

Issues of Access to and Utilization of Project Services amongst Communities with the EU-MPP6 Water Supply and Sanitation Projects in Imo State, Nigeria

Dr. Ezirim, O.N.

Dept. of Urban & Regional Planning
Federal Polytechnic, PMB 1036, Owerri, Nigeria
on_ezirim@yahoo.com +2348037173690

Dr. Onyenechere, E.C.

(corresponding author)
Dept. of Geography & Environmental Management
Imo State University, PMB 2000, Owerri, Nigeria
emmazob@yahoo.com +2348033743055

Doi:10.5901/mjss.2013.v4n6p239

Abstract

Despite the existence of a number of water and sanitation facilities, access to water supply and sanitation in Nigeria has remained a problem. This study examines communities' access to the European-Union Micro-Projects Programme (EU-MPP6) water supply and sanitation projects in Imo State, Nigeria and equally examines the communities' utilization of the projects' services. For the study primary data were collected from the key staff of the European Union Micro Projects Program and at the household level. Using distance, time and money as major determinants of access, the study revealed that there is considerable reduction in time spent fetching water (less than 1 hour), distance travelled to fetch water (less than 401metres), and households pay nothing most times for water fetched. Households collect above 20 litres from water points daily, and much of what is collected is for the purpose of drinking. Multiple regression model and the students't test statistical tools were used in testing the central hypothesis. Result of the test indicated that, there is a significant relationship between the access of the communities to the EU-MPP6 water supply and sanitation projects and the communities' utilization of the project services in Imo State. Presently, the people of the benefitting communities travel shorter distances to access greater quantity of water as a result of the presence of the EU-MPP6 water supply and sanitation projects. The significant difference that is exhibited by the access of the benefitting communities to the projects is an indication of the projects' effectiveness in Imo State, Nigeria.

Keywords: project services; access, communities, utilization, European Union, Nigeria

1. Introduction

As a vital natural resource, water is necessary for sustenance of life and ecological systems. In addition to having water to drink, people require it for sanitation. Water and sanitation complement each other and have considerable implications for the health, welfare, productivity and economic well-being of individuals, and households. Since the largest proportion of the world's poorest people live in rural areas across the world (Haan, 1997), and over 25% live below poverty line in rural parts of Imo State, Nigeria (Adeyemo, 2008), for them access to water can make a difference between life and death. This is because rural people require water for a wide range of activities essential to their livelihoods including both domestic and productive needs.

Department for International Development (2007) reported that access to improved drinking water sources in Nigeria increased from 49 per cent in 1990 to 60 per cent in 2002 and decreased to 48 per cent in 2004. In the rural sector, access increased from 33 per cent in 2002 but decreased to 31 per cent in 2004. As noted by the Federal Government of Nigeria (2004), access to water supply and sanitation in Nigeria has remained inadequate arising from years of neglect in the country. In most parts of Imo State, Nigeria prior to the EU-MPP6 projects intervention, populations of most communities continued to grow without significant improvement in access to safe water supply and sanitation services. Okereke *et al.* (2000) and Igbozurike *et al.* (2010) reported that some households trek long distances to collect water from shallow wells, ponds, streams, and springs. At the on-set of dry season, most shallow wells are

subject to fluctuation in the level of water while ponds are highly insanitary sources of water as they contain a lot of mud and debris which render them totally unhygienic and unfit for most domestic uses. Some streams are ephemeral and during the dry seasons have no water at all within their channels. Still, springs which are available in a few places, are mainly located in rugged, steep and slippery areas mostly unapproachable by vehicles (Uzoma, 1996; Ezeigbo 2005). Bacteriological studies in Nigeria have shown consistent contamination of most of the water sources with faecal coliforms and streptococci (MacDonald, 2001; Esrey *et al.*, 2006).

Access to basic services like water supply and sanitation is a moral and ethical imperative rooted in the cultural and religious tradition of societies around the world (Akpabio, 2012). The lack of access to safe drinking water and to basic sanitation impedes economic development, thwarts progress towards gender equality and puts the health in danger. Human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use. The thrust of this study is to examine communities' access to the EU-MPP6 water and sanitation projects and the communities' utilization of the project services.

2. Materials and Methods

2.1 The Research Design

This study employed both survey and experimental methods in the collection of data. The survey method was employed in this study to select the target population and to get the desired responses on the effectiveness of the EU-MPP6 water supply and sanitation projects (Cates, 1985; Osuala, 2005). The experimental method was used to analyze the water samples from the EU-MPP6 projects.

2.2 Research Population

In this study, research population included the following:

- a) Entire population of Local Government Areas and communities;
- b) All members of staff of the EU-MPP6 water supply and sanitation projects ;
- c) The EU-MPP6 project managers;
- d) The experts in water supply and sanitation projects in private and public sectors.

2.3 Sources of Data

Data for the study were collected from the primary sources. The primary data were information collected on first hand from the field such as the number of the EU-MPP6 projects accessible to the communities. In this study, households constitute the study unit from which primary data relating to the projects are collected. For this study, a household is referred to as the unit that comprises a person, or group of persons, generally bound by ties of kinship, who live together under a single roof or within a single compound, and who share a community life (World Health Organization/United Nations Children Education Fund, 2007). The household survey was complemented with direct observation and focus group discussions.

2.4 Sampling Procedure

There are 301 communities in 27 Local Government Areas of Imo State. Between 2003 and 2008, a total of 88 EU-MPP6 water supply and sanitation projects were executed in various communities across the 27 Local Government Areas of Imo State (Federal Government of Nigeria-European Union, 2006). The study adopted a multi-stage stratified random sampling approach in selecting subjects for the study. The 27 Local Government Areas are taken as clusters. The 27 Local Government Areas form the first sample frame from which 44 percent of the Local Government Areas, representing 12 Local Government Areas of Imo State were randomly selected. In each of the randomly selected 12 Local Government Areas, communities where the EU-MPP6 water supply and sanitation projects were initiated and completed were identified. The list of these communities formed the second sample frame from which 50 percent of the communities, representing 29 communities were randomly selected. The technique of the random sampling method employed is the fish-bowl technique (Denga and Ali, 1998). The names of the 27 Local Government Areas were written on pieces of paper, rolled into paper balls and mixed thoroughly in a container from where the 44 percent of the Local

Government Areas were blindly drawn. The same procedure was employed in selecting the 50 percent of the communities.

In terms of the selection of the respondents, the randomly selected 29 communities served as the third sampling frame from which stratified sampling method was employed to draw out 20 households from each of the communities. Stratified sampling method was adopted to take care of the heterogeneous and the amorphous nature of the population of study. This method guaranteed the inclusion of all the categories of the population that could be relevant in providing the required data. In terms of geographical spread, the study covered randomly selected 580 households from randomly selected 29 communities which benefited from the EU-MPP6 water supply and sanitation intervention in of Imo State.

2.5 Instruments for Data Collection

Two sets of questionnaire were designed and utilized. The first set of questionnaire was designed for households in the study communities. The second set was designed for key staff of the European Union Micro Projects Program. The first set of questionnaire contained question items relating to communities' access to and utilization of the project facilities and services. The second set of questionnaire contained question items relating to project rules of the EU-MPP6 water supply and sanitation projects.

Information gathering and data collection were done at three identifiable levels. At the state level, interviews were conducted with key informants in the Public Utility Board and the European Union Micro-Projects Program (MPP6). The administrators and engineers supplied the needed information. Documents and relevant publications were also obtained from these institutions. The stratified sampling of the households was done with their inputs. In the Local Government Areas, the members of Water and Sanitation Committee were the main sources of data. In some Local Government Areas, the chairman of the Local Government Area and the coordinator of the Poverty Alleviation Unit views and convictions in relation to community water and sanitation were of importance. Generally, the schedule officers for water and sanitation were the key informants. In the communities, the members of the Water and Sanitation Committee provided information at the level of the community. The study was conducted from 2005 to 2011. This period covered the gestation and the manifestation period of the intervention (the project). This helped in determining whether there is any significant difference in some of the variables under study before and after the intervention (the project).

2.6 Data Analysis

Descriptive statistics such as frequency distribution, percentages, category scores and rank scores were used to present the data from the field survey. Data collected from the field survey are also presented with the use of tables. Inferential statistics such as Multiple Regression models and Students't test were used to analyze the data. The relevant computer software used for analysis of the data were the Microsoft Excel version 2011, the Advanced Statistical Analysis Tools in Corel Quattro Pro X4 (Product of Corel Word Perfect Corporation of United Kingdom) and the Statistical Packages for Social Sciences version 19.0 (SPSS; Chicago, IL; USA). In each case, the technique involved input of data from the field survey in worksheets for processing by the computer.

3. Results and Discussion

3.1 Access of the Communities to the EU-MPP6 Water Supply and Sanitation Projects

To ascertain the access of the communities to the EU-MPP6 water supply and sanitation projects, considered in the study are the following: the proportions of user-households and non-user households of the projects, the distance covered by households in fetching water before and after the EU-MPP6 projects, time taken by the households in fetching water before and after the projects, and the amount households pay for water before and after the projects.

The respondents were asked if their households use the water from the EU-MPP6 projects. As shown in Table 1, 448 households represented by 84.1 percent of the respondents use the water from the projects water while 92 households represented by 15.9 percent of the respondents do not use the water from the projects. In other words, 448 (84.1 percent) households are EU-MPP6 project water users while 92 (15.9 percent) households are EU-MPP6 project water non-users. This indicates the wide spread acceptance of the projects and the access of the benefitting communities to the water supply.

