Performance and Future Prospect of Water Supply and Sanitation in Ethiopia

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1. Introduction

Ethiopia is the second most populous country in Africa with 81 million population following Nigeria (140 million) in 2008. The country is also endowed with various types of resources which could change the life of many people. However, these untapped potential resources could not be used to change the life of the nation due to poor economic policies persuaded by earlier governments. As a result today the country finds itself at a lower level in all social and economic strata as compared to other developed and developing countries. The recent (2007) human development index put the country at 169 out of 177 countries. In addition to these other health indictors also highlights the lower health status in the country.

The country experiences a heavy burden of disease mainly attributed to communicable infectious diseases and nutritional deficiencies (HSDP III, 2004). More than 80 percent of all diseases in Ethiopia are attributed to poor access to clean water and sanitation. This situation is highly affecting those children who are below the age of five years. For instance, Ethiopia is the country where 35 percent of children are under weight (MOH, 1999). Sustainable improvement in drinking water and sanitation condition is essential to the poor to (1) reduce income losses due to excessive time spent collecting water;(2) increase income earning potential through increase in the productivity;(3) reduce the cost of health services especially for water related disease such as diarrhea;(4) increase income from cattle that depend on water;(5) increase the quality of life of the poor through positive impact on material and child health, improvement in education enrollment and attendance through better school sanitation, reduce home duties for water collection or caring for siblings, especially for girls and reduce drudgery and time spent o collection of water, especially for women (WSP,2003).

These advantageous natures of the provision of water supply and sanitation were realized by the current Government of Ethiopia (GoE). Though all the local administration are not in their full capacity to provide drinking water and sanitation, the government set up special Fund(Ethiopia Social Rehabilitation Fund) to assist the regional government in providing drinking water since 1996. Recently we started to see the fruit of the government's efforts by various report published by Government and International organizations. One of the reports is from the recent WHO and UNICEF joint report in water supply and sanitation. But some people who are far from Ethiopia's reality try to deny the undeniable change observed in this sub sector in the country by taking 2006 figures instead of using the figures that existed in 1990 which would

have provided as a good benchmark. What is shocking to me is that they want to blame the 15 years old government for the current lower level of drinking water supply and sanitation coverage than understanding the problem left by the pervious governments/regimes who administered the country for more than 100 years before 1991. Anyone with rational mind should evaluate the performances of the current government by the changes it has brought during its own administrative years. The current government should be evaluated by comparing the performances with previous regime/s or with other neighboring countries (average performance of SSA).

This approach is the clear and unbiased ways of giving performance measurements to criticize or encourage the government's work for future development endeavors of the country. In this regard I came across to some misinterpretations of a few people about the performance of drinking water supply and sanitation coverage in Ethiopia. The purpose behind this article is to show the real change recorded since 1990 and to forecast the future prospect of the sub sector. In order to maintain the uniformity of data/variable measurements I used only one source of data that was published recently by the joint World Health Organization (WHO) and United Nation International Children Education Fund (UNICEF).

This paper has five sections the first being an introduction. The second section briefly presents the performance of Ethiopia's water supply and sanitation referencing coverage at national, rural and urban area by comparing with other Eastern African countries (Kenya and Sudan) and average SSA. The next two sections highlight the policy and institutional changes undertaken during the last decade in the country. The last section is conclusion. To make it easier to my readers I present the full version of the paper by dividing it to two parts. Part I discusses the first two sections. The second part (Part II) will focus on the new institutional and policy changes introduced after Megistu Hailemariam's Military government.

2. Performance of Water supply and sanitation in Ethiopia

Provision of drinking water supply means the access of safe and enough quality and quantity of drinking water to the people. Sanitation also refers to the immediate household and community need for human waste management required for private and healthy living conditions to yield a clean environment (Mehta M. and Knapp A, 2004). The recent Joint Mentoring program (JMP) evaluates the performance of water supply and sanitation at the world level using "drinking water and sanitation ladder" which are the new ways of analyzing the provision of drinking water and sanitation. A "drinking water ladder" includes pipe water in to dwelling yard or plot[1], other improved[2] and unimproved[3] drinking water. On the other side a

[1] .Piped water on premises: Piped household water connection located inside the user's dwelling, plot or yard.
[2] Other improved drinking water sources: Public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs and rainwater collection

"sanitation ladder" includes improved, shared, unimproved and open defection[4]. Improved sanitation facilities means: Facilities that ensure hygienic separation of human excreta from human contact. Shared sanitation facilities means: Sanitation facilities of an otherwise acceptable type shared between two or more households. Shared facilities include public toilets. Unimproved sanitation facilities means: Facilities that do not ensure hygienic separation of human excreta from human contact. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines. In this section we will see the performances of drinking water and sanitation at the national, rural and urban area.

