British Journal of Education, Society & Behavioural Science
3(1): 33-46, 2013

SCIENCEDOMAIN *international*
www.sciencedomain.org

Community Participation and Sustainable Development in the Niger Delta

M. O. Agwu[1*]

[1]*Department of Business Administration, Niger Delta University, Wilberforce Island, Bayelsa State, Nigeria.*

Author's contribution

Author MOA designed and carried out the study, performed the statistical analysis, wrote, read and approved the final manuscript with the assistance of SDI reviewers' and guides for final editing.

Research Article

Received 24th October 2012
Accepted 22nd December 2012
Published 25th January 2013

ABSTRACT

The paper examined community participation and sustainable development in the Niger Delta. The research question addressed the extent at which sustainable development of the Niger Delta and improved welfare of oil producing communities is dependent on their participation in the design and execution of community projects. It assumes that sustainable development of the oil producing communities can best be achieved through their participation in the design and execution of community projects. An exploratory cross-sectional survey research design was used in conducting the study using questionnaire administered on 396 randomly selected respondents from three age brackets (35-39, 40-44 & 45-49) in ten judgmentally selected (based on prominence) oil producing communities in the five most prominent oil producing states of the Niger Delta. The sample size of 396 was determined from a population of 40,568 using Yamane [1] sample size determination formula at 5% level of significance for sampling error. The questionnaire responses were presented using tables, analyzed and interpreted using simple percentages while formulated hypotheses were tested using chi-square (χ^2).The results indicated that sustainable development and improved welfare of oil producing communities in the Niger Delta is to a large extent dependent on community participation. The research concludes that community participation in the design and execution of community projects will result in sustainable development and improved welfare of oil producing communities. It therefore

**Corresponding author: Email: mbaagwu38@yahoo.com;*

recommends among others: enactment of legislation that will compel oil producing companies to stop gas flaring and clean up oil spillages in their host communities, creation of oil/gas heritage savings fund for the survival of oil producing communities in the post oil/gas era, Involvement of local communities in the design and execution of community projects using reputable contractors, establishment of afforestation, pollution control and conservation of natural resources schemes in oil producing communities to replenish damaged natural resources and sustenance of the current amnesty programme.

Keywords: Community participation; sustainable development; oil-producing communities; oil-companies; Niger Delta.

1. INTRODUCTION

The Niger Delta covers an area of well over 70,000 square kilometers, which amounts to about 37 7.5 per cent of Nigeria's total landmass; the coastline extends up to 560 kilometers, roughly two thirds of the entire coastline of Nigeria [2]. It has a population of about 39 million people and more than 40 ethnic groups with links to the linguistic groups of Ijaw, Edo, Igbo, Efik, Ibibio and Oron. It is the largest wetland in Africa, rich in renewable and non-renewable natural resources such as oil, gas, bitumen, timber, wildlife, etc. There are seven littoral states in Nigeria that make up the Niger Delta Region: Akwa-Ibom, Bayelsa, Cross Rivers, Edo, Delta, Rivers and Ondo. Other states that are oil producing, but not in the Niger Delta Region are Abia and Imo States.

Nigeria generates about 95% of its total revenue from oil and gas exports and has earned over $400 Billion as oil revenue since the early 70s [3]. But the pattern of resource exploitation and use has been a major threat to this prime resource region. The inequities experienced in distributing the wealth of the region, particularly as it affects the immediate oil producing areas, has been a source of social discontent, generating conflicts and communal tension. Ironically, the oil producing communities wallow in abject poverty, unaffected by the billions of dollars taken away from their land. They have no access to clean water; electricity and majority of them live in thatch houses. The long years of painful neglect and decay coupled with unbridled exploration and exploitations of their oil and gas have left the region bare as evidenced by large-scale want, squalor, ignorance, disease and idleness. Hence, they live in deprivation in the midst of abundance.

The growing awareness of the challenges of traditional development has led to the wide acceptance of a new concept – sustainable development which protects the environment and advances social justice. It is defined as the development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs from the common wealth of resources [4].

