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Policy Brief: Ending Open Defecation in Nigeria

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

The purpose of this paper is to present a policy brief on ending open defecation in Nigeria. The briefing notes the burden of open defecation (OD) in Nigeria, its causes, the impact of OD practices, successes achieved so far, as well as the failures encountered and offers recommendations to end the practice in order to achieve the sustainable development goal (SDG) 6.2 of ending open defecation globally by 2030 as proposed by the United Nations.

Key Recommendations:

- Strong Political Will to uphold and implement policies on sanitation
- Building more latrines
- Establishing monitoring team
- Capacity building
- Sustainable job creation
- Improved communication strategy

Keywords: Open defecation; policy; decision making; Nigeria.

1. INTRODUCTION

OD is a practice whereby individuals pass faeces outside their homes in areas such as fields,

farmlands, gutters or rails [1]. Worldwide, about 1.1 billion individuals defecate outdoors and this practice is said to be widespread in Asian and African countries (World Health Organisation

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(WHO)/United Nations Children's Fund [2]). In 2015, SDG 6.2 (Ending OD) was among the goals which the United Nations hope to attain globally by 2030 [3].

Nigeria (located in West Africa) is among the countries with the highest rate of OD ranking 2nd in Africa and 5th globally in 2010 [2]. According to WHO/UNICEF [2] reported that 34 million Nigerians practiced OD in 2010. A report by Abubakar [4] highlighted that in 2015 about 46 million Nigerians engaged in outdoor defecation, bringing Nigeria from 5th position to 3rd position in prevalence of OD globally. The World Development Indicators in 2016 also confirmed that OD practice in Nigeria had risen from 24% to 25.1% of its population in 1990 to 2015 respectively [5]. In October 2019, The Nigeria Minister, Mr Suleiman Adamu of Ministry of Water Resources in a forum on sanitation organized by Organised Private Sector, disclosed that Nigeria now ranks 1st in the world in OD prevalence with about 50 million Nigerians practicing OD [6]. This indicates that OD is a burden in Nigeria.

OD leads to outbreak of infections which the government needs to contain to prevent loss of lives. The World Bank estimated that about \$8.3 billion will be needed by the Nigerian federal government to curb OD (Federal Ministry of Water Resources Nigeria [7]. Therefore, the Nigerian government needs to put in more finance and efforts to make sanitation a priority nationally so that an OD free Nigeria can be achieved.

2. CAUSES OF OD IN NIGERIA

In Nigeria – poverty, lack of toilets and lack of awareness of the dangers associated with OD were identified as the major reasons for OD practice [8].

2.1 Poverty and Lack of Toilets

Poverty and lack of latrines can cause individuals to defecate outdoors. It could be argued that a poor person is highly unlikely to afford some basic human needs such as building a toilet facility. The United Nations [9] stated that OD is a glaring indication of poverty in its extreme in any country where such is practiced. Ewodage [10] and the World Poverty Clock [11] precisely on the 25/06/2018 reported that Nigeria is the country with the most extreme poverty rate worldwide (at 87,008,170 million individuals in extreme poverty). Based on this rate of extreme

poverty, individuals may be unable to afford basic amenities like latrine. Therefore, the government should create jobs to improve the standard of living of its populace to enable them afford facilities like toilets thereby minimising OD.

2.2 Lack of Awareness of Dangers of OD

Lack of awareness of dangers of OD was identified as a cause of the prevalence of OD in Nigeria. In 2018, 2019 and July 2020 3,14 and 27 local government areas (LGAs) respectively out of 774 (LGAs) in Nigeria were confirmed to be OD free by UNICEF [12,13,14]. The 27 LGAs declared OD free are as follows: 6 LGAs each from (Benue, Cross Rivers and Jigawa State), 5 LGAs in Katsina State, 2 LGAs in Bauchi State and 1 LGA each from Osun and Akwa Ibom State. These communities certified OD free benefited from the Community Led Total Sanitation campaign (health promotion campaign in the community on OD) which helped to instill a positive behavioural change. This demonstrates that awareness creation via health promotion campaigns is vital in the fight to end OD.

