

THE ENVIRONMENTAL IMPLICATIONS OF ABANDONED DEVELOPMENTAL PROJECTS IN PORT HARCOURT METROPOLIS

ABSTRACT- Development is expected to satisfy a purpose in the life of a people and therefore needs to be planned with a time schedule of commencement and completion. When a project is commenced and for some reasons stopped, without completion over a long period of time it is deemed to have been abandoned. Project abandonment poses both socio-economic and environmental challenges and consequences. This study investigated the different types of development projects that are commonly abandoned; factors responsible for project abandonment and the socio-economic and environmental implications of project abandonment in Port Harcourt Metropolis. The research adopted mixed method approach and case study to examine the effects of abandonment of developmental projects on the physical environment in the Port Harcourt Metropolis. Questionnaires were distributed amongst the residents of the various areas of the metropolis where the abandoned projects under study were sited and the data analyzed. Special attention was also given to professionals in government departments while data from semi-structured interviews were obtained in addition. Results from the study showed that there are both privately owned and government owned abandoned projects in the metropolis. Various factors which included insufficient budget, lack of reliable feasibility study, change of political administrations, nepotism etc are responsible for developmental projects abandonment. Also, there are several environmental implications arising from project abandonment, which in turn create socio-economic effects. These include among others, creation of social vices and untidy environment. It also showed that majority of the abandoned developmental projects are public (government) projects. The study suggests the putting in place of legal framework that would regulate timely execution of projects. The application of environmentally sustainable security of abandoned sites as a guide to execution of developmental projects with a view to avoiding negative externalities that may arise from abandonment of projects.

I INTRODUCTION

Successive government in Nigeria since independence have come up with one programme or the other targeted at embarking on developmental projects that could better the life of her citizens. Surprisingly, most of such projects and programmes at both Local, State and Federal levels are often partially or completely abandoned. Ukpanyang (2011) observed that the reasons most often given by successive governments in Nigeria for such abandonment are the differences in party programmes or manifesto. Residential housing project is among the worst hit projects in terms of abandonment in the country as the demand for its use is always on the increase in the country (Ankeli, et al, 2016).

Housing industry as a major priority of government in Nigeria, has faced persistent problems of project abandonment. Cases however abound in the country where new governments initiate their new housing projects without first completing or considering the huge public fund that might have been expended on the existing projects they met. The consequences of this, usually is the alarming rate of housing project abandonment Dumo (2017). The consequences of project abandonment to both

clients, contractors and the national economy is usually monumental.

It is known that development entails the carrying out of any building, engineering, mining or other operations in, on, over or under land (Urban and Regional Decree No. 88 of 1992). There is always environmentally significant change affecting both socio-economic activities and the physical environment itself, whenever development project is put in place. Every development project is thus planned to have commencement time, duration and completion time. Baum and Tolbert (1985) asserted that a project is a

sequence of tasks, bounded by time, resources and requires results to achieve a particular aim. Thus, if this timing is not met and the project is left fallow, it is deemed to have been abandoned. Abandoned projects are known to have always had negative implications ranging from socio- economic impacts to those of environmental nature.

It has been observed that abandoned projects litter many cities in Nigeria resulting from lack of continuity on the side of politicians, thereby causing infrastructural decadence which also constitutes environmental hazards. These abandoned projects are at

different stages of construction and are majorly projects of governments at the various levels while private developers comparatively own few of them. Such projects include bridges, flyovers, monorail, airports, hospital, water projects, roads, recreational parks, residential, commercial and industrial buildings that have been left fallow to constitute nuisance in the neighbourhoods. Abandoned building projects give rise to housing deficit, creation of hideouts for criminals, sanitation problems and distortion of environmental serenity/beauty. According to Osemenan (1987), Nigeria has become the world's junk yard for abandoned and failed projects worth billions of naira and it is greatly unthinkable that Nigeria blessed with so great potential in the building and construction industry can experience such magnitude of project failure and abandonment, now with the rapid increase in the expansion into the metropolitan communities and attendant development in commerce and industry.

