

EFFECT OF LAND POLICY ON COMPENSATION FOR ENVIRONMENTAL DAMAGE CAUSED BY GAS FLARE IN THE NIGER DELTA REGION OF NIGERIA

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Abstract

The impact of oil exploration on the environment of the Niger Delta region of Nigeria is gradually becoming an issue of global concern. This has also increased agitation by the oil producing communities for equitable compensation for damage caused by oil exploration activities in the region. This paper examines the effect of land policy on compensation for environmental damage caused by gas flaring in the region. Data for the study were extracted and analysed from cases of environmental assets severely damaged by gas flare in Eket and Ibeno areas of the Niger Delta region and the estimates of compensation based on the provisions of Nigeria's Land Use Act of 1978, which is the country's land policy document. Results of data analysis shows that compensation determined based on the basic valuation methods was far higher than those determined based on the provisions of the Land Use Act of 1978. These variations are up to 84.94% and 88.83% in the case of loss of income from economic trees and loss of income resulting from injurious affection to fishing rights respectively, assessed on before and after basis. The paper argues that compensation for compulsory acquisition as provided in Section 29 of Nigeria's Land Use Act is absolutely different from compensation to remediate the losses caused by damage to environmental assets due to gas flare. It recommends the enactment of an appropriate legislation that would provide effective legal support for the assessment of fair, just and adequate compensation for environmental damage in the Niger Delta region of Nigeria.

Keywords: Compensation, Environmental Damage, Gas Flare, Land Policy, Valuation, Niger Delta

Introduction

The impact of oil exploration on the environment of the Niger Delta region of Nigeria is gradually becoming an issue of global concern. At various local, national and international environmental fora, seminars and symposia, discussions concerning the future of the Niger Delta environment in the light of the impact of oil industry operations in the area have also been given due attention. The establishment of some governmental and non-governmental agencies such as the National Environmental Standards Regulation and Enforcement Agency (NESREA), the Federal Ministry of Environment, the Nigerian Environmental Society (an association of environmental scientists and allied experts) and the Environmental Rights Action (an environmental non-governmental organisation) also increased the awareness of the impact of oil industry activities on environmental assets in the Niger Delta region. Consequently, this awareness has led to the rising agitation by the people of the

region for an adequate compensation to remediate the damage caused by oil industry operations in the area. The result of this agitation is the demand for a sound environmental damage valuation in order to establish the quantum of damage (in monetary terms) to the environment, caused by these oil industry operations. Prominent among these damage to the environment are those caused by gas flare. Gas flare in Nigeria dates back to late 1950s when oil exploration and exploitation commenced in the Niger Delta region of the country. According to the statistics from Nigeria's Federal Ministry of Environment, about 68% of the associated gas production in the Niger Delta is flared. Besides, Nigeria accounts for 19% of the total amount of natural gas flared globally (Okopido, 2001). The rest of Africa accounts for another 19% while the rest of the world accounts for the remaining 62 % (Okopido, 2001).

Currently, Nigeria has ultimate recoverable gas reserve of about 187 trillion cubic feet, out of which an infinitesimal 20 billion cubic feet is

utilized for the nation's energy needs (Energy Information Administration, 2011).

Considering the wasteful and environmentally unhealthy practice of gas flaring in Nigeria and particularly, the Niger Delta region of the country, government has continued to initiate policies over the years but unfortunately, these policies have failed to extinguish gas flare in the country. Unrealistic zero – flare targets have also been fixed over the years, the latest being the 2010 near – zero gas flare target fixed by the Federal Government, which most oil exploration and production companies in the country had consistently insisted it was “impossible”. According to the resolution of the World Conference of Mayors on its conference on “Oil Industry and Environmental Pollution” held at Eket in Akwa Ibom State, Nigeria, between June 10 – 19, 2001, the major reason for continued gas flaring in Nigeria was identified to be government's inability to separate economic pursuit from human and environmental protection (World Conference of Mayors, 2001). Participants at the conference also reasoned that in view of Nigeria's tactical move to increase her oil production to about 4 million barrels per day, the total lack of concern for the Niger Delta environment by the various oil exploration and production companies operating in the area, coupled with the poor implementation of the nation's National Policy on Environment by the Federal Government, gas flare and its impact will continue to threaten the existence of human and environmental assets in the Niger Delta.

