

STATE OF WATER, SANITATION AND HYGIENE (WASH) PROGRAM IN PUBLIC SECONDARY SCHOOLS IN SOUTH- WESTERN NIGERIA: THE WAY FORWARD



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INTRODUCTION

- The provision of safe water, sanitation and hygiene in educational institutions has been established to improve health, boost educational achievement, and promote gender equity which has a positive impact on the society.
- Water, Sanitation and Hygiene (WASH) in schools is globally recognised as a key intervention to promote children's right to health, clean environment and to influence a change in health promotion behaviour and attitudes (UNICEF, 1998; Mooijman et al., 2010).



INTRODUCTION CONTINUED

- However, most schools in developing countries lack even basic water and sanitation facilities, and hygiene education programmes are often inadequate (WHO, 2009)
- On August 3, 2010, Nigeria was among the 122 countries that entered into a resolution adopted by the United Nations General Assembly pledging to make water and sanitation as human rights for their citizens.




- As part of the agenda, coupled with the millennium development goal (MDG) target, it was pledged to half by 2015, the proportion of people who had no access to water supply and basic sanitation.
- In spite of this pledge, presently 2.6 billion people do not have access to improved sanitation in the world, while 1.1 billion people still practice open defecation. Out of this number, 33 million are Nigerians (UNICEF, 2007; UNESCO, 2009; WHO/UNICEF, 2010; UNICEF/WHO, 2012).
- As the 2015 target date is being approached for the MDGs, WHO and UNICEF are addressing current monitoring challenges and those that lie ahead (UNICEF and WHO, 2012).



Problems responsible for this situation:

- Lack of priority given to WASH program
- Lack of sustained, effective and safe services
- Lack of sustainability of water supply
- Inadequate Sanitation services
- Poor hygiene behaviors


All these are evident in public secondary schools including hospitals and health centers, and have resulted into a high prevalence of water and sanitation related diseases, causing many people, children in particular, to fall ill or even die (UNICEF, 1998).



- Efforts have been made by government agencies, local organizations and NGOs to increase access to safe water supply and sustainable sanitation in major cities in Nigeria.
- This is to support the provision of improved water sources and sanitation facilities in schools and rural communities thereby contributing to the achievement of the national target of 90% by 2015 and 100% by 2020 (UNICEF, 2007; ADB, 2012)
- However, large numbers of both urban and rural schools and health centers still lack access to supply of potable water, adequate sanitary facilities like latrines and hand washing facilities.

- In practice, the situation in many schools in Nigeria is deplorable. There are still fundamental problems with long term sustainability of WASH services.
- Currently, Nigeria is part of the countries whose sanitation coverage rates are between 20% and 40% points below the MDG targets (Banerjee and Morella, 2011; Aremu, 2012).
- Therefore, this study emanates as a supporting effort to the realization of the MDGs. Specifically to partner with the government of each State and other stakeholders on the attainment of the MDGs related to WASH for public schools, thereby enhancing equitable development. ●