Table 1: Use of Water from the EU-MPP6 Water Supply and Sanitation Projects

S/N	COMMUNITY	FREQUENCY	
		YES	NO
1	EZUHU NGURU	15	5
2	OBOKWU NGWURU	16	4
3	NNARAMBIA	16	4
4	UMULOLO	17	3
5	AMAEGBU	18	2
6	UMUORIE EZIUDO	17	3
7	EZIALA AMUMARA	18	2
8	AMAGHOR IHITE	19	1
9	UMUEZEALA OBBOKO	16	4
10	AMUWU	17	3
11	AGWU NA DIM	15	5
12	NNEATO UMUOKIE	16	4
13	UMUZOHO EZIHE	15	5
14	AGADA ATTA	17	3
15	ABOH EBIKORO	16	4
16	UMUOZIRI	18	2
17	OWUBIRIUBI	18	2
18	NDIUKWU	17	3
19	UMUCHOKE	16	4
20	UMUDURUEKWE	18	2
21	AMAKUTA	17	3
22	NDIKPA	18	2
23	UMUNWAFOR	16	4
24	UMUOCHAM NTU	17	3
25	AMAOKPARA	18	2
26	UMUGARA	17	3
27	UMUASONYE	18	2
28	EZEAKIRI	16	4
29	OBUBE	16	4
	TOTAL	488	92
	% DISTRIBUTION	84.1%	15.9%
NUMBER OF SAMPLED HOUSEHOLDS=580			
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)			

Respondents were first asked the distance their households covered in fetching water before the EU-MPP6 water supply and sanitation projects were commissioned. The distribution of the responses of respondents on the distance households covered to fetch water before the EU-MPP6 water supply and sanitation projects were commissioned is shown in Table 2. The distance ranges from less than 401metres to above 700metres. From the Table, no households covered a distance of less than 401metres before the projects were commissioned, 7.8 percent of the households covered a distance of between 401 and 500metres, while a distance of between 501 and 600metres is covered by 8.4 percent of the households to reach the source points. In addition 14.3 percent of the households covered a distance of between 601 and 700metres while 69.5percent of the households covered a distance of above 700metres fetching water from their source points before the EU-MPP6 projects were commissioned. From the data, households using the EU-MPP6 project water represented by 84.1 percent of the respondents cover a distance of more than 400metres to and fro source points fetching water before the EU-MPP6 projects were commissioned. According to Mellor (2004), the market range of a service activity is the maximum distance which an individual is willing to travel to reach a service. Handy and Niemeier (2007) discovered that the maximum distance an individual is willing to travel to reach a service and beyond which an alternative is sought is 400metres. Therefore, prior to the commissioning of the MPP6 water supply and sanitation

projects, people trekked long distances fetching water from various sources. This explains why a great deal of energy is spent fetching water in rural communities especially during the dry season.

Respondents were also asked the distance their households cover in fetching water from the EU-MPP6 water supply and sanitation project after commissioning. The distribution of the responses of respondents on the distance households cover in fetching water is shown in Table 3. The distance ranges from less than 401metres to above 700metres. From Table 6, 70.3 percent of the households cover a distance of less than 401metres after the projects were commissioned, 10 percent of the households covers a distance of between 401 and 500metres, while a distance of between 501 and 600metres is covered by 8.2 percent of the households to reach the source points. In addition 8.8 percent of the households cover a distance of between 601 and 700metres and 2.7percent of the households covers a distance of above 700metres to and fro fetching water from the source points after the EU-MPP6 projects intervention. As revealed by the data, 70.3 percent of the households using the water from the EU-MPP6 projects cover a distance of less than 401metres fetching water. In other words, the water source points of the households of the majority of the respondents (70.3 percent) after EU-MPP6 projects intervention is less than 401metres. Therefore, the presence of the EU-MPP6 projects reduced the distance households' travel to fetch water when Table 2 is matched against Table 3.

Table 2: Distance Covered by Households in Fetching Water before the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	DISTANCE IN METRES				
		Less than 401	401-500	501-600	601-700	Above 700
1	EZUHU NGURU	0	1	1	3	10
2	OBOKWU NGWURU	0	1	1	2	12
3	NNARAMBIA	0	1	1	3	11
4	UMULOLO	0	1	1	2	13
5	AMAEGBU	0	1	2	2	13
6	UMUORIE EZIUDO	0	2	2	2	11
7	EZIALA AMUMARA	0	1	2	1	14
8	AMAGHOR IHITE	0	1	1	4	13
9	UMUZEZALA OBBOKO	0	1	1	1	13
10	AMUWU	0	1	1	2	13
11	AGWU NA DIM	0	2	1	2	10
12	NNEATO UMUOKIE	0	1	1	2	12
13	UMUZOHO EZIHE	0	1	1	2	11
14	AGADA ATTA	0	3	1	3	10
15	ABOH EBIKORO	0	2	2	2	10
16	UMUOZIRI	0	1	1	3	13
17	OWUBIRIUBI	0	1	2	3	12
18	NDIUKWU	0	1	1	3	12
19	UMUCHOKE	0	1	1	3	11
20	UMUDURUEKWE	0	1	2	3	12
21	AMAKUTA	0	1	1	2	13
22	NDIKPA	0	2	2	3	11
23	UMUNWAFOR	0	2	1	2	11
24	UMUOCHAM NTU	0	2	3	3	9
25	AMAOKPARA	0	2	1	2	13
26	UMUGARA	0	1	2	2	12
27	UMUASONYE	0	1	2	4	11
28	EZEAKIRI	0	1	1	2	12
29	OBUBE	0	1	2	2	11
	TOTAL	0	38	41	70	339
	%DISTRIBUTION	0.0%	7.8%	8.4%	14.3%	69.5%
NUMBER OF SAMPLED HOUSEHOLDS=488						
SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011						

Table 3: Distance Covered by Households in Fetching Water after the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	DISTANCE IN METRES				
		Less than 401	401-500	501-600	601-700	Above 700
1	EZUHU NGURU	10	2	1	2	0
2	OBOKWU NGWURU	11	1	1	2	1
3	NNARAMBIA	12	2	1	1	0
4	UMULOLO	13	1	1	1	1
5	AMAEGBU	11	4	1	2	0
6	UMUORIE EZIUDO	10	3	1	3	0
7	EZIALA AMUMARA	12	1	1	2	2
8	AMAGHOR IHITE	14	2	2	1	0
9	UMUEZEALA OBBOKO	12	1	1	1	1
10	AMUWU	13	2	1	1	0
11	AGWU NA DIM	10	1	2	2	0
12	NNEATO UMUOKIE	12	2	1	1	0
13	UMUZOHO EZIHE	11	1	1	1	1
14	AGADA ATTA	10	3	2	2	0
15	ABOH EBIKORO	12	1	2	1	0
16	UMUOZIRI	13	1	2	1	1
17	OWUBIRIUBI	14	1	2	1	0
18	NDIUKWU	13	1	1	1	1
19	UMUCHOKE	12	2	1	1	0
20	UMUDURUEKWE	12	2	1	2	1
21	AMAKUTA	12	2	1	2	0
22	NDIKPA	11	2	2	2	1
23	UMUNWAFOR	11	1	2	1	1
24	UMUOCHAM NTU	13	2	1	1	0
25	AMAOKPARA	12	2	2	2	0
26	UMUGARA	13	2	1	1	0
27	UMUASONYE	11	2	2	2	1
28	EZEAKIRI	12	1	1	1	1
29	OBUBE	11	1	2	2	0
	TOTAL	343	49	40	43	13
	%DISTRIBUTION	70.3%	10.0%	8.2%	8.8%	2.7%
NUMBER OF SAMPLED HOUSEHOLDS=488						
SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011						

Respondents were asked the time taken by households daily in fetching water before the EU-MPP6 water supply and sanitation projects were commissioned. The distribution of the responses of respondents varies from less than 1hour to above 6hours as shown in Table 4. From Table 4, 81.1 percent of the households spent between 1hour and 2hours fetching water from their source points while 18.9 percent spent between 3hours and 4hours fetching water from their source points. On the whole, all the EU-MPP6 user-households spent more than 1 hour daily fetching water from their source points before the EU-MPP6 projects were commissioned. It follows therefore, that before the EU-MPP6 projects were commissioned majority of the households in the study communities spent a great deal of time fetching water from various source points.

Respondents were also asked the time taken by households in fetching water after the EU-MPP6 water supply and sanitation projects were commissioned. The distribution of the responses of respondents on the time taken by households fetching water varies from less than 1hour to above 6hours as shown in Table 5. From Table 5, 78.5 percent of the households spend less than 1hour while 21.5 percent of the households spend between 1hour and 2hours fetching water after the EU-MPP6 projects were commissioned. On the whole, the least proportion (21.5 percent) of the households spend above one hour daily fetching water while majority of the households (78 percent) of respondents spends less than 1 hour daily in fetching water. Therefore, there have been considerable reductions in the time (less than

1hour) majority (78 percent) of the households in the communities spend in accessing water after the EU-MPP6 projects were commissioned when Table 5 is matched against Table 4.

Table 4: Time Taken by Households in Fetching Water before the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	TIME IN HOURS				
		LESS THAN 1 HOUR	1-2HOURS	3-4HOURS	5-6HOURS	ABOVE 6HOURS
1	EZUHU NGURU	0	13	2	0	0
2	OBOKWU NGWURU	0	15	1	0	0
3	NNARAMBIA	0	14	2	0	0
4	UMULOLO	0	13	4	0	0
5	AMAEGBU	0	14	4	0	0
6	UMUORIE EZIUDO	0	15	2	0	0
7	EZIALA AMUMARA	0	13	5	0	0
8	AMAGHOR IHITE	0	15	4	0	0
9	UMUEZEALA OBBOKO	0	14	2	0	0
10	AMUWU	0	13	4	0	0
11	AGWU NA DIM	0	13	2	0	0
12	NNEATO UMUOKIE	0	12	4	0	0
13	UMUZOHO EZIHE	0	13	2	0	0
14	AGADA ATTA	0	14	3	0	0
15	ABOH EBIKORO	0	14	2	0	0
16	UMUOZIRI	0	15	3	0	0
17	OWUBIRIUBI	0	12	6	0	0
18	NDIUKWU	0	14	3	0	0
19	UMUCHOKE	0	14	2	0	0
20	UMUDURUEKWE	0	13	5	0	0
21	AMAKUTA	0	15	2	0	0
22	NDIKPA	0	14	4	0	0
23	UMUNWAFOR	0	14	2	0	0
24	UMUOCHAM NTU	0	13	4	0	0
25	AMAOKPARA	0	15	3	0	0
26	UMUGARA	0	14	3	0	0
27	UMUASONYE	0	13	5	0	0
28	EZEAKIRI	0	12	4	0	0
29	OBUBE	0	13	3	0	0
	TOTAL	0	396	92	0	0
	%DISTRIBUTION	0.0%	81.1%	18.9%	0.0%	0.0%
NUMBER OF SAMPLED HOUSEHOLDS=488						
SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011						

