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Research Article

Investigating the Challenges of Urban Environment Governance with Respect to Participation among Households, the Community and town Municipalities: The Case of Sodo and Tarcha Town

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ABSTRACT

The study sought to investigate the major challenges of urban environment governance with respect to participation and partnership among the various actors in Sodo and Tarcha town. The study used mixed-research approach. While Quantitative data was collected through structured close and open-ended questionnaire, key informant in-depth interviews, and field observation were conducted to collect qualitative data. To identify the target sample, a multi-stage sampling technique was employed. A total of 302 (204 from Sodo and 98 from Tarcha) households and 18 (12 from Sodo and 6 from Tarcha) key informants were sampled. To analyze the data narrative and descriptive techniques were used. The major environmental problems identified by the study included: inadequate water supply and poor sanitation; poor solid waste management; and inadequate and poor infrastructure related with sewerage and drainage system. Finally the study went on to investigate the major challenges of urban environment governance with respect to participation and partnership among the various actors. The study concluded that the major challenges included horizontal fragmentation; lack of collective action; lack of enforcement rules and regulations; imbalance between demand and urban service provision; and traditional way of waste management.

Keywords: Urban; Urban Environment; Governance; Participation; Household; Community; Municipality

INTRODUCTION

Background

It is known that the current global trend is a massive expansion of urban areas. This growth being actually is generated by the numerical population growth and migration. Urban development determines changes regarding the organization of places, economic and social changes but these effects exceed the territorial barriers and generate a broad impact. The World Commission on Environment and Development (WECD) predicted in 1997 that the future will be predominantly urban and that the most immediate environmental concerns of most people will be urban ones [1]. In this moment we are facing for the first time in the history of mankind a change in the numerical proportion of population, the share of global urban population overcomes the rural population as result of recent statistics realized by specialists: - 60% of the global population will live in urban areas until 2030, considering that the urban population in 1930 was 30% of the total global population The prediction has come true and frequent reports on the situation in cities by UNCHS (Habitat) - now UN-Habitat - and other bodies have been examining the different responses and initiatives that are being tried all over the world to meet the urban challenge.

This intense global urbanization is required to adopt the measures and conditions to provide strategic planning and sustainable long-term space measures considering the principles of sustainable development and the impact of environmental condition on the quality of life. Rapid changes and institutional challenges being experienced in urban areas demand that urban managers rely on a new approach to ensure that urban populations, especially in the low-income neighborhoods, get the desired services. Nearly half of the world's populations live in cities and the rapid increase in urban population is expected to

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continue, mainly in developing countries. Currently, three-quarters of global population growth occurs in the urban areas of the developing countries, causing hyper-growth in the cities least capable of catering for such growth [2]. At least 600 million are estimated to live in "life and health threatening homes and neighborhoods" because of the inadequacies in the quality of the housing and the provision of infrastructure and services associated with housing and residential areas. This implies serious shortfalls in the investment in the homes and neighborhoods of the urban population, such as those inn piped water supplies, provision for sanitation, garbage collection, site drainage, paved roads and pavements, schools and health clinic.

The urbanization of most of Africa is moving fast forward, especially **south of the Sahara**. It is estimated that in 1900, about 89% of inhabitants lived from the primary occupations of farming, hunting & gathering, cattle nomadism, and fishing meaning that 11% or less were urban. At the start of the independence period in 1957, 14.7% of Africa's inhabitants were urban, in 2000 had it risen to 37.2% and it is expected to rise to 49.3% in 2015, in effect 3.76% to 3.35% per year [3]. Drought, environmental degradation, rural poverty and wars continue to push many young villagers towards cities in search of jobs and other economic and social opportunities [4]. As a consequence of the fast rate of urbanization, Sub-Saharan Africa is now characterized by a number of emerging environmental challenges. Of particular concern in the urban areas are the risks to the immediate and surrounding natural environments and their resources, as well as the health conditions of the urban citizens. Rapid urban growth has seriously outstripped the capacity of most cities to provide adequate housing and other basic services for their citizens. Yet each year, new migrants continue to flock to the cities, thereby exacerbating the problems of urban congestion, leading to the expansion of squatter settlements and shanty towns, and hampering the capacities of local authorities to improve basic infrastructure and deliver essential services [3].

Thus, as cities grow, managing them has become increasingly complex in Sub-Saharan Africa. The speed and sheer scale of the urban transformation and the increased concentration of population, production and consumption has presented formidable urban environmental challenges [5]. In turn, the dysfunctional urban environments have brought with them high costs that have undermined the benefits of economic growth and development needed to improve the living standards of urban populations.