3. IMPACT OF OD IN NIGERIA

3.1 Impact on Health

OD affects the health of individuals. About 88% of diarrhoeal diseases reported among children in Nigeria are linked to OD (National Population Commission [15,16,17]. There is also evidence that children living in areas where OD is practiced have retarded growth [18,19,20,15]. Additionally, close contact with faeces of humans could give rise to other diseases such as typhoid. worm infestation and cholera all of which are contacted through faecal-oral route (ingestion of water or food contaminated with faeces) [21]. UNICEF linked the Nigerian outbreak of cholera to OD practices [22,21]. In 2018 (January to June) Nigeria recorded 11,696 cholera cases with 0.79% deaths [23]. Hence, OD is a serious problem that needs to be tackled in order to prevent disease outbreaks.

3.2 Impact on the Economy

OD affects the economy. Water and Sanitation Program (WSP) Nigeria [24] reported that due to poor sanitation, NGN455 billion is lost annually by the Nigerian government. The Nation [25] also reported that about 1.3% of the Gross Domestic Product is lost annually in Nigeria due to an unhygienic environment. It could be argued that,

in the event of a disease outbreak, the economy will likely be crippled as the government will have to spend more money containing an outbreak of disease rather than using it to improve the standard of living of its populace. This shows that OD causes economic loss through disease outbreaks.

3.3 Impact on Agriculture

OD affects agriculture. A study by Singh et al. [26] concluded that due to OD practices on farmlands, some bacteria from faeces can inhibit the germination of seed of crops. WSP [24] affirms this and emphasised that contamination of products of agriculture and growth inhibition of crops by bacteria from faeces can cause economic loss. Agriculture is one of the major sources of living for some Nigerians and provides employment for about 30.5% Nigerians [27]. This crop germination inhibition due to infection of the soil by OD practice suggests that fewer or no crops may be produced by farmers. Therefore, OD needs to be tackled to prevent this possible economic loss, loss of source of livelihood and poverty.

3.4 Impact on Water Bodies

OD contaminates sources of water. During the rainy season, there is possibility of the rains carrying the faeces from the farmlands or fields into the streams, rivers or other water sources [7]. This pollutes the water sources and if ingested could cause diseases in humans such as cholera [21] and can also affect aquatic life. For instance, Campell [28] maintained that pollution of water by sewage causes hypoxia (reduced oxygen), retarded growth/reproduction and death of aquatic animals. This is due to deprivation of the rivers of the necessary oxygen which the aquatic life needs for their sustenance.

3.5 Impact on the Environment

OD affects the environment. OD could cause global warming (adverse change of climate/increased temperature) as a result of the release of gas (methane- greenhouse gas) from the faeces into the atmosphere [29,30]. This raised climatic temperature levels could make air pollution worse causing respiratory infections and other diseases [31]. Hence, there is a need to protect the environment by putting an end to OD practices.

3.6 Impact on Security

OD puts the security of women and girls at stake. There is evidence that girls and women who go outdoors to pass faeces encounter sexual molestation, rape and even death [32,33,34]. High rates of secondary school absenteeism of girls have also been reported due to lack of latrines [32,3] and safe places to defecate or use during their menstrual period. This shows that women and girls are more vulnerable to the dangers of OD, hence should be protected through government's construction of gender friendly latrines in public places and schools.

4. SUCCESSES TO DATE

The Nigerian government have made efforts to ensure that OD is curtailed in Nigeria for instance:

4.1 Introduction of Sanitation Groups and Centres

Sanitation centres (sanicentres) were introduced in Nigeria in 1994 by UNICEF with the aim of raising the standard of hygiene by providing services and materials for toilet construction [7]. Rural Water Supply and Sanitation (RUWASSA) and National Task Group on Sanitation were formed in 2002 to improve sanitation in Nigeria [7]

4.2 Water-sanitation Policy

In 2004, a National Water Sanitation Policy (NWSP) guideline was drafted for implementation with the aim of putting an end to OD in Nigeria [7].