Table 5: Time Taken by Households in Fetching Water after the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	TIME IN HOURS				
		LESS THAN 1 HOUR	1-2HOURS	3-4HOURS	5-6HOURS	ABOVE 6HOURS
1	EZUHU NGURU	13	2	0	0	0
2	OBOKWU NGWURU	14	2	0	0	0
3	NNARAMBIA	14	2	0	0	0
4	UMULOLO	13	4	0	0	0
5	AMAEGBU	12	6	0	0	0
6	UMUORIE EZIUDO	14	3	0	0	0
7	EZIALA AMUMARA	14	4	0	0	0
8	AMAGHOR IHITE	13	6	0	0	0
9	UMUEZEALA OBBOKO	14	2	0	0	0
10	AMUWU	13	4	0	0	0
11	AGWU NA DIM	14	1	0	0	0
12	NNEATO UMUOKIE	14	2	0	0	0
13	UMUZOHO EZIHE	12	3	0	0	0
14	AGADA ATTA	12	5	0	0	0
15	ABOH EBIKORO	14	2	0	0	0
16	UMUOZIRI	12	6	0	0	0
17	OWUBIRIUBI	13	5	0	0	0
18	NDIUKWU	13	4	0	0	0
19	UMUCHOKE	14	2	0	0	0
20	UMUDURUEKWE	13	5	0	0	0
21	AMAKUTA	11	6	0	0	0
22	NDIKPA	13	5	0	0	0
23	UMUNWAFOR	14	2	0	0	0
24	UMUOCHAM NTU	14	3	0	0	0
25	AMAOKPARA	13	5	0	0	0
26	UMUGARA	12	5	0	0	0
27	UMUASONYE	14	4	0	0	0
28	EZEAKIRI	14	2	0	0	0
29	OBUBE	13	3	0	0	0
	TOTAL	383	105	0	0	0
	%DISTRIBUTION	78.5%	21.5%	0.0%	0.0%	0.0%
NUMBER OF SAMPLED HOUSEHOLDS=488						
SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011						

Respondents were first asked the amount households paid each time water was fetched before the EU-MPP6 water supply and sanitation projects were commissioned. The result obtained from the field survey reveals that the amount paid each time water was fetched ranges from less than N10 to above N49 in the communities sampled. The distribution of responses of respondents is shown in Table 6 [where N stands for Nigerian Naira; the current exchange rate is N160 to United States \$1(one Dollar)]. From Table 6, households represented by 23.8 percent of the respondents paid less than N 10 for water each time fetched while households represented by 7.9 percent of the respondents paid between N 10 and N19 for water before the EU-MPP6 projects were commissioned. Again, households represented by 14.3 percent of the respondents paid between N 20 and N 29 for water each time fetched while households of 21.2 percent of the respondents paid between N30 and N39 for water each time fetched. Furthermore, households of 19 percent of the respondents paid between N 40 and N49 for water each time fetched while households of 13.8 percent of the respondents paid above N 49 for water each time fetched. From the data, households represented by 76.2 percent of the respondents paid above N10 for water while households represented by 23.8 percent of the respondents paid below N10 for water each time fetched from other sources before the EU-MPP6 water supply and sanitation projects were commissioned. By implication, the households in the EU-MPP6 benefitting communities paid various amounts for water from different sources.

Respondents were also asked the amount households pay for water each time they fetch water after the EU-MPP6 water supply and sanitation projects were commissioned. The result obtained from the field survey reveals that the

amount paid each time water is fetched ranges from less than N10 to above N49 in the communities sampled. The distribution of responses of respondents is shown in Table 7. From Table 7, households represented by 66 percent of the respondents pay less than N 10 for water each time fetched while households represented by 8.8 percent of the respondents pay between N 10 and N19 for water each time fetched. Again, households represented by 7.2 percent of the respondents pay between N 20 and N 29 for water fetched each time while households represented by 6.8 percent of the respondents pay between N 30 and N39 for water each time fetched. Furthermore, households represented by 5.9 percent of the respondents pay between N 40 and N49 for water each time fetched while households represented by 5.3 percent of the respondents pay above N 49 for water each time fetched. From the data, households represented by 66 percent of the respondents pay below N 10 for water each time fetched while households represented by 34 percent of the respondents pay above N10 for water each time fetched after the EU-MPP6 water supply and sanitation project was commissioned. Further interaction with the respondents revealed that most of the households in the communities do not pay any amount most of the time for water fetched after the EU-MPP6 projects intervention. Therefore the presence of the EU-MPP6 water supply and sanitation projects has reduced the amount of money households spend on water when Table 7 is matched against Table 6.

Table 6: Amount of Money per Day Paid by Households for Water Before the EU-MPP6 Water Supply and Sanitation Projects

S/N	COMMUNITY	Naira Value					
		LESS THAN 10	10-19	20-29	30-39	40-49	ABOVE 49
1	EZUHU NGURU	7	1	2	2	5	3
2	OBOKWU NGWURU	6	3	2	3	4	2
3	NNARAMBIA	6	1	3	4	5	1
4	UMULOLO	5	2	3	5	3	2
5	AMAEGBU	3	1	4	7	4	1
6	UMUORIE EZIUDO	5	2	3	6	3	1
7	EZIALA AMUMARA	4	1	4	4	4	3
8	AMAGHOR IHITE	3	2	3	6	3	3
9	UMUEZEALA OBBOKO	5	2	2	5	4	2
10	AMUWU	5	2	2	5	4	2
11	AGWU NA DIM	6	1	5	4	3	1
12	NNEATO UMUOKIE	5	1	4	4	3	3
13	UMUZOHO EZIHE	6	1	2	5	3	3
14	AGADA ATTA	5	2	4	4	3	2
15	ABOH EBIKORO	5	1	3	3	4	4
16	UMUOZIRI	4	2	3	4	4	3
17	OWUBIRIUBI	4	2	3	3	4	4
18	NDIUKWU	4	2	3	4	4	3
19	UMUCHOKE	5	1	2	5	3	4
20	UMUDURUEKWE	4	1	5	4	3	3
21	AMAKUTA	5	1	3	4	3	4
22	NDIKPA	3	1	3	6	4	3
23	UMUNWAFOR	5	2	2	4	4	3
24	UMUOCHAM NTU	4	2	2	5	3	4
25	AMAOKPARA	4	2	3	4	4	3
26	UMUGARA	5	2	1	2	6	4
27	UMUASONYE	4	2	3	5	4	2
28	EZEAKIRI	6	1	1	3	5	4
29	OBUBE	5	2	3	3	4	3
	TOTAL	138	46	83	123	110	80
	%DISTRIBUTION	23.8%	7.9%	14.3%	21.2%	19.0%	13.8%
NUMBER OF SAMPLED HOUSEHOLDS=580							
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)							

Table 7: Amount of Money per Day Paid by Households for Water after the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	Naira Value					
		LESS THAN 10	10-19	20-29	30-39	40-49	ABOVE 49
1	EZUHU NGURU	11	1	1	1	1	0
2	OBOKWU NGWURU	11	1	1	1	1	1
3	NNARAMBIA	10	1	1	1	1	2
4	UMULOLO	11	1	2	1	1	1
5	AMAEGBU	12	1	1	1	2	1
6	UMUORIE EZIUDO	11	2	1	1	1	1
7	EZIALA AMUMARA	11	3	1	1	1	1
8	AMAGHOR IHITE	13	2	2	1	1	0
9	UMUZEALA OBBOKO	12	1	1	0	1	1
10	AMUWU	12	1	1	1	1	1
11	AGWU NA DIM	9	2	1	1	1	1
12	NNEATO UMUOKIE	10	1	1	2	1	1
13	UMUZOHO EZIHE	9	2	1	1	1	1
14	AGADA ATTA	12	1	1	1	1	1
15	ABOH EBIKORO	10	1	2	1	1	1
16	UMUOZIRI	13	2	2	0	0	1
17	OWUBIRIUBI	12	2	1	2	0	1
18	NDIUKWU	10	2	1	2	2	0
19	UMUCHOKE	11	1	1	1	1	1
20	UMUDURUEKWE	14	1	1	1	1	0
21	AMAKUTA	12	1	2	1	0	1
22	NDIKPA	10	2	2	2	1	1
23	UMUNWAFOR	9	1	1	2	2	1
24	UMUOCHAM NTU	11	1	1	2	1	1
25	AMAOKPARA	12	2	1	1	1	1
26	UMUGARA	12	1	1	1	1	1
27	UMUASONYE	11	3	1	1	1	1
28	EZEAKIRI	10	2	1	1	1	1
29	OBUBE	11	1	1	1	1	1
	TOTAL	322	43	35	33	29	26
	%DISTRIBUTION	66.0%	8.8%	7.2%	6.8%	5.9%	5.3%
NUMBER OF SAMPLED HOUSEHOLDS=488							
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)							

3.2 Utilization of the Eu-MPP6 Water Supply and Sanitation Projects' Services

In ascertaining the communities' utilization of the EU-MPP6 water supply and sanitation projects' services, the data considered for analysis are: the sources of water of the households before and after the projects, the reasons for the households using the water from the projects, number of times a day households were fetching water before and after the projects, quantity of water fetched by households before and after the projects, the purpose for which the households use the water from the projects before and after the projects, the duration in using the water from the projects by households, and household member involved in fetching water.

The respondents in the sampled communities were first asked to indicate their sources of water before the EU-MPP6 water supply and sanitation project was commissioned. It is important to note that some respondents indicated more than one source. For the 488 respondents representing the user-households of the water from the EU-MPP6 projects, the sources vary from natural sources such as rivers, streams, ponds, rainwater, to human made sources such as hand-dug wells, and in few cases, private boreholes and water vendors as shown in Table 8. Given the responses of respondents, 36 (7.4 percent) of the user-households sourced water from the pond, the 448 (100 percent) of the user-households sourced water from rainfall, while 293 (60 percent) sourced water from streams/rivers before the EU-MPP6

projects were commissioned. Furthermore, 117 (24 percent) of the user-households sourced water from hand-dug wells, 45 (9.2 percent) sourced from private borehole, while 59 (12.1 percent) of the user-households sourced water from water vendors before the EU-MPP6 projects were commissioned.

For the 92 respondents representing the non-user households of the water from the EU-MPP6 projects, the sources also vary from natural sources such as rivers, streams, ponds, rainwater, to human made sources like hand-dug wells, and in few cases, private boreholes and water vendors as shown in Table 9. It is important to note that some respondents indicate more than one source. Given the responses of respondents, the use of pond was not observed among the non-user households of the water from the EU-MPP6 projects while all the 92 (100 percent) of the non-user households sourced water from rainfall and streams/rivers respectively. Furthermore, 54 (58.7 percent) of the non-user households sourced water from hand-dug wells, 79 (85.9 percent) sourced from private borehole, while 70 (76.1 percent) of the non-user households sourced water from the water vendors.