There is a significant population explosion in the metropolis that has required an attendant creation of infrastructures. This constitutes so much abandonment of on-going projects. Project development, particularly infrastructural projects are intended to provide new products and services to the community and at the same time promote the beauty of the environment, but these advantages are underestimated and unattained because of abandonment (Ayodele and Alabi, 2011). When available infrastructure is not able to serve the teeming population, abandoned sites are unavoidably improvised into slums where several negative impacts on the environment are created to affect the physical environment and socio-economic wellbeing.

The Port Harcourt city is affected by abandonment; it has taken the government much money to build meshed fences round government sites (both active and abandoned) with a view to curbing destitution as well as other environmental impacts. There had been significant cases of rapes, stealing, cultism, pollution and development of slums in the various abandoned project sites in Port Harcourt metropolis. This study is therefore carried out to investigate the environmental implications of abandoned development projects in the Port Harcourt metropolis, their effects on the socio economic well-being of the people and suggest means of curbing the menace.

II AIM OF THE STUDY

The aim of this study is therefore to examine the monumental implications of abandoned projects and the

environmental implications and recommend measures for reducing the monumental negative implications.

Objectives of the Study

The objectives for the study include:

- To identify various classes of abandoned projects in Port Harcourt Metropolis.
- To determine the factors responsible for the abandonment of these projects with special reference to public housing.
- To evaluate the socio-economic impacts of abandoned projects on the immediate environment.
- Examine the effects of abandoned projects and the environmental implications.

III PROBLEM STATEMENT

Every development project is designed and planned with a systematic arrangement that has times and schedules for commencement, duration and completion. A good planning of activities for a development project results in timely completion but when these processes for timeliness are abused, projects are subjected to abandonment and may create socio-economic and environmental issues which poses negative externalities on the general public. There are many abandoned development projects scattered across the country including Port Harcourt, the Capital of River State. Many researchers have advanced reasons for such abandonment to include change in government policy, inflation, lack of feasibility study.

The issues of housing projects abandonment in Nigeria and other developing nations of the world are persistent indicators such as project delay and sick projects abound in the continent Dumo, (2017); Dharmasegaran, (2016) and Syafrilldzwan (2008) however argued that there are laws and regulation guiding contract executions, the pertinent questions that need to be asked and answered; can such laws, rules, regulations and other statutory provisions or any improvements to them, help to prevent and avoid this catastrophe from recurring in the future or help protect the rights and interests of the parties involved as well as impeding environmental catastrophe. Knowing that, development project is designed and planned with a systematic arrangement that has times and schedules for commencement, duration and completion. A good planning of activities for a development project results in timely completion but when these processes for timeliness are abused, projects are subjected to abandonment and may create socio-economic and environmental issues which poses negative externalities on the general public.

Their proliferation has resulted in significant negative environmental/social issues. In response to this problem, the study proposes to investigate options such as regulatory laws creating an atmosphere of good and reliable management and administration of project development. This study also proposes to carry out investigations options for the existing lapses in the timely completion of development projects in Port Harcourt city and shall consider ways to mitigate the attendant negative environmental and socio-economic implications.

IV LITERATURE REVIEW

The Port Harcourt Metropolis

The city of Port Harcourt according to the Editors of Encyclopaedia Britannica- <http://www.britanica.com>, is the capital and largest city of Rivers State of Nigeria. It lies along the Bonny River (an Eastern distributor of the Niger River) and is located in the Nigeria's Niger Delta, 41 miles upstream from the Gulf of Guinea. The city was founded in 1912 in an area traditionally pre-occupied by Ijo (Ijaw) and Ikwerre people. A review of the Editorials from the editors of Encyclopaedia Britannica further asserted that the city of Port Harcourt was named after the then colonial secretary, Mr. Lewis Vemon Harcourt and it began to serve as a seaport after the opening of the Enugu coal fields in 1916. It graduated to become one of the nation's largest seaports, with facilities to handle the export of palm oil and timber from the surrounding area, coal from Enugu, tin and columbite from Jos plateau and with effect from 1968, petroleum from the Delta of the eastern Niger River. Port Harcourt thus became one of Nigeria's leading industrial centers following the enlargement of the ports with new facilities at Onne, creating extractive and manufacturing industries. It is seat of Nigeria's premier oil refinery built in 1965 at Alesa-Eleme. With the fast industrial growth and development, a total of three universities and several institutions of higher learning including military training schools are in place along-side several infrastructural facilities such as international airport, railway terminal, industrial estates fertilizer company, petrochemical industry etc.

