

## **Preliminary Evaluation of UNICEF's Assisted Water, Sanitation and Hygiene (WASH) Programme Using Interview Guides and Spot Checks in Ogun State, Nigeria**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Authors HOM and UFE designed the study, wrote the protocol and interpreted the data. Authors HOM, DOA, QAY, MEJ and UFE anchored the field study, gathered the initial data and performed preliminary data analysis. Authors HOM, DOA, UFE and MEJ managed the literature searches and produced the initial draft. All authors read and approved the final manuscript.*

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### **ABSTRACT**

**Aim and Place of Work:** UNICEF's assisted Water, Sanitation and Hygiene (WASH) programme is one of the intervention strategies to improve access to safe water, sanitation and good hygiene in developing countries. As 2015 MDG goals deadline approaches, assessment of progress and evaluation of these interventions are unknown in most states in Nigeria. Therefore an independent

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evaluation of UNICEF's assisted WASH programme was conducted between March and August 2014 in Ogun State, Nigeria,

**Methodology:** Well structured interview guides were used to obtain basic information on history, range of activities, target population and challenges of the WASH intervention from the state implementing agency. Cumulative achievements reports of the agency were also retrieved for data extraction. Spot checks assessments of interventions were made to schools benefitting from WASH programme within the pilot local government area of the state. Conditions and adequacy of WASH interventions were assessed using WHO/UNICEF recommended guidelines. Data obtained were uploaded and analyzed using SPSS 20.0 software for descriptive statistics.

**Results and Discussion:** Findings showed that no new water source was provided since 2006 through the assisted programme. UNICEF only assisted the state in the rehabilitation of already existing water sources, hence water coverage rate stagnated at 43% since then. The rise in the states sanitation coverage in 2012 from 32% to 36% was due to the additional provision of sanitary resources to schools, markets and health centre's by UNICEF's assisted WASH programme. These coverage rates are unsatisfactory and may not meet the universal MDG target goal of 2015. Spot assessments to intervention schools also shows inadequacy, poor coverage and poor condition of WASH facilities.

**Conclusion:** Therefore, scaling up of intervention projects and monitoring of adequacy and conditions of interventions are important, requiring funding and resource allocation.

*Keywords: Evaluation; WASH; UNICEF; Ogun State; Nigeria.*

## 1. INTRODUCTION

Almost 900 million people in the world do not have access to safe drinking water, while 2.6 billion people lack access to basic sanitation facilities [1]. Access to safe water and basic sanitation, combined with good hygiene behaviours, contributes significantly to improving public health outcomes. More importantly, WASH has been acknowledged as a significant contributor to achieving the specific Millennium Development Goal (MDG) target goal 7c of halving by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation" but progress towards universal achievement of this MDG target however remains poor in Sub Saharan Africa. Nigeria, the most populous country in Africa is one of the priority countries with high child mortalities and low water and sanitation coverage benefitting substantially from UNICEF's assisted WASH intervention since 2005 [2]. The programme has supported Nigerian government in the provision of water supply, sanitary facilities and intensive hygiene education to many rural communities and public primary schools. However WHO/UNICEF Joint Monitoring Programme currently report some 109 million Nigerians lacking access to basic sanitation facilities and 63 million not having access to improved source of safe drinking water [3], thus ranking Nigeria water and sanitation coverage rate amongst the lowest in the world. The coverage rate, achievements and challenges of the UNICEF's

assisted WASH programme in Ogun state are unknown since its implementation, such information are needed in evaluating the progress of the programme and planning for its optimization. Therefore this study was carried out to independently evaluate the current progress of the UNICEF's assisted WASH programme and compare with 2015 MDG target.

## 2. MATERIALS AND METHODS

### 2.1 Study Site

This study was carried out in Ogun state, Nigeria. Ogun state is one of the thirty six states in the country located on longitude 7.31 and latitude 3.28. The state is administratively, divided into 20 local government areas (LGAs) with some LGAs benefitting from UNICEF's assisted WASH interventions.