4.3 Community Led Total Sanitation (CLTS)

This was formed in 2005/2006 and through this CLTS strategy, access to latrine was created in Nigeria between 2010 and 2011 for 2.3 million and 4.03 million persons respectively [7].

4.4 Sanitation Roadmap

In 2014, with support from UNICEF, the Federal Ministry of Water Resources Nigeria initiated a roadmap named "making Nigeria OD free by 2025" which was endorsed in 2016 [7] with efforts presently on ground towards achieving the roadmap.

4.5 State of Emergency

Declaration of a state of emergency in water, sanitation and hygiene sectors in November 2018 by the Nigerian President - General Muhammadu Buhari (GMB) [13] in a bid to end OD

4.6 Signing of Executive Order 009

In 2019 an Executive Order 009 was signed by The Nigerian President (GMB) to tackle OD [35].

4.7 Nigeria Ministry of Water Resources (NMWR) & UNICEF Initiative

In 2019 an initiative was launched by NMWR & UNICEF tagged 'Nigeria Open –Defecation-Free By 2025: A National Road Map' which is targeted at ending OD in Nigeria by 2025 [36].

5. FAILURES TO DATE

Despite government efforts, failures of some of the strategies have been reported such as:

5.1 Sanicentres

Established in 1994, UNICEF carried out an evaluation on their services in 1998 and found out that the services rendered were below the expected standards [7]. Re-assessed in 2006, the evaluation showed that a third of the sanicentres were non functional [7]. This failure was associated with poor managerial structure of the sanicentres. This suggests lack of necessary knowledge and skills of the workers. Hence, there is a need for capacity building for all individuals working in such a facility.

5.2 NWSP

The drafted 2004 NWSP guideline was not implemented nor released officially [7], suggesting that the government lacked political will power in carrying out its role in improving the sanitation and wellbeing of its citizens.

5.3 CLTS

Despite government efforts, OD rose rapidly from 22%, 23% to 29% in 2010, 2011/2012 and 2013 respectively [7]. Out of 123,240 communities in Nigeria, only about 19,467 communities were said to have benefitted from OD health promotion campaigns through CLTS [7]. Low CLTS

coverage of communities could be the probable reason for the rise in OD. Therefore, communities should receive more CLTS coverage to promote positive change in behaviour.

6. WHY A TRANSDISCIPLINARY APPROACH IS REQUIRED TO ADDRESS OD

Considering the various adverse consequences of OD, collaborative actions and knowledge synthesis from stakeholders and appropriate disciplines is vital to influence change. Hence, the stakeholders and ministries below need to work closely with the Nigerian government to achieve an OD free status.

A brief summary of their roles in achieving OD free Nigeria [7] include:

6.1 International Non-profit Organisations and United Nations Agencies

Supports and makes inputs with their resources to promote interventions.

6.2 Federal Ministry of Education

Promotes sanitation and hygiene in schools and ensures toilets and water facilities construction in schools.

6.3 Federal Ministry of Health

Ensures training and health promotion programs on hygiene, water and sanitation in communities. Manages disease outbreaks and ensures prompt and proper treatment of affected persons.

6.4 Federal Ministry of Housing and Urban Development

Provides information and data on slum settlements and their sanitation status. Also, ensures building of latrines in such areas.

6.5 Federal Ministry of Environment

Ensures a safe environment and promotes policies on protection of the environment.

6.6 Federal Ministry of Women Affairs

Coordinates and ensures women participate and are involved in the promotion of latrine use and construction.

6.7 Federal Ministry of Water Resources

Promotes an integrated policy that links sanitation with water supply, and ensures the safety of water bodies and water consumed by households.

The collaborative efforts of these bodies will enable change to be influenced and an OD free Nigeria achieved.