These developments and the strategic characteristics of the city have catalyzed population explosion, calling for expansion and greater infrastructural developments. After several years of expansion across its borderline into the development lands of the Ikwerre communities, which has made it a metropolitan city, the Rt. Hon. Rotimi Chibuike's administration initiated the Greater Port Harcourt with a view to creating a wider city.

A metropolis according to the New Webster Dictionary of the English Language (2003), is the chief city of a country or region or any busy center of commerce. The Oxford Advanced Learners Dictionary of current English (2010) defines metropolis as a large important city, often the capital city of a region or country. However, in the view of Akukwe and Ogbodu (2015), the metropolis of Port Harcourt is made up of the present day Port Harcourt City Local Government and the Obio/Akpor Local Government areas. Akukwe and Ogbodu (2015) further subdivided the said metropolis into thirteen (13) zones which were listed with alphabetical descriptions as follows:

V PROJECTS AND ABANDONMENT

A project is a sequence of tasks, bounded by time, resources and requires results to achieve a particular aim (Baum *et al*, 1985). The management of such project requires the application of knowledge, skill and techniques to execute the project effectively and efficiently. There has been a large cry of government, banks, insurance companies, various levels of government and individuals over why well-meaning projects are always left uncompleted. According to the United Nations Industrial Development Organization (UNIDO), a project is a proposal for an investment to create and develop certain facilities in order to increase the production of goods and services in a community during a certain period of time. Development appraisal is carried out to examine the dimensions of a project with a view to assessing and questioning proposals before resources are committed.

Abandonment in Nigeria is mostly politically motivated as successive political administrations, irrespective of the huge sum of money involved still ongoing development projects are abandoned resulting from political antagonisms. Olapade, *et al* is of the view that when a project has been started at an earlier date, but for some reasons has been stopped, it's known to be abandoned.

Abandoned Development Projects in Port Harcourt Metropolis

The city of Port Harcourt is the capital and is known to be more urbanized than the suburbs in the state. Its population is currently so high that a measure of population against infrastructure will stand to prove the fact that population have actually outnumbered available infrastructure. For this reason, development project abandoned in the city of Port Harcourt is liable to create nuisances that in addition to economic loss. Also, it has been observed to have significantly affected social and environmental wellbeing of the people.

The beginning of the state when created in 1967 witnessed military administration with Navy Commander Alfred Papapreye Diète-Spiff as the pioneer administrator. That administration is known to have created an immeasurable infrastructural development in the state. It is noticed that amidst this wonderful performance, there was a monumental abandonment at the famous Rivers State Government Secretariat complex where a ten storey building proposed for the Rivers State House of Assembly was abandoned for years in addition to the magnificent Ultra-Modern Port Harcourt Civic Center. These sites remained abandoned until its completion.

The present House of Assembly improvised the Rivers State Ministry of Justice as it was not earlier planned to occupy its existing site. Also, other gigantic development projects intended for public purposes are found abandoned in pockets of places within the study area. For the purpose of this research work, strict observation of available abandoned development projects in Port Harcourt were recorded and tabulated as follows:

TABLE 1: Some Abandoned Projects in Port Harcourt Metropolis

S/N	Project	Location	Type	Condition
1.	Rivbank Insurance Company Head Office by the Liberation Flyover along the Port Harcourt/Aba Expressway/	Oro-Abali	Public	Built to required height and rendered in the interior and exterior without doors and windows
2.	Former University of Port Harcourt Teaching Hospital Site AT Hospital Road, Port Harcourt.	Port Harcourt Township	Public	Both roofed and unroofed structures occupied by destitute for various purposes