Generally, the communities, by force of circumstances, depended mainly on natural sources of water supply before the EU-MPP6 water supply and sanitation projects were commissioned. Most of the traditional sources of water in the study communities are seasonal and are incapable of meeting all-year-round water needs of the communities. This condition led to the growth of private operators in the supply of water in a few of the communities before the EU-MPP6 projects.

Table 8: Sources of Water Supply of User- Households before the EU-MPP6 Projects

S\N	COMMUNITY	SOURCES OF WATER SUPPLY BEFORE THE EU-MPP6 PROJECT IN THE COMMUNITY					
		POND	RAIN WATER	STREAM/ RIVER	HAND-DUG WELL	PRIVATE BOREHOLE	WATER VENDOR
1	EZUHU NGURU	1	15	11	5	1	2
2	OBOKWU NGWURU	2	16	10	4	1	1
3	NNARAMBIA	2	16	11	3	1	2
4	UMULOLO	1	17	10	5	0	2
5	AMAEGBU	2	18	10	3	1	1
6	UMUORIE EZIUDO	1	17	11	4	1	2
7	EZIALA AMUMARA	2	18	10	4	0	2
8	AMAGHOR IHITE	2	19	11	4	1	1
9	UMUZEALA OBBOKO	1	16	12	5	1	2
10	AMUWU	1	17	10	4	1	3
11	AGWU NA DIM	2	15	11	3	1	2
12	NNEATO UMUOKIE	1	16	11	3	1	2
13	UMUZOHO EZIHE	1	15	10	4	0	2
14	AGADA ATTA	1	17	12	4	1	3
15	ABOH EBIKORO	1	16	11	5	1	2
16	UMUOZIRI	1	18	10	4	0	2
17	OWUBIRIUBI	1	18	13	5	1	1
18	NDIUKWU	1	17	11	6	1	2
19	UMUCHOKE	2	16	12	6	1	3
20	UMUDURUEKWE	1	18	10	4	1	3
21	AMAKUTA	1	18	10	5	0	1
22	NDIKPA	1	17	11	4	1	3
23	UMUNWAFOR	2	16	10	5	0	3
24	UMUOCHAM NTU	1	17	11	4	0	2
25	AMAOKPARA	1	18	10	2	0	1
26	UMUGARA	1	17	10	3	0	3
27	UMUASONYE	2	18	10	3	0	2
28	EZEAKIRI	0	16	2	4	14	2
29	OBUBE	0	16	2	2	14	2
	TOTAL	36	488	293	117	45	59
	% DISTRIBUTION	7.4%	100.0%	60.0%	24.0%	9.2%	12.1%

NUMBER OF SAMPLED HOUSEHOLDS=488

SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

Table 9: Sources of Water Supply of Non-User Households before the EU-MPP6 Projects

S/N	COMMUNITY	SOURCES OF WATER SUPPLY BEFORE THE EU-MPP6 PROJECT IN THE COMMUNITY					
		POND	RAIN WATER	STREAM/ RIVER	HAND-DUG WELL	PRIVATE BOREHOLE	WATER VENDOR
1	EZUHU NGURU	0	5	5	2	4	3
2	OBOKWU NGWURU	0	4	4	2	3	2
3	NNARAMBIA	0	4	4	2	3	2
4	UMULOLO	0	3	3	1	2	1
5	AMAEGBU	0	2	2	1	2	1
6	UMUORIE EZIUDO	0	3	3	2	3	1
7	EZIALA AMUMARA	0	2	2	1	2	2
8	AMAGHOR IHITE	0	1	1	1	1	1
9	UMUEZEALA OBBOKO	0	4	4	2	3	4
10	AMUWU	0	3	3	2	3	3
11	AGWU NA DIM	0	5	5	3	4	2
12	NNEATO UMUOKIE	0	4	4	2	3	4
13	UMUZOHO EZIHE	0	5	5	2	4	3
14	AGADA ATTA	0	3	3	2	3	3
15	ABOH EBIKORO	0	4	4	2	3	4
16	UMUOZIRI	0	2	2	1	2	2
17	OWUBIRIUBI	0	2	2	2	2	2
18	NDIUKWU	0	3	3	2	3	2
19	UMUCHOKE	0	4	4	2	3	3
20	UMUDURUEKWE	0	2	2	2	2	2
21	AMAKUTA	0	3	3	2	3	3
22	NDIKPA	0	2	2	1	2	2
23	UMUNWAFOR	0	4	4	2	3	3
24	UMUOCHAM NTU	0	3	3	2	3	3
25	AMAOKPARA	0	2	2	2	2	2
26	UMUGARA	0	3	3	2	3	3
27	UMUASONYE	0	2	2	1	2	2
28	EZEAKIRI	0	4	4	3	3	2
29	OBUBE	0	4	4	3	3	3
	TOTAL	0	92	92	54	79	70
	% DISTRIBUTION	0.0%	100.0%	100.0%	58.7%	85.9%	76.1%
	NUMBER OF SAMPLED HOUSEHOLDS=92						
	SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)						

The respondents were further asked to indicate their sources of water after the EU-MPP6 water supply and sanitation projects were commissioned. It is important to note that some respondents indicate more than one source. For the 488 respondents representing the user-households of the water from the EU-MPP6 projects, the sources vary from natural sources such as rivers, streams, ponds, rainwater, to human made sources like hand-dug wells, private boreholes, water vendors, and the EU-MPP6 project water as shown in Table 10. Given the responses of respondents, the use of pond is not observed among the user-households of the EU-MPP6 water supply and sanitation project. None the less, 132 (27 percent) of the user-households source water from rainfall, 44 (9 percent) source water from streams/rivers, while 94 (19.3 percent) of the user-households source water from hand-dug wells. Furthermore, 36 (7.4 percent) source water from private borehole, 39 (8.0 percent) source water from the water vendors, while all the 448 (100 percent) of the user-households source water from the EU-MPP6 project water.

For the 92 respondents representing the non-user households of the water from the EU-MPP6 projects, the sources of water indicated are: natural sources such as rivers, streams, ponds, rainwater, and human-made sources like hand-dug wells, private boreholes, and the water vendors as shown in Table 11. It is important to note that some

respondents indicate more than one source. Given the responses of respondents, the use of water ponds and EU-MPP6 projects is not observed among the non-user households of the water from the EU-MPP6 projects. In addition, 44 (47.8 percent) of the non-user households source water from rainfall, 60 (65.2 percent) source water from streams/rivers, while 41 (44.6 percent) of the non-user households source water from hand-dug wells. Furthermore, 79 (85.9 percent) source water from private borehole and 50 (54.3 percent) source water from the water vendors. Although, all the communities surveyed still fetch water from other sources for their water needs, the use of water from the EU-MPP6 water supply and sanitation projects is also common among households represented by 84.1 percent of the respondents that mainly depend on the source for all domestic needs. More so, there is a visible cessation in the use of water from ponds by all households and a reduction in the use of some of the natural sources of water by majority of the households in the benefitting communities.

Table 10: Sources of Water Supply of User-Households after the EU-MPP6 Projects

SN	COMMUNITY	SOURCES OF WATER					
		POND	RAIN WATER	STREAM/ RIVER	HAND-DUG WELL	PRIVATE BOREHOLE	WATER VENDOR
1	EZUHU NGURU	0	6	2	6	1	1
2	OBOKWU NGWURU	0	4	1	5	1	1
3	NNARAMBIA	0	6	2	3	1	1
4	UMULOLO	0	4	1	4	0	2
5	AMAEGBU	0	4	0	5	1	1
6	UMUORIE EZIUDO	0	4	2	3	1	0
7	EZIALA AMUMARA	0	4	1	4	0	2
8	AMAGHOR IHITE	0	3	0	3	1	1
9	UMUEZEALA OBBOKO	0	5	3	4	1	0
10	AMUWU	0	5	1	4	0	1
11	AGWU NA DIM	0	7	3	4	1	2
12	NNEATO UMUOKIE	0	6	1	5	1	2
13	UMUZOHO EZIHE	0	7	2	3	0	2
14	AGADA ATTA	0	4	1	5	1	1
15	ABOH EBIKORO	0	6	1	4	1	2
16	UMUOZIRI	0	3	3	3	0	0
17	OWUBIRIUBI	0	3	1	2	1	1
18	NDIUKWU	0	5	1	2	1	2
19	UMUCHOKE	0	6	2	3	0	1
20	UMUDURUEKWE	0	3	1	3	1	2
21	AMAKUTA	0	4	2	2	0	1
22	NDIKPA	0	3	2	2	1	2
23	UMUNWAFOR	0	6	2	3	0	2
24	UMUOCHAM NTU	0	4	1	3	0	2
25	AMAOKPARA	0	3	1	2	0	1
26	UMUGARA	0	4	1	4	0	2
27	UMUASONYE	0	2	2	1	0	0
28	EZEAKIRI	0	6	2	1	11	2
29	OBUBE	0	5	2	1	10	2
	TOTAL	0	132	44	94	36	39
	% DISTRIBUTION	0.0%	27.0%	9.0%	19.3%	7.4%	8.0%

NUMBER OF SAMPLED HOUSEHOLDS=488

SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

Table 11: Sources of Water Supply of Non-User Households after the EU-MPP6 Projects