In most cities and many smaller urban centers, there have been very serious environmental problems, which are a result of the inadequate provision of urban basic services. There has been serious environmental degradation in areas surrounding the cities and damage to natural resources - for instance to soils, crops, forests, freshwater aquifers and service water and fisheries [6].

Environmental problems can be broadly divided into two major categories: those directly affecting the state of the global and local natural and physical environment and those that are related to human health and living conditions. The first kind of environmental problems, which affect the global and local resource base increases with growing levels of development. The second kind of environmental problems refers to unsatisfied human needs for basic services, so may decline with economic wellbeing and also socio-political development. The problems arise due to the gap between the rate of population growth and the environmental and public health services necessary to maintain a healthy and clean living environment. A great range of problems within the urban environment can therefore be categorized under three broad headings: urban pollution (air, water, soil and waste); urban basic infrastructure (roads, sanitation, water supply and solid waste management); and natural resources (ecosystems, groundwater, green spaces and wildlife within the city). There is a complex combination of the above issues and, given this context, it is almost impossible to solve the problems of environmental deterioration by adopting a sectoral approach. Effective management of the urban environment requires that urban managers adopt a strategy based on an overview of the urban system as a whole and those they also look beyond the city boundaries.

Solutions for many of the problems of African cities critically depend on the legitimacy, competence and capabilities of municipal governments and institutions. As [2] points out, efforts to achieve secure tenure for poor residents and too include as many urban actors as possible in upgrading programmes require local government institutions that are efficient, open and transparent. Observers note that in most African countries, political and administrative power is highly centralized. Though some countries have moved towards decentralization over the past decades, this has not always been followed by the necessary fiscal power to enable local governments and communities to raise the revenues needed to finance investments and meet other costs [3].

The problems outlined above can also be found in Ethiopia. The urbanization process in Ethiopia is similar to what happens everywhere in the globe. However, 83 percent of the population in Ethiopia is living in rural areas; recently there has been an observable trend towards rapid growth Background

Statement of the problem

Town municipalities are in charge of providing basic services and the necessary environmental infrastructure. However, the demand for these services - especially water, garbage collection and sanitation facilities –is exceeding the available supply because of the rising urban population and informal settlement. It is of utmost necessity to examine how the role of the municipalities has been changing from that of provider to that of facilitator and coordinator of different actions by a wide variety of actors in the provision of water, sanitation and solid waste management services. It is important to study how new partnerships between different actors emerged and operate and what problems they are facing in these three areas of urban environmental management. Partnership between different actors, municipal authorities, central government agencies, NGOs, households and the private sector is not a new phenomenon. What is new is the commitment by local

authorities to work with 'other sectors' to ensure adequate provision of urban basic services.

With its foundation around – Wolaita sodo town is one of the reform towns identified by the government so that prospects for evolution of vibrant urban life is to be foreseen. On the other hand the Tercha town is believed to be established around 20 years ago. It is currently serving as the seat of Dawro administrative zone. In line with this background as far as issues of urban environment governance and management are concerned, there is a great deal of task awaiting the municipalities of both towns. Accordingly the most important aspect of urban entered development as argued by scholars is all about issue related with environmental concerns. In this respect currently the towns have got so many problems, especially in the area of sanitation, settlement pattern, vegetation cover, clean air, landscape management, harmonizing residential areas with business centres, road drainage patterns and the associated sewage disposal systems, problems are very much rampant. Apart from this in order to tackle the above mentioned problem a coordinated effort is expected from different stake holders. However in reality apart from the municipal bodies it is difficult to see other actors making effort to address problems in both towns. Furthermore unfortunately with the exception of some attempts to make a study, particularly in Wolaita Sodo by the government with the support of World Bank to address the situation of the towns' road networks in standardized manner, there is no significant research undertaking pertinent to issues of governance and management of the towns' environmentally related phenomena.

Objectives of the study: The research aimed to identify the major urban environment problems and to explore the main challenges faced to practice urban environment governance with respect to participation among the municipal, households and Community based organizations in Sodo and Tarcha towns.

METHODOLOGY

Description of the study area

Wolaita Soddo town, the administrative capital of the Wolait zone, is located 390 Km South and 167 Km of South West of Addis Ababa and Hawassa, respectively. The town is located 6049" N latitude and 37045''E longitude. Currently, the total area of the town is about 3,200 hectares and is divided in to three sub town ("Kifleketema") and eleven "kebeles" (administrative units). Based on the 2018 population projection, the town has a total population of 254,294, with the projected annual growth rate of the 4.8 %. The second case study town is Tarcha, which is a town in southern Ethiopia (7.1°N and 37.1°E) and capital of Dawuro zone of the SNNP region. It has an average altitude of 1710 m and comprises more than 30,000 people in 2007. The town has two kebeles and 11 villages currently.