### 2.2 Study Design and Ethical Approval

The study is a cross-sectional survey, involving the use of questionnaires to assess the water, sanitation and hygiene conditions of intervention sites (public primary schools) in the state [4]. Interviews were also conducted to retrieve overall cumulative reports of the implementing agency. Prior to the commencement of assessment and evaluation, contacts were made with the State Ministry of Health and Ministry of Environment for cooperation, support and approval. Ethics statement was approved by the

ethical committee of the State Ministry of Health. WASH programme officers and headmasters in charge of implementation who agreed to participate in the study were asked to sign an informed consent form after the purpose of the study had been thoroughly explained to them. Only those who signed the consent form were recruited into the study.

### **2.3 Interview Procedures**

An interviewer-administered guide was used during the interview. Interview were conducted with three different WASH programme officers on their knowledge about the history, range of activities, target population, objectives and challenges in the implementation of WASH interventions in the state. Cumulative achievements report of the agency were also obtained from the data manager for data extraction.

### **2.4 Spot Checks Assessments to Intervention Schools**

Of the 20 Local government area (LGA) in the state, the pilot LGA (Odeda) for WASH interventions was purposively selected for intervention spot checks assessment. Only the three schools benefitting from WASH interventions within the LGA were visited. Conditions and adequacy of WASH interventions were assessed using WHO/UNICEF recommended guidelines with the help of the headmasters.

### **2.5 Data Management**

Data obtained from interviews were checked for coherence and presented accordingly. Cumulative reports of the implementing agency were also reviewed and important data were extracted. Qualitative data obtained from spot check assessment were grouped and analyzed using simple statistical software. Arc GIS 3.0 was used in creating of maps using the geographic coordinates of each school assessed.

## **3. RESULTS**

### **3.1 Target Criteria and Focus Population of UNICEF'S Assisted WASH Interventions in Ogun State, Nigeria**

The UNICEF's assisted WASH Programme in the state started in 2005, with the creation of

Rural Water Supply and Sanitation agency (RUWATSAN) in the state Ministry of Environment. With provision of funds from UNICEF and other Non-governmental organizations such as USAID, the agency is responsible for assisting the delivery of WASH interventions majorly to rural LGA of the state (rural LGA were characterised by "less than or equal to a population of 5000). The WASH package are been delivered to rural communities and government owned primary schools within the classified rural LGA. The state has 1449 government owned primary schools distributed across 14 rural LGA and 6 Urban LGA. Fig. 1 shows the map of the state, and focus (intervention) LGAs.

### **3.2 Delivery of UNICEF'S Assisted WASH Programme in Ogun State, Nigeria**

UNICEF's assisted WASH interventions in the state includes system developments to support water and sanitation sustainability, borehole provision/rehabilitation, community dialogues, sensitization and empowerment towards Community Led Total Sanitation (CLTS),provision of sanitary and urinal facilities, establishment of WASH committees in rural communities and schools, training of school teachers among others. Table 1, shows the list of LGA that are benefitting from the UNICEF's assisted WASH interventions and the type of interventions. Odeda LGA is the only model LGA amongst all the 14 rural LGA in the state for UNICEF's assisted intervention, majority of their interventions are first piloted in this LGA before others. Odeda LGA has received borehole with pump, improved latrine types, handwashing, lavatory facilities and improved hygiene education in public primary schools, health posts and rural communities far better than other rural LGAs in the state.

### **3.3 Spot Checks Assessments of WASH Interventions in Model LGA**

Out of the 106 public primary schools in the model LGA (Odeda), only 3 schools were benefitting from the UNICEF's assisted WASH programme since 2006. Assessments revealed presence of improved water source (functioning hand pump borehole) and latrine type (sanplat latrine), but adequacy and conditions are not in line with WHO/UNICEF recommendation (Table 2).

