

Integrating Small And Medium Industries (Smes) For Sustainable Environmental Management In Kano Metropolis, Nigeria

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Abstract— This paper investigated the environmental awareness of operators of SMEs industries in Kano metropolis, Nigeria. A questionnaire survey was undertaken to obtain information on awareness and knowledge of environmental issues such climate change, soil erosion, deforestation, consequences of industrial operation on environment and human health, environmental problems such as degradation and pollution, existing institutions laws for environmental regulation and protection and environmental management practices. Results indicated that 87.3% of the SMEs operators are of the view that they have no role in protecting the environment, only 9.3% of the operators have an idea of climate change, 4.3% know about the causes of soil erosion, 93.3% have no knowledge of the extant environmental protection laws and regulations or the institutions responsible for regulation and 64% are aware of the health impact of their operation as more than 42% have had illnesses attributed to contact with hazardous materials. The results further indicated that the activities of the SMEs release substantial amount of varying waste and workers are engaged without protective clothing with potential risks for serious health hazards. The paper concluded that whilst Nigeria has many agencies and regulations for environmental protection, there is no enforcement on the SMEs sector. The study recommends awareness campaign to educate the operators in the informal SMEs due to the potential for pollution as well as stringent enforcement of the regulations.

Index Terms— *Degradation, Environmental health, Environmental Management Global warming, Pollution,*

I. INTRODUCTION

Environmental issues relating to incessant and increasing use of environmental resources have taken a prominent position of discourse in the context of national, regional and global peace and development. [1][2]. Pollution as a result of emission and discharge from industrial activities has resulted in health risks and diseases to humans and animals as well as severe damage to the physical component of the environment. Estimates indicate that the proportion of the burden of disease associated with pollution hazards in Nigeria ranges from 23 to 30%. These estimates include infectious diseases related to drinking water, sanitation, and food hygiene; respiratory diseases related to severe indoor air pollution from biomass burning and vector borne diseases such as malaria.

II. METHODOLOGY

Study Area

Kano metropolis is the largest industrial and commercial hub of northern Nigeria Figure 1. In addition to formal industrial activity, it has also the largest concentration of informal SMEs involved in various manufacturing activities that generate various types of pollutants as shown in Plate,1. The Small and Medium Enterprises (SMEs) in Nigeria is informal, yet, represents the most important sector of the economy and currently represents 96% of the businesses and contributes 75% of the National employment. Although the socio-economic benefits of the informal sector have been recognized and thus subject to various investigations, their environmental impacts are not known either at national or local levels. Elsewhere it has been reported that, as a sector, SMEs could contribute up to 70% of all industrial pollution [3]. The influential may be more in Kano because of their rapid increase and the variation in their production processes and waste generation which range from oil milling, rudimentary resource recovery of electronics and batteries, recycling of all kinds of plastics and tyres, chemical production etc. Understanding the awareness or lack of it towards environmental management can provide information for integrating them into the state, national and global environmental management.