3.	Rivers State Government Quarters along Creek Road in Port Harcourt Township.	Port Harcourt Township	Public	Significantly incomplete, improvised for occupation by destitute
4.	Monorail Terminal at the Old Port Harcourt Township Stadium site, situate close and adjacent to the Police Children School, Port Harcourt.	Port Harcourt Township	Public	Incomplete construction work. Site overgrown with shrubs and weeds and occupied by lunatics and hoodlums.
5.	Stock Exchange Regional Office. Beside Entawonba Creek at the Kaduna Street Junction flyover bridge along Port Harcourt/ Aba Expressway	Nkpolu – Oroworukwo	Public (Federal)	Yet to 50% in construction, occupied by destitute, lunatics and hoodlums.
6.	St Mary Garden Along Herbert Macaulay Street, Amadi Flats, Old GRA, Port Harcourt City LGA	Nkpolu - Orogbum	Private	Construction work is 80% complete. Premises under security
7.	The Port Harcourt Mall at GRA Junction along the Port Harcourt/Aba Expressway in the Port Harcourt City LGA	Oromerezin gbu	Public	Built to 85% completion. Site overgrown with shrubs and invaded by hoodlums
8.	The Rivers State Government ‘Clinotec’ Hospital site at Greater Port Harcourt in the	Omagwa	Public	Overgrown with shrubs and invaded by hoodlums

Ikwere LGA

9.	The Rivers State Government's International Standard Model Secondary School site along the Emuoha axis of the Emuoha/Degema/ Abonnema Road	Emuoha	Public	Significantly overgrown with trees and shrubs and notoriously invaded by hoodlums for various criminal activities.
10.	The Rivers State Government Housing Estate at Iriebe town, Off Port Harcourt/Aba Road	Iriebe Town	Public	Several buildings abandoned and overgrown with shrubs, creating an hideout for hoodlums

Source:

Researcher's Field work, 2019

Each of these abandoned sites has been keenly observed to have had or created social, economic and environmental implications. An assessment of the various projects proves a relative wastage of billions of naira.

VI ENVIRONMENTAL IMPLICATIONS OF ABANDONMENT

Environmental implication is the major observed phenomenon for this study. It is also relevant to mention that certain of the social implications are equally grouped under environmental issues. Wikipedia defines environmental issues as the harmful effects of human activities on the biophysical environment. It is therefore a matter of relevance that the environmental implications as pointed out in this study are the direct observations of the researcher and is categorized into two as follows:

- Those that affect the uncompleted construction work and site and
- Those that affect the sanitary as well as the general wellbeing or condition and aesthetic value of the catchment area.

In the first category weather element is the greatest factor. Incomplete construction work that is exposed to weather elements is subject to decay and weakness in the long run. Cement itself is made of limestone and gypsum which are capable of being affected by rainfall. Rain falls as a weak carbonic acid after absorbing atmospheric carbon dioxide. This solution has a chemical effect on limestone and therefore melts out the limestone content of cement works, hanging uprightly at the base of concrete decking and beams exposed to prolonged rainfall (Leong and Adeleke, 1980), Steel reinforcements are also exposed to rusts when they are constantly in moistures, creating cracks along concrete columns, beams and decking. These phenomena are building decay.

It is significantly observed on the other hand that abandoned sites are homes for hoodlums, destitute who perpetrate all manner of crime especially at night. Also, you find refuse dumped at abandoned sites which attracts scavengers and vultures because of the unsanitary conditions like offensive odour, leachate emanates from dump site and percolate to the immediate environment and ground water, also all manner of hazardous waste could be dumped creating health problems like epidemic, flu etc.

The abandoned properties deface the neighbourhood which gives rise to social problems. A prolonged abandonment is associated with the shrubs, grasses, rodents and reptiles like cobra, mamba snakes, python, and spider with venom which creeps into the adjoining properties and cause environmental hazards.. Abandoned building also devalues the adjoining properties from rental or other commercial purpose, threats to neighbourhood safety.

VII METHODOLOGY

Instruments of Data Collection

The study used a battery of instruments made up of:

- Questionnaire
- Interviews and
- Observations.

Questionnaire Development

Questionnaires and interview were designed with valid characteristics to elicit relevant data for the study. The format of the questionnaire is designed to cover respondents' characteristics so as to justify reliability of data. Other information that followed include abandoned projects and their causes and the effects of abandoned

development projects. The questionnaire is the semi - structured type and it's designed to tie a set of opinion, using a graded 'Likert' scale. The benefits of the design are that it generated equal weighted responses to questions that will be useful in statistical analysis.