S\N	COMMUNITY	SOURCES OF WATER						EU-MPP6
		POND	RAIN WATER	STREAM/ RIVER	HAND-DUG WELL	PRIVATE BOREHOLE	WATER VENDOR	
1	EZUHU NGURU	0	2	4	1	4	2	0
2	OBOKWU NGWURU	0	1	3	1	3	1	0
3	NNARAMBIA	0	2	3	2	3	2	0
4	UMULOLO	0	1	2	1	2	1	0
5	AMAEGBU	0	0	1	1	2	1	0
6	UMUORIE EZIUDO	0	2	2	1	3	1	0
7	EZIALA AMUMARA	0	1	1	1	2	2	0
8	AMAGHOR IHITE	0	0	1	1	1	1	0
9	UMUEZEALA OBBOKO	0	3	2	2	3	2	0
10	AMUWU	0	1	2	1	3	1	0
11	AGWU NA DIM	0	3	2	1	4	2	0
12	NNEATO UMUOKIE	0	1	3	2	3	2	0
13	UMUZOHO EZIHE	0	2	2	1	4	2	0
14	AGADA ATTA	0	1	2	2	3	3	0
15	ABOH EBIKORO	0	1	3	2	3	2	0
16	UMUOZIRI	0	3	2	1	2	2	0
17	OWUBIRIUBI	0	1	2	2	2	2	0
18	NDIUKWU	0	1	2	2	3	2	0
19	UMUCHOKE	0	2	3	1	3	1	0
20	UMUDURUEKWE	0	1	2	2	2	2	0
21	AMAKUTA	0	2	2	1	3	2	0
22	NDIKPA	0	2	1	1	2	2	0
23	UMUNWAFOR	0	2	2	2	3	1	0
24	UMUOCHAM NTU	0	1	2	2	3	2	0
25	AMAOKPARA	0	1	1	2	2	2	0
26	UMUGARA	0	1	2	2	3	2	0
27	UMUASONYE	0	2	2	1	2	2	0
28	EZEAKIRI	0	2	2	1	3	2	0
29	OBUBE	0	2	2	1	3	1	0
	TOTAL	0	44	60	41	79	50	0
	% DISTRIBUTION	0.0%	47.8%	65.2%	44.6%	85.9%	54.3%	0.0%
	NUMBER OF SAMPLED HOUSEHOLDS=92							
	SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)							

The 448 respondents representing the EU-MPP6 projects water user-households were asked to indicate their reasons for using the water. It is important to note that some respondents indicated more than one reason. The distribution of the responses of respondents on the reasons for using the water from the EU-MPP6 projects is shown in Table 12. The reasons bother on the issues of convenience of source of water supply, accessibility of water supply, quality of water supply, cost of procuring the water, and availability of supply. From Table 12, 78.5 percent of the respondents uses the water from the EU-MPP6 projects because the source points are convenient, 70.2 percent uses the water because the source points are accessible, while 66.8 percent of the respondents uses the water because the water from the source points is of a better quality than the water from the sources before the new projects were commissioned. In addition, 66 percent of the respondents use the water from the EU-MPP6 projects because it is cheaper to procure while consideration for use of the water because of its availability accounts for 66.2 percent of the responses of respondents.

The 92 respondents representing non-user households of the water from the EU-MPP6 projects were also asked to indicate their reasons for not using the water. It is important to note that some respondents indicated more than one

reason. The distribution of the responses of respondents on the reasons is as shown in Table 13. From Table 13, 87 percent of the respondents indicate that the traditional source points before new projects are convenient to them while 76.1 percent states that the EU-MPP6 water supply point is far from their houses. 37 percent of the respondents indicate that the water from the EU-MPP6 projects is unhealthy while 21.7 percent has not been using the water because it is paid for. Furthermore, irregularity of the supply of water from the projects is indicated by 79.3 percent of the respondents as their reason for their households not using the water from the projects while 45.7 percent of the respondents indicate that the water projects facilities are difficult to operate by their households.

On the whole, no member of the benefitting communities is excluded from the use of the water from the EU-MPP6 projects. Reasons of inconvenient source points of the projects and irregularity of the water from same are major reasons why non-user households (15.9 percent) do not use the water from the projects. On the whole, the user-households (84.1percent) consider the EU-MPP6 water supply and sanitation projects to have met their water needs.

Table 12: Reasons Given by User-Households for Using the Water from the EU- MPP6 Projects

S/N	COMMUNITY	REASONS				
		WATER SUPPLY	WATER SUPPL	WATER FROM THE	THE WATER IS	THE WATER SUPPLY
		SOURCE IS	PIONT IS	PROJECT IS OF A	CHEAPER TO	IS ALWAYS
		CONVENIENT	ACCESSIBLE	BETTER QUALITY	PROCURE	AVAILABLE
1	EZUHU NGURU	13	10	12	11	10
2	OBOKWU NGWURU	14	11	13	11	9
3	NNARAMBIA	14	12	13	10	10
4	UMULOLO OGBE	13	13	12	11	13
5	AMAEGBU	12	11	13	12	12
6	UMUORIE EZIUDO	14	10	10	11	13
7	EZIALA AMUMARA	14	12	13	11	12
8	AMAGHOR IHITE	13	14	12	13	12
9	UMUEZEALA OBBOKO	14	12	10	12	13
10	AMUWU	13	13	11	12	11
11	AGWU NA DIM	14	10	12	9	12
12	NNEATO UMUOKIE	14	12	9	10	11
13	UMUZOHO EZIHE	12	11	10	9	12
14	AGADA ATTA	12	10	11	12	9
15	ABOH EBIKORO	14	12	10	10	11
16	UMUOZIRI	12	13	11	13	12
17	OWUBIRIUBI	13	14	11	12	13
18	NDIUKWU	13	13	13	10	10
19	UMUCHOKE	14	12	10	11	11
20	UMUDURUEKWE	13	12	12	14	12
21	AMAKUTA	11	12	13	12	10
22	NDIKPA	13	11	12	10	12
23	UMUNWAFOR	14	11	11	9	10
24	UMUOCHAM NTU	14	13	11	11	13
25	AMAOKPARA	13	12	8	12	10
26	UMUGARA	12	13	8	12	9
27	UMUASONYE	14	11	13	11	12
28	EZEAKIRI	14	12	11	10	9
29	OBUBE	13	11	11	11	10
	TOTAL	383	343	326	322	323
	% DISTRIBUTION	78.5%	70.3%	66.8%	66.0%	66.2%

NUMBER OF SAMPLED HOUSEHOLDS=488

SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011

Table 13: Reasons Given by Non-User Households for Not Using the Water from the EU-MPP6 Projects

SN	COMMUNITY	REASONS						
		TRADITIONAL SOURCE MORE CONVENIENT	WATER SUPPLY POINT IS FAR FROM MY HOUSE	WATER FROM THE SUPPLY IS UNHEALTHY	THE WATER SUPPLY IS PAID FOR	WATER SUPPLY IS NOT RELIABLE	FACILITY IS DIFFICULT TO OPERATE	EXCLUDED FROM THE USE
1	EZUHU NGURU	5	4	1	2	4	3	0
2	OBOKWU NGWURU	3	3	2	0	3	2	0
3	NNARAMBIA	4	3	1	1	3	1	0
4	UMULOLO	2	3	1	2	3	2	0
5	AMAEGBU	2	1	1	1	2	1	0
6	UMUORIE EZIUDO	3	2	1	0	3	1	0
7	EZIALA AMUMARA	2	2	0	0	2	1	0
8	AMAGHOR IHITE	1	1	0	0	1	0	0
9	UMUEZEALA OBBOKO	4	4	1	1	3	1	0
10	AMUWU	3	3	1	1	3	1	0
11	AGWU NA DIM	5	3	2	0	3	2	0
12	NNEATO UMUOKIE	4	3	1	1	3	1	0
13	UMUZOHO EZIHE	4	5	1	2	4	3	0
14	AGADA ATTA	2	1	1	1	2	1	0
15	ABOH EBIKORO	3	4	2	0	3	2	0
16	UMUOZIRI	2	1	1	1	2	1	0
17	OWUBIRIUBI	1	2	1	1	2	1	0
18	NDIUKWU	2	1	1	1	2	1	0
19	UMUCHOKE	4	3	1	0	3	2	0
20	UMUDURUEKWE	2	1	1	1	2	1	0
21	AMAKUTA	2	1	1	1	2	1	0
22	NDIKPA	2	1	1	1	2	1	0
23	UMUNWAFOR	4	4	2	0	3	2	0
24	UMUOCHAM NTU	2	3	0	0	1	1	0
25	AMAOKPARA	2	1	1	1	2	1	0
26	UMUGARA	2	2	2	0	1	1	0
27	UMUASONYE	2	1	2	0	2	1	0
28	EZEAKIRI	3	4	2	1	3	3	0
	OBUBE	3	3	2	0	4	3	0
	TOTAL	80	70	34	20	73	42	0
	% DISTRIBUTION	87.0%	76.1%	37.0%	21.7%	79.3%	45.7%	0.0%
NUMBER OF SAMPLED HOUSEHOLDS=92								
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)								

Respondents were asked the number of times per day households were fetching water from the traditional and other sources before the EU-MPP6 water supply and sanitation was commissioned. The result obtained from the field survey reveals that the number of times varies from once to thrice a day in the communities sampled as shown in Table 14. From Table 14, 66.4 percent of the respondents indicate once a day, 17 percent of the respondents indicate twice daily, while 16.6 percent of the respondents indicate thrice a day. On the whole, majority proportion (66.4 percent) of respondents indicates once a day while 23.6 percent indicates above once a day. The once-a-day activity of fetching water from traditional sources reveals that the search for water by majority of households in some communities involved

making long treks and moving down deep valleys, and investments of considerable time in accessing water before the EU-MPP6 project intervention.

Respondents were also asked the number of times water is fetched daily from the EU-MPP6 water supply and sanitation project points by households in the communities. The distribution of the responses of respondents varies from once to thrice a day as shown in Table 15. From the Table, 17.4 percent of the respondents indicate once a day, 16.4 percent of the respondents indicate twice daily, while 66.2 percent of the respondents indicate thrice a day. On the whole, households from majority proportion (82.6 percent) of the respondents fetch water more than once a day from the EU-MPP6 water supply and sanitation projects. The shorter distance covered and less time taken to access the EU-MPP6 water account for the frequency of fetching the water in a day.