2.1 National performance of drinking water supply and sanitation

Ethiopia is one of the countries with low drinking water supply and sanitation coverage. The Military government failed to realize its universal access program which it had materialized it would have yielded 100 percent water supply and sanitation coverage by the end of the Ten Year Perspective Plan (TYPP). In 1990, the provision of drinking water supply was only 13 percent in Ethiopia. This was due to the complete failure and inefficiency of the central administration system during the Military Government. In the same year the drinking water supply was 41, 67, and 49 percent in Kenya, Sudan and average SSA country. When we observe the pipe water in a dwelling area or plot, in Ethiopia it was 0 percent unlike other neighboring countries which had more than 16 percent. In the same year 87 percent of people in Ethiopia got drinking water from unimproved source. But the source of unimproved drinking water is lower in other countries: 59 percent in Kenya, 36 percent in Sudan and 51 percent in SSA. Imagine how the Ethiopian people were underprivileged in getting the basic drinking water service in the country as compared to its neighbor countries during 1990.

When we observe the change of drinking water supply during the last 16 years, Ethiopia has shown a remarkable change in drinking water supply provision. For instance the improved drinking water supply reached 42 percent in 2006 from 13 percent in 1990. In the last sixteen years the improved drinking water supply increased by 223 percent as compared to Kenya (39%), Sudan (4%) and average SSA (18%). In terms of the reduction rate of unimproved drinking water source, Ethiopia unimproved drinking water decline by 33 percent as compared to 27,16 and 17 percent in Kenya, Sudan and SSA. When we see this change further in terms of the number, we see a great number of people who benefited; in Ethiopia around 25 million people now get drinking water while only 9 and 10 million people now get improved drinking water supply in Sudan and Kenya respectively.

[3] Unimproved drinking water sources: Unprotected dug well, unprotected spring, cart with small tank/drum, tanker truck, and surface water (river, dam, lake, pond, stream, canal, irrigation channels), bottled water.
[4] Open defecation: Defecation in fields, forests, bushes, bodies of water or other open spaces, or disposal of human feces with solid waste.

Table 1: The water supply and sanitation converge in selected years and countries

Indicator	Ethiopia			Kenya			Sudan			SSA		
	1990	2006	%Δ	1990	2006	%Δ	1990	2006	%Δ	1990	2006	%Δ
Water Supply												
Improved	13	42	223	41	57	39	67	70	4	49	58	18
Pipe into dwelling yard or plot	0	9	-	20	19	5	34	27	21	16	16	0
Other improved	13	33	153	21	38	81	30	43	43	33	42	27
Unimproved	87	58	-33	59	43	-27	36	30	-16	51	42	-17
Sanitation												
Improved	4	11	175	39	42	7.6	33	35	6	26	31	19
Shared	3	7	133	33	37	12	-	-	-	14	18	29
Unimproved	3	18	500	8	10	25	29	28	3	24	23	-4
Open defection	91	64	-30	20	11	-45	38	37	-3	36	28	-22