In-depth Interviews

An interview schedule was drawn to reflect the questions that are pertinent to the research questions. The interviews were conducted on the people of the catchment areas, and particularly experts in the built environment such as engineers, estate surveyors, architects, urban and regional planners, quantity surveyors, building technologists and environmental practitioners. The purpose of the interview was to obtain expert opinions relating to abandoned projects in terms of social, economic and environmental considerations. Through the interviews there was an enormous gain of valuable insights as to how and why projects get abandoned, the consequential effects (latent and significant), and the solution that will be proffered to check the menace.

VIII OBSERVATION

Observation, according to Osuala (2005), is the act of recognizing and noting facts or occurrences of events. Observation method was used to physically examine abandoned project sites, where relevant photographs were taken and appropriate information also recorded. This facilitated the purposeful physical inspection of the various abandoned development project sites with the exercise of assessment of the environmental quality of the surroundings and a careful observation of the attendant social problems in relation to the abandoned development projects, all of which were incorporated in the data obtained from the survey for the study.

Significance of the Various Effects of Development Projects abandonment

Abandoned development project sites are known to be dens of several nuisances affecting social, economic and environmental activities. In view of this it is necessary in this study to ascertain the rate of significance of the major effects as outlined for the study. Respondents were asked to state the significance of the effects each of the factors.

Table 2: The significance of the Various Effects of Development Projects Abandonment

		Signif icant	Signific ant	ately Signif icant	Signi fican t	ely Signific ant
1.	Rape	53(14 %)	136(36%)	61(16 %)	84(22 %)	46(12%)
2.	Breeding of Reptiles.	30(8%)	38(10%)	99(26 %)	137(3 6%)	76(20%)
3.	Hideout for Hoodlums	8(2%)	8(2%)	53(14 %)	175(4 6%)	136(36%)
4.	Refuse Dump Site	30(8%)	68(18%)	99(26 %)	115(3 0%)	68(18%)
5.	Decay of Building Fabric.	-(0%)	-(0%)	76(20 %)	167(4 4%)	137(36%)
6.	Failure of Govt.'s Policies	23(6%)	61(16%)	30(8%)	175(4 6%)	91(24%)
7.	Waste of Fund	15(4%)	15(4%)	46(12 %)	160(4 2%)	144(38%)
8.	Health Hazards	38(10 %)	53(14%)	91(24 %)	83(22 %)	115(30%)
9.	Threat to Neighbourhood Safety	-(0%)	15(4%)	61(16 %)	152(4 0%)	152(40%)
10.	Defacing of neighbourhood Aesthetics/devaluing of adjoining properties.	-(0%)	15(4%)	61(16 %)	144(3 8%)	160(42%)

Source:Field Data (2019)

Threat to Neighbourhood Safety

The analysis seeks to illicit information on the effect the threat to neighbourhood safety posed by abandonment of development projects. Responding, there was no answer to 'Not significant'; 4% representing 15 respondents answered the question with slightly significant; 16% representing 61 respondents were of the opinion that threat to neighbourhood safety as an effect of abandonment of development project is moderately significant; 40% representing 152 respondents as proportion appeared twice in the analysis for Very Significant and Extremely Significant respectively.

Defacing of Neighbourhood Facilities/Devaluing of Adjoining Properties

The analysis indicates a no response to 'not significant' while 4% representing 15 respondents

S/N	EFFECTS	OPTIONS (SCALES)				
		Not	Slightly	Moder	Very	Extrem

answered the question with slightly significant; 16% representing 61 respondents opined moderately significant; 38% representing 144 respondents affirmed very significant and 42% representing 160 respondents answered extremely significant. These are analyzed in figure 1. below:

Source: Field Data (2019)

Fig. 1 Bar Chart Representation of significance of the various Effects of Development Projects Abandonment.

Abandonment of Development Projects can Lead to Poor Landscaping

This theme in the study examines respondents' view about the impacts of abandonment on the topography of the site as information was required to find out the impacts of project abandonment on the physical environment. The responses are as analyzed in table.