Table 14: Number of Times a Day Households were Fetching Water before the EU-MPP6 Projects

S/N	COMMUNITY	NUMBER OF TIMES PER DAY		
		ONCE	TWICE	THRICE
1	EZUHU NGURU	10	2	3
2	OBOKWU NGWURU	11	2	3
3	NNARAMBIA	10	3	3
4	UMULOLO	10	5	2
5	AMAEGBU	12	2	4
6	UMUORIE EZIUDO	13	2	2
7	EZIALA AMUMARA	12	3	3
8	AMAGHOR IHITE	12	4	3
9	UMUEZEALA OBBOKO	13	2	1
10	AMUWU	10	4	3
11	AGWU NA DIM	12	1	2
12	NNEATO UMUOKIE	11	3	2
13	UMUZOHO EZIHE	12	2	1
14	AGADA ATTA	9	4	4
15	ABOH EBIKORO	11	3	2
16	UMUOZIRI	12	4	2
17	OWUBIRIUBI	11	3	4
18	NDIUKWU	10	3	4
19	UMUCHOKE	11	2	3
20	UMUDURUEKWE	12	3	3
21	AMAKUTA	10	3	4
22	NDIKPA	12	3	3
23	UMUNWAFOR	10	3	3
24	UMUOCHAM NTU	13	2	2
25	AMAOKPARA	10	4	4
26	UMUGARA	12	3	2
27	UMUASONYE	12	3	3
28	EZEAKIRI	11	2	3
29	OBUBE	10	3	3
	TOTAL	324	83	81
	%DISTRIBUTION	66.4%	17.0%	16.6%

NUMBER OF SAMPLED HOUSEHOLDS=488

SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

Table 15: Number of Times a Day Households Fetch Water after the EU-MPP6 Projects

S\N	COMMUNITY	NUMBER OF TIMES PER DAY		
		ONCE	TWICE	THRICE
1	EZUHU NGURU	3	2	10
2	OBOKWU NGWURU	4	3	9
3	NNARAMBIA	3	3	10
4	UMULOLO	2	2	13
5	AMAEGBU	2	4	12
6	UMUORIE EZIUDO	2	2	13
7	EZIALA AMUMARA	2	4	12
8	AMAGHOR IHITE	4	3	12
9	UMUEZEALA OBBOKO	2	1	13
10	AMUWU	4	2	11
11	AGWU NA DIM	1	2	12
12	NNEATO UMUOKIE	3	2	11
13	UMUZOHO EZIHE	2	1	12
14	AGADA ATTA	4	4	9
15	ABOH EBIKORO	3	2	11
16	UMUOZIRI	4	2	12
17	OWUBIRIUBI	3	2	13
18	NDIUKWU	3	4	10
19	UMUCHOKE	2	3	11
20	UMUDURUEKWE	3	3	12
21	AMAKUTA	3	4	10
22	NDIKPA	3	3	12
23	UMUNWAFOR	3	3	10
24	UMUOCHAM NTU	2	2	13
25	AMAOKPARA	4	4	10
26	UMUGARA	4	4	9
27	UMUASONYE	3	3	12
28	EZEAKIRI	4	3	9
29	OBUBE	3	3	10
	TOTAL	85	80	323
	%DISTRIBUTION	17.4%	16.4%	66.2%
NUMBER OF SAMPLED HOUSEHOLDS=488				
SOURCE OF DATA: AUTHOR'S FIELD SURVEY, JULY-SEPTEMBER, 2011				

Respondents were first asked to indicate the quantity of water collected each time by households from the traditional and other sources before the EU-MPP6 water supply and sanitation projects were commissioned. The result obtained from the field survey reveals that the quantity of water collected by respondents each time ranges from less than 21litres to above 50litres as shown in Table 16. From Table 16, 69.1 percent of the respondents indicate less than 21litres of water each time, 9.6 percent of the respondents indicate between 21 and 30litres of water each time, while another 9.6 percent of the respondents indicate between 31 and 40litres of water each time. In addition, 6.1 percent of the respondents indicate between 41 and 50litres of water each time while 5.5 percent of the respondents indicate above 50litres of water each time. From the data, households represented by 30.8 percent of respondents were collecting above 20litres of water each time while households represented by 69.2 percent of the respondents were collecting below 20litres before the EU-MPP6 water supply and sanitation projects were commissioned. The low quantity of water collected by majority proportion (69.2 percent) of the households in the benefitting communities before the EU-MPP6 projects were

commissioned is not independent of the long distances covered and considerable time spent by households to reach the traditional and other sources.

Respondents were also asked to indicate the quantity of water households collect each time after the EU-MPP6 projects were commissioned. The result obtained from the field survey reveals that the quantity of water households collect each time ranges from less than 21litres to above 50litres. The distribution of responses of respondents is shown in Table 17. From the Table, 4.9 percent of the respondents indicate less than 21litres of water each time, 5.5 percent of the respondents indicate between 21 and 30litres of water, while 7 percent of the respondents indicate between 31 and 40litres of water each time. Furthermore, 16.4 percent of the respondents indicate between 41 and 50litres of water each time, while 66.2 percent of the respondents indicate above 50litres of water each time. Overall, households represented by 95.1 percent of the respondents collect above 20litres of water each time from the EU-MPP6 water supply and sanitation projects.

Table 16: Quantity of Water Collected each Time by Household before the EU-MPP6 Water Supply and Sanitation Projects were Commissioned

S\N	COMMUNITY	QUANTITY IN LITRES PER DAY				
		LESS THAN 21 LITRES	21-30 LITRES	31-40 LITRES	41-50 LITRES	ABOVE 50 LITRES
1	EZUHU NGURU	10	2	1	1	1
2	OBOKWU NGWURU	12	1	1	1	1
3	NNARAMBIA	11	2	2	1	0
4	UMULOLO	14	1	1	0	1
5	AMAEGBU	13	2	2	1	0
6	UMUORIE EZIUDO	12	1	2	1	1
7	EZIALA AMUMARA	12	2	2	1	1
8	AMAGHOR IHITE	13	3	1	1	1
9	UMUEZEALA OBBOKO	12	1	2	1	0
10	AMUWU	10	3	2	1	1
11	AGWU NA DIM	11	2	1	1	0
12	NNEATO UMUOKIE	12	1	1	1	1
13	UMUZOHO EZIHE	10	1	2	1	1
14	AGADA ATTA	13	1	1	1	1
15	ABOH EBIKORO	12	1	1	1	1
16	UMUOZIRI	11	2	2	2	1
17	OWUBIRIUBI	12	2	2	2	0
18	NDIUKWU	11	2	2	1	1
19	UMUCHOKE	12	1	1	1	1
20	UMUDURUEKWE	12	2	2	1	1
21	AMAKUTA	11	2	2	1	1
22	NDIKPA	12	2	2	1	1
23	UMUNWAFOR	12	1	1	1	1
24	UMUOCHAM NTU	11	1	2	1	2
25	AMAOKPARA	12	1	3	1	1
26	UMUGARA	11	2	2	1	1
27	UMUASONYE	12	1	2	1	2
28	EZEAKIRI	11	2	1	1	1
29	OBUBE	10	2	1	1	2
	TOTAL	337	47	47	30	27
	%DISTRIBUTION	69.1%	9.6%	9.6%	6.1%	5.5%

NUMBER OF SAMPLED HOUSEHOLDS=488

SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

Table 17: Quantity of Water Collected each Time by Household after the EU-MPP6 Water Projects were Commissioned

S\N	COMMUNITY	QUANTITY IN LITRES PER DAY				
		LESS THAN 21 LITRES	21-30 LITRES	31-40 LITRES	41-50 LITRES	ABOVE 50 LITRES
1	EZUHU NGURU	1	1	1	2	10
2	OBOKWU NGWURU	1	1	2	3	9
3	NNARAMBIA	0	2	1	3	10
4	UMULOLO	1	1	0	2	13
5	AMAEGBU	0	1	1	4	12
6	UMUORIE EZIUDO	0	1	1	2	13
7	EZIALA AMUMARA	1	0	1	4	12
8	AMAGHOR IHITE	1	1	2	3	12
9	UMUEZEALA OBBOKO	0	1	1	1	13
10	AMUWU	1	2	1	2	11
11	AGWU NA DIM	0	0	1	2	12
12	NNEATO UMUOKIE	1	1	1	2	11
13	UMUZOHO EZIHE	1	0	1	1	12
14	AGADA ATTA	2	1	1	4	9
15	ABOH EBIKORO	1	1	1	2	11
16	UMUOZIRI	1	1	2	2	12
17	OWUBIRIUBI	1	1	1	2	13
18	NDIUKWU	1	1	1	4	10
19	UMUCHOKE	0	1	1	3	11
20	UMUDURUEKWE	1	0	2	3	12
21	AMAKUTA	1	1	1	4	10
22	NDIKPA	1	1	1	3	12
23	UMUNWAFOR	1	1	1	3	10
24	UMUOCHAM NTU	0	1	1	2	13
25	AMAOKPARA	1	1	2	4	10
26	UMUGARA	1	0	3	4	9
27	UMUASONYE	1	2	0	3	12
28	EZEAKIRI	2	1	1	3	9
29	OBUBE	1	1	1	3	10
	TOTAL	24	27	34	80	323
	%DISTRIBUTION	4.9%	5.5%	7.0%	16.4%	66.2%
NUMBER OF SAMPLED HOUSEHOLDS=488						
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)						

The respondents were first asked to indicate the purposes for which water from other sources is being used before the EU-MPP6 projects were commissioned. It is important to note that some respondents indicate more than one purpose. The distribution of the responses of respondents is among drinking, cooking, bathing, laundry, farming, and processing as shown in Table 18. From the Table, 11.9 percent of the respondents indicate the use of water for the purpose of drinking while 40.5 percent indicates the purpose of cooking. The use of water from other sources for the purposes of bathing and laundry accounts for 37.9 percent and 41.4 percent of the responses of respondents respectively. The use of the water from other sources for the purposes of farming and processing respectively accounts for 18.4 percent and 15.5 percent of the responses of respondents. This implies a strong dependence by the communities on most inaccessible traditional or natural sources of water for their domestic and sanitation needs before the EU-MPP6 projects were commissioned.

The respondents in the communities were also asked to indicate the purposes for which water from the EU-MPP6 water supply and sanitation project is used. It is important to note that some respondents indicate more than one

purpose. From the responses of respondents the water is used for various purposes such as drinking, cooking, bathing, laundry, farming, and processing as shown in Table 19. From the Table, 89 percent of the respondents indicate the use of water for the purpose of drinking while 61.7 percent indicated the purpose of cooking. The use of water for the purposes of bathing and laundry among the respondents accounts for 65.5 percent and 62.4 percent of the responses respectively. The use of the water for the purposes of farming accounts for 15.2 percent of the responses of respondents while responses of respondents on the use of the water for processing accounts for 12.9 percent. In addition, 15.9 percent of the respondents indicate not using the water from the EU-MPP6 projects for any purpose. Overall, there is a visible use of water from the EU-MPP6 projects for the purpose drinking, cooking, laundry, and bathing and a great reduction in the use of the traditional sources of water mainly for drinking purpose by more than 65 percent of the households in the benefitting communities.