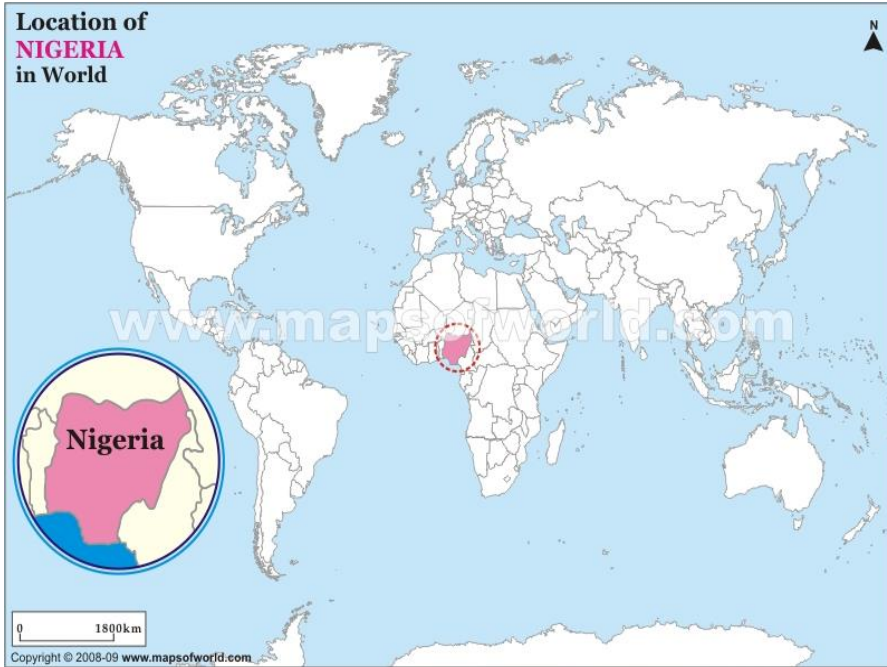
Specific Objectives

- Create awareness that would help in integrating WASH global standards into our national programs and set specific targets at local level in order to ensure sustainability
 - Recommend the provision of information, education and communication (IEC) materials that incorporates water-, sanitation-, Hygiene-, and waste disposal-related topics on posters in classrooms, teachers' common-rooms and strategic places.
 - Encourage the school teachers to unite in promoting safe water, environmental sanitation and personal hygiene, thereby ensuring an enabling environment for continual awareness-raising campaigns.
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MATERIALS AND METHOD

- The research conducted in public secondary schools in Lagos and Ogun States, South-Western Nigeria focused on gathering key data on all the components of WASH program that includes:
 - Water, sanitation and handwashing facilities;
 - Hygiene knowledge and practices;
 - Waste disposal; and
 - Operation and maintenance systems
- The study identifies the state of WASH program in the public secondary schools by a user-based data, collected through school surveys, which more accurately reflect actual use of water, sanitation and hygiene facilities by individuals in the schools.

Map of the world showing the location of Nigeria



Five, three and four public secondary schools were selected from Lagos-, Abeokuta- and Ota-city respectively for the purpose of this study.



Map of Nigeria showing locations where the study was carried out

- The criteria for selecting these schools were based on their prominence in the society and the willingness of the schools to provide information.
- Consents were taken from the heads of the schools with the first part of the questionnaire focusing on basic school information and then, structured questionnaire on water-, sanitation-, hygiene-, and waste disposal-related issues were administered to the students.
- On site observations which involved moving around the schools to see the facilities on ground for data collection were also carried out.
- The standards for WASH in schools (UNICEF, 2011) were used as the guiding principles to evaluate the adequacy of the various WASH components.

Result and Discussion



- The result of the study revealed that students` knowledge and perceptions were inconsistent with WASH facilities.
 - The schools were not provide with the learning materials on policy and resources on hygiene and health.
 - Most facilities are in a very poor and deplorable state.
 - Facilities are not well maintained and urinals are not provided.
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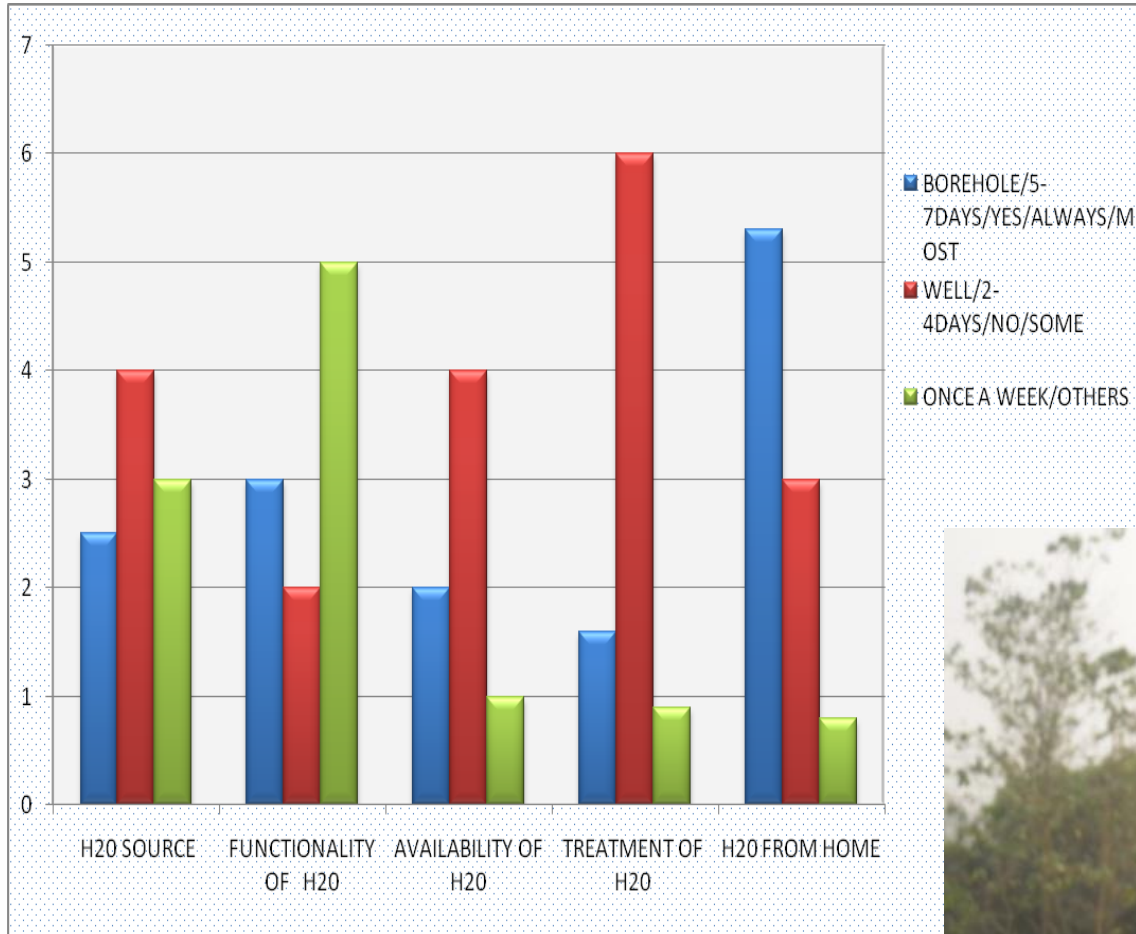
Table 1. Response on Hygiene Related Matters

