of some 550 Kms via *Bure* and 460 Kms via *Motta* from Addis Ababa, the capital of Ethiopia. The city has an estimated total area of 28,660 ha. For administrative purpose the city was classified in to 17 urban *kebeles*¹ (local administration),

while the 2006 restructuring decreased urban *kebeles* to nine and also incorporated one peri-urban *kebele*, *Zenzelma*, and three rural *kebeles*, namely *Woreb Kolatsiyon*, *Woramit*, and *Sebatamit* (BDCA, 2009 and 2013; Birhanu et al., 2012).

According to a 2013 report by BDCA, Bahir Dar had a population size of 249,125. Households were the target population of the study. The 2007 CSA census result, being the latest of its kind in the country, showed there were 62, 960 households in the city. There are nine urban *kebeles*, three rural *kebeles*, and one peri-urban *kebele* in the city. For the purpose of the study, four *kebeles* were purposively selected; two *kebeles*, namely *Sefene Selam* and *Gish Abay kebeles* both constituting the old urban center of the city, *Hidar 11 kebele*-one of the city's largest *kebeles* incorporated in to it since the 1960s, and *Zenzelma kebele*-a peri-urban *kebele* annexed to the city since 2006. Based on a report from the city administration there were 56,183 people living in the four sample *kebeles* in 2015. The researcher selected the *kebeles* for the reason that in the attempt to uncover urban growth and its impacts on the city, the study should focus on households found at old, new, and recently annexed *kebeles* of the city. In general, households were the target population of the study and also units of observation.

2.2 Method of the Study

Cross-sectional research design, where data are collected from participants of a study at a limited period and one point in time (Jupp, 2006; Lavrakas, 2008), was used to gather data concerning the negative impact of urban growth on Bahir Dar city. In terms of the study's research approach, a mixed methods design was used. The approach was useful to develop a better understanding of the issue at hand, i.e. the negative impact of urban growth on Bahir Dar city, by complementing one set of results with another.

The researcher employed in-depth interview, focus group discussion (FGD), observation, and survey research methods. Interviews, involving a set of assumptions and understandings about the situation which are not normally associated with a casual conversation (Miller and Brewer, 2003; Denscombe, 2007), enabled the researcher to explore the informants' opinions, feelings, emotions and experiences about the negative impact of urban growth on Bahir Dar city in an in-depth manner. Focus group discussion, a method whereby people were asked to come to discuss certain issues (Yeraswork, 2010), was used to capitalize on group dynamics among informants about the negative impacts of urban expansion on Bahir Dar city. Observation was used in the entire process of undertaking the investigation to substantiate the effectiveness of other methods. The researcher observed the study area by drawing theoretical ideas and thoughts

¹ The lowest administrative unit in city structure

from the field of (urban) sociology. Settlement patterns, physical aspects of urban growth and neighborhoods, impacts of urban growth, nature and forms of social interaction in different settings including family, friendship networks, market areas, and many others were issues observation accentuated on. In addition, survey method, which had a descriptive use while conducting the study, was especially used while collecting large data from 280 household respondents about the impacts of urban growth.

With regard to the researcher's intension of conducting a descriptive study of the negative impacts of urban growth on the city, a non-probability purposive sampling method was employed to select 280 households. Besides, the researcher entertained accidental sampling whenever the necessity and importance of acquiring any data from potential household samples appealed. The relative importance of settlements of households, socio-economic activities of neighborhoods and households, attributes of households that have relation with hues of the issue under investigation, and the presumed importance of households in generating appropriate data were considered whilst selecting households.

The researcher used both primary and secondary data. Primary data were gathered from research participants while secondary data were made in to use through review of books, magazines, fact books, brochures (which dealt with the profile of the study area), previous studies (which had affinity with the issue under investigation) and other written and documented materials.