At this point, it is pertinent to ask this question. Why has gas flare not extinguished in Nigeria despite its increasing harmful effects on the people and environmental assets? The answer lies on the general lack of commitment and transparency on the part of oil companies operating in the country and the government's inability to enforce existing laws and regulations on environmental pollution. By accounting for about 19% of the total quantity of natural gas flared globally, Nigeria is one of the leading contributors to global warming via gas flaring. Global warming which is primarily associated with the increases in the concentration of green house gases in the atmosphere has been identified as the major cause of climate change, which is one of the greatest environmental challenges facing

humanity over the next century. Gas flare has major adverse socio – economic and other impact on the Nigerian environment in general and that of the Niger Delta in particular. In a study on the state of the Nigerian environment conducted in 1991 by the Ibadan – based Nigerian Environmental Study Action Team (NEST, 1991), the adverse impact of gas flare in Nigeria were identified to include atmospheric pollution by combustion contaminants; thermal pollution of air, land and water; destruction of vegetation and associated wildlife; damage to buildings and other structures by acid rain; damage to soil and crops by heat released by the flare; photogenic pollution both by day and particularly by night, a nuisance that is experienced up to 50 kilometres away from oil wells; loss of sources of livelihood and human illnesses leading to shortage of life span among others.

Land – based assets such as buildings, crops, economic trees and other improvements including installations on land are also affected by the impact of gas flare. Baseline studies carried out by government environmental agencies and environmental impact analysis produced by the various environmental assessors and consultants to the oil companies operating in the Niger Delta region have confirmed this fact. For instance, the Air Quality, Precipitation and Corrosion Studies of Qua Iboe Terminal (QIT) Gas Flare in Ibeno area of Akwa Ibom State, conducted by the Akwa Ibom State government revealed that acid rain, caused by gas flare in the oil producing areas of Akwa Ibom State is the greatest factor affecting property values in these areas. The corrosion studies confirmed that extensive corrosion and the resultant rusting of roofing sheets of buildings within the oil communities are caused by the adverse effects of gas flare. The air quality studies showed the presence of excess oxides of sulphur, nitrogen, carbon and other hydrocarbons, all higher than acceptable national and international limits. With its corrosive action on materials, acid rain defaces extremely all buildings, installations and improvements on land in the Niger Delta (Aina, 1992; Esara, 1997). Similarly, the yield and growth of some economic trees, crops and other plant species in the region have been found to be suppressed and stunted, a consequence of polluted air, soil and water (Ihejimaizu, 1979; Esara, 1997). Also, acid rain, which has been confirmed

to have carcinogenic effects (Aina, 1992; Okopido, 2001) falls as precipitation into rivers, streams, swamps and creeks. The result of this has been changes in chemical parameters of water quality, over and above international standards, thereby rendering these water bodies bad sources of drinking water. Furthermore, damage to crops and economic trees are in the form of loss of income and loss of source of livelihood resulting

from poor yield. Thermal radiation and pollution from the gas flare points have caused severe plant growth and impairments (Ihejiamaizu, 1979), leading to false ripening of fruits and accelerated destruction of the vegetation (Esara, 1997). The environmental assets in the Niger Delta region and what they have lost to gas flare is summarised in Table 1.

Table 1 Environmental Assets in the Niger Delta and what they have lost to gas flare

Environmental Assets	what is lost
Buildings	The building components, particularly, the roof is lost. Income from them is not lost.
Crops and Economic Trees	Income from them is lost. Source of livelihood is also lost.
Marine Resources e.g. fishes	Income from them is lost. Also lost is source of livelihood.
Soil	The fertility is lost.
Air	The quality is lost
Vegetation	Income from it is lost. Source of livelihood is also lost
Humans	Long life span is lost. Productivity is also lost.

Compensation for Environmental Damage in the Context of Nigeria's Land Policy

In an attempt to explain the importance of land to human existence, several scholars in the fields of real estate, land economics and land law including Elias (1971); Umeh (1973); Simpson (1976); Barlowe (1986); Harvey (1992); Ozigbo (2005); Ukaejiofor (2007) and Utuama (2008) have summarized that land is the source of all material wealth. In order to regulate the use and development of land and land resources, nations the world over have instituted land use legislations aimed at consistent balancing of the interests of the government, the land owning class and the landless class. In Nigeria, such legislations have evolved over the years until 1978 when they became a single land policy document, otherwise known as the Land Use Act of 1978 (herein referred to as the Act). The provisions of the Act are applicable to all states in the Federation of Nigeria, including the nine states which geographically – politically comprise the Niger Delta region of the country. The effect of this legislation on compensation for environmental damage caused by gas flare in the Niger Delta region of Nigeria is the subject of this paper. Section 1 of the Act vests

