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## ENVIRONMENTAL SANITATION ENFORCEMENT AND COMPLIANCE BEST MANAGEMENT STRATEGIES FOR NIGERIA

NWACHUKWU, MICHAEL A.<sup>1</sup>

<sup>1</sup> Department of Earth & Environmental Studies, School of Science & Mathematics, Montclair State University New Jersey, U.S.A

### SUMMARY

A great problem in Nigeria is determining what sanitation programmes to implement and designating the best enforcement strategies to adopt. The issue of environmental sanitation compliance and enforcement cannot be properly discussed because currently no serious sanitation programmes exist in Nigeria. This paper recommends a combination of direct and indirect enforcement, with a number of sanitation strategies. The strategies are concerned with the management of human and cow excrement, including solid waste, sewage and drainage systems. These strategies must be designed to reduce environmental related diseases, poverty, and mortality.

### 1 INTRODUCTION

Nigeria and many developing countries, have no central sewage collection and disposal system. Every home in the urban and semi-urban areas utilizes block lined private septic and soak away pits for excreta and sewage disposal. The rural areas use unlined toilet pits with no provision for waste water. Even in the urban and semi-urban areas that use septic and soak-away pits or water systems, and there is often a lack of water to run the system. Yet in the rural settings, approximately half of the population does not have even the pit toilet.

The greatest dangers lie in the evacuation and disposal of the excreta and sewage from the septic and soak-away pits when they fill up. Private contractors can be paid to do this, along with the police department. Motorized trucks equipped with suction pump are used to suck the wastes into the tank. Other individuals who work in groups as contractors do the evacuation manually, using buckets and hand pushed trucks. The work is done during the day, when the home is free of residents. Additionally, despite serious air pollution and health concerns, the only sanitizer used is kerosene.

After the evacuation, how the excreta-sewage is disposed of is a matter for great concern. Typically, the contractors dispose the waste at any site convenient to them, including ditches, ravens, unreclaimed borrow pits, and in isolated bush or forest areas. As a result, the disposed wastes are washed back to nearby streams by the next rain. In Nigeria, roughly 40 percent of the population does not have access to any form of toilet. Their toilet is the bush or forest areas. There is increasing

surface and groundwater pollution, especially in areas where groundwater table is close to the surface or coincide with weathering depth.

Another major threat to safe water is the indiscriminate dropping of excreta by cattle, following uncontrolled grazing. This threat is heightened by the tremendous increase in migration and grazing of cattle from the northern side of Nigeria to the south. Whereas the north has vast savannah grasslands away from residential areas for good grazing, the south is disadvantaged with limited rain forest lands that adjoin residential areas, as well as greater streams and drainage density. As a result, persistent and frequent epidemics of environmental related diseases occur, including malaria, typhoid fever, diarrhea, hepatitis, and cholera. Additionally, high mortality, increasing poverty, public health disorder, and lack of environmental freedom results from poor excreta and sewage disposal and management.

## **2 ADDITIONAL SANITATION RESEARCH**

According to Snel and Smet (2006), "It is now becoming evident that the most effective intervention against water and sanitation related diseases is safe excreta disposal." P.K. Jha (2007), in his work on sustainable technologies for waste management, stated: "Human excreta is the cause of many enteric diseases such as cholera, dysentery, typhoid, paratyphoid, infectious hepatitis, hookworm, diarrhea, etc." "In rural areas, 80 percent of diseases are borne of human excreta, and safe disposal of human waste is most important to improve community health and quality of life." Similarly, Bastable (2000), informed that diseases transmitted through unsafe excreta disposal accounts for 50 percent of death. He also cited Esrey (1981 &1991), to state that safe excreta disposal can account for 36 percent reduction of childhood diarrhea.

Njemanze et al (1999) attributed the high rate of diarrhea in the Imo State of Nigeria to lack of potable water at different communities, indicating that a total of 11,537 cases of diarrhea have been reported in 1999, whereas more than half of this number may not have been reported. The number of deaths due to this and the financial drain on individual households and the state economy are yet to be determined. From Match Strength Abstract (2004), out of 65 patients that reported febrile condition in a salmonella typhus screen in some parts of Nigeria, 20 were positive whereas a total of 36 had malaria or both. They found that the patients were in a ratio of 10/14 (female/male), with a mean age of 33 years, and were found to have been drinking both tap and "pure water" (p.179-81). UNDP report (2004) implies that about 40 percent of Nigerian population does not have access to potable drinking water and 41 percent also have no access to good sanitation.

## **3 SANITATION ENFORCEMENT AND COMPLIANCE**

Poor environmental sanitation in Nigeria is due to bad leadership. The military regimes and the past administrations have failed to formulate adequate

environmental laws and regulations. There have been few past actions related to environmental enforcement and compliance in Nigeria. In the past, governments appear to have concentrated on problems of the Niger Delta oil and gas pollution crisis. The hundreds of people dying every day due to neglect of waste management and lack of sanitation are ignored.

The only sanitation strategy in Nigeria during the last thirty years that can be recalled was implemented by the short lived Buhari and Idiagbom military regime (1983-1985), when the monthly national environmental sanitation exercise was started with war against indiscipline. During this period, sanitation was improved across the nation. Urinating outside, excreting in the bush or by the road side, and littering were punishable offences. People complied for fear of being arrested, prosecuted, or fined. War against indiscipline and national environmental sanitation exercise were enforced by a combined team of the war against indiscipline brigade, the police, and participation of the public. The program became very popular, and war against indiscipline was a household name. However, this program was not sustained by subsequent administration. The public viewed the program as a type of military order that had no public mandate. Today, only very few states still conduct the monthly sanitation exercise with reduced popularity, enforcement, and public participation.