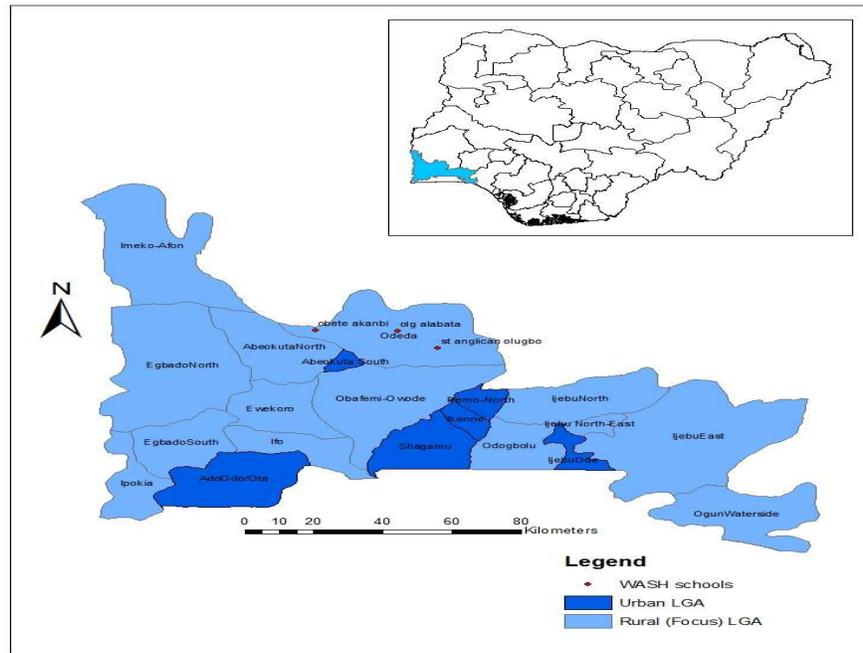


Fig. 1. Map of Ogun state and the focus (Intervention) LGA with Nigeria as insert

Table 1. Delivery of UNICEF’s assisted WASH programme in Ogun state, Nigeria

LGA	Hand pump borehole	Sanplat/VIP latrine	Handwashing facilities	Urinal facilities	WASH committee presence
Odeda	1	2	3	3	3
Obafemi Owode	1	3	-	-	-
Yewa North	5	2	1	1	-
Remo North	2	2	-	3	-
Ado odo ota	4	-	-	-	-
Ipokia	4	-	-	-	-

1=presence in some schools and rural communities; 2=presence in some schools and health centre; 3=presence in some schools; 4=Presence in some rural communities; 5=presence in some schools, rural communities and health centres

### 3.4 Progress Rates of UNICEF’S Assisted WASH Interventions in Ogun State, Nigeria

MDG target 2015 clearly specify that water and sanitation coverage rates of Nigeria should be 75% and 63% respectively in order to halve the population of people without sustainable access to safe drinking and basic sanitation facilities [5]. In Ogun state, prior to embarking on assisted WASH intervention projects, a baseline survey was conducted in 2006 by RUWATSAN to assess the existing water and sanitary resources in rural areas. Coverage rates of 43% and 32% respectively, were presented after the survey. Nigeria Core Welfare Indicators Questionnaire Surveys (CWIQS) also presented coverage rates

of 65.1% and 57.6% respectively for water and sanitary resources in both urban and rural areas of the state [6]. However, since the implementation of UNICEF’s assisted WASH interventions several progresses have been made, though the progresses are still at a low pace. Water coverage in the rural areas stagnated at 43% since 2006, majority of the activities carried out in the state were rehabilitation of non-functioning existing water sources. Sanitation facilities also rose to 36% in 2012 as more public latrines were provided in schools, health post and market place [7]. Since then it has stagnated till date. Table 3 shows the progress rates of UNICEF’s assisted WASH interventions in the state since its introduction.

