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Slums, women and sanitary living in South-South Nigeria

By

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4 **Slums, women and sanitary living in South-South Nigeria**
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7 **Abstract**
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10 How much do slums affect women’s ability to negotiate access to water, sanitation and hygiene
11 (WaSH)? We used random narratives, interviews, and a review of literature from theoretical and
12 secondary sources to capture the experiences of slum dwellers in South-South Nigeria. Our findings
13 demonstrate that women and girls bear disproportionate burden and risk of poor and inadequate WaSH
14 services in the course of domestic supplies and management and making tough choices in negotiating
15 between personal sanitary needs of privacy and safety as well as attending to domestic hygiene,
16 childcare and other chores. These lived realities and experiences are partly associated with gendered
17 public policy practices, linked to the broader socio-cultural norm that confine women’s roles to the
18 private/domestic spheres, while men are free to pursue higher aspirations and opportunities. Limited
19 State capacity to guarantee universal access to WaSH for slum dwellers automatically shifts the
20 responsibility for its provision to the private/domestic domain with women bearing the greater burden.
21 We argue that the non-recognition of slums in official discourses limit their consideration for essential
22 public services provision, and the implication of such neglect is discussed in the context of the
23 consequences on women in the course of negotiating access to WaSH.
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45 **Keywords:** WaSH; gender; poverty; urban outskirts; Akwa Ibom; Rivers.
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4 **Slums, women and sanitary living in south-south Nigeria**
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8 **1.0 Introduction**
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10 About 32% (approximately one billion) of the world’s urban population is estimated to live in
11 slums (UN Habitat, 2009). A breakdown shows a very high percentage (62%) for sub-Saharan Africa
12
13 over relatively lower rates of 43% for South and 36% for East Asian regions respectively (Oppong et.al
14
15 2014:8). World Bank (2019) report shows the South Sudan produces the highest (96%) proportion of
16
17 slum dwellers while South Africa (23%) record the least (Table 1).
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24 **INSERT TABLE 1 HERE**
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26 Slums are associated with squatting, poor housing quality, poor access to basic healthcare, unimproved
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28 drinking water, poor sanitation and hygiene, insecure land tenure, and absence of physical planning,
29
30 among others.
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34 Slums fall in the categories of ‘illegal’ and ‘unapproved’ settlements attracting less
35
36 development interest and officially ineligible for the provision of public physical, social and economic
37
38 infrastructures (Crow and Dill, 2014; Ghertner 2014; Brueckner 2013). Slums present different
39
40 challenges to different categories of residents, with poor access to water, sanitation and hygiene
41
42 (WaSH) being the most critical (Akpabio and Udofia 2017, Aboderinis 2015, Sanusi 2010, WHO &
43
44 UNICEF 2013). This paper focuses on the gender related challenges of living in slums.
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50 Gender related experiences of livelihoods in slums are mediated by the broader structural
51
52 factors that shape the relative distribution of power, access to basic resources, and institutional practices,
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54 but relatively few studies address group specific experiences (Sodeinde et al 1997, Tilley et.al 2013,
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56 Babalobi 2013) in relation to specific contexts. The relationship between women and access to WaSH
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58 can be understood within the prism of cultural beliefs, gender-based roles, power and responsibilities at
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4 the domestic and wider societal levels (Akpabio and Takara 2014, Fisher 2008 and Douglas 1966). In a
5
6 study on women in water supply and sanitation programme, Archer (2005), Delgado and Zwarteven
7
8 (2007) situated gender-related inequality in historical practices of social division of labour that confine
9
10 women to the private and domestic arena while men were involved in public spheres of decision
11
12 making. Gender division of labour pushes the responsibility for WaSH related management on women
13
14 and girls. The girl child is saddled with the responsibility for supplying domestic water while the
15
16 mother focuses on management, including the domestic sanitation and hygiene. These, in most cases,
17
18 come at the expense of the education (of the girl child) and engagement in other economic activities (of
19
20 the mother). A report in Burkina Faso and Malawi noted that women spend several hours daily to
21
22 secure water for domestic needs during the dry season (van Wijk 1985, Akpabio 2019). Gender and
23
24 Water Alliance (GWA, 2003) had reported 10% drop-out or non-attendance of school age girls in
25
26 Africa during menstruation due to water related problems.
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34 Needs for privacy and safety in the process of accessing water and toilets and for personal
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36 hygiene present difficult choices for women in slums. Hickling and Hutton (2014) in a study in the
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38 democratic Republic of Congo (DRC) associated sexual violence against women with incident of open
39
40 defecation. The study argued that a lack of access to private latrines encouraged women to seek privacy
41
42 in open defecation, which exposes them to sexual molestation (also see Avannavar and Mani 2008,
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44 Akpabio and Brown 2012). The UN (2019) reported that women and girls in 80% of households walk
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46 long distances in search of water to meet up with domestic shortages.
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52 Geography, cultural factors, institutional practices and power relations interrelatedly shape
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54 gender-based access to WaSH (Nunes, 2016, Fox 2014). Institutional practices underlying uneven
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56 distribution of power linked to geography-and gender-based discrimination in the distribution of public
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58 infrastructures appropriately qualify Nunes' (2016) concept of neglect- a failure to care in an adequate
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4 way through inaction or a product of incompetence or inadequate prioritization in the allocation and
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6 management of specific resources and phenomena. Slum dwellers are conceptualized as neglected
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8 groups- systematically excluded from gaining access to specific public health facilities due to location,
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10 status, class, gender, race and age. According to Nunes (2016: 546), ‘a group is neglected when it is
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12 systematically placed in a position of vulnerability to disease, or is excluded from high-quality and
13
14 affordable healthcare...’ Structural factors can reinforce a culture of neglect either in terms of absence
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16 of rules and standard practices governing public actions; or when existing structures and institutions are
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18 skewed to disadvantage certain groups.
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24 The 1977 UN Water Conference at Mar del Plata, the International Drinking Water and Sanitation
25
26 Decade (1981-1990) and the International Conference on Water and the Environment at Dublin (1992), had long
27
28 mainstreamed gender and WaSH in development. The UN Millennium Development Goals (MDGs- 2000-2015)
29
30 and its successor, the Sustainable Development Goals (SDG) has strong gender sensitivity in their principles and
31
32 resolutions with clear emphasis on gender equality and women empowerment in WaSH at both practical and
33
34 decision-making levels. Integrating women in WaSH related planning, management and implementation has
35
36 been shown to contribute to improving access to WaSH for women in sub-Saharan Africa (Smith et al 2004).
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38 Our aim is to understand how women in slums negotiate access to WaSH and the consequences arising
39
40 thereof in South-South Nigeria.
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46 **2.0 Urbanization and sanitation in Nigeria**