7. THREE OPTIONS FOR ACTION OVER THE NEXT 5-10 YEARS

If the government takes the following actions below over the next 5-10 years, the probability of OD reduction in Nigeria may be high:

7.1 Increased Government Funding

Channelling of more funds on OD and building more easily accessible gender friendly latrines in public places and communities [37] will cut down OD.

7.2 Enforcing Sanitation Laws and Policies

The National Assembly of Federal Republic of Nigeria (NAFRN) in [38] enacted "National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007, No. 25" [38]. This law already in existence should be made more active and fully enforced to promote sanitation and prosecute OD offenders to reduce OD in Nigeria.

7.3 Capacity Building

Capacity building on management of sanitation centres and education of the populace on dangers of OD through health promotion campaigns [38] should be promoted.

8. RECOMMENDATIONS TO MAKE NIGERIA OD FREE BY 2030

The government should consider these recommendations to be on track to achieving an OD free Nigeria by 2030.

8.1 Political Will

Government should have strong Political Will to uphold and implement policies on sanitation [8]. This, government can achieve by making

sanitation a priority nationally, formation and implementation of enabling laws to promote the use of latrines with sanctions in place for noncompliance.

8.2 Building More Latrines and Establishing Monitoring Teams

Cost-effective suitable modern latrines should be built in communities and all public places [37,39]). This will minimise OD, promote school attendance of young girls and minimise sexual molestation. Monitoring team should also be established to ensure compliance with sanitation laws and policies [38].

8.3 Capacity Building and Improved Communication Strategy

Training of individuals on skills towards promoting OD and the use of diverse communication strategies (radio jingles, town criers, posters, seminars, CLTS campaigns) to educate Nigerians on the importance of good hygienic practices should be promoted [40,41.8].

8.4 Sustainable Job Creation

Government should create more jobs to address poverty which was identified as a major trigger of OD in Nigeria [42,8].

9. CONCLUSION

OD is a burden in Nigeria, affects health, economy and other areas thus requires a transdisciplinary approach and government's strong political will to end it. Therefore, if the recommendations above are implemented, poverty will reduce, Nigeria's economy will become better and fewer deaths among children will be recorded. People will also live healthier lives, safety of women and girls will improve and above all an OD free Nigeria may likely be attained by 2030.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

- Mehta L. An end to open defecation? [online]. Institute of Development Studies; 2008.
 - Available:https://www.assests.publishing.s ervice.gov.uk/media/57a08b98ed915d3cfd 000e04/id21_special_sanitation.pdf [Accessed 02/07/2018].
- World Health Organisation / United Nations Children's Fund (2012) Water, sanitation and hygiene [online]. WHO/UNICEF; 2012.
 Available:http://www.who.int/water_sanitation.health/manitoring/imp/2012/fact_facts/sanitation.health/manitoring/imp/2012/facts/sanitation.health/manitoring/imp/2012/facts/sanitatio
 - Available:http://www.who.int/water_sanitation_health/monitoring/jmp2012/fast_facts/en/[Accessed 23/06/2018].
- United Nations Children's Fund. Innovative Water and Sanitation Services Promotes School Attendance for Girls [online]. UNICEF; 2017. Available: https://www.unicef.org/nigeria/wes_11565.
 - html [Accessed 05/07/2018].

 Abubakar IR Exploring the determinants
- Abubakar IR. Exploring the determinants of open defecation in Nigeria using demographic and health survey data. Science of the Total Environment. 637 (n.k). 2008;1455-1465.
- World Bank. World Development Indicators: Featuring the Sustainable Development Goals, Data bank. Washington DC: World Bank Group; 2016a.
- Vanguard. Nigeria Ranks Number 1 in Open Defecation in the World – Minister [online]. Vanguard; 2019. Available: https://www.allafrica.com [Accessed 12/11/2020].
- 7. Federal Ministry of Water Resources Nigeria / United Nations Emergency Children's Fund. Making Nigeria Open-Defecation-Free by 2025: A National Road Map. Abuja: FMWR & UNICEF; 2016.
- Ngwu UI. The practice of open defecation in rural communities in nigeria: a call for social and behaviour change communication intervention. International Journal of Communication Research. 2017;7 (3):201-206.
- United Nations. End open defecation [online]. United Nations; 2014.
 Available: https: www.un.org/milleniumgoals/endopendefec ation.shtml [Accessed 30/06/2018].
- Ewodage R. Nigeria Overtakes India in World's Extreme Poverty Ranking [online]. Channels Television; 2018.