Interview guides, focus group discussion (FGD) guide, observation checklist, and survey questionnaire were used to collect data. Three different forms of interview guides were used to collect data from people who had knowledge about the negative impacts of urban growth on the city; people who worked in government organizations including *kebele* administrations, city administration, police office, and other relevant offices; people who were considered as figures in their respective *kebeles* with capability of providing 'privileged information'; and in general people who worked and lived in the city with reasonable capability of providing information regarding the negative impacts of urban growth on the city. FGD guide, which had semi-structured form that helped retain effective and meaningful discussions, was employed. Semi-structured observation checklist was prepared enabling the researcher to undertake effective observation in the field across many *kebeles* and areas of the city. Additionally, a total of 280 questionnaires were distributed to gather data from household respondents concerning the negative impact of urban growth on Bahir Dar city. Most of the data collection through questionnaire was administered through face-to-face interview.

3. URBAN GROWTH AND ITS NEGATIVE IMPACTS ON BAHIR DAR CITY

Literatures have been developed focusing on the consequences of urbanization. Many of them are rife with the blame of urbanization causing a rather destructive ends. In this section, the paper discusses negative impacts of urban growth on Bahir Dar city. Household respondents were asked a question whether urban growth in the city had any negative impact. Accordingly, 279 (99.6%) respondents replied urban growth had negative impacts. A further question was asked on the nature and forms of negative impacts of urban growth. Similarly, interviews and discussions were held on the impacts of urban growth on the city. Observation was also made that the methods and data were triangulated accordingly.

3.1 Industrial Residues

There are many light industrial establishments operating in the city. The influence of industries on the environment, especially water bodies, is immense. Respondents and informants pointed on these establishments as potential pollutants of the city. Bahir Dar tannery and Bahir Dar textile factory are among such establishments with massive impact on the Blue Nile River. During the field work, observation and interviews were held with workers and informants about these establishments though the efforts of observation in Bahir Dar tannery was not made possible due to bureaucracy related issues. However, the researcher has revisited secondary sources on the impact of Bahir Dar tannery on the Blue Nile River.

A 2014 report of a study by *Assefa and Ayalew* on the downstream impact of Bahir Dar tannery waste water on the head of the Blue Nile River argued that the discharge of the highly concentrated pollutants in to the river caused severe damage on the ecosystem. The impairment level at the immediate downstream sites was severe which made the water unfavorable for domestic, agricultural, and aesthetic use as pollutants like chromium from the tannery had a bio-accumulating effect (*Assefa and Ayalew, 2014*). In a study of the socio-economic impacts of the Bahir Dar tannery, *Fitsum and Fikirte* (2014) argued that since safety devices were not adequately provided, workers faced different health hazards. Besides, the nature of the work, i.e., tanning process that produces bad odor and causes contamination, workers face infection and bacterial contamination, and hazards and diseases including tetanus, anthrax, leptospirosis, cold, headache, epizootic, mouth ulcer, fever, asthma, and brucellosis. Water contamination by the tannery's effluents has also resulted in different health problems among residents including typhoid, giardia, and skin disease/irritation (*Fitsum and Fikirte, 2014*).

Besides the tannery factory, since its establishment in the early 1960s, Bahir Dar textile factory has been

discharging its effluent directly in to the Blue Nile as it is located on the riverside. High polluting effects no lesser than the impact of the tannery on the Blue Nile as discussed above were apparent over the course of the past decades and more albeit the factory has developed effluent treatment scheme in a very recent time.

3.2 Poverty and Unemployment

Poverty in Ethiopia is pervasive and the country remains at the end of the ladder in the wealth line. It is crystal clear that poverty is a severe problem in Amhara National Regional State (ANRS) like other regions of the country. It is multidimensional and deep rooted nature made the struggle so difficult to reduce it. The situation in Bahir Dar cannot be exceptional like in other parts of the country. Thus, Bahir Dar is also suffering a very acute problem of poverty. About 42 percent of the population of the city lived below the poverty line as of a study in 2006 (FUPI and BDMCA, 2006).

Although Bahir Dar city has been showing signs of efforts to tackle the ubiquitous poverty, poverty in the city explained itself by wide socioeconomic problems such as shortage of housing, poor infrastructure, high prevalence of disease, presence of marginalized group and so on. Causes of poverty and unemployment in the city could highly be attributed to structural failure which would demand strong institutional capacity to address (Birhanu et al., 2012).