The methods of achieving sustainable development include: effective waste management, afforestation programmes, pollution control, conservation of natural resources and proper environmental management plan while the principles of sustainable development include: due care, due diligence, environmental management plan, integrating environmental management plan into project life cycle and good housekeeping.

The three aspects of sustainable development include:

Economic: An economically sustainable system must be able to produce goods and services on a continuous basis, maintain manageable levels of external debts and avoid extreme sectorial imbalances which may damage agricultural or industrial production.

Environmental: An environmentally sustainable system must maintain a stable resource base; avoid over-exploitation of renewable resource systems and depleting non-renewable resources to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability and other ecosystem functions not ordinarily classed as economic resources.

Social: A socially sustainable system must achieve distributional equity, adequate provision of social services including health, education, gender equity, and political accountability/participation.

1.1 Statement of the Problem

Exploration and exploitation activities of oil prospecting companies open the Niger Delta to environmental pollution, greenhouse effect, habitat destruction, soil erosion and flooding. Even more damaging to the ecosystem is the impact of oil spillage and careless handling of petroleum effluents by oil companies. The marine resources of the entire area are systematically depleted while the traditional occupation of farming and fishing are engendered. The utter neglect and brazen insensitivity of the government and companies to the plight of the Niger Delta culminated in the wave of violence, kidnapping and youth restiveness that has long been the feature of the area.

Before the federal government amnesty programme, the persistent incidence of oil-workers hostage taking, blockage of oil facilities, oil pipeline vandalization and human rights violations with subsequent damage to corporate reputations have had a negative impact on both government revenue and corporate profit. Edmund Daukoru, former special adviser to President Olusegun Obasanjo on petroleum and energy, asserted that due to the persistent conflict in the Niger Delta, the Nigerian government has lost well over $6.8 billion in oil revenue since 1999 [5].While oil and gas production activities have been beneficial and have produced the base for economic growth for over 25 years, for the 27 million Nigerians who live in the Delta the impact can hardly be described as positive. It is obvious, that previous economic policies and resource exploitation programmes of government have paid marginal attention to sustainable development of the oil producing communities in the Niger Delta. It is against this background that it becomes pertinent to examine community participation and sustainable development in the Niger Delta.

1.2 Research Objectives

The objectives of the research are as follows:

1. To determine the extent at which sustainable development of the Niger Delta is dependent on community participation in the design and execution of community projects.
2. To determine the extent at which improved welfare of oil producing communities in the Niger Delta is dependent on their participation in the design and execution of community projects.

1.3 Research Questions

Previous strategies aimed at developing oil producing communities in the Niger Delta emphasized corporate philanthropy and social investment characterized by one-time "gifts" to host communities without their participation in the design, monitoring and implementation of the community projects such projects were often either poorly implemented or not utilized at all, as they failed to address community priority needs hence, we have school blocks built that were never used, renovated hospitals without doctors and water pipes that functioned for only a few days after construction. This identified gap in previous sustainable development efforts in oil producing communities of the Niger Delta has prompted the following research questions:

1. To what extent is sustainable development of the Niger Delta dependent on community participation in the design and execution of community projects?
2. To what extent is improved welfare of oil producing communities in the Niger Delta dependent on their participation in the design and execution of community projects?

1.4 Research Hypotheses

In view of the above research questions, the following null hypotheses were formulated:

$1H_o$**:** Sustainable development of the Niger Delta is not dependent on community participation in the design and execution of community projects.

$2H_o$**:** Improved welfare of oil producing communities in the Niger Delta is not dependent on community participation in the design and execution of community projects.

2. LITERATURE REVIEW

Previous attempts at sustainable development of oil producing communities in the Niger Delta has been based on community development partnerships between oil producing companies, government agencies and local communities. This approach which have little or no impact on the way oil companies carry out their core business operations fails to prevent or compensate oil bearing communities for the negative social, economic and environmental externalities generated by oil exploration. The concern in business/society relationships today is not about making money the way one wants and then giving a portion of it back to the community; rather, it is about how a company earns its money, how that company is run and how it interacts with communities [6].