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48 Nigeria’s population is estimated at over 193 million (NBS, 2018), with an estimated 50% urban
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50 dwellers. Access to WaSH services remains poor. Less than 7% and 29% of the population is estimated
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52 to enjoy piped water supplies and improved sanitation respectively. WaSH sector spending is liminal
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54 having gone down to 0.27% of the Gross Domestic Product (GDP) from the 1990 value of 0.70%; and
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56 it is estimated that 25% of the population still practices open defecation (The Nation 2018 online-
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4 [http://thenationonline.ng.net/buhari-declares-state-emergency-water-sanitation-](http://thenationonline.ng.net/buhari-declares-state-emergency-water-sanitation-sector/?fbclid=IwAR2TRabItqsQphQjxi_NvgSlipVYHMeC25g1PrkEGlmtgCM5TY29pfRYZpk)
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7 sector/?fbclid=IwAR2TRabItqsQphQjxi_NvgSlipVYHMeC25g1PrkEGlmtgCM5TY29pfRYZpk).

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9 Poor budgetary commitment hampers the capacity for WaSH sector improvements. A sizeable
10
11 percentage of the urban population still depends on unimproved or shared sanitary facilities and open
12
13 defecation (Tables 2).

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17 **INSERT TABLE 2 HERE**

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19 OD in urban areas occurs in gutters, roadsides, garbage spots and open bodies of water, among other places.
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21 Slums are mostly vulnerable on account of limited space and restricted land use produced through urban
22
23 gentrification process. Poor urban WaSH contributes to poor health outcomes. Women and children are more
24
25 likely to suffer from a lack of improved WaSH services given that they face a disproportionate burden of
26
27 securing access to water and managing domestic sanitation and hygiene. For instance, under 5 years old are
28
29 reported to have a 38% higher risk of mortality in Nigeria due to a lack of improved water and sanitation sources
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31 (Abubakar 2017: 2). Studies report that women in slums face problems of poor education, diseases, and sexual
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33 abuses as a consequence of efforts to improve access to WaSH services (Chant et.al 2017 and Karn et.al 2003).
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39 Urbanization in Nigeria, over the past four decades, has been mediated through State creation and
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41 designation of administrative headquarters, commercial opportunities (e.g., Port towns) and migration process.
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43 Urbanization rate has progressed from 10% in 1950, 20% in 1970, 27% in 1980 and 1990 (35% in 1990) to over
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45 40% in the last decade (Olotua and Babadoye 2009). High urban population and a limited public planning
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47 capacity translate to a considerable pressure on available economic opportunities and social infrastructures
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49 including housing. Slums provide alternative livelihood spaces for migrants and low-income individuals who
50
51 cannot afford the high cost of city lives. The UN-HABITAT (2009) estimated that the proportion of population
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53 in slums in Nigeria in 2005 represented 60.1 to 70.0 percent of the total urban population of 63,969,000.
54
55 Majority of slums are associated with temporary and makeshift structures (with tarpolyn, nylon, loin
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57 cloths), while the relatively permanent ones are built with woods, mud walls and zinc roofs. Slums
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constitute the epicenter and settlement destinations for rural, urban and inter-city migrants, and low-income city workers for livelihood, business and related opportunities and supports. Popular resistance often trails government attempts at demolishing and upgrading urban slums. In 2010, Nigeria's Rivers State government's attempt to demolish the waterfront slums triggered tension, and according to Amnesty International, an estimated 200, 000 were at risk of homelessness (Ekeinde (2010)).

Nigeria's rising urban growth has grave implication on urban housing, urban water and sanitation and general livelihoods. Urban public water and sanitation system is generally poor. Except limited part of Lagos and Abuja, no urban centre has sewerage system, implying that urban sanitation is left to individual fate (Akpabio 2012). Poor or non-integration of urban development practice with urban sewerage management means urban sanitation is of marginal priority in public policies (Ezeudu, 2019). Institutionally, urban WaSH sector straddles across different agencies and ministries at different governmental levels with limited capacity for coordination of activities. By the 2000 National Policy on water supply, the Federal Government of Nigeria (FGN) has 30% responsibility for urban water supply; 60% is reserved for the State while 10% goes to local authorities. The Federal Ministry of Water Resources (FMWR) is involved in coordinating national water policies, management of water resources including allocation between states, and approving development projects. The Federal Ministry of Environment (FME) claims regulatory oversight, but also claims responsibilities for sanitation and waste management. Several other units exist across public ministries/agencies with direct or indirect responsibility for urban WaSH sector management. For instance, urban and regional development department under the ministry of Power, Works and Housing (MPWH) is associated, as part of its statutory responsibilities, with urban renewal and slum upgrading. Subnational urban water companies/boards, public health agencies, sanitation taskforces and multitude of multinational, non-governmental and other private interests are involved in urban WaSH through supplies, management, monitoring and enforcement of standards, charity and corporate social responsibilities, etc. There is no evidence of coordination among these bodies. Apart from the State Executive Council meetings that may discuss key national policies and projects for implementation, national and sub-national agencies pursue different and overlapping agenda for the sector. Some semblance of coordination

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for the sector was noted to include the National Task Group on Sanitation (NTGS¹) (an inter-ministerial initiatives for coordinating action against open defecation). Generally, institutional arrangement for urban WaSH sector governance is weak and poorly coordinated. Public interest in WaSH sector management rarely extends beyond drinking water supplies. Sanitation rarely features as a public policy priority, and when it does, the rural areas are prioritized (Ezeudu 2019). In general, Nigeria’s WaSH sector governance is poorly developed in terms of management capacity, evidence-based services and necessary legal and policy framework. Available legal and policy frameworks are colonial and dated and less likely to address emerging challenges including the experiences of women living in slums.