The problem of poverty, one of the omnipresent problems of urban centers in Ethiopia in general, and Bahir Dar city in particular, is usually accompanied by the existence of very high unemployment. Assessing the structure of unemployment is, therefore, useful to indicate the extent of available and unutilized human resources that must be absorbed by the local economy to ensure full employment and full production which are the route to economic growth and development, and indeed poverty reduction.

According to the 2007 CSA result on the rate of unemployment in Bahir Dar City, there were 9,998 unemployed economically active people with the average unemployment rate calculated to be 9.5 percent. On top of this, according to the nine months report of Micro and Small Scale Enterprise Development Office (2012) of Bahir Dar City Administration, about 21,706 of the city residents were unemployed in different sexes and age structures (Birhanu et al., 2012).

The majority of unemployed group of the community in the city consisted of the youth, where this type of unemployment breeds disappointment, hopelessness and despair. These conditions are more likely to result in the youth engaging in risky and unyielding behaviors. High rural-urban migration and inadequate level of capital investment were among the main causes of the youth unemployment in the city. Effects of this unemployment are increased poverty, worsening of social problems

including drug addiction, alcoholism, prostitution, streetism, crime, and so on.

Table 1
Unemployment level in Bahir Dar city in 2012

Educational level	Male	Female	Total
Degree	268	210	478
Diploma	277	590	867
TVET	581	1041	1622
Grade 9-12	2153	3949	6102
Less than or equal to grade 8	3760	8877	12632
Total	7039	14667	21706

Source: Birhanu et al., 2012.

The labor market of the city indicated that practically the youth are more likely to be employed in jobs of low quality, underemployed, working long hours for low wages, engaging in dangerous work, involving only in short term and/or informal employment arrangements. The consequences would be the creation and breed of unproductive youth, feelings of a sense of hopelessness, greater risk for drug and alcohol abuse, and increase of delinquency and crime. Particularly, lack of employment opportunities for the youth has become among the critical development challenges that the city administration faces where explosive growth has produced many graduates ready for work. The combined effects of poverty and unemployment could lead to social unrest and civil disobedience among the general community. Families have also become reserved, to some extent, in investing in education as the trend turned out to be that unyielding and disappointing.

3.3 Crime and Insecurity

Abundant literatures propounded prepositions that are rife with the blame that urbanization is the social and contextual arena where deviant behaviors, in general, and delinquency and crime, in particular are bred and spread. Wirth (1938) argued that urbanization would engender social disorganization which ultimately could be explained through increase in crime rates. The fore most assumption of social theories as an explanation of crime and delinquency is that crime and delinquency are primarily the result of a breakdown of institutional and community-based controls by adding that the disorganization occurs primarily in urban areas (Shoemaker, 2010).

Urban growth in Bahir Dar city is accompanied by a distressing consequence of crime and insecurity. Increase in crime and insecurity is much more attributed to structural failures in providing extensive job opportunities, migration processes (which further the agglomeration of potential source of unemployed group of people), and poverty than a high difference and incompatibility in cultural practices as they could be argued in the case of Western cities' nature of the problem of crime (and delinquency) and insecurity. However, besides poverty,

unemployment, and migration, crime (and delinquency) and insecurity can also be explained in terms of lack of conformity to cultural means to achieve goals and expectations among the youth, in particular, and the people of the city, in general. This can be understood by using Merton's anomic theory of deviance, which propounded 'innovation' as one mode of adaptation by individuals within the cultural-bearing of societies where a person innovates somehow deviant forms of means to achieve societal goals (Traub and Little, 1999), as a backdrop. The inclination of the youth into crime and delinquency is further worsened by the effects of media violence. Increase in crime and delinquency, nevertheless, has been inflicting insecurity among residents of the city. In relation with this argument, one informant from *Gish Abay kebele* said the following:

Crime and insecurity nowadays are a severe problem in my surrounding. What worries me more is that people who happen to inflict the problem are much known to us. I have encountered a burglary problem recently that a teenager had broken my house and stolen TV Set and CD player apparatus. Now I am alone and cannot go to church, market, or to any of my neighbors to attend the usual coffee ceremony since I am highly shocked by the burglar's status that he turned out to be the brother of my God daughter. I and his family have lived together in this very place for long time; we are this close that we consider ourselves as a family. But now situations have changed, their mother had deceased, they stopped attending schooling, and generally they turned out to be thieves and shoplifters that I could not trust them with my life and property anymore.