However, the partnership approach to sustainable development failed to appreciate this concern, and tacitly assumes that meeting affirmative duties via social investment is a sufficient compensation for failure to address negative injunction duties. Unfortunately, there is no amount of road or bridge construction, provision of electricity or awarding of scholarships that can compensate for the loss of daylight resulting from gas flaring [7], neither can cash payments compensate for future loss of livelihood.

At the heart of this argument is that negative injunction and affirmative duties are mutually reinforcing. While addressing negative injunction duties creates value, addressing affirmative duties adds as well as consolidates the value created. Consequently, the failure of current sustainable development initiatives in the oil producing communities of the Niger Delta to encompass issues of negative injunction duties and influence how oil companies conduct

their day-to-day operation means at best that sustainable development initiatives will have a marginal impact on host communities.

The failure of current sustainable development initiatives in the oil producing communities of the Niger Delta to address negative injunction duties can be attributed to the oil companies' drive for profitability and the absence of an enabling environment in the oil industry. Inadequate human and institutional capacity, corruption, institutional decay and overdependence on oil as the main source of government revenue have undermined the ability of the Nigerian government to ensure an enabling environment for sustainable development. Weak institutional and technical capacities mean regulatory agencies such as the Department of Petroleum Resources and the Federal Ministry of Environment are unable to effectively monitor and ensure compliance with regulatory statutes in the oil industry.

In addition, these regulatory agencies more or less depend on the oil companies to monitor and report on compliance. As a result, the regulated i.e. the oil companies —are in effect the regulators. The conflict of interest that arises from this situation is manifested in the high incidence of oil spills and gas flaring in the Niger Delta region. For example, Egbu [8] asserts that neither the Federal Environmental Protection Agency's zonal office in Port-Harcourt nor the Rivers state Ministry of Environment have a well-equipped laboratory. In the event of an oil contamination incident in Rivers state, the authorities often request that the responsible oil companies provide soil and water sample analysis.

Furthermore, corruption and institutional decay has meant that government officials are quick to turn a blind eye to gross violation of Nigerian laws for personal gains. For example, Halliburton acknowledged that it paid bribes worth $2.4 billion to some Nigerian government officials for tax breaks related to its operation in Nigeria [9]. Recently, Jim Bob Brown, a former staff member of Willbros Group, Inc. (an oil servicing firm), confessed in a United States court that he paid bribes worth $1.5 billion to officials of the Nigerian National Petroleum Corporation and the Federal Inland Revenue Services to secure and retain contracts and to manipulate tax figures for the company [10].

On the other hand, government overdependence on oil revenue means that most of its policy is generally geared towards minimizing loss of oil revenue at the expense of environmental protection or the protection of citizens' rights. Indeed, Ikporukpo [11] has argued that given the importance of petroleum to the Nigerian economy, the laxity in enforcing existing legislation might actually be a deliberate policy to encourage foreign direct investment in the oil industry.

These sustainable development constraints create a condition in which the temptation for abnegating negative injunction duties by oil companies is high and the risk, cost and consequence for doing so are low. For example, in 1980, Chevron noted that compliance with the Gas Re-injection Decree would cost the company $56 million, compared to a mere $1 million per year that it would have to pay in fines for gas flaring. Gas flaring was in essence cheaper [12]. The absence of an enabling environment invariably means that oil companies have huge latitude to pursue profitability without constraints.

Besides, consensus is emerging that oil companies can best contribute to sustainable development by optimizing the potential positive social, economic and environmental impact of oil production on host communities and minimizing the corresponding negative impacts [13,14]. The issue here is that oil companies can best contribute to sustainable development of the Niger Delta by not only creating new sources of livelihood via social investments, but

also by ensuring that existing sources of livelihood are not destroyed or lost due to its operations. Prevention is as important as creation because, for development to be meaningful and sustainable, it must protect, preserve and conserve the lives and resources of rural inhabitants [15].