2.1 Description of the Study Area

This study took place in the South-South region of Nigeria. The region is occupied by six states of Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers, and characterized by rivers, streams, canals and creeks; extensive wetlands; sandy coastal ridge barriers; brackish or saline mangrove, freshwater and rainforest (Fig 1).

INSERT FIGURE 1 HERE

The region is home to diversities of biological and geological resources giving rise to farming, fishing, gathering, small-scale and large-scale economic activities including petroleum oil exploration and allied businesses. The South-South region of Nigeria is associated with petroleum oil exploration, which accounts for 80% and 90% of Nigeria’s revenue and exports respectively (Omoregie, 2019). It is rated as the most degraded due to largescale and unregulated impact of petroleum exploration on the environment.

¹ The NTGS has no legal mechanism to initiate and enforce discipline and standard practices, and cannot intervene in budgetary matters

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There is widespread poverty (Akpan and Akpabio 2009), substance use and crime (Ben 2019), overcrowding, poor quality houses and insecure property tenure, poor healthcare services, absence of physical planning and commercial sex work, in addition to poor and absence of basic water and sanitation services. In terms of sanitation, shared latrine and open defecation are widely practiced, and few modern buildings are equipped with modern flush toilets. Shared latrines are poorly maintained and unclean, and could be susceptible to misuse, blockage and flood inundation, occasionally oozing offensive and discomfoting odour. The WHO/UNICEF (2013) classified shared latrine, for instance, as ‘unimproved’ and poses threats to public health and safety. Latrines services in slums are either commercially run or as part of the terms of tenancy agreement, which in most cases attract exploitative fees, encouraging open defecation in drains, water bodies, garbage bins and spots, bush and roadsides, among other places.

Our study was conducted in Oginigba, a slum in Obio-Akpor local government area (Rivers State) and Urua Ekpa, a slum in Uyo local government area (Akwa Ibom State) (Plates 1 & 2).

INSERT PLATES 1 & 2 HERE

Oginigba contrasts sharply with Urua Ekpa as a riverine settlement with poor soils, which hardly support potable and functional drinking water projects and sustainable pit latrines. Water supply come from the natural sources, private and commercial supplies and limited intervention from non-state organizations. For instance, the Michelin company once donated three public drinking water projects in Oginigba town, which are today not functional. Majority of the inhabitants depend on the natural as well as private and commercial sources of water supplies. Sanitation system remains poor. Houses with close proximity to water bodies adopt make-shift latrines that empty directly into nearby water bodies, which also serve to provide water for domestic uses and for bath and laundry purposes. Shallow latrines

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4 (4-5 feet deep) and open defecation (in bush, drains, garbage bins/spots, etc) dominate the sanitation
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7 system of houses not in close proximity to water bodies.
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10 Given the unplanned, illegal and transitory nature of slums, it is difficult to account for basic
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12 demographic and settlement compositions, but available statistics put the population at a very relatively
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14 higher figures (over 5% growth rate) (Gabriel and Abraham 2009), with high birth and high death rates.
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16 While Oginigba settlement commands a mix of high- and low-quality houses and high composition of
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18 ethnic diversity (Ijaw, Igbo, Yoruba, Hausa Fulani, Ibibio, Efik, etc), Urua Ekpa settlement is over 90%
19
20 dominated by low quality residential buildings. These sharp differences are probably due to the
21
22 differential impact of petroleum resources exploration in the two States (Rivers State has had long
23
24 history of exposure to onshore and offshore petroleum exploration activities over Akwa Ibom). Unlike
25
26 Urua Ekpa, Oginigba settlement is much closer to petroleum oil exploration activities and attract higher
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28 oil related and allied company wage workers. Specific contexts produce different levels of realities,
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30 experiences and impacts, and how much does dwelling in slums affect women’s ability to negotiate
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32 access to WaSH?
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40 **3.0 The Study Processes**

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42 We used random narratives, interviews, and a review of literature from theoretical and
43
44 secondary sources to capture the experiences of slum dwellers in two urban locations namely, Urua
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46 Ekpa, Uyo (Akwa Ibom State) and Oginigba (Rivers State). The project builds on a decade of earlier
47
48 works of the lead author on WaSH in Nigeria. A three-day capacity building workshop on water-
49
50 sanitation-gender-public health nexus (20th-22nd March 2017) held at the University of Uyo,
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52 complemented other sources of information for this research. During the data collection processes, we
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55 were interested in understanding daily and practical realities, experiences and consequences associated
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57 with negotiating access to WaSH among women in slum dwellings.
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We interviewed 60 residents (representing 60 households) in an in depth, semi-structured and simple random processes over a span of one year (Urua Ekpa=45; Oginigba=15). Our primary target for interviews was the women (n=41), but we later sought the views of some men (n=19), through a similar process, to balance understanding of the situation. We arrived at 19 men when we discovered no new information was forthcoming. Preliminary selection of women participants was conducted to explain the study purpose, secure their commitment to participate, exchange contacts and agree on interview schedules. Securing the interest and commitment of the 41 women was rather difficult, which explains our inability to have gone beyond the number. The interview process commenced in February 2016 following necessary ethical approvals. Each interview could last up to two hours on average. Follow-ups data collection and clarifications were conducted through repeated contacts, observations, phone calls, SMS and email correspondences. The follow-up was necessary to resolve some conflicts and contradictions noticed among respondents. In every case, notes were taken of important issues, which also enabled us to develop some themes for analysis, comparison and discussions.