S/N	School Code	Availability of Handwashing facility	Response (%)	Availability of soap	Response (%)	Is hygiene taught in school	Response (%)	Availability of IEC materials	Response (%)
Somolu-Lagos									
1	A	Not Available	-	Not Available	-	Yes	100	Not Available	-
						No	0	Available	
2	B	Not Available	-	Not Available	-	Yes	100	Not Available	-
						No	0	Available	
3	C	Not Available	-	Not Available	-	Yes	100	Not Available	-
						No	0	Available	
4	D	Not Available	-	Not Available	-	Yes	100	Not Available	-
						No	0	Available	
5	E	Not Available	-	Not Available	-	Yes	100	Not Available	-
						No	0	Available	
Abeokuta-Ogun State									
6	G	Yes	77	Always	17	Yes	87	Yes	21
				Sometimes	26				
		No	23	Never	57	No	13	No	79
7	H	Yes	13	Always	11	Yes	87	Yes	9
				Sometimes	14				
		No	87	Never	74	No	13	No	91
8	I	Yes	14	Always	11	Yes	73	Yes	8
				Sometimes	14				
		No	88	Never	74	No	27	No	92
Ado-Odo/Ota-Ogun State									
9	J	Yes	33	Always	6	Yes	84	Yes	21
				Sometimes	26				
		No	67	Never	68	No	16	No	79
10	K	Yes	0	Always	0	Yes	84	Yes	11
				Sometimes	0				
		No	100	Never	100	No	16	No	89
11	L	Yes	0	Always	0	Yes	89	Yes	20
				Sometimes	4				
		No	100	Never	96	No	11	No	80
12	M	Yes	3	Always	2	Yes	86	Yes	13
				Sometimes	2				
		No	97	Never	96	No	14	No	87

Water Related

- It is interesting to know that only 3 schools (20%) out of the 12 schools visited had drinking water points boreholes).
 - This source of water does not go through any form of treatment before use and this implies that it may not be safe for drinking.
 - For this reason majority of the students bring their drinking water from home while some depend on sachet water sold in school.
 - It was observed that the borehole in some of the schools had not been functional for quite some time and for that reason, water is usually accessed from unprotected hand dug well and public tap which is not usually available as source of water supply.
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Water Related Assessment



Sanitation Related Assessment

- It was observed that there are insufficient toilets in all the public schools. The pit latrine is the major type that is available in many of the schools.
- Latrine construction in all the schools had not kept pace with the increase in enrollment which has resulted in some schools having more than 200 pupils per drop-hole.
- 40% of the schools do not have separate latrines for boys and girls.
- The ratio of toilets to students in some of the schools range from 1:70 to 1:260 as compared to the global standard of one toilet compartment for every 25 girls, and one toilet compartment for every 50 boys (UNICEF, 2011).