Research approach

There are two basic approaches of research, quantitative approach and qualitative approach. Quantitative approach involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis. This usually means survey research where a sample of population is studied to determine its characteristics [10].

Qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior. Research in such a situation is a function of researcher's insights and impressions. Such an approach to research generates results either in non-quantitative form or in the form which are not subjected to rigorous quantitative analysis. Generally, the techniques of focus group interviews and depth interviews are used [10].

Triangulating both qualitative and quantitative approach (Mixed-method approach) is the most appropriate to reach at a level of truth that enables the researcher to come up with complementary and convergence of facts. Thus, this study for the purpose of achieving the stated research objectives used both qualitative and quantitative research approaches.

Source of data and data collection instruments A variety of information sources were used to provide different perspectives on similar issues. In this study both primary and secondary data sources were used.

Primary sources

Primary data sources include: Direct observation: The researcher/s employed direct observation during the entire fieldwork period. Both the principal researcher and the research assistants documented various issues through observation, such as clean-up exercises, garbage heaps, location and type of thee toilet facilities and neighborhood types. Direct observation is a means for certifying, challenging, complementing or extending local knowledge and opinion, rather than a technique to be used in isolation [11].

Semi structured interview

This research also employed semi-structured interviews during the household survey and the institutional surveys, combining some predetermined questions or activities with more open-ended discussions. Three types of interviews were held: with households, with community leaders and representatives of Community based organizations at the community or neighborhood level and with key informants with specialized knowledge of some topics of interest.

Questionnaire

In this data collection instrument, primary data were obtained from individual respondents who complete and return questions concerning the issue under study. Under this technique the researchers distributed printed open and close-ended questions for selected participants. For open-ended questions, the respondents provided with a general guide on the type of information to be obtained and the respondents were free to supply their answers in their words whereas the respondents need to select one of the alternative possible answers put to them for close ended questions.

Secondary data sources

This research also benefited much from secondary sources of data; information collected from a wide variety of the institutions that are operating in Sodo and Tarcha town. Several research reports and survey reports, consultative workshop reports and sectoral studies, various research and etc were used as a secondary source. They were used mainly as background information on the study areas and to determine the gaps that this study intends to fill.

Sampling techniques, sampling procedure and sample size

In order to identify the target sample, a multi-stage sampling technique was employed. At the first stage, through cluster sampling technique all 'sub-cities' or kifle Ketemas were considered. Second, kebeles (from each sub-city) were selected purposefully or in accordance to the intensity of the problem. Once the smallest geographic study units (kebeles) were determined, sample respondents selected on the basis of probability sampling techniques for the sake of ensuring representativeness.

Sample size

Three criteria usually will need to be specified to determine the appropriate sample size: the level of precision, the level of confidence or risk, and the degree of variability in the attributes being measured. The researchers used Yamane's (1967:886) simplified formula to calculate sample sizes [12].

Where n is the sample size, N is the population size, and e is the level of precision.

For case 1 (Sodo town)

Based on the 2018 Population Projection by the CSA, Wolaita Sodo town has a total population of 254,294. It is also estimated that the town has around 63,573 households with an average family size of 4.

With A 95% confidence level and 0.07 level of precision (e):

n= 63,573/1+63,573(0.07)2

n= 204 households

For case 2 (Tarcha town)

Based on the 2018 Population Projection by the CSA, Tarcha town has a total population of more than 30,000. It is also estimated that the town has around 7,500 households with an average family size of 4.

With a 95% confidence level and 0.1 level of precision (e):

n= 7500/1+7500(0.1)2

n = 98 households

Method of data analysis The methods of data analysis used for this research is descriptive and comparative in nature. In doing the analysis, various data elicited from the individual respondents, public institutions, private sectors, civil society organizations etc. are pooled together and analyzed using both narrative and descriptive analysis techniques.

RESULT AND DISCUSSION

In this section the major findings of the study are presented and discussed by two major sections. The first section presents the result while the second section contains the discussion part. So that the demographic profile of the respondents involved, the major urban environment problems in Sodo and Tarcha town, and the role households, the community and municipalities on urban environment governance and the major challenges of urban environment governance for the two cases are discussed in detail under section two. For this study a total of 320 participants were involved. i.e. 204 households and 12 key informants from Sodo town and 98 households and 6 key informants from Tarcha town. Their demographic profile is discussed below.