Our findings were presented and discussed at a three-day capacity building workshop on water-sanitation-gender-public health nexus (20th-22nd March 2017) held at the University of Uyo. The workshop was made up of representatives from the study areas, the academia, civil society and non-governmental organizations, policy makers (from government Ministries and Departments), women groups and students, among others. Presentations and discussions that followed supported our data analysis, compilation and discussion of our findings. Other supports came from keen observations, targeted official interviews and the review of relevant literatures from academic, policy and media sources.

This study is exploratory and did not give adequate scope for reaching out to diverse communities, ethnic groups and individuals sharing similar settlement features for comparison. We

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3
4 used purposive sampling to target the two settlements due to the advantages of their close proximity to
5
6 the authors (all the authors except one are natives of Akwa Ibom State), and to enhance the
7
8 optimization of our limited resources. Urua Ekpa had the highest number of interviewees (45
9
10 interviewees) while only 15 participants came from Oginigba due to logistic reasons. These two
11
12 settlements do not adequately represent the complex socio-cultural, environmental and ethnic diversity
13
14 of the South-South region. The proximity of two of our co-authors and the long-term trustful
15
16 relationship with some occupants in the study settlements provided additional advantage of confidence
17
18 and relative ease during data collection processes. Our interest was to explore and understand the direct
19
20 experiences of women living in slums in relation to WaSH.
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27 This project was approved for funding after due ethical consideration and approval by the
28
29 University of Uyo Ethical Committee through the University's Centre for Research (UU/REG/289/Vol.
30
31 111/187). Additionally, our data collection and analysis processes followed strict ethical standards of
32
33 anonymity, confidentiality, informed consent and ability to withdraw from participation at any stage of
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35 the research process. As earlier acknowledged, we depended on few samples for generalizations. We
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37 believe these preliminary findings will open up wider scope for deeper academic discussions and for
38
39 further research on this obviously unexplored issue.
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45 **4.0 Findings**

46 **4.1 Socio-demographic and economic characteristics of the respondents**

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48 The socio-demographic and economic characteristics of the respondents covering gender,
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50 income, education and occupation were analyzed (Table 3).
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56 **INSERT TABLE 3 HERE**
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4 Average household² size was 7. It was a bit difficult getting the respondents to accurately estimate their
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6 income brackets due to the largely informal nature of their activities, and the figures presented probably
7
8 may have been underestimated/overestimated. Several informal and small-scale businesses were
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10 identified. They include street hawking of food, sachet water and household goods, itinerant services
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12 including shoe repairs, herbal cures, among several others. Repair of electronics and auto products,
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14 commercial cycling, tailoring, carpentry, eateries, hair saloon, etc., were equally visible. Some
15
16 respondents were involved in daily paid jobs in the construction and transportation businesses. Other
17
18 less visible businesses were discussed by our informants to include commercial sex and drug trafficking,
19
20 pick-pocketing and robbery: *'it is not easy to point out exactly what most people do...one business in*
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22 *the day and another at night...some are involved in all forms of bad [illicit] businesses'* (**Respondent**
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24 **T**).
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32 The two slums function simultaneously as alternative and transitory urban residential outskirts
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34 for low-income individuals and newly arrived immigrants who may not be able to afford the cost of
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36 settling in the main city. All the major ethnic groups of Hausa-Fulani, Yoruba and Igbos as well as
37
38 several others including Ibibios, Ijaw, etc., occupy these areas though with varying density. Oginigba
39
40 attracts higher diversity and density of ethnic composition relative to Urua Ekpa. This is possible due to
41
42 its proximity to major petroleum oil industry operations and allied companies: about 33 companies
43
44 were estimated. Low cost and flexible housing terms, cheap food, opportunities for low-cost and small-
45
46 scale business start-ups, and easy networking space with close relatives and friends, were major
47
48 attractions. Urua Ekpa is about one kilometer away from the city campus of the University of Uyo, and
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50 plays host to students and non-students from different ethnic backgrounds whose majority depends on
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52 affordable and low-cost food and flexible/negotiable accommodation terms. A plate of food could be
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59 ² Household here implies every member of the house shares in a common cooking pot
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4 between 80% and 150% cheaper in these settlements compared to the main city, though with relatively
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6 different quality. About 6 civil servants (13%) claimed their monthly income cannot sustain their living
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8 in the main city: *'...staying here is better for me and my family...my income will not cope with the high*
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10 *cost of living in the main city...'* (**Respondent B**).
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14 **4.2 The rise and attraction of slums**

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16 Cost of living, unemployment, business interest and other factors are associated with slum
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18 settlements. A total of 38 interviewees (84%) opted for such places due to cost-of-living related factors.
19
20 Five respondents (11%) mentioned business interest while two respondents (4%) were not certain of
21
22 any specific reason. Over 80% of the respondents were not prepared to move to the inner city without
23
24 the prospect of a high-paying job and improved standard of living: *'...I have been here for over 5*
25
26 *years...so am ok...I can only go to the main city if am guaranteed a better living condition than here...'*
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31
32 (**Respondent L**). Cost of living related factors encapsulate several interrelated issues mentioned by the
33
34 respondents to include a lack of savings and other financial assets; poor/low income; joblessness; poor
35
36 educational background; migration; and general survival needs (Table 4).
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40 **INSERT TABLE 4 HERE**