It is equally important to note that in Nigeria, the enabling environment for sustainable development is at best still largely ineffective, and the capacities of potential partners (government and local civil societies) to deliver on their responsibilities as at when due is undependable. Efforts presently geared toward institutional capacity building in existing community development partnership schemes will continue to yield limited dividends as long as the more fundamental issues are ignored. For example, the strengthening of local capacity to monitor and enforce local environmental regulation effectively will make little difference if developing countries' governments continue to lower environmental standards as an incentive to attract foreign direct investment. An example is the continual shifting of the date for ending gas flaring in Nigeria's oil industry: these frequent shifts have led most people in the Niger Delta to believe that gas flaring will never end.

2.1 Theoretical Framework

From community perspective, oil producing companies are seen as members of host communities that should, like other members of the community, instinctively consult and take into consideration community concerns in their decision making process and treat community issues as priority issues without community pressure to do so. In contrast, the worldview of oil companies is shaped by neo-liberalism and pure market logic driven by profitability and the assumption that everyone would benefit from oil exploration activities [16]. Oil producing companies in Nigeria therefore, see government as largely responsible for sustainable development of oil bearing communities and the redistribution of the wealth generated from oil exploration. This clash in worldviews and expectations of host communities and oil producing companies invariably violates the psychological contract that exists between local communities and oil companies.

Issues of compensation and strengthening of local capacity in event of oil spills are still being sidelined in the current efforts towards sustainable development of the Niger Delta. Compensation is still either not paid or is inadequate to compensate farmers for present and future loss related to oil production [17]. For example, while the Lagos high court awarded $10 million to three southern communities as damages for the 40,000 to 100,000 barrels of oil spilled in 1998 due to Mobil's operations, their spokesperson argued that there was no discernible adverse effect of the spill on the people and the environment, therefore, intended to appeal the ruling, while the people continue to suffer [18]. Similarly, despite the federal high court ruling in Port Harcourt that SPDC should pay $1.5 billion to the Ijaw aborigines as damages for environmental degradation, a ruling also supported by the national assembly, SPDC has neither paid nor engaged in effective dialogue with the affected community to seek alternative solutions [19].

Unfortunately, failure to address these negative injunction duties put extra strain on the ability of oil companies to contribute meaningfully to poverty reduction programmes in their host communities, because, inadequate attention to negative injunction duties means addressing affirmative duties which is tantamount to responding to symptoms instead of dealing with the root causes of poverty in the host communities. Also, given the enormous demands/needs of the host communities, sustainable development programmes, as presently implemented, are bound to have only a marginal impact on host communities as

demand will always surpass supply of sustainable development benefits. In other words, meeting affirmative duties cannot be a substitute for negative injunction duties [20].

This research is based on Freeman's [21] stakeholder theory which defines stakeholders as any group or individual who can affect or is affected by the achievement of the firm's objectives hence the firm has a binding fiduciary duty to put their needs first to increase value for them. In its input-output models of corporate governance, inputs of shareholders, employees and suppliers are transformed into usable outputs that customers buy. This returns some capital benefit or profit to the corporation. Under this model, corporate decision makers only address the needs of those four parties: investors, employees, suppliers and customers, with an emphasis on investors' wishes. However, the stakeholder theory argues further that other parties are involved as well, including governmental bodies, political groups, trade associations, trade unions, communities, associated corporations, prospective employees, and prospective customers, the general public and perhaps even competitors.

The stakeholder view is an instrumental theory; since it integrates the resource-based view of the host communities in the Niger Delta as well as the market-based view of the oil companies, and adds a new and expanding sociopolitical dimension (sustainable development) which is taking root in the emergence of corporate social responsibilities. Effective communication and participation of stakeholders (host communities) in matters that affect them is fundamental for the successful implementation of sustainable development programmes in the Niger Delta.

3. RESEARCH METHODOLOGY

The scope of this research is limited to the ten judgmentally selected (based on prominence) oil producing communities, selected from the five most prominent oil producing states of the Niger Delta. These include: Akwa-Ibom (Ibeno and Onna), Bayelsa (Brass and Gbaran), Delta (Benekuku and Brutu), Ondo (Ayetoro and Apoi) and Rivers (Obiricom and Soku).An exploratory cross-sectional survey was used in conducting the research using questionnaire administered on 396 randomly selected respondents from three judgmentally selected age brackets (35-39, 40-44 & 45-49) in the ten selected oil producing communities.