The above quote can explain the sense of insecurity felt by residents of the city. To understand the nature, severity, and causes of the crime (and delinquency) problem in Bahir Dar a discussion-cum-interview session was held with a police officer who worked in the city administration's police office. The officer described the general nature of the crime problem in the city. Accordingly, forgery, contraband, illegal engagement in deforestation, homicide, trials to commit homicide, vandalism, sever pummel cases, plundering and depredation, burglary and robbery, shoplifting, theft, cheating and deceiving, drug abuse, rape, abduction, sexual abuse, illegal weapon utilization, and the like were mentioned as widely observed forms of crime in the city. The officer added that 2172 (2910 suspects), 1848 (2663 suspects), and 1718 (2443 suspects) accusations were reported for further persecution in 2011, 2012, and 2013 respectively.

In relation to the age composition of defenders, people with age between 19 and 30 were more prevalent with 1628 (1502 males and 128 females) and 1534 (1434 males and 100 females) defenders in 2012 and 2013 respectively. 671 (627 male and 41 female) and 586 (559 male and 27 female) defenders were found to be in the age group between 31 and 50 in 2012 and 2013 respectively. There were also 239 (219 male and 10 female) and 234 (134 male and 10 female) teenage (16-

18 year category) defenders in the respective years while 83 (in 2012) and 142 (in 2013) defenders, most of them males again, were found to be 50 and above. Poverty, vendetta, unemployment, drug addiction, alcoholism, and dispute with family and neighbors were among the chief reasons behind the causes of crime in the city. As to the case of delinquents, peer pressure, home violence, media violence, alcoholism and drug addiction, especially *Khat* and *Shisha*, and immaturity were pointed out as factors for delinquent behaviors and acts.

3.4 Health Problems and Inefficient Waste Disposal in the City

The densely packed neighborhoods of cities combined with poor sanitary conditions and inadequate solid-waste removal to create the elements necessary for the spread of infectious diseases. This pattern is widely spread with the poor in cities of developing and developed countries disproportionately ravaged by infectious and chronic diseases.

Urban growth in Bahir Dar city has been accompanied by a plethora of health problems. These health problems are worsened by inefficient waste disposal system to cause and aggravate the plight of the residents of the city, especially the poor. The natural environment, the forces of migration, poor living conditions and congestion, and poverty all shape the nature and magnitude of health problems in the city. The natural environment of the city has a direct relation with the perpetuation of infectious diseases. The fact that the city is established and located in a close proximity to Lake Tana and the Blue Nile, and the abundant existence of water bodies in the surrounding and hot climatic conditions make the city highly vulnerable to Falciparum, Intestinal parasites, Skin disease, Bronchitis, Pneumonias, Tonsillitis and Urinary infections and other water borne diseases. With high poverty, congestion, and poor living conditions residents are inflicted much more by other forms of infectious diseases, especially pneumonia and tuberculosis, besides water and vector borne diseases. Prostitution, drug addiction, and alcoholism, social problems caused and worsened partly by urbanization, have had a triggering effect in expansion of STDs.

Besides health problems, urban growth can also be associated with inefficient waste disposal system. Solid and liquid waste disposal is the main challenging task in the study area. Since the city is characterized by settlements which are not well planned and lack necessary facilities, it exhibits poor sanitary conditions. Solid waste generation rate at the city is increasing at a relatively fast rate due to the increase in population and relative activities. A 2010 study by *Dream light* private company, which is engaged in solid waste collection, reported that waste generation in 2010 was 98.8 tons per a day while it projected waste generation of 105, 112, 119.4, 129.5, 135.6, and 186.7 tons per a day for year 2011, 2012, 2013,

2014, 2015, and 2020 respectively. Similarly, residential, commercial, institutional, and street sweeping contributed 54, 24.2, 17, and 3.56 tons (per a day) respectively to the total 98.8 ton waste (per day) generation expected in the city in 2012 (Birhanu et al, 2012).