all land comprised in the territory of each state in the Federation of Nigeria in the Governor of that state and such land shall be held in trust and administered for the use and common benefit of all Nigerians in accordance with the provisions of the Act. Section 5(1) of the Act empowers the Governor of a state to grant statutory right of occupancy to any person for all purposes in respect of land, whether or not in an urban area and issue a certificate of occupancy in evidence of such right of occupancy in accordance with the provisions of Section 9(1) of the Act. Sections 21 and 22 of the Act prohibits alienation, assignment, mortgage, transfer of possession, sub – lease or otherwise howsoever customary or statutory rights of occupancy in Nigeria without the consent and approval of the Governor of the state where such right of occupancy was granted. Section 28(1) empowers the Governor of a state to revoke a right of occupancy for overriding public interest subject to the payment of compensation for the unexhausted improvements based on the provisions of Section 29 (4) of the Act. Section 29(4) of the Act provides the basis for the assessment of compensation for compulsory acquisition of land throughout the Federation of

Nigeria as follows:

- a) *the land, for an amount equal to the rent, if any, paid by the occupier during the year in which the right of occupancy was revoked;*
- b) *buildings, installation or improvements thereon, for the amount of the replacement cost of the building, installation or improvement, that is to say, such cost as may be assessed on the basis of the prescribed method of assessment as determined by the appropriate officer less any depreciation, together with interest at the bank rate for delayed payment of compensation and in respect of any improvement in the nature of reclamation works, being such cost thereof as may be substantiated by documentary evidence and proof to the satisfaction of the appropriate officer;*
- c) *crops on land apart from any building, installation or improvement thereon, for an amount equal to the value as prescribed and determined by the appropriate officer.*

Section 50(1) defines the appropriate officer as the Chief Lands Officer of a State and in the case of the Federal Capital Territory, Abuja, the Chief Federal Lands Officer. However, unlike assessment of compensation for compulsory acquisition which is entirely statutory as provided in Section 29 of Nigeria's Land Use Act of 1978, assessment of compensation for damage to environmental assets arising from adverse activities on land is not entirely statutory (Iniama, 1997). The Land Use Act which is the major land policy instrument of the Federal Republic of Nigeria is completely silent on the basis of compensation for damage and injurious affection arising from negative impact of land use activities. This lacuna has created inconsistencies in the assessment of environmental damage in the Niger Delta for the purpose of compensation. Similarly, the Environmental Impact Assessment Act of 1992 and the Nigerian Urban and Regional Planning Act of 1992 have no provision for compensation to the environment due to degradation. The Oil Pipelines Act of 1990 is perhaps the only statute in Nigeria that has mentioned compensation for damage and injurious affection to buildings, land, crops, economic trees and installations affected either by the grant of an oil pipeline licence or by

the activities of the holder of such licence on land for which the licence was granted. However, the basis of compensation for compulsory acquisition under Section 29 of the Land Use Act is implied in the Oil Pipelines Act and such compensation cannot remediate environmental damage caused by gas flare. This is because losses suffered as a result of these damage such as loss of income from fishing, farming, business, etc and injurious affection to human life among others, have been neglected by these statutes. Hence, valuation techniques prescribed by these statutes cannot be used to determine the compensation for these losses. Although the principles of compensation are the same, compensation for compulsory acquisition as provided in Section 29 of the Land Use Act is absolutely different from compensation to remediate the losses caused by damage to environmental assets due to gas flare (Udoekanem, 2012). While in the former, the affected assets have been compulsorily acquired, in the latter, the assets have not been acquired but have been damaged by an impact.

Methodology

Data for the study were extracted and analysed from compensation cases for environmental assets severely damaged by gas flare in Eket and Ibena areas of the Niger Delta region of Nigeria. These cases are presented as follows:

Case A

An oil palm estate along QIT road in Ibena, Akwa Ibom State is affected by the impact of gas flare. Oil palm trees in the estate have been severely damaged by thermal pollution and acid rain, resulting in continued false ripening of oil palm fruits and impoverishment. The estate has an area of 10,000 m². The degraded oil palm trees were high quality, yielding palm trees. About 205 stands of the palm trees had matured and producing at a production capacity of 20 fruit bunches per oil palm tree per annum. The oil palm trees are 11 years old. The current production capacity of the estate is about 8 properly ripe fruit bunches per oil palm tree per annum. A bunch of oil palm tree currently sells at ₦ 75 at the local markets in the area. According to the owner of the estate, he holds a customary right of occupancy from the Local Government Council and pays the ground rent of ₦ 507 per annum. His estimated cost of labour and cost of

fertilizer per annum are in the sum of ₦ 37,500 and ₦ 24,800 respectively. Other administrative costs including cost of repairs to farm equipment and tools was put at ₦5, 600 annually. A similar oil palm estate at Mkpanak, a nearby neighbourhood, producing a net income of ₦ 182,000 per annum was sold out rightly recently at ₦ 1,203,000.