The sample size of 396 was determined from a population of 40,568 using Yamane [22] sample size determination formula at 5% level of significance. The study population of 40,568 consists of the entire respondents in the three age brackets:13,104(35-39),13,241(40-44) and 14,223(45-49). It is assumed that responses obtained from these three categories of respondents would be representative of the opinions of all oil producing communities on community participation and sustainable development in the Niger Delta. The sample size consists of the following respondents from the three selected age brackets: 128(35-39), 129(40-44) and 139(45-49). The questionnaire was designed to obtain a fair representation of the opinions of the 396 sample respondents using a three-point Likert type scale. The questionnaire responses of the sample respondents were presented using tables, analyzed and interpreted using simple percentages while the formulated hypotheses were tested using chi-square (χ^2). A total of 396 copies of the questionnaire were administered, out of which 2 were cancelled while 4 were not returned and 390 (98%) were used for analysis.

4. RESULTS AND DISCUSSIONS

4.1 Distribution of Sample Respondents

The distribution of sample respondents from the three age brackets in the ten selected oil producing communities of the five prominent oil producing states in the Niger Delta is as shown in Table 1 below:

Table 1. Distribution of sample respondents

S/No	Name of community/state	Age bracket 35 -39	Age bracket 40 -44	Age bracket 45 -49	Total number of sample respondents
1.	Ibeno/Akwa-Ibom	8	11	20	39
2.	Onna/Akwa-Ibom	8	11	20	39
3.	Brass/Bayelsa	8	11	20	39
4.	Gbaran/Bayelsa	8	11	20	39
5.	Benekuku/Delta	8	11	20	39
6.	Brutu/Delta	8	11	20	39
7.	Ayetoro/Ondo	8	11	20	39
8.	Apoi/Ondo	8	11	20	39
9.	Obiricom/Rivers	8	11	20	39
10.	Soku/Rivers	8	11	20	39
	Total Number of Sample Respondents	80	110	200	390

Source: Field Survey, 2012.

4.2 Distribution of Responses on Research Questions

Question Number 1: To what extent does your community participate in the design and execution of oil companies/government sponsored community projects in your community?

Table 2 indicates that a total of 10 i.e. 2.56% of the entire respondents across the three age brackets were of the opinion that their respective communities to a large extent participate in the design and execution of oil companies/government sponsored community projects in their respective communities. 42(10.77%) respondents were of a mild extent opinion while 338(86.67%) respondents were of the opinion that their respective communities to a poor extent participate in the design and execution of oil companies/government sponsored community projects in their communities. We therefore conclude that there is a strong evidence that oil producing communities in the Niger Delta do not participate in the design and execution of oil companies/government sponsored community projects in their respective communities as buttressed by the 86.67% poor extent response of the sample respondents.

Table 2. Response pattern on the extent of community participation in the design and execution of oil companies/government sponsored community projects

Category of respondents	Responses provided			
	Large extent	Mild extent	Poor extent	Total
Age bracket (35 -39)	2	10	68	80
Age bracket (40 -44)	3	7	100	110
Age bracket (45 -49)	5	25	170	200
Total	10	42	338	390

Source: Field Survey, 2012.

Question Number 2: To what extent is sustainable development of the Niger Delta dependent on community participation in the design and execution of community projects?

Table3, shows that a total of 345 i.e. 88.46% of the entire respondents across the three age brackets were of the opinion that sustainable development of the Niger Delta is to a large extent dependent on community participation in the design and execution of community projects in their respective communities. 20(5.13%) respondents expressed a mild extent opinion while 25(6.41%) respondents expressed a poor extent opinion. We therefore conclude that there is a strong evidence that sustainable development of the Niger Delta is dependent on community participation in the design and execution of community projects as buttressed by the 88.46% large extent response of the sample respondents.