41
42 Civil servants, company workers and graduates with higher level qualifications settle in such places due
43
44 to poor income, unemployment and inability to sustain relatively high cost of living in the urban
45
46 mainstream: *'my take-home pay cannot cope with the high cost of housing in Uyo...better for me to live*
47
48 *here...rents and food here are relatively cheap...the only challenge is daily transport to and from work*
49
50 *place...but this is better for me...'* (**Respondent B**).
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55 Few well-to-do individuals claimed they were attracted to those places for businesses.
56
57 Compared to the inner cities of Uyo and Port Harcourt, Urua Ekpa and Oginigba slums are associated
58
59 with low-cost landed properties which encourage external investment interests in housing development
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4 and commercial businesses. Oginigba enjoys mixed housing types (about 30% fairly high-quality
5 residential houses) and attracts widespread commercial investments in small- and medium-scale
6
7 businesses taking advantage of the petroleum oil exploration and related activities. Urua Ekpa is mostly
8
9 associated with petty and informal commercial retail businesses. One of the most important features of
10
11 these settlements is their flexible capacity for hosting migrants from different locations and for various
12
13 reasons including horizontal and vertical networking with relatives; pursuit of business opportunities;
14
15 escape from ‘boring and unproductive’ rural lives; escape from high cost of living in the inner cities;
16
17 and as platforms for accessing urban opportunities including higher education: *‘here everything is*
18
19 *straightforward...you can connect with your siblings in the village and engage him or her in small-*
20
21 *small businesses...to support yourself and family...’ (Respondent C).* This respondent was referring to
22
23 the option of using children, school dropouts, elderlies and some unemployed to support itinerant or
24
25 stationary commercial businesses to supplement main income.
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34 Low-cost housing, cheap food and almost limitless opportunities for unregulated and small-
35
36 scale businesses make slums notorious as ‘sex, crime and drug trafficking’ havens. Over 80% of
37
38 women interviewed were involved in diverse small-scale, retail activities in roadside
39
40 restaurants/eateries, hawking of food items, hair dressing, tailoring, etc: *‘...we don’t know what some*
41
42 *women are doing here...but they are here...’ (Respondent C).* This response was an indirect reference
43
44 to the prevalence of illicit businesses including commercial sex. Men were mostly associated with
45
46 commercial water businesses (through commercial boreholes), wheel barrowing, alcohol and drugs
47
48 related businesses, transportation, rule enforcements, among others.
49
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53
54 The study areas lack access to improved drinking water and sanitation. About 96% of the
55
56 respondents gain access to drinking water through commercial services and complement with natural
57
58 sources (from rain, rivers/streams). About 2 respondents (4%) depend on their private borehole in their
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4 residences (which also serves as commercial supplies to the public) for drinking and other needs. The
5
6 cost of a 25 litre of water is #10 (\$0.03) and could be higher in the dry season with groundwater
7
8 drawdown. No functional public water services for these settlements. The sanitation system is poor and
9
10 dominated by pit latrines and open defecation on roadside gutters, rivers/streams, nearby bush, garbage
11
12 bins etc. Pit latrines are widely shared and 43 respondents (96%) indicated ‘shared pit latrines’ as their
13
14 main toilet system. Only two respondents (4%) use indoor flush toilets.
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19 Poor access to toilets encourages open defecation. A typical shared latrine in a compound, on
20
21 average, can serve no less than ten people on daily and regular use basis. Daily experiences of queues
22
23 and associated pressure of time as well as poor maintenance of latrines encourage low utilization, and
24
25 an alternative in open defecation. Based on our findings, open defecation into gutters, bushes, nearby
26
27 rivers or garbage bins is common in the night or early hours of the day. Day hours present some
28
29 difficulties relating to privacy and is more likely to encourage ‘wrap and throw’ form of open
30
31 defecation-faeces wrapped in small bags and thrown into the dustbins, river, gutters or bushes. ‘Wrap
32
33 and throw’ form of open defecation has already been reported in Akpabio and Brown (2012) in a study
34
35 on riverside settlements in Nigeria. Most of the respondents were less concerned of the risks of possible
36
37 outbreaks of diseases associated with poor and unimproved latrines, even with daily experiences of filth,
38
39 flies and oozing odour. This is probably related to the overwhelming commitment to
40
41 existence/livelihood as well as poor knowledge of the epidemiological link between WaSH and health.
42
43 Our interaction showed very high value placed on existence and survival than improved drinking water
44
45 supplies and sanitation: *‘we have lived here for years...we have been seeing these things [waste heaps]*
46
47 *for years...we have been coping with our usual ways of lives and no problem...it is God that*
48
49 *protects...if someone dies, it was destined for the person...not because of the water or sanitary*
50
51 *condition...’ (Respondent H).* Similar findings linking survival considerations and poor sense of
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4 aesthetics with poor commitment to sanitary improvement among shared latrine users have been
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6 reported in Kampala, Uganda (Kwiringira et.al 2016).
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9 **5.0 Women and experiences in negotiating access to daily WaSH services**

10
11
12 Study findings have shown that informal and illicit jobs/businesses including eateries, hawking
13
14 and sales of food items/provisions, commercial sex, are highly gendered, and dominated by women to
15
16 support personal existence and complement household income. Over 80% of the women did not have
17
18 specific future plans for themselves as long as they have secured daily livelihood supports as
19
20 emphasized by respondent (A): *‘it was difficult staying in the village...you find it hard to eat in a*
21
22 *day...no money, no job...here is better for me...’* Another female respondent (M) noted: *‘I have been*
23
24 *here for over 18 years...this place has helped me to train my children...I have one in the University...’*
25
26
27 Few women (about 8%) saw those settlements as transit places to pursue higher aspirations and access
28
29 opportunities in the city including education, business and public or private sector employments. These
30
31 categories of respondents (mostly in their early 20s) depend on the support chain of earlier and
32
33 relatively better-off settler siblings and their network. Women with no clear future plans of pursuing
34
35 higher livelihood opportunities outside the slums belonged to the categories of respondents with poor
36
37 socio-economic background (poor education, poor income) and long-term settlers.
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44 Women in Oginigba and Urua Ekpa share common experiences of poor and inadequate access
45
46 to potable water, exposure to shared but poorly maintained latrines and widespread open defecation
47
48 behaviors. The generally poor living condition of these settlements encourages a living pattern that
49
50 places premium on existence and survival over considerations for improved access to WaSH. A
51
52 respondent (F) (with 5 children), who claimed had been abandoned by her husband had this to say: *‘I*
53
54 *have no job or source of income...but the children have to be fed and sheltered...it is tough, no external*
55
56 *help...’*. This respondent is powerless, with no legal ownership and control of properties to support
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their existence, and she is most likely to be involved in multiple informal and illicit businesses for survival. Though some respondents complained of poorly maintained latrines that leaves the settlements with stench, they had no plans for immediate improvements: ‘...*everyone uses the toilet but no one seems to be concerned about maintenance...*’ (**Respondent H** who discussed the problems of shared pit latrine in her compound).