Survey Results

Demographic profile

Table1: Demographic profile of the respondents.

		Sodo		Tarcha					
		HHs (n=204)		KIs (n=12)	HHs (n=98)	KIs (n=6)			
Sex		No.	%	No.	%	No.	%	No.	%
	Male	121	59.3	7	58.33	53	54.08	4	66.66
	Female	83	40.6	5	41.66	45	45.91	2	33.33
Age	18-29	41	20	2	16.66	11	11.22	1	16.66
	30-39	73	35.78	4	33.33	39	39.79	3	50
	40-49	53	25.98	5	41.66	32	32.65	2	33.33
	50-59	37	18.13	1	8.33	14	14.28	-	-
	>=60	-	-	-	-	2	2.04	-	-
Educational level	Can't write and read	21	10.29	-	-	7	7.14	-	-
	Grade1-4	37	18.13	-	-	9	9.18	-	-
	Grade 5-8	46	22.54	1	8.33	32	32.65	-	-
	Grade 9-12	45	22.05	11	91.66	27	27.55	1	16.66
		55	26.96			23	23.46	5	83.33

	Above grade 12								
Occupation	Government employed	47	23.03	9	75	16	16.32	5	83.33
	Private employed	93	45.58	3	25	41	41.83	-	-
	Unemployed	24	11.76	-	-	20	20.4	-	-
	Other	40	19.6	-	-	21	21.42	1	16.66

Result on urban environment problems

Figure 1: Graph of Households' response on inadequate water supply and sanitation as urban environment in Sodo town and Tarcha town.

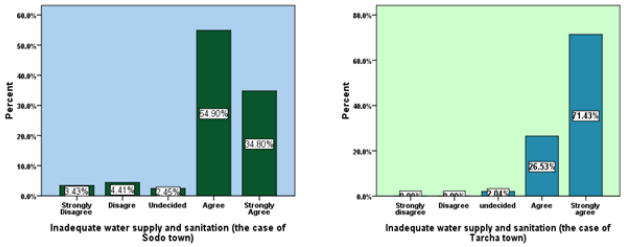

Figure 2: Households' response on poor solid waste management as urban environment problem in Sodo and Tarcha town.

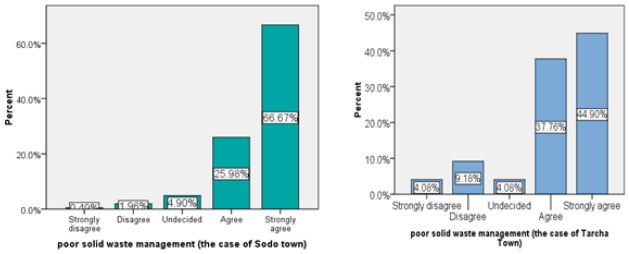

Figure 5: Pie chart on inadequate sewerage and drainage system as an environment problem in Sodo and Tarcha town.

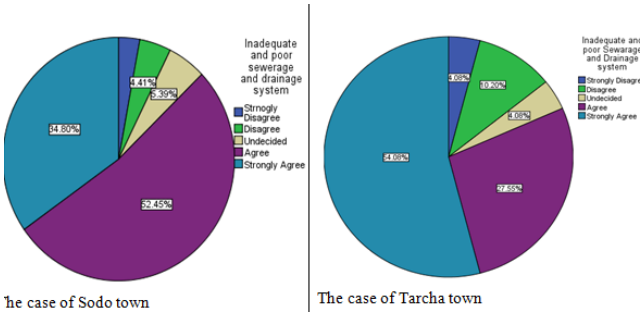

Table 2: Households' response on slum settlement as urban environment problem in Sodo and Tarcha towns.

Urban environment problems	Responses	Sodo		Tarcha	
		Number	Percent	Number	Percent
Slum settlement	Strongly agree	30	14.7	27	27.6
	Agree	44	21.6	18	18.4
	Undecided	54	26.5	17	17.3
	Disagree	43	21.1	21	21.4
	Strongly disagree	33	16.2	15	15.3
	Total	204	100	98	100

Table 3: Households' response on air pollution as urban environment problem in Sodo and Tarcha towns.