Table 3. Response pattern on the extent sustainable development of the Niger Delta is dependent on community participation in the design and execution of community projects

Category of respondents/workers	Responses provided			
	large extent	Mild extent	Poor extent	Total
Age bracket (35 -39)	49	13	18	80
Age bracket (40 -44)	101	5	4	110
Age bracket (45 -49)	195	2	3	200
Total	345	20	25	390

Source: Field Survey, 2012.

Question Number 3: To what extent is improved welfare of oil producing communities in the Niger Delta dependent on their participation in the design and execution of community projects?

Table 4, shows that a total of 340 i.e. 87.18% of the entire respondents across the three age brackets were of the opinion that improved welfare of oil producing communities in the Niger Delta is to a large extent dependent on their participation in the design and execution of community projects in their respective communities. 25(6.41%) respondents expressed a mild extent opinion while 25(6.41%) respondents also expressed a poor extent opinion. We therefore conclude that there is a strong evidence that improved welfare of oil producing communities in the Niger Delta is dependent on their participation in the design and execution of community projects as buttressed by the 87.18% large extent response of the sample respondents.

Table 4. Response pattern on the extent improved welfare of oil producing communities in the Niger Delta is dependent on their participation in the design and execution of community projects

Category of respondents/workers	Responses provided			
	Large extent	Mild extent	Poor extent	Total
Age bracket (35 -39)	51	7	22	80
Age bracket (40 -44)	97	12	1	110
Age bracket (45 -49)	192	6	2	200
Total	340	25	25	390

Source: Field Survey, 2012.

4.3 Test of Hypotheses

4.3.1 Test of the first hypothesis

(i) **H_O:** Sustainable development of the Niger Delta is not dependent on community participation in the design and execution of community projects.
H_1: Sustainable development of the Niger Delta is dependent on community participation in the design and execution of community projects.
(ii) α =0.05
(iii) Degree of Freedom (df) = (r – 1)(c-1= (3-1)(3-1)=4
(iv) Decision Rule: **Reject H_o: if $\chi^2_c > \chi^2_t$, Accept H_o: if $\chi^2_c < \chi^2_t$**
(v) Chi- square critical table value **$(\chi^2_t) = \chi^2_{0.05} = 9.49$**
(vi) Chi-square critical computed value **from table 6 = χ^2_c=12.5473(see appendix one)**

Since $\chi^2_c > \chi^2_t$ i.e. **12.5473> 9.49**, we reject the null hypothesis and accept the alternative hypothesis that sustainable development of the Niger Delta is dependent on community participation in the design and execution of community projects, as buttressed by the **88.46%** large extent response of the sample respondents in Table 3.

4.3.2 Test of the Second Hypothesis

(i) **H_O:** Improved welfare of oil producing communities in the Niger Delta is not dependent on community participation in the design and execution of community projects.
H_1: Improved welfare of oil producing communities in the Niger Delta is dependent on community participation in the design and execution of community projects.
(ii) α =0.05
(iii) Degree of Freedom (df) = (r – 1)(c-1= (3-1)(3-1)=4
(iv) Decision Rule: **Reject H_o: if $\chi^2_c > \chi^2_t$, Accept H_o: if $\chi^2_c < \chi^2_t$**
(v) Chi- square critical table value **$(\chi^2_t) = \chi^2_{0.05} = 9.49$**
(vi) Chi-square critical computed value **from table 8 = χ^2_c=13.2543(see appendix two)**

Since **$\chi^2_c > \chi^2_t$ i.e. 13.2543> 9.49,** we reject the null hypothesis and accept the alternative hypothesis that Improved welfare of oil producing communities in the Niger Delta is dependent on community participation in the design and execution of community projects, as buttressed by the **87.18%** large extent response of the sample respondents in Table 4.

5. CONCLUSION AND RECOMMENDATIONS

This paper has tried to examine community participation and sustainable development in the Niger Delta from the perspective of community involvement in the design and execution of community projects. It assumes a stakeholder approach to community participation and believes that sustainable development of oil bearing communities cannot be attained by oil companies addressing their affirmative duties in place of negative injunction duties (e.g. stoppage of gas flaring).