In addition to the above projections, haphazard waste collection and disposal was reported. Industries managed their waste collection by their own. They tried a bit to treat the waste before disposing but it was not in a standard manner. The local governmental institution only monitored if industries were not dumping the waste with the municipal waste. Above all, there is no sufficient waste collection mechanism which would suggest that the collection and disposal system is only haphazard. In general, solid and liquid waste disposal system in the city is not efficient. The existing notoriously clogged and smelly drainage channels and open dump sites have the potential to worsen health problems in the city.

3.5 Environmental Problems in the City

Cities are growing inexorably, causing many problems of which the environmental impact is among the worst one. Lake Tana and the Blue Nile River constitute a very sensitive ecological zone in the region and the country as a whole and, hence, we can argue that urban growth in the city is taking place along the sensitive ecological system. Studies have shown that construction projects in the city, in particular, and the region, in general resulted in a decrease in size and biodiversity in water bodies. As tried to raise the issue of residues and effluents polluting water bodies earlier, activities that have a relation, whether direct or indirect, with urban growth have been causing problems to the ecosystem of the city and the exurbia.

Solid and liquid waste disposal system is another factor highly associated with urban growth, as causal consequence of, and environmental (and ecological) problem in the city, as a causal factor to. The inefficient and poor nature of solid and liquid waste disposal system has direct influence on water pollution and environmental degradation. It is apparently evident that many ditches and sewerage lines in the city discharge the liquid waste generated by hotels, residential areas, factories, service delivering agencies and so on in to Lake Tana and/or the Blue Nile. In his study, *Tenagne Addisu* (2009) wrote that water runoffs collected from areas where hotels and other commercial centers were located had elevated value of nitrogen and phosphorus which were in excess of concentration causing eutrophication of Lake Tana. This trend is known to affect the quality of the water bodies, their biodiversity, and their very survival too. Haphazard storage and bulky amount of solid waste almost in every spot of the city, in general, and in the southern part of the city, in particular, has resulted in intoxication of the land and the surrounding environment which further has influence over the health status of the residents. Combined with the effect of drainage and rain, these bulky solid

waste materials can also potentially damage the water bodies and the nearby land masses.

Cities draw from the natural environment for survival and continuity. Constructions, food, water, recreation, energy source, and so on are all variables defining the nature of urban life and urbanization characterized by dependence on natural endowments (especially of the exurbia). One way to look in to the effect that urban growth has caused on the environment is observation on forest cover, land degradation, and soil erosion along rivers and streams in the city.

Forest (natural) coverage of the city and the surrounding has dramatically dwindled over the last few decades. It is believed that half a century ago, the region, where the city highly extracted on, was densely vegetated and streams and rivers used to flow and discharge year round. Currently, natural vegetation consists mainly of few remnants of different tree species, bushes, shrubs and grasses, and papyrus, and the coverage is restricted to parks, shores of Lake Tana and banks of the Blue Nile, individual residential yards, organizations and churches' compounds, and privately owned fields growing eucalyptus for commercial purpose. The researcher could not manage to secure statistical data on deforestation rate in the city. However, a 2012 report of a study on land use showed that, by considering 279 ha of total area for Bahir Dar city, forest coverage decreased from 6 ha in 1957 to 3.7 ha in 1984 and 4.8 ha in 1994, the increase in the period between 1984 and 1994 being attributed to commercial plantation of eucalyptus (Nigusie et al., 2012).

Research participants concurred that urban growth has been accompanied by loss of vegetation both in the city and the surrounding. The loss of vegetation in and around the city is partly attributed to the urbanization process. Farmers used to cut trees down for charcoal and fuel production, which has highly been triggered by the economic return up on their sale in the city, and for securing arable land which itself has partly been caused by high economic/business transaction between the farmers and urbanites in the city. The following quote by a key informant from *Hidar 11 kebele* can explain the abundant nature of vegetation resource once and the magnitude of their removal in the city:

I first came to Bahir Dar in 1950s as a teenage in search of job. Buildings and settlements were so scanty that the area was a dense forest filled with abundant vegetation, wild life and marshy area. After a stay of some time, I was granted with a lot of land for house construction in *Abay Mado*². All the materials I needed to buy to build my home was tins, nails, and other utensils that could not be extracted from the natural endowment. I found all the wood and timber necessary for the construction of my home in the lot that I got from government. It is a surprise that I could see such amount of bare land these days in my neighborhood that all the vegetation coverage has gone just over a few decades.