Source: WHO/UNICEF 2008 report

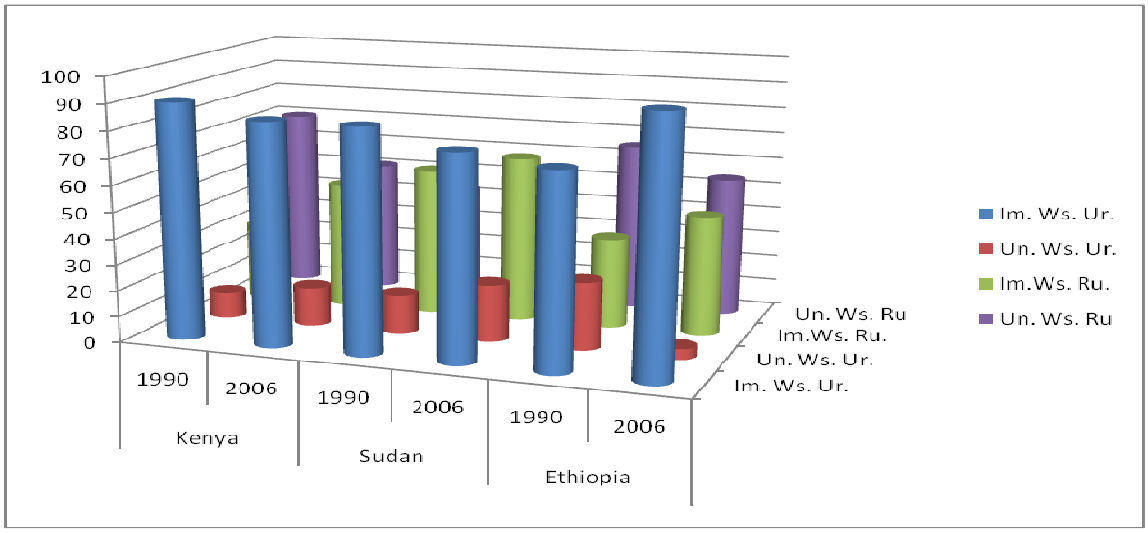
In terms of sanitation also, in 1990 the improved sanitation was 4 percent in Ethiopia when other neighboring countries like Kenya and Sudan had 39 and 33 percent. In the same year the average SSA average improved sanitation provision was 26 percent. It is very shocking to know that in this year only 1.9 million people (out of 48 million people) used improved sanitation in Ethiopia while 9 million people (out of 23 million) in Kenya and 8 million people (out of 26 million) in Sudan got improved sanitation. In other words, around 91 percent of Ethiopian people used open defection facility while in Kenya and Sudan only 20 and 38 percent of the people used open defection. Then during the last 16 years in Ethiopia around 6.2 million additional number of people got improved sanitation as compared to 4.9 and 5.9 million in Sudan and Kenya respectively. This performance can also be seen by the 30 percent reduction of open defection in Ethiopia when in Kenya open defection declined by 45 percent in the same year. In addition shared and unimproved sanitations increased by 133 and 500 percent respectively unlike other countries. Sanitation performed weak than the performance level of drinking water in the country. This may be due to the priority given for the provision of water supply. In this regard the study conducted by many researchers revealed that people request first water supply than sanitation service.

2.2 Urban and rural performance of water supply and sanitation

There is no clear definition of urban and rural area. Most of the time urban and rural area can be defined based on the provision of basic facilities or the total population in the specific area. Here this study uses the definition for urban/rural area based on the size of total population in specific area/region. Accordingly, in 1990 the urban drinking water supply was 74 percent in Ethiopia compared to the 90 percent in Kenya and 85 percent in Sudan. Even the average SSA urban drinking water supply was 82 percent which was 8 percent higher than Ethiopia's urban improved drinking water supply. The unimproved drinking water in the same year was 26 percent in the country as compared to Kenya (10%), Sudan (15%) and the average SSA (18%).

At the end of the study in (2006), in Ethiopia the urban drinking water increased to 96 percent. That means the urban improved drinking water increased by 30 percent as compared to 1990. But this performance recorded in Ethiopia was not observed in Sudan and Kenya urban drinking water supply. In Kenya the urban drinking water supply declined to 85 percent in 2006 as compared to 90 percent in 1990. But in Sudan no change has been observed in the provision of improved drinking water supply during the last 16 years. When Kenya failed to provide the drinking water for the fast growing urban people, Ethiopia, on the other hand provided urban drinking water for 22 percent additional people in the urban area.

Figure 1: Water supply in selected counties in urban and rural area in 1990 and 2006[5].