Table 2. Response of Sanitation related matter


S/N	School Code	Population of students	No. of toilet facilities	Ratio of toilet to students	Condition of toilets	Frequency (%)	How often students use the toilets	Frequency (%)
Somolu-Lagos								
1	A	1050	5	1:210	Difficult to use	20	Always	28
					Dirty	75	Sometimes	50
					Clean	5	Never	22
2	B	1052	4	1:263	Difficult to use	17	Always	60
					Dirty	77	Sometimes	25
					Clean	6	Never	15
3	C	1291	8	1:161	Difficult to use	30	Always	33
					Dirty	62	Sometimes	63
					Clean	8	Never	4
4	D	1453	6	1:242	Difficult to use	25	Always	28
					Dirty	63	Sometimes	54
					Clean	12	Never	10
5	E	830	12	1:69	Difficult to use	13	Always	38
					Dirty	83	Sometimes	46
					Clean	4	Never	16
Abeokuta-Ogun State								
6	G	2520	10	1:250	Difficult to use	0	Always	47
					Dirty	26	Sometimes	40
					Clean	74	Never	14
7	H	576	4	1:144	Difficult to use	36	Always	57
					Dirty	64	Sometimes	29
					Clean	0	Never	14
8	I	1584	8	1:200	Difficult to use	71	Always	57
					Dirty	29	Sometimes	28
					Clean	0	Never	15
Ado-Odo/Ota-Ogun State								
9	J	2510	12	1:210	Difficult to use	33	Always	44
					Dirty	67	Sometimes	33
					Clean	0	Never	23
10	K	1387	8	1:173	Difficult to use	14	Always	21
					Dirty	86	Sometimes	43
					Clean	0	Never	36
11	L	3800	12	1:320	Difficult to use	10	Always	0
					Dirty	90	Sometimes	7
					Clean	0	Never	93
12	M	1678	8	1:210	Difficult to use	21	Always	41
					Dirty	79	Sometimes	30
					Clean	0	Never	29