Urban environment problems	Responses	Sodo		Tarcha	
		Number	Percent	Number	Percent
Air pollution	Strongly agree	17	8.3	4	4.1
	Agree	35	17.2	11	11.2
	Undecided	32	15.7	39	39.8
	Disagree	69	33.8	35	35.7
	Strongly disagree	51	25	9	9.2
	Total	204	100	98	100

DISCUSSION

Demographic profiles of the respondents

For this study a total of 302 sampled households and 18 key informants were participated. From the household participants in Sodo town 121 households (59.3%) were male and the rest 83 (40.6%) were female. From the key informants 7(58.33%) male and 5(41.66%) female respondents were involved. From Tarcha town, 53(54.08%) male and 45(45.91%) female households were involved in the survey. Among the key informants 4(66.66%) were male while the rest 2(33.33%) were female (see table 1).

Regarding with the age distribution of the household respondents in Sodo town, 73 (35.78%) were between the age of 30-39 followed by 53 (25.98%), 41(20%) and 37(18.13%) within

age group of 40-49, 18-29 and 50-59 respectively. From Tarcha the majority 39 (39.79) of the respondents also fall within the age of 30-39 followed by 32(32.65%), 14(14.28%) and 11(11.28%) within the range of 40-49, 50-59 and 18-29 respectively. From Tarcha there were 2(2.04%) participants above 60 years old (table 1).

While 55(26.96%) households from Sodo and 23(23.46%) from Tarcha reported that they are above grade 12, 21(10.29%) from Sodo and 7(7.14%) from Tarcha found to be as cannot read and write (table 1).

Regarding with the occupational status of the household respondents the majority 93(45.58%) from Sodo and 41(41.83%) from Tarcha are reported to be private employed followed by government employed 47(23.03%) for the case of Sodo and other occupational activities 21(21.42%) for the case of Tarcha town.

Urban Environment Problems in Sodo and Tarcha towns

Inadequate water supply and poor sanitation: Water and sanitation are thought to be among the most important services that should be provided for people who live in urban areas. This area includes water supply, systems for dealing with waste water and sewerage and domestic sanitation systems and practices. It is the undeniable fact that the sufficiency and quality of water supply directly affects the well-being of the society living in that particular town. Most Sub-Sahara African countries are characterized by their limited urban water, sanitation and drainage facilities. The reason mostly associates low per capita Gross Domestic Product (GDP) of them to unable to keep pace with rapid urban growth.

A majority of the respondents in the two towns mentioned inadequate water supply and poor sanitation as a major problem. Figure1 Shows that in all, 112(54.9%) of the households in Sodo town responded that they agreed with the inadequate status of the current water supply followed by 71(34.8%) who reported that they strongly agreed. For the case of Tarcha town 70(71.4%) reported that they strongly agreed on the problem while the rest 26 (26.5%) agreed (see figure1).

Unlike respondents from Sodo town, there were no "Strongly Disagreed" and "disagreed reports by the surveyed households from Tarcha town.

Regarding with water supply the observation result shows that most of the households in Sodo town depend upon piped water supply. But for the case of Tarcha town, to meet their demand we observed that river and private well water sources are used by the community. In this town the share of the river water and private well water sources increases during the warmest season of the year.

The common problem associated with water supply is frequent interruption. One key informant from Sodo responds that:

"Though water supply is relatively good there are weaknesses regarding with safe collection and treatment of waste water. He adds that...there is a problem to handle inappropriate waste water".

Another key informant from Tarcha town responds as follows:

"Even though a tap installed there is no access to water, the majority of us use river water, unprotected hand dug well, and surface water as well. We know that using unsafe water is considered to be a risk to our health, but we have no other option not to use this poor quality water".

This study also assesses the sanitation status of the two towns. Though most of the households' in the two towns have a pit latrine, we observe much open defecation is here and there. Most people used to urinate in the ditches and street flood canals instead of looking for toilets in their home. The available public latrines were insufficient.

Though water and sanitation provision have an impact on the health of the environment, unfortunately, most third world cities are not too much concerned about the environmental impacts related to water supply and sanitation as they are struggling to provide a stable supply of clean water.

The observation result also revealed that infrastructure installation are found inadequate and inequitable; utilities and social services are not been provided in advance for new settlements; and service delivery continues to be unreliable due to poor maintenance, and limited technical and administrative expertise.

Poor solid waste management: Solid waste is increasingly an issue for urban areas in developing countries due to rapid urban growth and increases in consumption. The problem of waste management in Sub-Saharan Africa is a function of inefficient collection, transportation and reduced availability of safe, suitable, and accessible disposal sites around urban areas. The involvement of and participation by private waste management companies is very minimal. This has led to a call for more efficient, environmentally friendly options such as locally developed collection and disposal equipment, recycling and adoption of less polluting incineration technologies where feasible.

Providing collection, sorting, processing, recycling and final disposal of waste has proven to be a considerable challenge for the majority of urban areas in developing countries. As many towns

of Ethiopia, providing solid waste management service is among the tasks for municipals of the two cases (Sodo and Tarcha town municipals).