- Available:https://www.channelstv.com/201 8/06/25/nigeria-overtakes-india-in-worlds-extreme-poverty-ranking/ [Accessed 30/06/2018].
- World Poverty Clock. World Poverty Clock [online]. World Poverty Clock; 2018.
 Available: https://www.worldpoverty.io [Accessed 30/06/2018].
- Adebayo T. Only 3 out of 774 LGA in Nigeria is open defecation free [online]. News Focus; 2018.
 Available: https://www.newsfocusng.com [Accessed 06/07/2018].
- Adebowale N. Only 11 of Nigeria's 774 LGA's are free from open defecation – UNICEF [online]. Premium Times; 2019. Available:https://www.premiumtimesng.com/news/top-news/331271-only-11-of-nigerias-774-lgas-are-free-from-open-defecation-unicef.html [Accessed 12/11/2020].
- Onabolu B. Nigeria: 27 of 774 LGAs Are Open Defecation Free [online]. Premium Times; 2020. Available: https://allafrica.com/stories/202007150017. html [Accessed 12/11/2020]
- National Population Commission Nigeria / ICF International. Nigeria Demographic and Health Survey 2013. Abuja & Maryland: NPC and ICF International; 2014.
- Oloruntoba EO, Folarin TB, Ayede AI. Hygiene and sanitation risk factors of diarrhoeal disease among under-five children in Ibadan, Nigeria. African Health Science. 2014;14 (n.k):1001-1011.
- Yaya S, Ekholuenetale M, Tudeme G, Vaibhav S, Bishwajit G, Kadio B. Prevalence and determinants of childhood mortality in Nigeria. BMC Public Health. 2017;17(1):485.
- 18. Paul VK, Sachdev HS, Maviankar D, Ramchandran P, Sankar MJ. Reproductive Health and Child health and Nutrition in India: Meeting the Challenge. Lancet. 2011;377(n.k):332-349.
- Lin A, Arnold BF, Afreen S, Goto R, Huda TM. Household environmental conditions are associated with enteropathy and impaired growth in rural Bangladesh. American Journal of Tropical Medicine and Hygiene. 2013;89(n.k):12-629.
- Robert C, Gregor VM. Sanitation and Stunting in India Undernutrition's Blind Spot. Economic and Political Weekly. 2013;48(25):15-18.

- World Health Organisation. Cholera -Nigeria [online]. WHO; 2017a. Available: http://www.who.int/csr/don/12july-2017-cholera-nigeria/en/ [Accessed 30/06/2018].
- 22. Adagbada AO, Adesida SA, Nwaokorie FO, Niemogha M, Coker AO. Cholera Epidemiology in Nigeria: an Overview. Pan African Medical Journal. 2012;12(59):1-12.
- Nigeria Centre for Disease Control. Coordinating Response Activities [online]. NCDC; 2018. Available:

https://www.ncdc.gov.ng.reports/124/2018june-week-23 [Accessed 30/06/2018].