Dirty pit latrine in one of the schools

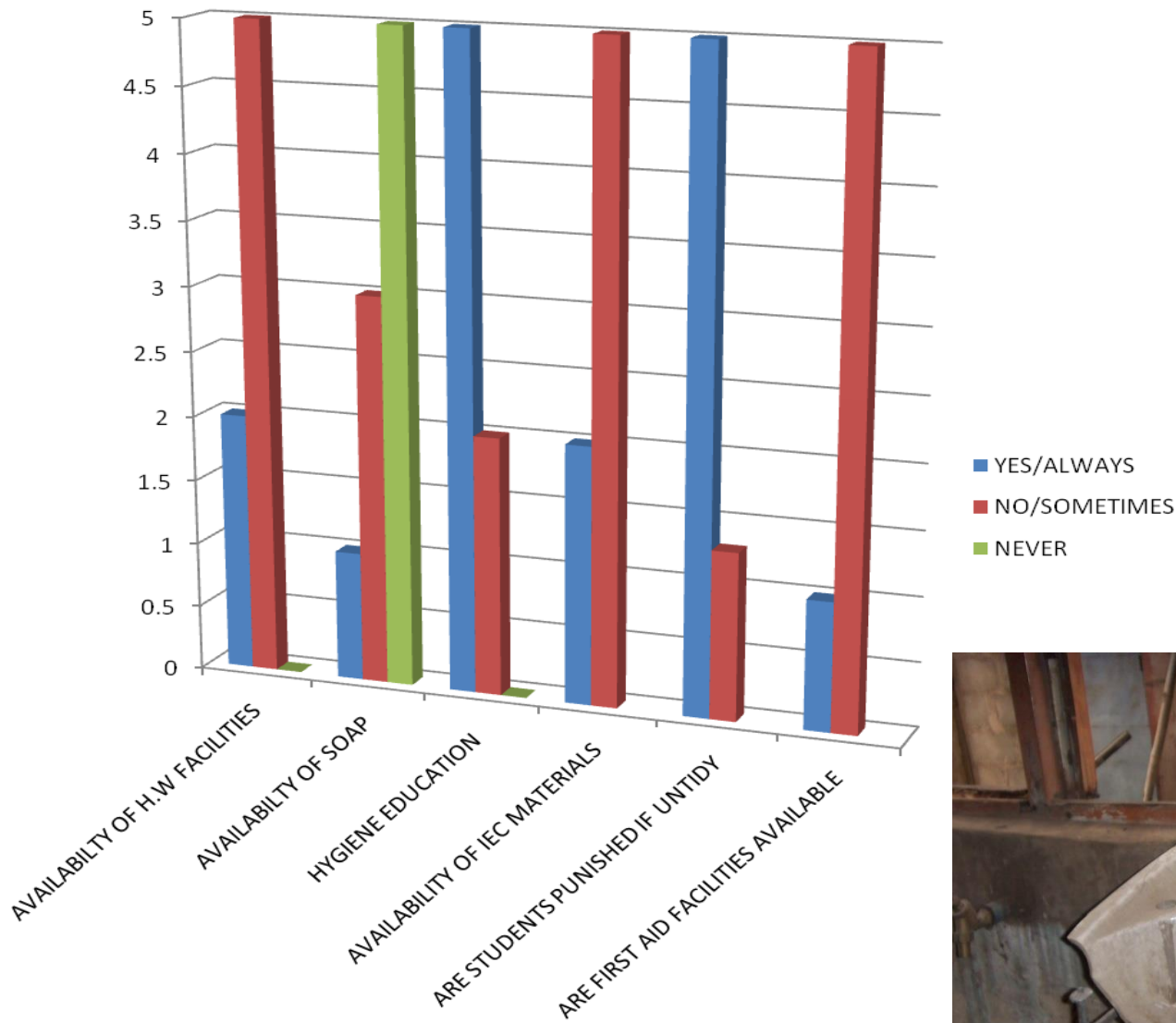
A flush toilet with broken tank



- Some of the toilet facilities were not well designed and students find it difficult to use especially the female students, who prefer using the toilets before leaving their various homes and also at the close of the day.
 - Many of the toilets are not hygienic to use: an average of 65% of the students could not use the toilet facility because it is always dirty and no urinals are provided in all the schools assessed.
 - Only 1 out of the 12 schools visited had functional toilet facility (flush water system) because the supply from the borehole is consistent and the students find the toilet convenient to use.
 - This facility was made available by the old students association of the school. None of the schools had sanitation club which should be helpful in reminding the students on the ethics of good sanitation.
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Hygiene Related Assessment

- Hand washing facilities are not provided in most of the public schools and where they are available they are in a deplorable state. Only 1 (10%) of the schools had hand washing points but without soaps.
- IEC materials are not provided in any of the public schools. The essence of IEC materials is to educate the students on the ethics of hygiene.
- The major efforts that were made so far by the school authorities to improve the health of students is by checking student finger nails once a week and students are being punished if not neat and tidy.
- Hygiene education in schools is very important, as this promotes the health of students and learning ability.



Deplorable state of hand washer

Waste Disposal Assessment

- Open dump system of solid waste disposal that are not well managed is the general practice in all the schools whereas untreated human waste and inadequate sanitation create a source from which communicable diseases can spread, placing society as a whole at huge risk when exposed.
- The solid waste in the schools comprise mainly of papers, food waste, water nylons, plastic bottles. Some of the schools adopt the incineration method of waste management and disposal.
- However, It was relieving to know that sludge (sewage) from school latrines or septic tanks are always emptied and removed before they get filled up.





Indiscriminate disposal of waste in schools environment

Waste disposal site in one of the schools

Waste littering all over the disposal site



CONCLUSION

- It can be deduced that the present state of WASH program in all the schools are not satisfactory due to inadequate provision of water supply for drinking, sanitation and hygiene education.
- Generally, the WASH sector has weak monitoring and evaluation systems, with limited evidence based data collection, poor analysis and documentation which are important for improved sector advocacy.
- Capacity building to evaluate and advocate equity issues also requires attention.
- Provision of potable water, adequate sanitary facilities like latrines and hand washing facilities for all schools at all levels requires urgent attention.