Table 18: Purposes for which Water Fetched by Households Was Used before the EU-MPP6 Projects were Commissioned

S/N	COMMUNITY	PURPOSE					
		DRINKING	COOKING	BATHING	LAUNDRY	FARMING	PROCESSING
1	EZUHU NGURU	4	11	16	15	4	3
2	OBOKWU NGWURU	3	10	11	16	3	3
3	NNARAMBIA	2	16	10	9	5	3
4	UMULOLO	3	6	8	17	6	5
5	AMAEGBU	2	3	6	1	4	4
6	UMUORIE EZIUDO	2	13	8	8	5	5
7	EZIALA AMUMARA	3	4	8	9	4	3
8	AMAGHOR IHITE	2	6	2	5	3	3
9	UMUEZEALA OBBOKO	2	5	10	8	4	3
10	AMUWU	3	6	11	6	5	4
11	AGWU NA DIM	4	19	4	9	4	3
12	NNEATO UMUOKIE	2	17	10	9	3	4
13	UMUZOHO EZIHE	4	18	5	10	4	1
14	AGADA ATTA	3	7	9	15	4	4
15	ABOH EBIKORO	2	15	10	8	3	4
16	UMUOZIRI	3	5	5	1	4	4
17	OWUBIRIUBI	2	1	3	7	4	3
18	NDIUKWU	3	6	9	4	3	2
19	UMUCHOKE	2	5	2	7	3	3
20	UMUDURUEKWE	2	4	5	10	4	3
21	AMAKUTA	1	6	4	4	3	3
22	NDIKPA	2	10	7	5	3	3
23	UMUNWAFOR	2	3	10	9	3	3
24	UMUOCHAM NTU	1	3	9	5	4	3
25	AMAOKPARA	2	5	5	9	2	1
26	UMUGARA	2	6	7	3	2	1
27	UMUASONYE	1	10	5	5	4	3
28	EZEAKIRI	3	9	10	16	3	4
29	OBUBE	2	6	11	10	4	2
	TOTAL	69	235	220	240	107	90
	%DISTRIBUTION	11.9%	40.5%	37.9%	41.4%	18.4%	15.5%
NUMBER OF SAMPLED HOUSEHOLDS=580							
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)							

Table 19: Purposes for which Water Fetched by Households is Used after the EU-MPP6 Projects were Commissioned

S\N	COMMUNITY	PURPOSE						
		DRINKING	COOKING	BATHING	LAUNDRY	FARMING	PROCESSING	NONE
1	EZUHU NGURU	16	10	5	6	3	2	5
2	OBOKWU NGWURU	18	11	10	5	3	3	4
3	NNARAMBIA	18	5	11	12	4	3	4
4	UMULOLO	17	14	12	4	5	4	3
5	AMAEGBU	18	17	14	19	3	3	2
6	UMUORIE EZIUDO	18	7	12	13	4	4	3
7	EZIALA AMUMARA	17	16	12	11	3	2	2
8	AMAGHOR IHITE	18	14	18	15	3	2	1
9	UMUEZEALA OBBOKO	18	15	11	13	3	2	4
10	AMUWU	17	15	10	15	5	4	3
11	AGWU NA DIM	16	2	17	12	3	2	5
12	NNEATO UMUOKIE	19	4	11	12	3	4	4
13	UMUZOHO EZIHE	17	3	16	11	3	1	5
14	AGADA ATTA	18	14	12	5	4	4	3
15	ABOH EBIKORO	18	5	11	13	2	3	4
16	UMUOZIRI	17	15	15	19	3	3	2
17	OWUBIRIUBI	18	19	17	14	3	3	2
18	NDIUKWU	17	15	12	17	3	2	3
19	UMUCHOKE	18	16	19	14	2	3	4
20	UMUDURUEKWE	18	16	15	10	3	2	2
21	AMAKUTA	19	14	16	17	2	2	3
22	NDIKPA	18	10	14	16	3	3	2
23	UMUNWAFOR	18	17	11	12	2	2	4
24	UMUOCHAM NTU	19	17	12	16	3	2	3
25	AMAOKPARA	18	16	16	11	2	1	2
26	UMUGARA	18	15	14	18	2	1	3
27	UMUASONYE	19	10	15	16	3	3	2
28	EZEAKIRI	18	11	11	5	3	3	4
29	OBUBE	18	15	11	11	3	2	4
	TOTAL	516	358	380	362	88	75	92
	%DISTRIBUTION	89.0%	61.7%	65.5%	62.4%	15.2%	12.9%	15.9%

NUMBER OF SAMPLED HOUSEHOLDS=580

SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

Respondents were asked the duration households in the benefitting communities have used the water from the EU-MPP6 water supply and sanitation projects. The distribution of the responses of respondents on the duration ranges from 1 to 6years as shown in Table 20. From the Table, no time the households represented by 15.9 percent of the respondents used the water. None the less, households represented by 5.7 percent of the respondents have used the water for less than 1year while 8.3 percent of the respondents have used the water for 1 to 2years. In addition, households represented by 7.8 percent of the respondents have used the water for 3 to 4years while households represented by 35.2 percent have used the water for 5 to 6years. Furthermore, households represented by 27.2 percent have used the EU-MPP6 water for more than 6years. Overall, majority of the households represented by 62.4 percent of the respondents has used the water from the project for 5years and above. This is an indication of a continuous flow of benefit outcomes from the EU-MPP6 projects in the benefitting communities.

Table 20: Duration in Using the Water from the EU-MPP6 Water Supply and Sanitation Projects

SN	COMMUNITY	DURATION IN YEARS					
		NO TIME	LESS THAN 1 YEAR	1-2 YEARS	3-4 YEARS	5-6 YEARS	ABOVE 6YEARS
1	EZUHU NGURU	5	1	2	2	6	4
2	OBOKWU NGWURU	4	1	1	2	6	6
3	NNARAMBIA	4	0	1	2	7	6
4	UMULOLO	3	1	2	1	7	6
5	AMAEGBU	2	2	1	1	7	7
6	UMUORIE EZIUDO	3	0	2	1	8	6
7	EZIALA AMUMARA	2	1	1	1	9	6
8	AMAGHOR IHITE	1	2	1	1	8	7
9	UMUEZEALA OBBOKO	4	1	1	2	7	5
10	AMUWU	3	5	2	1	6	3
11	AGWU NA DIM	5	0	2	2	6	5
12	NNEATO UMUOKIE	4	0	3	4	3	6
13	UMUZOHO EZIHE	5	2	1	2	5	5
14	AGADA ATTA	3	2	2	1	6	6
15	ABOH EBIKORO	4	1	3	1	6	5
16	UMUOZIRI	2	1	2	2	8	5
17	OWUBIRIUBI	2	1	1	3	7	6
18	NDIUKWU	3	2	1	2	8	4
19	UMUCHOKE	4	2	2	1	6	5
20	UMUDURUEKWE	2	1	2	1	8	6
21	AMAKUTA	3	1	2	1	7	6
22	NDIKPA	2	1	1	2	8	6
23	UMUNWAFOR	4	0	3	1	7	5
24	UMUOCHAM NTU	3	1	2	2	8	4
25	AMAOKPARA	2	1	2	1	9	5
26	UMUGARA	3	0	1	2	7	7
27	UMUASONYE	2	1	2	1	9	5
28	EZEAKIRI	4	1	2	1	7	5
29	OBUBE	4	1	0	1	8	6
	TOTAL	92	33	48	45	204	158
	%DISTRIBUTION	15.9%	5.7%	8.3%	7.8%	35.2%	27.2%
NUMBER OF SAMPLED HOUSEHOLDS=580							
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)							

Respondents were asked the frequency of breakdown of the EU-MPP6 water supply and sanitation project facilities according to seasons. The distribution of the responses of respondents is shown in Table 21. From the Table, 79.1 percent of the respondents indicates monthly breakdown of the facility in the dry season while 20.9 percent of the respondents indicates weekly breakdown in the same season. In addition, 80.9 percent of the respondents indicates monthly breakdown of the facility in the wet season while 19.1 percent of the respondents indicated weekly breakdown in the same season. Therefore, the breakdown of the EU-MPP6 water supply and sanitation project facility in the benefitting communities occurs monthly most of the time, and much more in the wet season. The monthly breakdown of the facilities points to the robustness of the projects and their potentials to continuously generate water services over a long period of time.

Respondents in the sampled communities were also asked about the regularity of the water supply from the EU-MPP6 projects according to seasons. The distribution of the responses of respondents on the regularity of the water according to seasons is shown in Table 22. From the Table, 27 percent of the respondents indicate that water supply is frequent in the dry season, 39.5 percent of the respondents indicates that water supply is occasional, while 34.4 percent of the respondents indicates that the water supply is rare in the same season. Furthermore, 13.3 percent of the respondents indicated that water supply is frequent in the wet season, 68.6 percent of the respondents indicates that water supply is occasional, while 18 percent of the respondents indicates that the water supply is a rare in the same season. It is observed from the data that the water from the EU-MPP6 water supply and sanitation project facilities in the studied communities is regular and much more in the wet season.

