



Impact of Environmental Auditing on Environmental Pollution, Sustainable Development and Healthy Environment of Some Organizations in Port Harcourt, Nigeria

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ABSTRACT: The aim of this paper was to examine the impact of environmental auditing on seven (7) organizations companies in Port Harcourt using a randomized questionnaire survey system of 235 employees in these organizations and the results were analyzed by spearman's rank order coefficient. The data obtained revealed that the environmental auditing were A:15.4%, B:15.2%, C:14.0%, D:15.1%, E:14.1%, F:13.4%, and G:12.8%; environmental pollution were A:15.0%, B:14.9%, C:14.2%, D:14.6%, E:14.9%, F:13.3% and G:13.3%, while sustainable development and healthy environment were A:15.1%, B:15.3%, C:13.9%, D:14.7%, E:13.9%, F:14.0%, G:13.8% and A:15.2%, B:15.3%, C:14.2%, D:14.0%, E:13.8%, F:13.8%, G:13.7% respectively. The findings revealed significant relationships between environmental auditing and sustainable development, environmental pollution and healthy environment. To achieve the desired sustainable development through environmental auditing, companies, government and stakeholders could embark on environmental enlightenment and awareness campaign to let citizens know the consequences of environmental neglect and pollution.

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The quest for industrialization and sustainable development in Nigeria (and Port Harcourt in particular) and the attendant improvement in the quality of life of the populace has taken its toll on the environment. The effects of different industrial sectors activities on the environment vary enormously, but it is an incontrovertible statement that damage is being done to the environment worldwide. Environmental concerns rarely formed an integral part of development plans, particularly in the third world countries like Nigeria. Supported activities for sustainable development worldwide have increased companies' confidence in auditing systems of environmental impact and environmental performance to gain a competitive advantage in strategic positioning. Organizations' abilities to achieve environmental objectives depend heavily on monitoring the continuous improvement of environmental performance through efficient planning of organizational, economic investments and necessary technological measures. The realization that sustainable development can only be achieved through interdependence between economic growth and environmental quality has compelled some governments to now regard the environment as a valued and an integral part of economic growth.

Consequently, environmental issues are now at the vanguard of international, domestic as well as local governments' agenda (Abdul, 2013).

In Nigeria, the implementation and acknowledgement of corporate social and environmental reporting is relatively new and it has become more popular in recent time. The concept has also made popular due to the notorious environmental incidents in Nigeria, such as, an attempt in 1997 by a foreign company, acting through an agent, to dump toxic waste in the Niger Delta region. This event shocked the Federal Government of Nigeria and highlighted the gap in Nigerian environmental regulation. This led to the promulgation of Decree no 42 of 1988 by the then Military Government. Hence, the decree made it a criminal offence for anyone to carry or dump any harmful waste within the entire landmass and waters of the Federal Republic of Nigeria. Harmful Waste Decree (1988). Also, the birth of agencies such as the Federal Environmental Protection Agency (FEPA) in 1988 and the National Environmental Standards and Regulation Enforcement Agency (NESREA) in 2007 strengthen environmental regulations in Nigerian. Ugochukwu (2009). The concept of sustainable development has been and still is subject to criticism.

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What, exactly, is to be sustained in sustainable development? It has been argued that there is no such thing as a sustainable use of a non-renewable resource, since any positive rate of exploitation will eventually lead to the exhaustion of Earth's finite stock; this perspective renders the Industrial Revolution as a whole unsustainable. It has also been argued that the meaning of the concept has opportunistically been stretched from 'conservation management' to 'economic development', and that the Brundtland Report promoted nothing but a business as usual strategy for world development, with an ambiguous and insubstantial concept attached as a public relations slogan (Blewit 2015). So, one can try to appeal to the ethics of the situation by doing the right thing as an individual, but in the absence of any direct consequences, the individual will tend to do what is best for the person and not what is best for the common good of the public. Once again, this issue needs to be addressed. Because, if left unaddressed, the development of the commonly owned property will become impossible to achieve in a sustainable way. So, this topic is central to the understanding of creating a sustainable situation from the management of the public resources that are used for personal use. (Lynn, 2014). Since environment holds and sustains life, concerted and conscious efforts should be made to protect the environment. Sustainable development can only be achieved when environmental pollution monitoring is used as a tool in Environmental auditing so as to maintain a healthy environment. This paper therefore was aimed at evaluating the impact of environmental auditing on environmental pollution, sustainable development and healthy environment of some organizations in Port Harcourt, Nigeria.