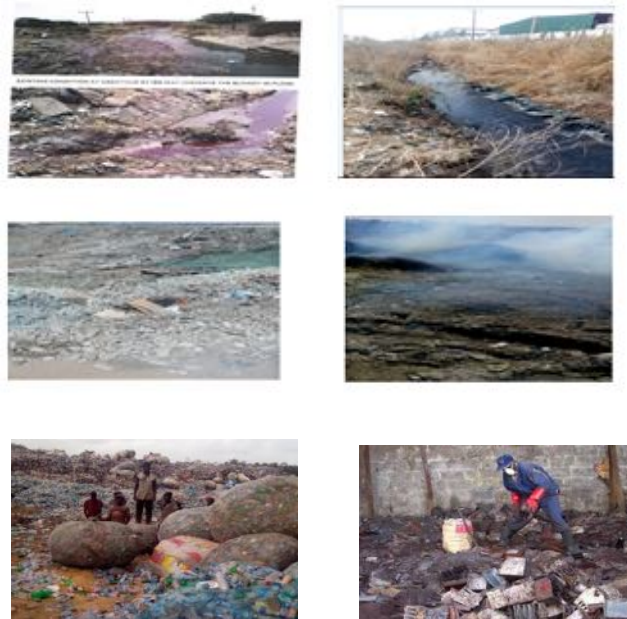


Plate1 Showing various types of informal activities

III. DATA COLLECTION METHOD

Primary Data

Primary data was collected through administration of questionnaires and observation relating to environmental awareness, attitude and environmental management practice.

Secondary Data

Secondary data was collected from relevant sources, which included reports and unpublished data from projects relating to the types, location and processes and technology in use by SMEs in Kano metropolis.

Sampling technique

To identify the informal sector, the World Bank definition, of the enterprises with 1-49 employees were identified and a total 100 firms were randomly selected for the study.

IV. RESULTS AND DISCUSSIONS

Awareness on Environmental Protection

Respondents were asked whether they were aware of their role in environmental protection and results indicated that majority of the operators 87.3% were not aware of the role of their in environmental protection and the potential implication of this finding is that operators are not likely to take up the challenge of environmental protection and this will ultimately result in poorly managed environment.

Awareness of Environmental Issues

Environmental awareness has a lot to do with understanding issues such as climate change, biodiversity loss, erosion and water contamination etc. Respondents were asked to indicate to what level they were aware of the various environmental issues. The results indicated that only 9.3% of the operators have an idea of climate change, and 34.1% have a slight idea while 56.6% have no idea. To further examine the level of awareness of environmental issues, operators were asked to indicate their level of awareness of soil erosion 45.6% respondents have no idea of it, 42.0% have a slight idea while 12.4% have a good idea of the issue. Pollution is another key environmental issue which respondents were asked to clarify and 61.6% of respondents have no idea of the term. These findings are evidence that respondents have little or no awareness of new and emerging environmental issues and problems and are therefore not likely to respond positively towards mitigation efforts.

Awareness of Environmental Problems

Respondents were asked to indicate their level of awareness of the environmental problems especially those common in the area such as desert encroachment, biodiversity loss, soil erosion and drought. The results indicated that only 4.3% know about the causes and 95.2. % has no idea.

Awareness of Institutions Responsible for Environmental Management

Respondents were asked whether they are aware of the institutions and agencies responsible for environmental management namely in Nigeria and Kano metropolis, the Federal Ministry of environment FMEnv, National Environmental Standards Regulations and Enforcement Agency NESREA, Kano state ministry of environment or the local government environmental and health department. The results obtained showed that 93.3% of the respondents are not aware of any the government agencies.

Environmental Attitude

Environmental attitude of operators to environmental concerns was examined by considering the personal roles and willingness to act for or against environmental protection such as cleanliness and personal responsibility. Regarding their role in cleanliness,

the respondents were asked as to whether cleanliness is the responsibility of the government and as to whether all operators should hire cleaners and the results indicated 76% of the respondents believe that cleanliness is the sole responsibility of the government and 23. % agree cleanliness is the responsibility of the operators. Attitude has a strong relationship with taking personal responsibility. Respondents were asked whether they could do something to make the environment better and the results indicated that 79.6% of the respondents did not show willingness to do anything to ameliorate environmental concerns from their operation.

V. CONCLUSION

Environmental degradation poses a major threat to the existence of humanity today. In such a scenario, the importance and need for environmental awareness as a tool for environmental management cannot be overemphasized. Furthermore, the need of organizations to manage their environment is emerging as a strategy of good behavior worldwide due to the realization that the environment is regarded as an asset to be valued. Consequently, because of the significant socio-economic impact of SMEs and the large workforce they employ, it is imperative that the sector is given due attention. Specifically, identifying their awareness and engaging them in environmental improvement is a vital part of sustainable development.

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