The survey result of this study indicates that solid wastes that are generated are not appropriately handled and managed. Figure2 shows that in all, 136(66.75) indicated that the strongly agreed on the poor waste management practice in Sodo town. 53(26%) also responded that they agreed for the weak management system of solid wastes. For the case of Tarcha town the strongly agreed and agreed respondents accounts 44(44.9%) and 37(37.8%) respectively (see figur2).

Key informants were asked about garbage collection and management practices in their respective town. Among them one from Sodo town gives the following response.

"Because of the less availability of community containers, most dwellers of the town store their waste in private pit in their compound and wait until the municipal vehicle comes and some of others may contract with private waste collectors".

Other informants from Tarcha town say that:

"I can't say that there is proper solid waste management practice in our town". He adds..."even there is lack of door to door solid waste collection service by the municipality".

The observation results reveal that improper solid waste disposal is common not only in Sodo town but also in Tarcha. Many urban dwellers dispose their solid waste improperly by dumping in the yard, burning in their compound, throwing in the ditch etc. This could be due to the poor infrastructure particularly in Tarcha town.

Figure 3: Wastes burning near the house compound and wastes stored in sack.

Figure 4: Wastes dumping irregularly.

Inadequate Sewerage and Drainage system For the first case (Sodo town), majority of the respondents, 52.45% and 34.08% reported that they agreed and strongly agreed respectively for the inadequacy and poorly maintained drainage systems. Though the status of road infrastructure of the town is found good, the existing drainage network length of the town is not as much as the total built up area of the road network coverage. Additionally, road infrastructure without appropriate drainage system become deteriorated by runoff and storm water. The majorities of drainage systems of the town are open channels and by their type they are masonry drainage, concrete and pipe drain. For the second case (Tarcha town), from all, the majorities (54.06%) stated their strong agreement followed by agreed respondents (27.55%) for the existing problems related with sewerage and drainage systems. The study findings revealed that, the quality of drainage in the study area is poor and hence, the construction of drainage infrastructure has to be undertaken.

Regarding with the quality of drainage system, we observe that the existed drainage infrastructure is not convincing.

Inadequacy of Sustainable urban drainage system leads to ill economy and poor environmental conditions. Due to the inadequacy of the drainage system, the low lying parts of the town, especially is hitted frequently by splash flood. And this is mainly resulted because of the blockage of drainage system by the solid waste, poor maintenance practice of drainage system and lack strong integration among stakeholders in the provision of drainage infrastructure to ensure sustainability of drainage system. In addition to this, in poorly drained areas, urban runoff mixes with sewage from overflowing latrines and sewers, causing pollution and a wide range of problems associated with the increased risk of waterborne disease.

Figure 6: Poorly maintained drainages (in Sodo town).

Slum settlement: Slums have become worldwide phenomena of urban landscape with around one third of the world urban population living in it. Recent estimates suggest that there are 900 million slum dwellers in the developing world, accounting for 43% of urban population.

As a comparison, the above table shows that 54(26.5%) and 17 (17.3%) reported 'undecided' responses for Sodo and Tarcha towns respectively. While 74(the sum of agreed and strongly agreed) and 76(the sum of disagreed and strongly disagreed) responses were reported for the case of Sodo town, 45 (the sum of agreed and strongly agreed) and 36(the sum of disagreed and strongly disagreed) responses were reported for the case of Tarcha town on slum settlement as urban environment problem.

Though a significant number of respondents from the two towns perceive that slum settlement is not as such a critical problem, the observation result reveals that there is the sign of the emergence of unplanned residential quarters in Sodo and Tarcha towns.

According to the UN-HABITAT, household as a group of individuals living under the same roof in an urban area and who lack one or more of the following can be considered as a slum. These are:

Durable housing of a permanent nature that protects against extreme climate conditions.

Sufficient living space, which means not more than three people sharing the same room.

Easy access to safe water in sufficient amounts at an affordable price.

Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.

Security of tenure that prevents forced evictions (Slum Dwellers to double by 2030: United Nations Human Settlements Programme [13].

Here our focus is the negative impact of slum on the physical urban environment. It is the undeniable fact that as the slums get crowded, the environment gets overpopulated. The physical environment of the slums depends on the outcome of facilities of habitation, available water, toilets, drainage, and lighting. Unfortunately, high levels of pollution, lack of basic needs, and room-crowding are some of the basic characteristics of slum housing.