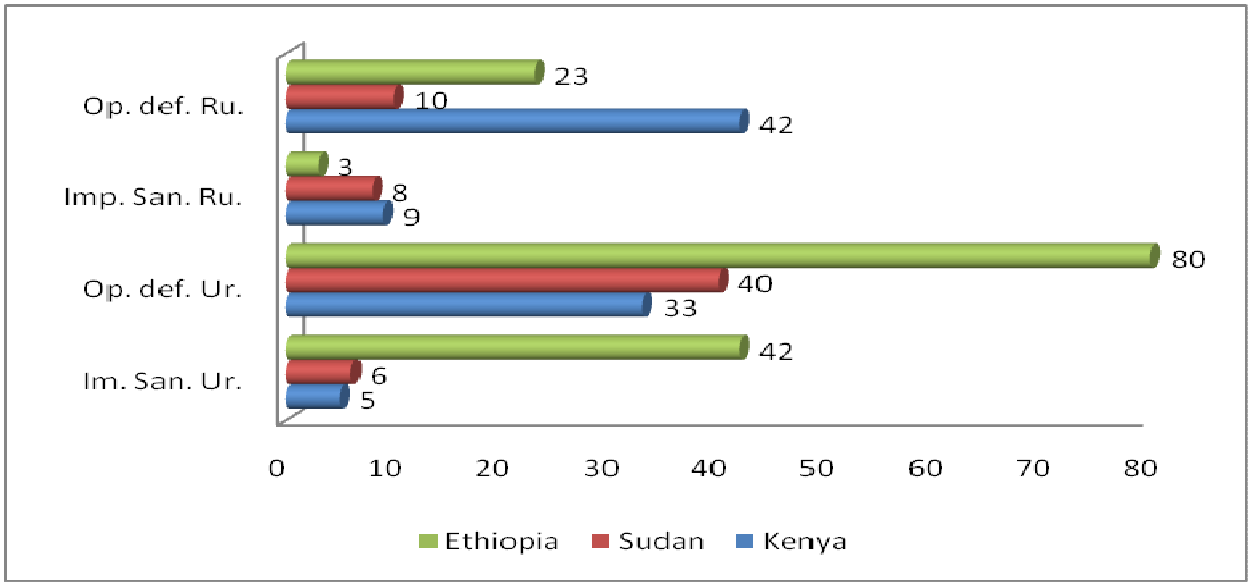


Source: Compiled by Author from WHO/UNICEF 2008 report, *Note: Un. Ws. Ur=Unimproved drinking water supply in urban, Im. Ws. Ur=improved drinking water supply in urban, Un. Ws. Ru=Unimproved drinking water supply in rural, Im. Ws. Ru=improved drinking water supply in urban.*

[5] The vertical line represents the percentage of improved and unimproved drinking water supply.

The rural area is the most disadvantaged in the provision of basic social service in most of the developing countries. In addition to the biased development priority pursued during the last decade, the poor infrastructure and scattered distribution of the population contributed for low provision of social service. In this regard, the best example is the provision of drinking water and sanitation in the rural area. In Ethiopia only 4 percent of the rural population got drinking water which is the lowest as compared to 30 percent in Kenya and 57 percent in Sudan. Even the average SSA drinking water in the rural area was 35 percent in the same year. In 2006 this low improved drinking water provision in rural Ethiopia increased to 31 percent. That means the improved drinking water increased by 675 percent as compared to 63 percent and 12 percent improvement of drinking water in Kenya and Sudan in the same period respectively. Imagine how many million additional people benefited by getting improved drinking water in rural Ethiopia during the year the study was being conducted. This is the result of government rural base development policy and the plan designed to empower the local people by involving them in the provision of drinking water in the rural area.

Figure 2: Percentage change of urban and rural sanitation in selected countries[6].



Source: Compiled by Author from WHO/UNICEF 2008 report,

Note; Op.def. Ru: Open defection in rural, Imp. San. Ru: Improved sanitation in rural, Op. def. ur.: Open defection in urban, Imp. San. ur: Improved sanitation in urban.

When we observe the sanitation, in 1990 the improved sanitation in the urban area is 19 percent which is one percent higher than Kenya and 34 percent less than Sudan's improved urban sanitation. During the last 16 years the improved urban sanitation increased by 42 percent in

[6] The horizontal line represent the percentage of improved sanitation and open defection

Ethiopia as compared to 5 and 6 percent in Kenya and Sudan respectively(see figure 2 above). In other words Ethiopia's urban open defection during these years declined by 80 percent which is 100 percent more than the decline in open defection in Kenya and Sudan. In the same manner in 1990 the rural improved sanitation was 2 percent. It is lower than Kenya and Sudan which had 44 and 26 percent respectively in 1990. In 2006 the improved sanitation in rural area reached to 8 percent in Ethiopia. It is the lowest performance as compared to 48 and 24 percent improvement of Kenya and Sudan. That means during the last 16 years improved rural sanitation increased only by 3 percent in Ethiopia which is the lower performance as compared to 8 and 9 percent in Sudan and Kenya. The performance of sanitation in the rural area is lower than the improvement of sanitation in urban area. This poor performance of sanitation aggravates the existing urban-rural gap in sanitation provision in the country.

Part II briefly explains the reason behind these performances of water supply and sanitation in Ethiopia. In addition to this I will highlight the future prospect of water supply and sanitation in the country and forward the possible recommendations to achieve the universal water supply and sanitation coverage at the end of 2015.

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