It is important to recall also that Nigeria has abundant manpower for the sanitary regulations that need to be enforced. There were sanitary inspectors who in the 1970s to early 1980s were very effective in inspecting sanitary facilities and conditions from urban to rural communities. Today, sanitary inspection is almost forgotten. Further, trained inspectors are less motivated because the government currently pays little or no attention in this area of service. The result is poor sanitation, use of a toilet facility by unlimited number of people, presence of overgrown trees in living areas, and ecosystem destruction.

#### **4 SANITATION STRATEGIES**

The reality is that poor sanitation and inadequate excreta management in Nigeria is due to failure on the part of government to instill in the public a better environmental culture, which would promote public participation in environmental waste management. This is further enhanced by the lack of knowledge on the part of Nigeria's leaders and the high level of illiteracy on the part of the masses. As a result, intensive environmental education must occur in the country, including primary through secondary schools and teachers.

Public awareness, enlightenment, and environmental education of all stakeholders must become a priority. Knowledge should be shared with the local community at their domain, accomplished by visiting market squares, churches, schools, and in the local government headquarters to educate them on sanitation and its benefits. There is need for a social change from poor excreta-sewage disposal and management culture, to a culture where human and cattle excreta is converted to a

safe to use organic manure, where sewage is treated prior to disposal, and sanitary landfill is used for solid waste disposal (Nwachukwu, 2007a). Additionally, sanitary landfill sites must be properly investigated, and identified with natural lining, to reduce or eliminate the high cost of geosynthetic liners, and make sanitary landfill affordable to poorer communities (Nwachukwu, 2007b). Landfills must also have odor control, leachate collection and treatment system, or operators be prosecuted. All open gutter drainage should be covered by 2010; federal government must direct states, with special grants to support, as some individuals find the open gutter as the nearest place for excreta disposal, and urinating.

The promotion of adequate environmental compliance and enforcement also include monthly environmental sanitation program is to be reinforced by the federal government. There should be adequate protection of national, state, and local waters from surface runoff, particularly at such locations where the waters adjoin residential areas. All gas stations, churches, stores, schools, streets, motor parks, restaurants and hotels, corporate offices, health centers, mechanic villages, business centers must operate a well maintained public toilet facility for free use by the public. Government should build and maintain two standard toilet facilities on every business street in each Nigerian city; longer streets may be required to have more than two toilets.

## **5 ENFORCEMENT STRATEGIES**

Nigeria has recently recruited a large population of youths into the civil defense corps in all the states. Government should provide adequate training to these fellows and commission them to environmental duties, rather than using them as errand boys and girls to self aggrandizing politicians, government functionaries, and private individuals.

Local governments could implement indirect strategies to stimulate environmental enforcement and compliance, such as awarding free medical service to members of every household present on the five cleanest streets in a city on yearly bases. This will provide the public incentive to establish proper sanitation.

The poor environmental habits of many Nigerians are embedded in their lifestyles, such as littering the streets with cans and plastic bags. Programs should be implemented to reward cash for waste cans and plastic bags supplied by individuals based on the weigh, providing incentive not to litter. This is another example of an indirect enforcement strategy.

Additional enforcement strategies that should be developed include the federal government penalizing states for noncompliance with environmental sanitation standards. Example, five percent of the state's allocation may be withdrawn and paid into a federal environmental health emergency fund. Moreover, states can also fine local governments for not complying with national standards or sanitation programmes. Additionally, there must be law prohibiting urinating

and excreting outside. Offenders must be prosecuted and fined accordingly. Three regional environmental appeal courts should be established in each of the following three regions: East, West, and the North. A federal environmental high court of appeals should be located in Abuja.

## 6 CONCLUSION

Environmental sanitation strategies, enforcement strategies, and compliance are the most important, but neglected environmental issues in Nigeria; as a result, emergency response is now required. Solutions to alleviate the sanitation crises are easy and available, and are important in improving human and environmental health within this country.

## REFERENCES

- Bastable, A. (2000), Guidelines for excreta disposal in emergencies, Oxfam technical manual
- Esrey (1986, 1991), As in Bastalda, A. (2000).
- Match Strength 14:214 (2004), British Journal of Biomedical Science. 61(4), 179-81
- Njemanze, P.C, Anozie, J.O, Ihenacho, J.O, Russel, M.J & Uwaeziozi, A. B (1999), Application of risk analysis and geographic information system technologies to the prevention of diarrhea diseases in Nigeria. Am. J. of Trop. Med. Hygiene 61(3).
- Nwachukwu, M.A (2007a), Environmental geology/geophysics field techniques in the selection of a landfill site, making sanitary landfill affordable to poorer communities. A research project presented to the Department of Civil and Environmental Engineering, Villanova University, Pennsylvania U.S.A.
- Pending:* Nwachukwu, M. A (2007b); Environmental sanitation best management practice for Imo State Nigeria, phase 1: Solid waste management by sanitary landfill option, technical, and economic imperatives. A paper presented to the government and people of Imo State Nigeria, at the 'Environmental stakeholders forum' Owerri 26<sup>th</sup> -27<sup>th</sup> November, 2007.
- P.K. Jha (2007), Sustainable technologies for waste management. Retrieved from: <http://www.ias.unu.edu/proceedings/icibs/ecosan/jha-d1>
- Snel, M. A & Smet, J (eds), 2006: The value of environmental Sanitation case studies (occasional paper series; No. 42), IRC Int. water and sanitation center, The Netherlands.

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INECE Secretariat  
2300 Wisconsin Ave, NW Suite 300B  
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