Arising from the findings of this paper, it is suggested that oil companies and the relevant government agencies (NDDC, DPR) should take the following measures to ensure sustainable development of the oil producing communities of the Niger Delta region:

- Enactment of legislation that will compel oil producing companies to stop gas flaring and clean up oil spillages in their host communities.
- Creation of oil/gas heritage savings fund for the survival of oil producing communities in the post oil/gas era.
- Involvement of local communities in the design and execution of community projects using reputable contractors.
- Establishment of afforestation, pollution control and conservation of natural resources schemes in oil producing communities to replenish damaged natural resources.
- Provision of social infrastructures: good roads/ bridges, electricity, modern houses, pipe-borne water, proper waste disposal system, transport system etc. in all the oil producing communities in the Niger Delta.
- Establishment of technical institutions to train indigenes of oil producing communities in relevant skills that will make them employable in oil companies.
- Sustenance of the current amnesty programme of the Federal Government to ensure that the youths do not return to arms struggle.
- Promotion of tripartite consultation/dialogue between government, oil companies and host communities in conflict resolution.
- Establishment of industries in oil producing communities to provide gainful employment opportunities to the residents.
- Immediate passage and implementation of the petroleum industry bill to ensure local participation in oil exploration.
- Restructuring and increase in revenue allocation of the NDDC to enable them execute more sustainable development projects in the oil producing communities of the Niger Delta.

ACKNOWLEDGEMENTS

The author expresses his gratitude to the indigenes of the selected oil bearing communities in the Niger Delta for their co-operation and support in carrying out this research, especially those that completed and returned the research questionnaire.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Yamane T. Statistics: An Introductory Analysis. 3rd. edition. New York Harper and Row; 1964.

2. Niger Delta Development Commission (NDDC). Niger Delta Regional Development Master Plan Draft: Directorate of Planning. Port- Harcourt: NDDC; 2004.
3. International Crisis Group. Crisis Watch. 2006;12:8. Accessed on 10 0ctober, 2012. Avalaible at: http://www.org/home/index.com
4. World Commission on Environment and Development. Our Common Future, 1987;8(1):56-66.
5. Afrol News. Nigeria Lost US$6.8 Billion to Niger Delta Crisis. 22 January, 2004. Accessed on 9 October 2011. Available at: http://www.afrol.com/articles/10800.
6. Swanson P. Corporate social responsibility and the oil sector. CEPML Internet Journal. 2002;11:1. Accessed on 25 September 2011. Available at: http:// www.dundee.ac.uk/cepmlp/journal/html/vol11/article11-1.html
7. Idemudia U, Ite UE. Demystifying the Niger Delta conflict: Towards an integrated explanation. Review of African Political Economy. 2006;33(108):56-65.
8. Egbu UA. Constraints to effective pollution control and management in Nigeria. The Environmentalist. 2000;20(2):34-47.
9. Cason J. US firm Halliburton acknowledges bribes to Nigeria official. News2003. Accessed on 11 October, 2011. Available at: http:// www.allafrica.com/stories/200305090511.html
10. This Day News. An oily business. 28September,2006. Accessed on 28 September 2011. Available: http:// www.allafrica Editorial,.com/stories/printables/2000609280632.html.
11. Ikporukpo CO. The management of oil pollution of natural resources in Nigeria. Journal of Environmental Management. 1985;20(3):18-36.
12. Frynas JG. Oil in Nigeria: Conflict and Litigation between Oil Companies and Village Communities. LIT, Munster; 2000.
13. Moser K. MNCs and sustainable business practice: The case of the Colombian and Peruvian Petroleum Industries. World Development, 2001;29(2):22-40.
14. Warhurst A, Mitchell P. Corporate social responsibility and the case of Summitville mine. Resource Policy. 2000;26(5):89-97.
15. Ukpongson M, Onu D. Development efforts of oil companies as perceived by rural households in selected oil producing communities of Rivers State, Nigeria. Journal of Agriculture and Social Research. 2004;4(1):47-61.
16. Jenkins R. Corporate social responsibility and the mining industry: Conflict and constructs. Corporate Social Responsibility and Environmental Management. 2004;11(1):23-45.
17. Frynas JG. Oil in Nigeria: Conflict and Litigation between Oil Companies and Village Communities. LIT, Munster; 2000.
18. CNN World. Exxon Mobil Fined $10 Million for Nigeria Oil Spill. 10 December 2003. Accessed on 3 October; 2011. Available at: http://www.cnn.com/2003/WORLD/africa/12/08/exxon.fine.ap/,2003.
19. This Day News. An oily business. 28September, 2006. Accessed on 28 September, 2011. Available: http://www.allafrica Editorial,.com/stories/printables/2000609280632.html.
20. Idemudia U, Ite UE. Demystifying the Niger Delta conflict: Towards an integrated explanation. Review of African Political Economy. 2006;33(108):56-65.
21. Freeman RE. Strategic Management. A Stakeholder Approach. Boston: Pitman, 1984.
22. Yamane T. Statistics: An Introductory Analysis. 3rd. edition. New York Harper and Row; 1964.