There are two reasons for the development of slum settlement: population growth and lack of good governance. Regarding with the former reason, because of rapid urbanization, more people migrate from rural areas to the towns and natural population growth continues to occur. Today, more than half the world's population resides in urban areas. More than 90 percent of this urban growth is taking place in the developing world. Rural-Urban migration happens for a number of reasons: Some people migrate because they are pushed out of their place of origin by factors such as natural disasters or sustained ecological changes. Others are pulled to a new destination by better job prospects, education, health facilities, or freedom from restrictive social or cultural realities. For the latter reason, Governments often fail to recognize the rights of the urban poor and incorporate them into urban planning, thereby contributing to the growth of slums. In addition, many towns simply cannot respond to rapid urbanization quickly enough. People are coming to cities far faster than the planning process can incorporate them. Often, they find their own land and build a shack before the government has a chance to learn of their existence.

During our observation we found that slum settlements are expanding with lack basic municipal services such as water, sanitation, waste collection, storm drainage, street lighting, paved sidewalks and roads for emergency access. Most also do not have easy access to schools, hospitals or public places for the community to gather. Many slums have been subserviced and unrecognized for long periods. Like all informal settlements, housing in slums is built on land that the occupant does not have a legal claim to and without any urban planning.

Air pollution

As shown in table5 for the case of Sodo the majorities from all, 69(33.8%) and 51 (25%) responded as disagree and strongly disagree on air pollution as a problem. For the case of Tarcha 39(39.8%) can't decide whether it is a problem in their town or not followed by 35 (35.7%) who disagree on air pollution as a problem.

Though the surveyed households in the two case towns believe that air pollution is not as such a major environmental problem, the fast rate of urbanization in Sub-Sahara Africa, devoid of environmental safeguards, is a major factor in high air pollution levels. The air we breathe could be polluted with the byproducts of combustion from industry, power generation, and transportation, as well as the manufacture and use of chemicals. Air pollutants are a heterogeneous group of gases and particles that can remain airborne for long periods of time. Common air pollutants are oxides of nitrogen (NOx), oxides of sulfur (SOx), ozone (O3), carbon monox ide (CO), and particulate matter (PM).

About 70 to 80 percent of local air pollution in cities of Sub-Sahara Africa is caused by emissions from the transport sector. As air pollutant levels begin to exceed WHO standards in many Sub-Sahara African cities, they are now responsible for a plethora of adverse health effects, ranging from cardiovascular and respiratory disorders, cancers to reduced IQ of children. Women in the sub-region also suffer most from indoor air pollution due to extensive dependence on biomass cooking.

Challenges of Urban Environment Governance with respect to Participation among Households, the Community and Urban Municipalities in Sodo and Tarcha town

This section discusses the results on challenges of urban environment governance of the two case towns. Data was collected through interview and observation from individuals and experts among various actors. Since the survey result from the two town shows that poor sanitation and water supply, poor solid waste management, and inadequate drainage systems are the major urban environment problems, we focused to investigate the challenges of exercising urban environment governance on this three urban environmental problems.

The following table shows the summery result of the two town case raised by the actors as a challenge.

Table 4: Summary of results on challenges of urban environment governance.

Environment problems	Challenges
Inadequate water supply and poor sanitation	Frequent interruption of supply Lack of private investors Imbalance between demand service provision
Poor solid waste management	Poor communication Double payment (for the municipality and the associations) for their solid waste.

	Poor communication with the community
	Unwillingness of the households to pay their waste
	Road infrastructure problem to transport the waste to waste disposal site.
	Shortage of car to transport waste
	Lack of coordination from the community & private investors
	Limited awareness of the community about their responsibility
	Limited road infrastructure to transport waste from the town to the disposal site
Poor drainage and sewerage system	Problem of planning, implementation, monitoring
	Problem of maintaining of drainage channels
	Limited infrastructure
	Lack of community participation
	Lack of coordination from private investors
	Lack of resources and man power
	Communication gap among sectoral departments

The results on challenges of urban environment governance transcribed in the above table discussed below.

Poor communication and coordination among sectoral departments/Horizontal fragmentation'

Urban environmental problems such inadequate water supply and sanitation, poor solid waste management, air pollution, and so on have cross-border impacts. Environmental management practices on the identified urban environmental problems in the case towns are not effective largely due to poor communication and coordination which results the horizontal fragmentation of various sectoral departments involved in environmental management. This horizontal fragmentation occurs when many units of local government operate in distinct sectors without coordination. In Ethiopia in general and in the case towns in particular, a number of sectors, such as Urban Development and Construction, Water Supply and Sewerage Services are often in conflict or competition with one another. This resulted an extraordinary complexity in the decision making process on town municipalities. This indicates that other governmental sectoral departments, as an actor, because of their poor communication can lead to confusion.