MATERIALS AND METHODS

The study utilized a questionnaire as its research instrument in evaluating the Impact of Environmental Auditing and Sustainable Development in Port Harcourt. The questionnaire was divided into three sections- A, B and C. Section A elicits background information about the respondents. Section B and C seek information about the respondents' awareness/knowledge of the Sustainable Development and Environmental Auditing respectively. The targeted population of the study consists of all environmentally related organizations in Port Harcourt. However, the accessible population of the study was made up of seven (7) selected organizations/companies operating in Port Harcourt. They are as follows: – A = MOE, B = SPDCOIL Limited (SPDCOIL), C = NLNG OIL Limited (NLNG), D = MOH, E = EPOIL Limited (EPOIL), F

= RIVOCOIL Limited (RIVOCOIL), G= ECEM Limited (ECEM).

A total of 206 copies of questionnaires were retrieved from the 235 employees made up of both junior and senior staff reached and sampled in seven (7) organizations that were randomly selected for the study. For the analysis, the study used the simple percentages, tables and frequencies for the analysis of research questions while the spearman's rank order correlation co-efficient was applied for the test of the hypotheses formulated for the study.

Respondents were required to rank their observation of the relationship between the independent and dependent variables using the five-point Likert scale in this order: 5 - Strongly Agree (SA), 4 – Agree (A), 3 – Slightly Agree (SLA), 2 – Disagree (D), 1- Strongly Disagree

RESULTS AND DISCUSSION

A total number of two hundred and thirty five (235) copies of questionnaire were distributed to randomly select seven (7) organizations/companies in Port Harcourt namely: MOE, SPDCOIL Limited, NLNGOIL Limited, MOH, EPOIL Limited, RIVOCOIL Limited, and ECEM Limited. Out of the 235 questionnaires distributed, 206 copies were successfully returned which forms the basis for the researcher's analysis. This number therefore accounts for a general response rate of eighty seven point seven percent (87.7%). A total number of seven (29) questionnaires were not returned which represents twelve point three percent (12.3%) of the copies distributed. The demographic characteristics of the respondents reveals that out of the total of 206 respondents, a total of 168 respondents representing 81.6% were male; while the remaining 18.4% were female. 35.9% were single while 64.1% were married. On their age distribution, 21-30 years age bracket accounted for 13.6%, 31- 40years were 27.2%, 41 – 50 years were 40.8%, while the remaining 18.4% were those above 50 years of age.

Furthermore, their response on the number of working years' experience indicate that 25.2% had 1-5years paper experience, 20. 9% had 6-10years, 16.0% had 11-15years, and 24.8% had 16-20years, leaving the rest 13.1% to be those who had acquired experience for 20years and above paper. Similarly, the respondents educational status reveals that the highest proportion of 72.3% were those who had either a Diploma and/or a first degree, while 26.7% had postgraduates degrees, leaving only 1.0% to be the respondents with primary/High school education.

The hypotheses tested in this research paper showed a positive relationship between variables of interest. The first hypothesis which was tested with the spearman's rank order correlation gave a value of (0.85) and the t-test was further used to test for null hypothesis showed that there is a significant relationship between environmental auditing and sustainable development (Table 7).

The second hypothesis tested with spearman's rank order correlation gave a value of (0.93) and the t-test established the fact that there is a significant relationship between environmental pollution and environmental auditing (Table 8).

The third hypothesis tested with spearman's rank order correlation gave a value of (0.71) thus revealing that there is a significant relationship between environmental pollution and sustainable development (Table 9).

The result of the fourth hypothesis tested still with spearman's rank order correlation and t-test statistics gave a value of (0.83) and is interpreted to mean that there is a significant relationship between healthy environment and sustainable development (Table 10).

This results goes to confirm what Aina (1998) earlier said, when he declared that 'the quest for industrialization and sustainable development in Nigeria and the attendant improvement in the quality of life of the populace has taken its toll on the environment'.

Environmental concerns rarely formed an integral part of development plans, particularly in the third world countries like Nigeria.

Table 3 Weighted Response on Environmental Auditing. Source: Field Survey 2017

Organizations	SA (5)	A (4)	SLA(3)	D (2)	SD (1)	SCORE	% SCORE
MOE	21(105)	6(24)	2(6)	1(2)	—	137	15.4
SPDCOIL Limited	20(100)	5(20)	5(15)	—	—	135	15.2
NLNGOIL Limited	17(85)	7(28)	2(6)	2(4)	1(1)	124	14.0
MOH	23(115)	2(8)	2(6)	2(4)	1(1)	134	15.1
EPOIL Limited	17(85)	8(32)	2(6)	—	2(2)	125	14.1
RIVOCOIL Limited	14(70)	9(36)	3(9)	1(2)	2(2)	119	13.4
ECem Limited	15(75)	4(16)	5(15)	3(6)	2(2)	114	12.8