Table 3: Data Presentation of responses on if Abandonment of Development Projects can Lead to Poor Landscaping.

Responses	Frequency	Percent (%)
Strongly Agree	120	32
Agree	182	48
Undecided	33	8
Disagree	39	10
Strongly Disagree	6	2
Total	380	100.0

Source: Field Survey (2019)

When questioned about poor landscaping as an impact of project abandonment, as much as 302 respondents making approximately 80% of the total responded with the Strongly Agree and Agree options. 45(12%) of the total responded with the Disagree and Strongly Disagree options while 33(8%) responded Undecided.

IX CONCLUSION

Abandonment of development projects results in environmental and socio-economic impacts. Environmental impacts associated with abandonment include visual impacts, landscape modification, erosion, biodiversity loss and pollution, all of which may commence as environmental issues and eventually result in significant environmental problems. Every project has a commencement and finishing time frame with which contract values are calculated. Nevertheless out of sheer

nepotism and corruption, particularly in the public sector where majority of abandonment takes place, development projects abandonment commonly abounds in Nigeria. Imperatively, it is observed that abandonment in the public sector is as a result of political influence and misguidance which arose from insufficient budgeting, lack of effective feasibility studies, change of political administration, nepotism and corrupt contract procedures.

Environmental effects culminate into major socio-economic issues such as the health of living things end economic losses as abandoned project sites are hideouts for many anti-social activities such as kidnapping, rape, armed robbery, initiation into cultism and even ritual killings. Others include breeding of dangerous reptiles and rodents that aids the spread of diseases, environmental pollution through indiscriminate dumping of refuse by unscrupulous residents of the area, threat to neighbourhood safety and defacing of neighbourhood aesthetics/devaluation of adjoining properties. This of course is the rationale for this study as stated earlier and had been a major issue in Nigeria in general and the Port Harcourt metropolis in Particular.

Public sector projects are prone to problems of abandonment than those of private sectors and have been instrumental to significant economic losses, incompatibility of infrastructural development. The teaming population of the study area, poor standard of living, encouragement of social ills such as robbery, kidnap, rape and ritual practices as facilitated by the hideouts created by abandoned sites. Environmental issues are on the increase in Nigeria as poor sanitary conditions created by abandoned sites facilitated the breeding of disease carrying rodents that are responsible for the spread of dangerous diseases such as lassa fever.

The study had therefore underscored both socio-economic and environmental impacts of abandonment of development projects in the Port Harcourt Metropolis, investigatively establishing the major causes of project abandonment and highlighted the various forms of socio-economic and environmental impacts associated with project abandonment.

X RECOMMENDATIONS

Following the findings from the results of the study, the following recommendations are made.

Governments and agencies of government responsible for development should formulate policies that will create blueprints on proposed development projects with a provision that will compel continuity of execution to avoid the negative influence caused by political changes over development projects. This should be accompanied with strict penalties upon the defaulting regime of administration.

Contracts for development projects should be routinely and duly awarded to capable hands that should be able to carry-out timely execution. Political affiliations, favouritism and corrupt procedures of award of contracts should be discouraged.

Abandoned development project sites, especially those with large expanse of land should be placed under strict monitor by a special agency of the government so that environmental implications such as indiscriminate dumping of refuse, unauthorized squatter settlement, the site being overgrown with shrubs etc can be guided against. This is with a view to curbing the consequential effects such as destitution, kidnapping, raping and other activities that poses threat to human health and social life.

Development projects such as housing estates should be handled with environmental considerations such as the establishment of layouts, roads, drainages, water supply systems, landscaping, electricity and communication systems before commencement of construction work. This is important so that every part of the site shall become useful and accessible, even in the event of abandonment. This will facilitate a close monitor of the premises and guide against indiscriminate invasion of the premises by unscrupulous elements, who are the creators of the associated socio-economic and environmental problems.

Governments at all level should ensure that all abandoned projects sites in their possession, and even those privately owned are given good environmental sanitation at regular intervals to ensure that negative externalities associated with project abandonment is reduced to the lowest minimal.

Certain abandonment capable of defacing neighbourhoods should be disallowed by law from remaining for a prolonged period to avoid the attendant economic calamities upon adjacent properties.

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