At Oginigba, majority of the respondents defecates to the river through draining pipes. Others pull resources together and build a shallow pit toilet, which is very unsafe. As argued by respondent (**A**): ‘*I don’t allow my children to use such toilet to prevent them from falling inside...*’ Open gutters, drains, bushes and garbage bins were also mentioned as hotspots for defecation across the two settlements. At night the practice of ‘wrap and throw’ (wrap at night and throw in the day or wrap in the day into open bushes or gutters) was reported. Time, space and who is involved determines possible choices for open defecation. Children are allowed to defecate on open ground which would be thrown into the river, pit latrines or nearby bush. Women, however, face the greatest problem in relation to privacy and safety. The prospect of waiting on queues for use of a shared and often poorly maintained latrine for a woman would translate to a waste of valuable business time and justifies widespread open defecation behaviours. From our informants, open defecation is more likely to expose women to abuses, sexual harassments and insect bites especially at night hours.

Although urban slums are spaces of opportunities, businesses and livelihoods, the risks associated with poor quality water supplies, sanitation and hygiene constitute potential sources of danger to human lives and public health. Securing and managing daily water, personal and household sanitation and hygiene at such places render women most vulnerable to infection, epidemics, mortality and physical attack. Most respondents did not see these as problems (Table 5).

INSERT TABLE 5 HERE

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4 When asked about the public health concerns of inappropriate WaSH, over 95% of the respondents did
5
6 not rate poor WaSH services as their problem: *'I have lived here for over 18 years...using these same*
7
8 *sources of water and toilets...so no problem...God protects...'* (**Respondent D**). Crime and worries
9
10 over daily survival and existence were rated high in the list of their problems.
11
12

13 14 **6.0 Discussion of findings and concluding remarks**

15
16 Slums, women and WaSH in Nigeria speaks to the consequences of a wider political economy
17
18 of survival, urbanization and public policy neglects. Traditional/historical occupation, migration,
19
20 poverty, livelihood necessities and public gentrification practices explain the emergence and
21
22 persistence of slums in the study areas. The political designation of Rivers (May 1967) and Akwa Ibom
23
24 (September 1987)) as separate geopolitical entities triggered rural urban migration and processes of
25
26 physical and socio-economic planning to build a new landscape of administration and development.
27
28 Urbanization drive is associated with renewal and gentrification practices, which often push low-
29
30 income citizens to the outskirts, often with no resettlement plans. Slums thrive out of livelihood
31
32 necessities engendered by State policies and practices encapsulated in regulation and inequitable
33
34 distribution of public resources and infrastructures in favour of the newly transformed city landscape.
35
36 From our findings, slums function either as places of 'hope' (temporary settlements for migrants and
37
38 low-income individuals with future aspirations) or 'despair' (for individuals with no future aspirations)
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40 (see Stokes 1962).
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48 By the findings, women in slums are involved in diverse businesses under circumstances of
49
50 overcrowding, poor and insecure housing tenure, self-help, informal/illicit and predatory businesses,
51
52 poor access to basic social and economic infrastructures, and poor sanitation and hygiene, among others.
53
54 This raises important WaSH risk challenges for different categories of the populations. Our findings
55
56 demonstrate women and girls bear disproportionate burden of poor and inadequate WaSH services.
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They are involved in supplies, handling and the management of water and domestic sanitation and hygiene. They are involved in child hygiene and care. Meeting up these daily tasks and responsibilities, in addition to fulfilling their personal sanitary needs for defecation, expose them to the tough choices in negotiating between personal issues of privacy and safety, and attending to domestic hygiene, childcare and other chores.

Slum settlements and associated public health risk for women could partly be associated with gendered public policy practices, linked to the broader socio-cultural structure of patriarchy that confines women’s roles to the private/domestic spheres, while men are free to pursue higher aspirations and opportunities. Limited state capacity to guarantee universal and improved access to WaSH for slum dwellers automatically shifts the responsibility for its provision to the private/domestic domain with women bearing the greater burden. Although Nigeria’s 1999 constitution is mute on sanitation and hygiene, it expressly guarantees the right of access to water for every citizen. This right rarely extends to slums due to a lack of political will. Poor representation of women in public policy decisions also implies their lived experiences in slums are less likely to be brought to the frontline of public policies (Nwabunkeonye, 2014). More men at the helm of State WaSH leadership and institutions have the implication of reinforcing gendered policies and consequent marginalization of women.