² A customary name of Hidar 11 kebele

Another informant, a native to the locality, said that the saying ‘ዓባይ ማደሪያ የለው ግንድ ይዞ ይዞራል’ (*Abay maderiya yelew gened yizo yizoral*) was not just a story, but a real experience that the river was so fearful to try to cross it that its currents, volume and width of the area that it drains were all that amazing and surprisingly hard to cross it. Currently, the river is on the wane. Perhaps the most important example that could show the trend of deforestation and shrink of water bodies in the city is the case of *Chembel* River, a tributary to the Blue Nile that drains the north eastern part of the city. Once a big and perennial river, *Chembel* has now become small and dry, with exception of a little and seasonal water flow. The river’s survival has been brought in to question by the high rate of deforestation taking place in the city and the surrounding. This deforestation has resulted in degradation of the land (and soil erosion) found alongside the river.

3.6 Pollution and Flooding

Urban growth is a factor of air pollution in the city, since the car-dependent lifestyle leads to increases in fossil fuel consumption and emissions of greenhouse gases. Urban growth contributes to poorer air quality by encouraging more automobile use, thereby adding more air pollutants such as carbon monoxide, carbon dioxide, sulphur dioxide, nitrogen oxides, and microscopic particles. These pollutants can inhibit plant growth, create smog and acid rain, contribute to global warming, and cause serious human health problems.

Besides air pollution from vehicle use, cities are affected by several other forms of pollution. Water, soil, and noise pollution are evident in the study area. Haphazard waste disposal in market areas, coexistence of work places and residential areas that create noises and disturbance, and emission of noises from automobiles, advertising, and business delivering entities all represent the chaotic nature of the problem in the city.

Flooding is a major problem affecting urban areas. The problem is even worse with urban areas having water bodies in their territory. Bahir Dar city has a long history of suffer from flooding. Plain topography, coupled with other factors including inefficient sewerage and drainage system, inadequacy of culverts, and poor construction of roads and ditches, aggravated the nature of the problem. Drainage systems have been constructed since the Italian Occupation. However, the level and magnitude, and their quality too, of the construction of drainage system could not averse the problem. The city experienced massive flooding scenarios in 1992, 1993, 1994, and 2006. Although it is not sufficient, the city administration had constructed 101.34 km of drainage channels, which include concrete pipe, masonry channel covered with slab, open masonry channel, and open stone pointed, as part of storm water management to minimize flooding and spread of malaria in the city (BDCA, 2009; Birhanu et al, 2012).

3.7 Increased Farm Land Grabbing

Urban growth in general, and its form of sprawl, in particular, contributes to loss of farmlands and open spaces. A significant amount of agricultural land has been lost in the process of urban growth in the city in the past, especially over the last three decades.

Urban growth in the city has been fast in the last three decades than before and the defining character of the growth is increase in built up area at the expense of forest and agricultural lands. As of the result of the study conducted by *Atalel* (2014), there had been a considerable decrease of agricultural areas over the period between 1986 and 2010. In 1986 agricultural areas covered 90.2% of the study area while it was 85.8% in 2001 and 74.7% in 2010. The successive decrease of agricultural areas was at the expense of a dynamic increase in built up areas. This could be attributed to increase of population associated with high demand for land and urban supplies and investment.

In another study conducted in the city by *Sayeh Agegnehu* (2014), agricultural land had substantially decreased during the period 1986 to 2011. The study added that from the interviewed research participants, 272 farmers had lost 445 parcels covering about 260 ha within the period between 2001 and 2011, in which, on average every respondent had lost 0.95 ha of land while the average landholdings of the farmers had been reduced nearly by half with the existing average landholding being about 0.97 ha. It was also found that about 3% of the research participants lost all their land as a consequence of urban expansion (Sayeh, 2014).