Table 21: Frequency of Breakdown of the EU-MPP6 Water Supply and Sanitation Projects

S/N	COMMUNITY	FREQUENCY									
		DRY SEASON					RAINY SEASON				
		NEVER	MONTHLY	WEEKLY	DAILY	HOURLY	NEVER	MONTHLY	WEEKLY	DAILY	HOURLY
1	EZUHU NGURU	0	14	1	0	0	0	14	1	0	0
2	OBOKWU NGWURU	0	15	1	0	0	0	15	1	0	0
3	NNARAMBIA	0	13	3	0	0	0	14	2	0	0
4	UMULOLO OGBE	0	10	7	0	0	0	13	4	0	0
5	AMAEGBU	0	10	8	0	0	0	17	1	0	0
6	UMUORIE EZIUDO	0	11	6	0	0	0	15	2	0	0
7	EZIALA AMUMARA	0	13	5	0	0	0	15	3	0	0
8	AMAGHOR IHITE	0	12	7	0	0	0	17	2	0	0
9	UMUEZEALA OBBOKO	0	11	5	0	0	0	12	4	0	0
10	AMUWU	0	11	6	0	0	0	13	4	0	0
11	AGWU NA DIM	0	10	5	0	0	0	11	4	0	0
12	NNEATO UMUOKIE	0	13	3	0	0	0	12	4	0	0
13	UMUZOHO EZIHE	0	13	2	0	0	0	11	4	0	0
14	AGADA ATTA	0	13	4	0	0	0	14	3	0	0
15	ABOH EBIKORO	0	15	1	0	0	0	12	4	0	0
16	UMUOZIRI	0	15	3	0	0	0	15	3	0	0
17	OWUBIRIUBI	0	16	2	0	0	0	16	2	0	0
18	NDIUKWU	0	13	4	0	0	0	16	1	0	0
19	UMUCHOKE	0	15	1	0	0	0	11	5	0	0
20	UMUDURUEKWE	0	13	5	0	0	0	13	5	0	0
21	AMAKUTA	0	14	3	0	0	0	10	7	0	0
22	NDIKPA	0	16	2	0	0	0	14	4	0	0
23	UMUNWAFOR	0	12	4	0	0	0	12	4	0	0
24	UMUOCHAM NTU	0	14	3	0	0	0	15	2	0	0
25	AMAOKPARA	0	16	2	0	0	0	14	4	0	0
26	UMUGARA	0	14	3	0	0	0	13	4	0	0
27	UMUASONYE	0	17	1	0	0	0	14	4	0	0
28	EZEAKIRI	0	13	3	0	0	0	13	3	0	0
29	OBUBE	0	14	2	0	0	0	14	2	0	0
	TOTAL	0	386	102	0	0	0	395	93	0	0
	% DISTRIBUTION WITHIN	0.0%	79.1%	20.9%	0.0%	0.0%	0.0%	80.9%	19.1%	0.0%	0.0%
NUMBER OF SAMPLED HOUSEHOLDS=488											
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)											

Table 22: Regularity of the Water Supply from the EU-MPP6 Water Supply and Sanitation Projects

S\N	COMMUNITY	REGULARITY									
		DRY SEASON					RAINY SEASON				
		ALWAYS	FREQUENTLY	OCCASIONALLY	RARELY	NEVER	ALWAYS	FREQUENTLY	OCCASIONALLY	RARELY	NEVER
1	EZUHU NGURU	0	2	10	3	0	0	1	11	3	0
2	OBOKWU NGWURU	0	1	2	13	0	0	1	12	3	0
3	NNARAMBIA	0	10	3	3	0	0	3	10	3	0
4	UMULOLO	0	2	12	3	0	0	2	12	3	0
5	AMAEGBU	0	11	4	3	0	0	3	12	3	0
6	UMUORIE EZIUDO	0	1	5	11	0	0	1	13	3	0
7	EZIALA AMUMARA	0	8	8	2	0	0	2	14	2	0
8	AMAGHOR IHITE	0	11	7	1	0	0	3	13	3	0
9	UMUEZEALA OBBOKO	0	7	3	6	0	0	2	12	2	0
10	AMUWU	0	10	4	3	0	0	3	10	4	0
11	AGWU NA DIM	0	1	2	12	0	0	1	12	2	0
12	NNEATO UMUOKIE	0	4	9	3	0	0	3	9	4	0
13	UMUZOHO EZIHE	0	1	3	11	0	0	1	11	3	0
14	AGADA ATTA	0	12	2	3	0	0	3	12	2	0
15	ABOH EBIKORO	0	4	2	10	0	0	2	10	4	0
16	UMUOZIRI	0	2	13	3	0	0	2	13	3	0
17	OWUBIRIUBI	0	3	10	5	0	0	3	10	5	0
18	NDIUKWU	0	2	13	2	0	0	2	13	2	0
19	UMUCHOKE	0	4	9	3	0	0	4	9	3	0
20	UMUDURUEKWE	0	2	12	4	0	0	2	12	4	0
21	AMAKUTA	0	3	3	11	0	0	3	11	3	0
22	NDIKPA	0	2	14	2	0	0	2	14	2	0
23	UMUNWAFOR	0	2	3	11	0	0	2	11	3	0
24	UMUOCHAM NTU	0	4	3	10	0	0	4	10	3	0
25	AMAOKPARA	0	2	9	7	0	0	2	11	5	0
26	UMUGARA	0	3	12	2	0	0	3	12	2	0
27	UMUASONYE	0	13	2	3	0	0	2	13	3	0
28	EZEAKIRI	0	3	2	11	0	0	1	11	4	0
29	OBUBE	0	2	12	2	0	0	2	12	2	0
	TOTAL	0	132	193	163	0	0	65	335	88	0
	%DISTRIBUTION	0.0%	27.0%	39.5%	33.4%	0.0%	0.0%	13.3%	68.6%	18.0%	0.0%

NUMBER OF SAMPLED HOUSEHOLDS=488
SOURCE OF DATA: AUTHOR'S FIELD WORK (JULY-SEPTEMBER 2011)

3.3 Central Hypothesis

H₀: There is no significant relationship between the access of the communities to the EU-MPP6 water supply and sanitation projects and the communities' utilization of the project services in Imo State

H_A: There is a significant relationship between the access of the communities to the EU-MPP6 water supply and sanitation projects and the communities' utilization of the project services in Imo State

One of the objectives of the initiators of the EU-MPP6 projects is to improve communities' access to water supply and sanitation. To test the hypothesis in order to ascertain the degree of relationship, the statistical technique that is used is the multiple regression model. By subjecting the data to regression analysis, it is found that the Multiple Correlation Coefficient (R) for the 29 communities is 0.587 with Coefficient of Multiple Determination (R²) of 0.344 as shown in Table 23. R² of 0.344 means that 34.4 percent of the variation in the distance covered by the communities can be attributed to the variation in the quantity of water procured by the communities. Therefore there is a residual of 65.6 percent which can be attributed to the influence of the EU-MPP6 water supply and sanitation projects.

Using the students't-test model to test the hypothesis that there is no significant relationship between the access of the communities to the EU-MPP6 water supply and sanitation projects and the communities' utilization of the project services in Imo State, it found the t-statistic is 3.765. Testing at 95 percent significance level at 27 degrees of freedom, the critical value is 1.703. Since the t-statistic is greater than the critical value, the null hypothesis is rejected. It is therefore affirmed that there is a significant relationship between the access of the communities to the EU-MPP6 water supply and sanitation projects and the communities' utilization of the project services in Imo State. The inference is that the communities travel shorter distances to access greater quantity of water as a result of the presence of the EU-MPP6 water supply and sanitation projects. The significant difference that is exhibited by the access of the benefitting communities to the projects is an indication of the widespread acceptance of the projects and their effectiveness in Imo State.

Table 23: Regression Statistic Based on Distance Covered by Households in Fetching Water and Quantity of Water Fetched

Regression Statistics	
Multiple R	0.587
R Square	0.344
Adjusted R Square	0.202
Standard Error	1.015
Observations	29

4. Conclusion

This study represents an attempt to provide suitable differentiation so that real differences in water related well being before European Union externally funded water projects are executed and after European Union externally funded water projects are executed can be assessed. It took into account time spent in water collection, money spent in water procurement, access within a certain distance of a dwelling, use of water etc. This is because there is much interest in improving rural people's quality of life and rural livelihoods, as well as increasing rural household incomes.

Results obtained have explicitly shown how micro-projects in water and sanitation programme can greatly improve the socio-economic well-being of rural inhabitants and contribute to the development of rural livelihoods. They have also shown that if rural communities are given the opportunity to be involved in decision-making, planning and execution of projects that touch them directly, the projects will end up being well-managed and sustainable.

The results from the study are a demonstration of the theory of change which portends that every intervention (project) is directed at achieving an objective that brings about changes (outcomes) in the society. The study equally demonstrated that decentralized planning and decision-making in water and sanitation management offers potential benefits relating to increased responsiveness to local demands and needs and hence increased willingness of communities to contribute for increased services. The implication of these observations is the need for more improved community-based programmes /strategies in externally-funded water and sanitation development actions in other rural communities, as this will go a long way in reducing the profile and trend of ineffective and unsustainable projects associated with externally-funded water supply and sanitation projects.

References

- Adeyemo, A. M. (2008). Environmental policy failure in Nigeria and the tragedy of underdevelopment of Niger Delta region, Inaugural Lecture Series 63, University of Port Harcourt, Nigeria.
- Akpabio, E. M. (2012). Water meanings, sanitation practices and hygiene behaviours in the cultural mirror: A perspective from Nigeria. *Journal of Water, Sanitation and Hygiene for Development*, 2 (3), 168-181.
- Denga, K., & Ali, M. (1998). Case study research: Design and methods. Newbury Park, California: Sage.
- Department of International Development (2007). Millennium development goals: Environment, water and sanitation in Nigeria. Washington, D.C.: World Bank, Economic Development Institute.
- Esrey, S. A., Potash, J., Roberts, L., & Shiff, C. (2006). Health benefits from improvements in water supply and sanitation: Survey and analysis of the literature on selected diseases. Technical Report 66, Water and Sanitation Health Project, Washington, D.C.
- Ezeigbo, H.I. (2005). Groundwater quality problems in parts of Imo State, Nigeria. *Nigerian Journal of Mining Geology*, 2 (1 & 2), 1-9.

- Federal Government of Nigeria (2004). Water supply and sanitation interim strategy note. Abuja, Nigeria: National Planning Commission.
- Haan, A. (1997). Urban poverty and its alleviation. Institute for Development Studies Bulletin, 28 (2), 1997.
- Handy S. L., & Niemeier, D. A. (2007): Measuring Accessibility: An Exploration of Issues and Alternatives. Environment and Planning, 29, 1175-1194.
- Igbozurike, U.M., Ijioma, M. A., & Onyenechere, E. C. (2010). Rural water supply in Nigeria. Owerri, Nigeria: Cape Publishers.
- MacDonald, A.M. (2001). Report on visit to a Water Aid project, Nigeria, to carry out workshops and assess the geology of Benue State, British Geological Survey, International Report, R/01/18.
- Mellor, J. (2004). The new economics of growth: A strategy for India and developing world. Cornell: Cornell University Press.
- Okereke, P.A., Ebere, I.U., & Eze, U.E. (2000). Water supply management in Nigeria: Examples in some states. Owerri, Nigeria: M. Cojee Publicatons.
- Uzoma, E.C. (1996). Rural water supplies in Enugu State: A comparative analysis. M.sc. Thesis, Department of Geography, University of Nigeria, Nsukka.
- World Health Organization/United Nations Children and Education Fund (WHO and UNICEF) (2007). Joint monitoring programme for water and sanitation: Global water supply and sanitation assessment 1-80.