Poor knowledge of the epidemiological, public health and socio-economic values of securing improved WaSH services limits their mainstreaming in public policy discourses and practices aimed at securing improved services to settlements officially labelled ‘illegal’ and ‘unapproved’. For the respondents, guaranteeing basic existence through food and other basic responsibilities was far more important and imperative than the perceived public health risk associated with poor WaSH services and practices. Our workshop outcome also demonstrated that much needs to be done in building the capacity of the citizens and public officials on this issue. Awareness of WaSH-public health nexus is

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4 important, but this also depends on the active support of all relevant institutions and the Media. This,
5
6 however, is not practicable, at least given our experiences of low participation and non-reporting of our
7
8 three-day capacity building workshop by the major Media organizations. Access to improved WaSH
9
10 complements existential and public health needs, and should be of clear public policy necessity, but the
11
12 non-recognition of slums in official discourses is less likely to attract the necessary public policy
13
14 priority.
15
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19 Clearly, women in slums lack access to basic WaSH services. They also lack the capacity to
20
21 address their regular WaSH needs. Access to basic drinking water is the first entry point to sustaining
22
23 improvement in sanitation and hygiene. These fall within the human and national security interests of
24
25 the State, and are linked to good health and well-being, public health safety and improved quality of
26
27 life for the citizens. It would be of greater public policy priority were WaSH sector governance
28
29 approached from the nexus perspective with emphasis on the interconnectedness of WaSH in achieving
30
31 effective public health management. A nexus approach will ensure all citizens and categories of
32
33 settlements including slums and women are not left behind in WaSH services provision and
34
35 improvements. Achieving the nexus approach needs high level of institutional coordination among
36
37 sector ministries and departments to achieve integrated WaSH sector management. Coordination can be
38
39 achieved through appropriate legislative interventions. Covid-19 pandemic is enough evidence
40
41 demonstrating the public health imperative of WaSH to every society.
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49 As earlier acknowledged in the methodology section, we depended on few samples for
50
51 generalizations. Given the complexity characterizing gender and slum sanitation, future research should
52
53 aim to further deepen understanding on the relationship between gender and slum WaSH through more
54
55 qualitative case studies specifically employing narrative accounts and oral testimonies to generate first-
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57 hand experiences and insights.
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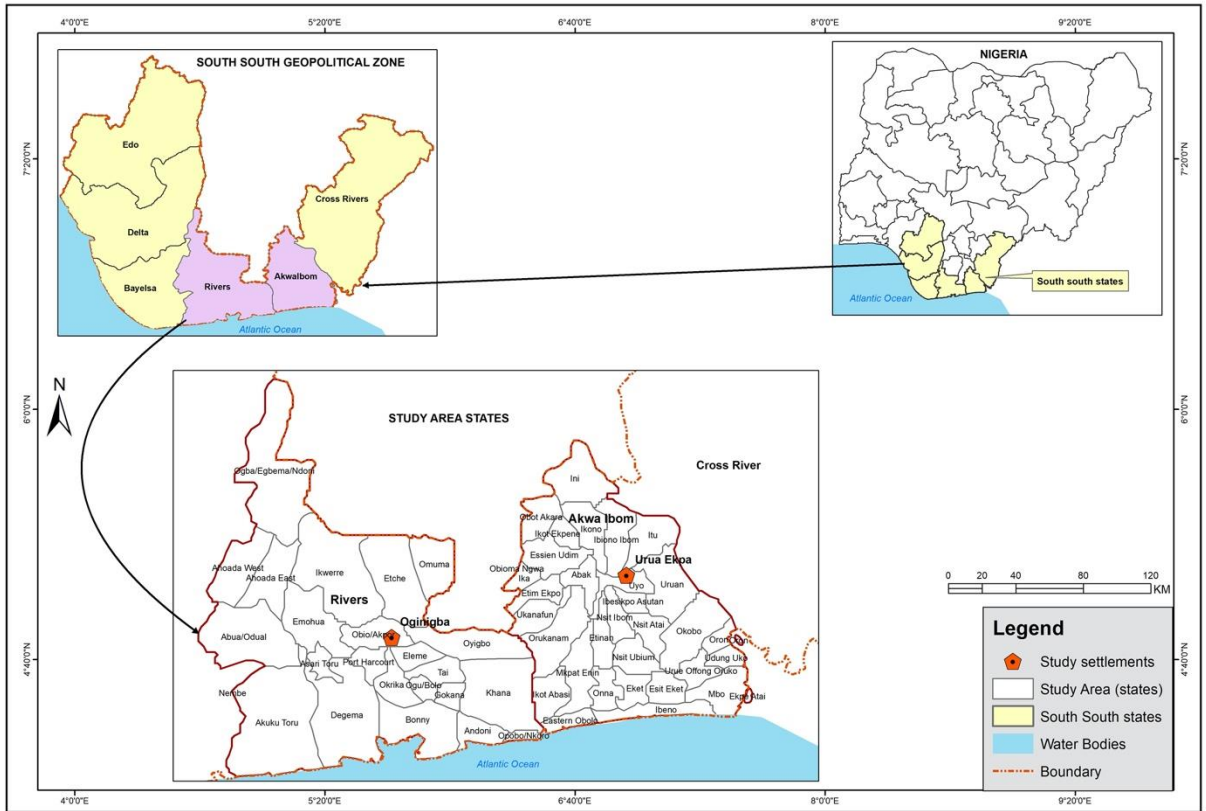