**Table 2. Spot checks assessments of UNICEF's assisted WASH programme in model LGA**

S/N	Name of school	Population	Female	Male	Toilet type	Water source	Number of toilet	UNICEF's recommendation [4]	Comments
1	ST Anglican Primary School, Olugbo	444	232	212	Sanplat latrine	Hand pump-Borehole	3	9 for females, 7 for males	Inadequate, dirty and lack of soap in toilets
2	Baptist Day Primary School, Obete Akanbi	138	59	79	Sanplat latrine	Hand pump-Borehole	6	2 for females, 3 for males	Adequate, clean and lack of soap in toilets
3	OLG Primary School, Alabata	425	183	242	Sanplat latrine	Hand pump-Borehole	6	7 for females, 8 for males	Inadequate, dirty and lack of soap in toilets

**Table 3. Progress rates of UNICEF'S assisted WASH interventions in Ogun state, Nigeria**

	Coverage rates for rural and urban areas [6]	Baseline coverage rates of rural areas in 2006 [7]	Rural coverage rates in 2010 [7]	Rural coverage rates in 2011 [7]	Rural coverage rates in 2012 [7]	MDG 2015 target for Nigeria [5]
Water coverage	65.1%	43%	43%	43%	43%	75%
Sanitation coverage	57.6%	32%	32%	32%	36%	63%

[6]= (CWIQS, 2006); [7]= (RUWATSAN, 2013)

**Table 4. Progress of UNICEF's assisted Sanitation coverage rates in rural LGA of Ogun state**

	Baseline coverage rates of rural areas in 2006 [7]	Rural coverage rates in 2010 [7]	Rural coverage rates in 2011 [7]	Rural coverage rates in 2012 [7]
Household latrines	15%	15%	15%	15%
Public latrines (Schools, health post, markets)	17%	17%	21%	21%

[7]= (RUWATSAN, 2013)

## 4. DISCUSSION

Though MDG 2015 target specifies coverage rates that are achievable, the current progress rate of water and sanitation coverage in Ogun state are insufficient to meet this specified national target. Cumulative achievement reports of the RUWATSAN, the implementing agency for UNICEF's assisted programme in Ogun state shows that no water point construction were made since 2006. UNICEF only assisted the state in the rehabilitation of already existing water sources, hence water coverage rate stagnated since then. The rise in the states sanitation coverage in 2012 from 32% to 36%, was due to the additional provision of sanitary resources to schools, markets and health centre's. Despite these efforts, the coverage rates on both sides are still low compared to the MDG 2015 national target. Though the state has myriads of widely dispersed dug well water sources either constructed by self or state government serving majority of the citizens, there is paucity of data on the location and available number of the dug well water source in the state, their conditions and suitability for domestic use is also questionable. In addition, aside coverage rates, the importance of adequate and improved water and sanitary facilities as the world strives to meet the MDG target have been reported [4], however meeting this set standards is an up-hill task most especially in poorer settings like Nigeria. Findings of spot assessments to intervention schools shows that aside coverage rates, the conditions and adequacy of WASH interventions needs to be focused on. Though the three government owned primary school benefitting from the UNICEF's WASH package in the model LGA all have improved sanitary facilities (sanplat type latrines and hand pump boreholes), the conditions of their facilities shows lack of sustainability system. One out of the three schools have abandoned their latrine due to poor management. In regards of adequacy, the number of toilets per students was insufficient. WHO recommends 50 male students and 25 female students to a toilet (hole) each [4], but the population of the attending pupils of each school outnumbered the available sanitary facilities on ground. Only one of the intervention schools has an adequate WASH resource in the context of the pupils' population. Lack of soaps and water basins to rinse hands after defecation are issues of great concern, as several studies [8,9] have shown the effect of these resources on pupils absenteeism and diarrhea incidence.

## 4.1 Challenges and Way Forward

The implementing agency through interviews emphasized on lack of fund and resources (project vehicles) that would aid project monitoring and surveillance as majority of the concerned communities and schools are linked up within a rough and bad terrain. Provision of sufficient resources as well as promotion of further engagement of community members in the monitoring of intervention projects would improve the coverage rates and help in achieving the MDG targets.

## 5. CONCLUSION

Access to clean water and sanitation is generally improving, but at a very slow pace. The coverage rates in the state compared to MDG expected target in 2013 is low, therefore meeting the 2015 target would require intensified efforts. However looking beyond the coverage rates, the conditions and adequacy of these resources in the context of the benefitting population is unbalanced. The need to scale up intervention projects through allocation of more resources with the consideration of the target population and meeting the target MDG scale is of paramount importance.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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