With high level of urban growth taking place in the city, this trend of massive loss of agricultural land is expected to steadily continue in the years to come. According to the interview held with an official in BDCA, based on the existing rate of urbanization in the city (6.4%), the city, and urban centers found nearby it, will have a projected total population of 2,182,760 in the year 2043. To accommodate 2.2 million people in 2043, based on current population density, the projected total area of Bahir Dar will be 50,039 ha of which 28,660 is existing boundary. Hence, additional 21,379 ha of land will be needed; a projection which shows possible loss of huge amount of farm land to expansion in the upcoming years. The researcher’s observation revealed that farm land encroachment which was apparent almost in all directions of the city.

The loss of agricultural land to urban growth means not only the loss of fresh local food sources but also the loss of habitat and species diversity, since farms include plant and animal habitat in woodlots and hedgerows. The presence of farms on the rural landscape provides benefits such as green space, rural economic stability, and preservation of the traditional rural lifestyle. The result of this massive loss of agricultural land to the city’s

urban growth is worsening of the problems among the farmers of the surrounding. Moreover, it is resulting in massive influx of farmers in to the city which further deepens existing problems of poverty, unemployment, and congestion.

3.8 Housing Problem, Slum and Squatter Settlement

Among other consequences, housing problems and slum and informal settlements are the most noteworthy challenges that urban growth poses. Bahir Dar city is facing acute and ever worsening housing shortage. The problem of housing is even more profound in the city center. High rate of urbanization, explained through the influx of people from rural areas and other urban centers, and economic growth and demand for house construction, triggered the problem of housing. The end result of this sever housing problem is the proliferation of slums and informal settlements.

Informal settlements (often referred to as squatter settlements, slum areas, or shanty towns) are dense settlements comprising of communities housed in self-constructed shelters under conditions of informal or traditional land tenure. They are common features in developing countries and are typically the product of an urgent need for shelter by the urban poor. As such they are characterized by a dense proliferation of small, makeshift shelters built from diverse materials, degradation of the local ecosystem and by severe social problems. In Ethiopia, they are known as illegal settlements or commonly 'የጨረቃ ቤቶች' (yechereka betoch), since people squat on the land during the night times. In the city of Bahir Dar informal and slum settlements, alternatively called 'ኮሻኮሻ ሠራር' (koshekosh sefer), usually possess similar features and conditions that they represent the worst living conditions of the residents of the city.

Typically, the city's slums and informal settlements lack adequate shelter, potable water and sanitation and sewerage systems, electricity (from the grid), and sufficient yard and toilet systems. Besides mud and wood, they are usually constructed from such fragile materials as plastic fabrics, papyrus reeds, commonly known as 'ደንገል' (dengel), and bamboo made material called 'ጥራር' (tirar). Furthermore, they may be located far from centers of employment and on environmentally hazardous sites as in marshy and flood prone areas around Lake Tana and the Blue Nile River. Overcrowding and congestion are defining features while most of them lack sense of privacy since they usually do not have private yards. Most of the city's slums and informal settlements house the destitute. However, there are also informal settlements that house families of greater means who may not have other housing options or who, in the case of centrally located slums and informal settlements, may choose more convenient location over better shelter conditions in the periphery. Some have also established informal businesses in slums

and informal settlements; their livelihood is mainly based on informal trading, that is selling of local drinks (*Tella* and *Arake*), engagement in commercial sex work, and some by engaging in *Baltna*³, selling French fries (chips) and '*Bonbolino/Sambusa*' and so on.

Population growth, inefficient land provision, poverty, land grabbing attitude, and poor planning and law enforcement are among the factors causing slum and informal settlements in the city. These alternative housing mechanisms have consequences including environmental degradation, encroachment on agricultural land and open spaces, economic costs especially up on their demolition, social costs including discrimination and isolation, and physical disorder and health problems.

Although the magnitude of such housing establishments in the city is not clearly known, they are widely found aspects of the city. Slums are usually found in inner-city *kebeles* (01, 04, 05, 06 and 12) while informal settlements are found in the peripheries of the city. According to *Daniel Weldegebriel* (2011), the result of cadastral surveying work of Bahir Dar city reported that 30% (9000) of the city's houses were identified as informal settlements constituting slums.