Figure 1. Nigeria's south-south showing Rivers and Akwa Ibom States

Plate 1. Images of Oginigba



Plate 1. Latrine with a pipe emptying into a drain

Plate 2 removed

Plate 2. One of our co authors

Plate 3 removed

Plate 3: Water Collection point



Plate 4: Drains in-between houses

Plate 5 removed

Plate 5: Makeshift houses



Plate 6: Atypical settlement point

Plate 2. Images of Urua Ekpa



Plate 7. A typical waste dumpsite

Plate 8 removed

Plate 8: one of our co-authors in a private water point



Plate 8: private/commercial water facility

Table 1. The proportion of slum by country in sub-Saharan Africa

Slum rate by percentage	Country proportion	Remarks
Highest (70% and above)	South Sudan (96%); Central African Republic (93%), Chad (88%); Sao Tome Principe (87%); Guinea Bissau (82%); Mozambique & Mauritania (80% each); Madagascar (77%); Sierra Leone (76%);; DRC (75%); Ethiopia & Somalia (74% each); others including Niger, Eritrea, Comoros & Cape Verde have 70% each.	South Sudan, Central African Republic, Chad, Sao Tome Principe and Guinea Bissau are leading in this category
Medium (40-69%)	Malawi (67%); Equitorial Guinea, Liberia, Burkina Faso (66% each); Benin (62%); Botswana (59%); Burundi (58%); Cote d' Ivoire, Angola, Kenya & Mali (56% each); Uganda & Zambia (54% each); Rwanda (53%); Togo, Tanzania & Lesotho (51% each); Nigeria (50%); Congo Republic (47%); Guinea (43%)	Malawi, Equitorial Guinea, Liberia, Burkina Faso and Benin experience medium slum growth
Low (0-39%)	Senegal (39%); Cameroun & Ghana (38% each); Gabon (37%); Gambia (35%); Namibia (33%); Zimbabwe (25%); South Africa (23%)	Zimbabwe and South Africa perform relatively better in this category

Source: World Bank Report (2019); N/B: categories are arbitrarily done

Table 2. Utilization of sanitation facilities (% population) in Nigeria: 1990-2015

Facility	1990	2000	2008	2010	2011	2012	2013	2015
National								
Improved	38	32	32	31	31	28	34	29
Shared	24	27	26	25	24	26	20	24
Others	14	18	20	22	22	23	17	22
Open defecation	24	23	22	22	23	23	29	25
Urban								
improved	38	34	36	35	33	31	43	33
shared	43	43	38	38	36	40	34	38
other	12	13	14	15	18	14	8	14
Open defecation	7	10	12	12	15	15	15	15
Rural								
improved	38	32	14	27	28	25	28	25
shared	16	16	27	13	13	12	11	11
other	15	19	31	29	28	32	23	30
Open defecation	31	33	32	31	31	31	38	34

Source: FMWR (2018: 5)

Table 3. Socio-demographic and economic characteristics of respondents

Gender (%)		Education (%)			Occupation (%)				Income (in NGN 000') (%)				
M	F	N/F	PP	Ter	PB	CS	CE	St	<10	10-20	20-30	30-40	>40
31.7	68.3	40	47	13	58	31	4	7	24	38	20	11	7

N/B: 1). M (Male); F (Female); N/F (No Formal Education); PP (Primary/Post-primary); Ter (Tertiary); PB (Private Business); CS (Civil Servant); CE (Company Employee); St (Student); 2). NGN Less than (<) (>\$28); NGN 10,000-20,000 (\$28-\$56); NGN 20,001-30,000 (\$56-\$83); NGN 30,001-40,000 (\$83-\$111);3). \$1 translated to NGN 360

Table 4. The rise and attraction of slums in Nigeria

Attraction	Contents	Gender perspectives/other Remarks
Market	Supports the unemployed, migrants, struggling students and hustlers; illegal/illicit businesses (commercial sex work, drugs, alcohol); outside public tax net	Over 80% of small scale retail businesses including commercial sex is dominated by women; men are involved in drugs, pimping, etc; male visitors mostly target female sex workers
Landed and housing properties	Cheap landed properties; cheap rented accommodations with flexible terms; opportunities for shared accommodation; prevalence of make-shift kiosks/retail shops; relatively privileged individuals invest in slums to avoid certain development levies in the main city	Transition or permanent place for newly arrived female migrants who may not be economically strong to cope with the cost of living in the main city; help male and female hustlers and struggling students
Networking platforms	1.Connects and mentor people of shared ethnicity and kinship to prepare them for integration-horizontal networking; 2.Vertical networking avenue with well-established individuals in the main city through associational/collective action platforms or individual contacts;	Overcrowding/congestion reinforces sanitary burden through excessive waste production and poor handling practices; increase in incidence of open defecation
Hide-out for criminals	Platforms for all illicit and illegal transactions; launch-out platforms for armed robbers; a hide-out for rapists	Female serves as support base for criminals through sex, drugs, eateries and alcohol businesses; women are victims of rape especially during open defecation
Institutional supplies	public planning resources highly limited; social order is sustained through informal network of information circulation/exchanges; high incidence of jungle justice; presence of recognized groups, individuals and informal bodies who enforce some rules, norms and sanctions, e.g., sanitation/other monthly and daily levies; State agents hardly enforce formal rules due to prospect of resistance; healthcare practices depends on traditional and informal sources	Informal midwifery services dominated by women
Water, sanitation and hygiene (WaSH)	rain, streams, commercial boreholes and wells are the main sources of water supplies; absence of standard practices and enforcement for borehole operation; pit toilets, direct discharge to river/drain, open defecation in bushes; sources of drinking water could be rain or commercial borehole, while stream sources are for other purposes; collective and individual sanitation practices narrows to cleaning the homes and streets	Women bear almost over 95% of WaSH practices including supplies of drinking water, laundry and domestic sanitation, street cleaning, etc; convenient places for newly arrived migrants to start lives; women are mostly the rape victims in the course of open defecation etc.

Table 5. Women, slums and WaSH

Issue	Common Response	Remarks
Reason for habitation	Cost saving, alternative to joblessness, transit point, business, staying with my relatives	-
Major problem	Daily existence, crime	Surprisingly WaSH issues were mentioned by a few (dirty environment)
<u>Follow-up question:</u> are you comfortable with the sanitary condition of this settlement?	-we are used to it; it does not bother since it has not affected me; God protects; food and how to make a living	-
<u>Follow-up question:</u> water supplies	We buy water daily; use nearby river; obtain water through rain; supplies from well	Matters of water quality were not discussed. However, the general belief is still located in the spiritual (water is a divine gift; it cannot harm)
<u>Follow-up on water quality:</u> how comfortable with the quality of the sources of water you use	No problem; God protects; since we stay here, we do not have problem from drinking water; drink water from borehole	-
Toilet facilities	Use pit; wrap and throw; use the bush; use the river; a combination	-