Table 4 Weighted Response on Environmental Pollution. Source: Field Survey 2017

Organizations	SA (5)	A (4)	SLA (3)	D (2)	SD (1)	score	% score
MOE	19(95)	6(24)	3(9)	2(4)	—	132	15.0
SPDCOIL Limited	19(95)	5(20)	4(12)	2(4)	—	131	14.9
NLNGOIL Limited	17(85)	6(24)	4(12)	2(4)	—	125	14.2
MOH	18(90)	5(20)	5(15)	2(4)	—	129	14.6
EPOIL Limited	19(95)	7(28)	2(6)	1(2)	—	131	14.9
RIVOCOIL Limited	15(75)	5(20)	5(15)	3(6)	1(1)	117	13.3
ECem Limited	15(75)	5(20)	5(15)	3(6)	1(1)	117	13.3

Table 5 Weighted Response on Sustainable Development. Source: Field Survey 2017

Organizations	SA (5)	A (4)	SLA (3)	D (2)	SD (1)	SCORE	% SCORE
MOE	18(90)	6(24)	3(9)	3(6)	—	129	15.1
SPDCOIL Limited	19(95)	5(20)	4(12)	2(4)	—	131	15.3
NLNGOIL Limited	15(75)	6(24)	4(12)	4(8)	—	119	13.9
MOH	17(85)	6(24)	4(12)	2(4)	1(1)	126	14.7
EPOIL Limited	15(75)	6(24)	4(12)	4(8)	—	119	13.9
RIVOCOIL Limited	15(75)	5(20)	5(15)	3(9)	1(1)	120	14.0
ECem Limited	15(75)	3(12)	5(15)	3(6)	3(3)	111	13.8

Table 6 Weighted Response on Healthy Environment (Source: Field Survey 2017)

Organizations	SA (5)	A (4)	SLA (3)	D (2)	SD (1)	SCORE	% SCORE
MOE	18(90)	4(16)	5(15)	1(3)	2(2)	126	15.2
SPDCOIL Limited	16(50)	7(28)	5(15)	2(4)	—	127	15.3
NNLNGOIL Limited	14(70)	6(24)	6(18)	3(6)	—	118	14.2
MOH	13(65)	6(24)	7(21)	2(4)	2(2)	116	14.0
EPOIL Limited	14(70)	5(20)	5(15)	3(6)	2(2)	115	13.8
RIVOCOIL Limited	14(70)	6(24)	5(15)	2(4)	2(2)	115	13.8
ECem Limited	14(70)	5(20)	5(15)	4(8)	1(1)	114	13.7

Table 7.Test of Hypothesis one (H₀₁): There is no significant relationship between Environmental Auditing and Sustainable Development

Organizations	SA (5)	A (4)	SLA (3)	D (2)	SD (1)	SCORE	% SCORE
MOE	18(90)	4(16)	5(15)	1(3)	2(2)	126	15.2
SPDCOIL Limited	16(50)	7(28)	5(15)	2(4)	—	127	15.3
NNLNGOIL Limited	14(70)	6(24)	6(18)	3(6)	—	118	14.2
MOH	13(65)	6(24)	7(21)	2(4)	2(2)	116	14.0
EPOIL Limited	14(70)	5(20)	5(15)	3(6)	2(2)	115	13.8
RIVOCOIL Limited	14(70)	6(24)	5(15)	2(4)	2(2)	115	13.8
ECem Limited	14(70)	5(20)	5(15)	4(8)	1(1)	114	13.7

The major objective of a company should not only be about increasing the company's profit but it's multidimensional: economic, social and environmental. Supported activities for sustainable development worldwide

have increased company's confidence in auditing systems of environmental impact and environmental performance to gain a competitive advantage in strategic positioning.

An organization's ability to achieve environmental objectives depends heavily on monitoring the continuous improvement of environmental performance through efficient planning of organizational, economic investments and necessary technological measures

Environmental concerns rarely formed an integral part of development plans, particularly in the third world countries like Nigeria. The major objective of a company should not only be about increasing the company's profit but it's multidimensional: economic, social and environmental. Supported activities for sustainable development worldwide have increased company's confidence in auditing systems of environmental impact and environmental performance to gain a competitive advantage in strategic positioning. An organization's ability to achieve environmental objectives depends heavily on monitoring the continuous improvement of environmental performance through efficient planning of organizational, economic investments and necessary technological measures.

The realization that sustainable development can only be achieved through interdependence between economic growth and environmental quality has compelled some governments to now regard the environment

as a valued and an integral part of economic growth. More and more companies are finding it valuable to audit their environmental impacts. Welford, (2002).