Lack of collective action

Most responses to poor urban environmental problems needs collaboration between various actors: households, community based organizations (CBOs), non-governmental organizations (NGOs) and the private sector offering service where it is lacking. This means that most environmental action is always a matter of partnering..

Collective action seems to rest on the dedication and enthusiasm of a rather limited group of people. The survey result from the key informants revealed that most households are not motivated to engage in collective action and this is a serious bottleneck to practice urban environment governance. A key informant from Sodo Town said that:

"The less motivation of households raises issues of the difficulties of mobilizing community members. Many informal operators are involved in urban environmental service delivery, though they do not get the appropriate backing".

This implies that there is lack of community participation and coordination. Participation provides the opportunity to contribute in the policy and decision making process for the community. Participation in its approach is seen as a means of ensuring augmented social accountability with the involvement of the citizens in decision making as well as creating a close relationship between the "governed" and the "governing". Participation plays a key role by taking proper care of infrastructure and maintaining them with a feeling of ownership for a prolonged service life of infrastructure.

Lack of enforcement of rules and regulation

The respondents complained that there is lack of enforcement of rules and regulation about household solid waste management and that they haven't see anyone being punished until now. The main problem is that the municipality is not able to trace the problem or take a measurement on members breaking the rule. The key informant from Sodo said that:

"We report on household owners who are not acting according to the rules on waste collection process while working to municipality... the report back to the municipality solid waste management section by writing up the house numbers and their names but the municipality did not give response appropriately".

The other responds, "Whenever we report back to them they say they are going to look at the case, we should come back tomorrow or the other week and that they would take a measure but they never do something or give us a solution".

The survey data shows that there is a gap on enforcement of rules and regulations on solid waste management in particular in the case towns.

Mismatch between demand and urban service provision

The survey in the two case towns identified that there is growing demand of urban services. An informant from Tarcha town assures this by the following responses.

"The rapid growth of urban population and the present budgetary constraints challenged us to address the demand of the town dwellers".

Though the problem looks more in Tarch town, in Sodo town the survey identified the presence of mismatch between institutional capacities and responsibilities. The inability of local bodies (town municipalities) to generate internal resources, do not allow demand for services to be met by local bodies.

Traditional ways of Waste Management

In Sodo town though the municipality organized the waste collection workers and exercised house to house collection system through these workers, urban dwellers in in this town found exercising traditional way of waste management. A key informant said in Sodo town that "still so many community members manage solid waste through traditional mechanisms like burning, burying, dumping in rivers and gorges, etc." This implies that rather than cooperating with other actors who are involved in urban environment management, community members at household level they still rely on traditional waste management trend. The other informant also mentioned that "the main challenge in the current waste management work is that people are not changed and most people are still trapped in the traditional dumping and unclean habits they have developed before the current household management system".

This shows that though there are waste collectors organized to take waste out of their houses, if they miss a week by different reasons, the households would take out the trash and throw it on the street. We have also observed that it is how they have always done it and all they care is that it's out of their own house.

For the case of Tarcha town still there is no integrated waste management system. The methods used by the community members to remove wastes produced are either by dumping or by burning the waste inside or outside their compound.

CONCLUSION AND RECOMMENDATION

This study has been conducted to investigate the challenges of Urban Environment Governance with respect to participation and partnership among various actors in Sodo and Tarcha towns. Based on the literature revised, the data collected, and the findings obtained, conclusions drawn are attempted as follows.

The analysis of the survey result on urban environment problems indicated that inadequate water supply and sanitation, poor solid waste management, and problems related with drainage and sewerage system are found common problems on the two case towns.

Regarding with the actors in the urban environmental management process in the two case towns, the research analyzed that town municipalities are the central decision maker, although other non-municipal organizations like association organized to collect and transport solid wastes in particular, and households impact on the decisions of the MCN as well. We have observed that households are not cooperative to associations organized on solid waste management. The Association that has been organized (particularly in Sodo town) involved in the improvement of the environmental quality through clean-up exercises. They were more involved in solid waste management activities than inn water supply or sanitation. They faced a number of problems that affect their functioning. These problems include low participation of households, management problems, and low financial bases.

Finally an attempt made to investigate the challenges of urban environment governance with respect to participation among the key actors. The major challenges identified are: poor communication and coordination among sectoral departments/ Horizontal fragmentation, lack of enforcement of rules and regulation, lack of collective action, mismatch between demand and urban service provision, and Traditional ways of Waste Management.

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