APPENDIX ONE

Computation of Expected Frequencies and Calculated Chi-Square Critical Computed Value (χ^2_c) for The First Hypothesis

Table 5. Observed and expected frequencies of question number 2 (from Table3)

Category of respondents/workers	Responses provided			
	Large extent	Mild extent	Poor extent	Total
Age bracket (35 -39)	49 (70.77)	13(4.10)	18 (5.13)	80
Age bracket (40 -44)	101 (97.31)	5 (5.64)	4 (7.05)	110
Age bracket (45 -49)	195(176.92)	2 (10.26)	3(12.82)	200
Total	345	20	25	390

Source: Field Survey, 2012.

Table 6. Computation of Chi-square critical computed value (χ^2_c) from Table 5

Fo	Fe	(Fo-Fe)	(Fo-Fe)/Fe	$(Fo-Fe)^2/Fe$
49	70.77	-21.77	-0.3076	0.0946
13	4.10	8.9	2.1707	4.7121
18	5.13	12.87	2.5088	6.2939
101	97.31	3.69	0.0379	0.0014
5	5.64	-0.64	-0.1135	0.0129
4	7.05	-3.05	-0.4326	0.1872
195	176.92	18.08	0.1022	0.0104
2	10.26	-8.26	-0.8051	0.6481
3	12.82	-9.82	-0.7660	0.5867
				χ^2_c=12.5473

APPENDIX TWO

Computation of Expected Frequencies and Calculated Chi-Square Critical Computed Value (χ^2_c) for The Second Hypothesis

Table 7. Observed and expected frequencies of question number3 (from Table4)

Category of respondents/workers	Responses provided			
	Large extent	Mild extent	Poor extent	Total
Age bracket (35 -39)	51 (69.74)	7 (5.13)	22 (5.13)	80
Age bracket (40 -44)	97(95.90)	12(7.05)	1 (7.05)	110
Age bracket (45 -49)	192 (174.36)	6(12.82)	2(12.82)	200
Total	340	25	25	390

Source: Field Survey, 2012.

Table 8. Computation of Chi-square critical computed value (χ^2_c) from Table 7

Fo	Fe	(Fo-Fe)	(Fo-Fe)/Fe	$(Fo-Fe)^2/Fe$
51	69.74	-18.74	-0.2687	0.0722
7	5.13	1.87	0.3645	0.1329
22	5.13	16.87	3.2885	10.8142
97	95.90	1.1	0.0115	0.0001
12	7.05	4.95	0.7021	0.4930
1	7.05	-6.05	-0.8582	0.7364
192	174.36	17.64	0.1012	0.0102
6	12.82	-6.82	-0.5320	0.2830
2	12.82	-10.82	-0.8440	0.7123
				χ^2_c=13.2543

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sciencedomain.org/review-history.php?iid=181&id=21&aid=864