Table 8. There is no Significant Relationship between Environmental Pollution and Environmental Auditing

Healthy Environment	% Health Environment	Sustainable Development	% Sustainable Development	Rank _{HE}	Rank _{SD}	D	d ²
126	15.2	129	15.1	6	6	0	0
127	15.3	131	15.3	7	7	0	0
118	14.2	119	13.9	5	2.5	2.5	6.25
116	14	126	14.7	4	5	-1	1
115	13.8	119	14.0	2.5	2.5	0	0
115	13.8	120	14.0	2.5	4	-1.5	2.25
114	13.7	111	13.0	1	1	0	0
Total							9.5

Table 9. There is no Significant Relationship between Environmental Pollution and Sustainable Development

Environmental pollution	Environmental Auditing	Rank _{EP}	Rank _{EA}	D	d ²
132	137	7	7	0	0
131	135	5.5	6	-0.5	0.25
125	124	3	3	0	0
129	134	4	5	-1	1
131	125	5.5	4	1.5	2.25
117	119	1.5	2	-0.5	0.25
117	114	1.5	1	0.5	0.25
Total					4.0

Table 10. Test of hypothesis three (H₀₄): There is no Significant Relationship between Healthy Environment and Sustainable Development

Environmental pollution	Sustainable Development	Rank _{EP}	Rank _{SD}	D	d ²
132	129	7	6	1	1
131	131	5.5	7	-1.5	2.25
125	119	3	2.5	0.5	0.25
129	126	4	5	-1	1
131	119	5.5	2.5	2.5	6.25
117	120	1.5	4	2.5	6.25
117	111	1.5	1	0.5	0.25
Total					16.5

However, realizing the goals of sustainable development requires the economic justification of such social re-orientation. Therefore, the combined integration of the three-strand policy of economic, environmental and societal elements required for sustainable development (Oyalowo, 2009) has been enunciated by this study This paper has also shows that protecting and creating healthy environments is a critical component of sustainable development.

Environmental health can be integrated into sustainable development by improving environmental quality for the poorest population, reducing exposures to air pollution in homes and villages from biomass burning, and providing clean water and sanitation An environment that is healthy will be an attraction to investors, sole business men, Non-Governmental Organizations (NGO), etc and the health of persons living within is guaranteed.

With these, sustainable developmental activities can take place without obstructions. Fundamental human needs such as the availability and quality of air (that is environment devoid of pollution), water, food and shelter are also the ecological foundations for sustainable development. Standing with the earlier submission by White *et al.*, (2013), on addressing public health risk through investments in ecosystem services as a powerful and transformative force for sustainable development, any efforts at making business environment more sustainable and eco-friendly through regular environmental auditing would be great accomplishment.

From the tests carried out it is evident that there is a significant relationship between environmental auditing and sustainable development, between environmental pollution and environmental auditing, between healthy environment and sustainable development, and between environmental pollution and sustainable development. (Table 4 to 10). The key and common word here is the environment which is the centre of activities. The environment holds life or existence. For life or existence to continue environment must be supported to continue. This environment includes the Air, Water, and soil/land and therefore should be void of pollution. Every activity must be carried out in an environmentally friendly manner. There is no doubt that there are other activities that are needed to maintain and sustain life, such as Agriculture, Urbanization/Modernization, Industrialization/Technological Development but these activities should be not carried out to the detriment of the environment. Sustainable development is really sustainable when we are not robbing the future for the present day satisfaction.

The impact of every activity to environment should be monitored and audited from time to time. Environmental pollution is the major challenge facing every country. Natural resources are depleting rapidly, creating scarcity problem for the next generation. A large number of population particularly poor segments of societies are suffering badly as a result of the environmental pollution. On the one hand, every country is trying to increase economic growth to alleviate living standard of their people and on the other hand, environmental problems are becoming complicated due to excessive use of resources. The complication is occurring because governments and stakeholders are not balancing economic growth with environmental sustainability. This is why the need for regular environmental auditing of organizations involved in environmental activities in Port Harcourt and its environs is indispensable.

Environmental laws have been formulated to deal with a variety of environmental pollutants, such as toxic chemicals, noise, etc.; control particular activities, such as mining, power generation, etc.; and provide general guidelines for protecting basic natural resources, such as air, land and water. It does not end on environmental laws and guidelines alone, ignorance to some extent plays major role. On Wednesday 22nd 2017 the UNICEF of (WASH) Water, Sanitation and Hygiene in Nigeria (Zaid Jurji) while on courtesy visit to the Governor of Katsina State (Aminu Masari) observed that "The situation of sanitation in Nigeria is alarming, noting that Nigeria is ranked third worldwide when it comes to open defecation, one-third of the population practices it. Nigeria is a heavy weight country not only in Africa but worldwide. It does not go well to know that open defecation is being practiced widely in various communities in a strong country like Nigeria, so we need to do something about that beyond the traditional approach to improve on the sanitation he continued. Punch Newspaper (2017)

Conclusion: Government and stakeholders are to intensify efforts towards enlightening people on the dangers associated with deteriorating environment.

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