3.9 Urban growth and Its Impact on Social Organization in the City

One of the sever problems of urban growth is its impacts on native forms of social organization and institutions. Urban growth usually represents changes in cultural elements and practices. These changes and alterations are usually accompanied by the effects of globalization and media, not to mention internal cultural differences, as urban life nowadays widely involves global dimensions and aspects. Bahir Dar city is no exception to this influence of globalization and media, and at large urban growth although the effects are not as pervasive as they would be in other cities for the cultural practices being characterized much more by homogeneity than heterogeneity.

Cultural (and social) heterogeneity and diversity in Bahir Dar city is low. A significant amount of the residents of the city are Amhara (96.2%) and Orthodox Christianity (89.7%) is also a leading and widely practiced denomination (CSA 2007). Again, among the forces of urban growth in the city is rural-urban migration (Abeje, 2012). This has resulted in continuity of rural ways of life since the influx is highly homogeneous. Hence, social organizations including *Ikub* and *Idir* and religious associations of *Senbete* and *Mahiber*, and the likes are still at the heart of social life among residents of the city. In fact, 256 (91.4%) respondents replied they engaged in any form of (local) social organization.

However, as said before, urban growth is not without any influence on local forms of social organization in the

³ Home based production and sale of goods for consumption

city. It has brought changes in the ways these aspects are entertained and practiced. *Ikub*, for example, has now become a much more economic instrument than a form of social organization serving interaction and togetherness of members. Usually, economic returns have now become the sole reasons and prerequisites for membership in *Ikub*. Sentiments and reciprocity, features of *Ikub* in previous times, are now lacking; people highly value the economic return of *Ikub* that they may sell their lottery/turn to other members for a substantial amount of money, a situation which was not usually apparent in previous times.

The influence is also apparent in other forms of social organization. *Mahibers* as forms of social organization are now practiced among adults and the elderly than the young (who rather would prefer to do party in bars). Personal contexts and situations (mostly economic variables) are highly valued over *Mahibers*, things which were considered only secondary before. Investments on celebration-related aspects of *Mahibers* have now dramatically dwindled due to economic and a retreat to dogma-related reasons. *Mahibers*, as memorial celebrations of saints and angels among Orthodox Christians, used to be held almost all the days through a month (considering a single day for remembrance for typical saint or angel). Nowadays, this celebration is held for selected days and highly revered saints and/or angels.

CONCLUSION

Urbanization, as a major demographic trend, has become a global phenomenon since the second half of the twentieth century whereby modernization, colonization, and globalization have all been swaying the transition in to urbanization across countries. The year 2007, being taken as a tipping point where urban population outnumbered the rural one for the first time in the history of the globe, has been followed by an increase in the magnitude of regional and global urbanization.

Ethiopia has also been urbanizing fast in recent years albeit it constitutes the continent's least urbanized nations. With 17% urban population in 2013 and 3.57% annual growth rate for the decade 2010-2020 (UN-Habitat 2014), it is urbanizing fast in which the process involves, among other things, an increase in urban areas of which Bahir Dar is among the most important ones. Hence, the study was conducted in Bahir Dar city to describe the unyielding impacts of urban growth. Household respondents were selected from four purposively selected kebeles in the process of data generation. Informants also took part in gathering of the data.

With 28,660 ha of total area, population size of 249,125, and a 6.4 percent projected rate of urbanization in 2013, according to the city administration, Bahir Dar has observed fast urban growth. This urban growth has resulted in consequences characterized by duality;

negative and positive impacts. However, the study focused on the negative impacts of urban growth on the city. Housing problems and informal settlements, environmental degradation and pollution, inefficient waste disposal and health problems, problems on indigenous forms of social organization, flooding, pollution, farm land encroachment, unemployment and poverty, and crime and insecurity were found to be among the destructive impacts. Housing problem and informal settlements, pollution of ecosystem and water bodies through effluent and water runoffs, farm land encroachment, temperature increase and pollution, unemployment and poverty, uneven spatial development, and increasing crime are the most noteworthy.

It is important to note that urban growth is not without positive consequences. Urbanization is important that life in the globalized world is so immersed in the contexts that it brought about, and to which it will keep influencing and shaping too. Urban growth has brought significant positive impacts on Bahir Dar city over the past decades. These yielding impacts of urban growth should be uncovered as well.

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