The Way Forward:

- There is urgent need for Government, NGOs and Private Sector intervention in the provision of potable water, adequate sanitary facilities like latrines and hand washing facilities for all schools at all levels.
- Schools should introduce orientation programmes at the beginning of every term which will remind the students' on the need to managing well the available facilities.
- In addition, adequate number of well designed and gender segregated toilet facilities should be provided for students and must be well maintained.
- Health clubs should be encouraged in schools in order to ensure adequate campaign on the importance of WASH in schools and I E C materials must be pasted at conspicuous and strategic places in the school premises.



- Introduction of competitions and awards to best schools with best environmental practices in school environmental management. These will ensure a better school environment for a more fruitful academic endeavor.
- The States Ministry of Education and the Management Board should modify documents used in developing policies and guidelines on accreditation of secondary schools to include effective WASH program and provision of adequate facilities.
- The students in all schools should be enlightened on the importance of hygiene education in order to break the contamination cycle of using unsanitary latrines, contaminated water, and unsafe hygienic behavior.





- The school teachers should be encouraged to ensure enabling environment and promote continual awareness campaigns to the students.
- Each school should be made to realize the importance of information, education and communication (IEC) materials that incorporates water-, sanitation-, Hygiene-, and waste disposal-related topics on posters in classrooms, teachers common-rooms and specific offices of teachers.
- Urgent attention should be given to the provision of basic amenities at all levels.
- To maximize the potential of students as the most persuasive advocates of good WASH practices in the society, it is necessary to integrate WASH program into National Education policy and schools should be provided with adequate facilities.




Limitations of study

- Permission for the assessment of 'Water, sanitation and hygiene' (WASH) in some schools was not granted by the school's authority.
- It was difficult to assess some schools at the time of visit due to other school activities at those periods.
- Some teachers declined in responding to the questionnaires because of their official schedule.



Selected Reference

- Adam, J., J. Bartram, Y. Chartier, and J. Sims, (2009). Water, Sanitation and Hygiene Standards for Schools in Low Cost Settings. World Health Organization, Geneva, Switzerland.
 - Adeniji, G and Afolabi, F. (2010). Resulting Gender Issues in Accessibility and Operation of Sanitation Services Provided by Private Sector in Nigeria. Journal of Applied Sciences in Environmental Sanitation, 5 (4): 411-417.
 - African Development Bank in Action: Activities in the Water and Sanitation Sector In the Federal Republic of Nigeria – February 2012.
 - Banerjee, S. G. and Morella, E. (2011). Africa's Water and Sanitation Infrastructure: Access, Affordability, and Alternatives. The International Bank for Reconstruction and Development/ The World Bank, Washington DC, U. S. A.
 - Curtis, V. (2003). Talking dirty: how to save a million lives. International Journal of Environmental Health Research. Volume 13, Issue 1, Supplement1, pages S73-S79.
 - Reed, R. A. and R. J. Shaw, 2008. Sanitation for Primary Schools in Africa. Water, Engineering and Development Centre (WEDC), Loughborough University, UK.
 - UNICEF (2006). Water, Sanitation and Hygiene Strategies. United Nations, New York, U. S. A.
- 

- United Nations Children's Fund (1998). A Manual on School Sanitation and Hygiene. Water, Environment and Sanitation Technical Guidelines Series No. 5. New York, NY Available at www.irc.nl/. Assessed January 15, 2012.
- UNICEF/ IRC. (2007). Towards Effective Programming for WASH in Schools: A manual on scaling up programmes for water, sanitation and hygiene in schools. http://www.unicef.org/wash/files/TP_48_WASH_Schools_07.pdf
- UNICEF/IRC (2007). Towards effective programming for WASH in schools. Delft, The Netherlands, IRC International Water and Sanitation Centre. (Technical paper series; no. 48)
- UN (2011) The Millennium Development Goals Report. United Nations, New York, U. S. A.
- UNICEF (2011) WASH in Schools Monitoring Package.
- WHO and UNICEF (2010) Progress on sanitation and drinking water: 2010 update. Geneva: World Health Organization and United Nations Children's Fund; 2010.
- WHO, 2010. Health through Safe Drinking Water and Basic Sanitation. Accessed from http://www.who.int/water_sanitation_health/mdg1/en/index.html.
- UNICEF and World Health Organization (2012). Progress on Drinking Water and Sanitation. Joint Monitoring Programme for Water Supply and Sanitation. ISBN: 978-92-806-4632-0

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My Family (Wife and Children)



THANK YOU FOR LISTENING