- 24. Water and Sanitation Program Nigeria. Economic Impacts of Poor Sanitation in Africa: Nigeria loses NGN455 billion annually due to poor sanitation [online]. WSP; 2012. Available: http://documents.worldbank.org/c urated/en/855961468297356898/pdf/6812 60WSP0ESI0000Box367907B0PUBLIC0.p df [Accessed 02/07/2018].
- The Nation. Nigeria loses 1.3% of annual 25. GDP to poor sanitation [online]. The Nation: 2017. Available:http://thenationonlineng.net/niger ia-loses-1-3-of-annual-qdp-to-poorsanitation/ [Accessed 05/07/2018].
- Singh BR, Kumar A, Agrawal S, Verma A. Effect of Salmonella enterica subspecies enterica serovar, Typhimurium Serratia fonticola on germination of seeds of common crops. The Journal of Infection in Developing Countries. 2007;1(1):67-71.
- 27. National Bureau of Statistics Nigeria. Manpower National Stock Employment Generation Survey. Abuja: National Bureau of Statistics; 2010.
- Campell K. The Effects of Sewage on 28. Aquatic Ecosystems [online]. Science; 2017. Available:https://www.sciencing.com/effect s-sewage-aquatic-ecosystems-21773 [Accessed 07/07/2018].
- 29. El-Fadel M, Massoud M. Methane emissions from wastewater management. Environmental Pollution. 2001:114(n.k):177-185.
- 30. World Health Organisation. Vision 2030: The resilience of water supply and sanitation in the face of climate change; technical report [online]; 2010. Available:http://www.who.int/water sanitati on health/publications/vision 2030 techni cal report.pdf [Accessed 02/07/2018].

- Natural Resources Defense Council. Are the Effects of Global Warming Really that Bad? [online]. NRDC; 2016. Available:https://www.nrdc.org/stories/areeffects-global-warming-really-bad [Accessed 07/07/2018].
- O'Reilly K. From toilet insecurity to toilet 32. security: creating safe sanitation for women and girls. Wiley Interdisciplinary Reviews Water. 2016;3(1):43-51.
- Tong T. A lack of clean and safe toilets leaves women vulnerable to rape and attacks [online]. Public Radio International; 2017.
 - Available:https://www.pri.org/stories/2017-11-29/lack-clean-and-safe-toilets-leaveswomen-vulnerable-rape-and-attacks [Accessed 12/07/2018].
- 34. The Indian Express. Higher incidents of rape in India linked to open defecation: Study [online]. The Indian Express: 2018. Available:https://indianexpress.com/article/ india/higher-incidents-of-rape-in-indialinked-to-open-defecation-study-4427994/ [Accessed 12/07/2018].
- 35. Akindayo D. Tackling open defecation in Nigeria [online]. IBA; 2020. Available:https://www.ibanet.org/Article/Ne wDetail.aspx?ArticleUid=D4103B88-731B-4B2C-A24A-85F5AD005743 12/11/20201.
- United Nations Children's Fund, Making Nigeria Open-Defecation-Free By 2025: A National Road Map [online]. UNICEF; 2019. Available:https://www.uncef.org/nigeria/me dia/1491/file/Nigeria-making-Ngeria-opendefecation-free-by-2025.pdf.pdf [Accessed 12/11/2020].
- Guiteras R, Levinsohn J, Mobarak AM. Encouraging sanitation investment in the developing world: a cluster-randomized trial. Science. 2015;348(6237):903-906.
- 38. National Assembly of Federal Republic of Nigeria. National Environmental Standards and Regulations Enforcement Agency (Establishment) ACT 2007, No. 25 [online]. NAFRN: 2007.

Available:

- https://nass.gov.ng/document/download/58 21 [Accessed 05/07/2018].
- World Health Organisation. Sanitation 39. [online]. WHO; 2017b. Available:http://www.who.int/en/newroom/factsheets/detail/sanitation [Accessed 01/07/2018].

- Anaeto SG, Solo-Anaeto M. Development Communication: Principle and Practice. Ibadan: Stirling-Horden Publishers Ltd; 2010.
- 41. United States Agency for International Development. Social and Behaviour Change Communication (SBCC): Training for Information, Education and Communication (IEC) Officers. Washington DC: USAID & FHI 360; 2013.
- World Bank. Nigeria: Macroeconomic Stability for Accelerated Growth, Job Creation, and Delivering Services for the Poor [online]. World Bank; 2016b. Available:http://www.worldbank.org/en/res ults/2016/07/18/nigeria-macroeconomic-stability-for-accelerated-growth-job-creation-and-delivering-services-for-the-poor [Accessed 05/07/2018].

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