Case B

A 41-year-old fisherman at Ukpenekeang fishing settlement in Akwa Ibom State had been making an average of 4 local nets of freshwater fishes per week within the surrounding rivers in the area. At present, his employees are four canoe men who are paid ₦ 5,000 each per month. He has been in the fishing industry since 1980. He spends about ₦ 50,250 monthly as running costs for the fishing business which according to him includes repairs to fishing equipment and accessories, maintenance of the canoes among others. Now he is making a catch of 3 local nets per week after putting greater unit of effort. Current prices of wholesale fresh fishes in the area range between ₦6, 000 – ₦ 8,000 per local net, depending on the maturity of

the catch. Presently, return on fishing investment in the area is put at 9%.

Results and Discussion

The damaged assets were assessed for the purpose of compensation on before and after basis using the basic valuation methods and the capital values obtained were compared to the values determined based on the provisions of Nigeria’s Land Use Act of 1978. Based on the data extracted from the compensation cases under study, loss of income resulting from damage to crops and economic trees and injurious affection to fishing rights require income capitalisation approach in order to determine the discounted values of the lost incomes for the purpose of compensation. These were assessed on Before and After basis such that:

$$V_c - V_d = D$$

Where V_c = Value Clean (Value Before Impact)

V_d = Value Dirty (Value After Impact)

D = Damage

In the determination of compensation for tree crops damaged by gas flare, knowledge of their estimated life span is very necessary. Table 2 shows estimated lifespan of selected tree crops in Nigeria.

Table 2 Estimated lifespan of selected tree crops in Nigeria

Tree crop	Estimated lifespan (in years)
Cocoa	50
Oil Palm	50
Kola	50
Pear	50
Mango	50
Coconut	50
Bread Fruit	50
Sweet Orange	30
Grape Fruit	30
Lemon	30
Rubber	30
Coffee	25

Source: Ajobo and Awoyomi (1988)

The determination of compensation are summarised in Tables 3 and 4.

Table 3 Compensation for Case A based on the Income Approach

	Before Impact	After Impact
Gross Realisable Income	₦ 307, 500	₦ 123,000
Operating expenses	₦ 68, 407	₦ 68, 407
Net Realisable Income	₦ 239, 093 p. a	₦ 54, 593 p.a
Income Lost to Damage		₦ 184, 500
Capitalisation Factor*		6. 6380
Capital Value (Compensation payable)		₦ 1, 225,000

*YP 39 yrs @ 15%

Table 4 Compensation for Case B based on the Income Approach

	Before Impact	After Impact
Gross Realisable Income	₦ 1, 456, 000	₦ 1, 092, 000
Operating expenses	₦ 843, 000	₦ 843, 000
Net Realisable Income	₦ 613, 000 p. a	₦ 249, 000 p.a
Income Lost to Injurious Affection		₦ 364, 000
Capitalisation Factor*		8.9501
Capital Value (Compensation payable)		₦ 3, 258, 000

*YP 19 yrs @ 9%

Table 5 Comparison of Compensation based on the basic valuation methods with those determined based on the provisions of Nigeria’s Land Use Act

Compensation Case	Compensation based on the basic valuation methods	Compensation based on the provisions of the Land Use Act	Difference	% Difference
Case A	₦ 1, 225,000	₦184 500	₦ 1,040,500	84.94%
Case B	₦ 3, 258, 000	₦ 364,000	₦2,894,000	88.83%

There are wide differences between compensation determined based on the basic valuation methods and those determined based on the provisions of the Land Use Act. These variations are up to 84.94% and 88.83% in Case A and Case B respectively. These differences are largely due to the inability of the basis of compensation provided in Section 29 of the Land Use Act to capture the income-yielding potential of land-based assets damaged by environmental pollution. Thus, while the basis of compensation provided in Section 29 of the Land Use Act may be adopted for the assessment of compensation for compulsory acquisition, the same cannot be adopted for the assessment of compensation for damage caused by environmental pollution as such basis of compensation cannot place owners of assets damaged by environmental pollution at a position that they were immediately before the occurrence of such damage. Natural assets such as crops, economic trees and fishes damaged by gas flare cannot be replaced, but can only be compensated for, based on the loss of income from them, assessed to determine the value today of the right to receive the income at the end of each year for the particular number of years for which the loss of the affected income will last. These issues must be adequately reflected in the valuation process although existing statutes on environmental damage assessment in Nigeria have no provisions for them. The capital value of the

lost income or the compensation is the discounted value of each block of lost income assessed as at the date of valuation for the estimated remaining life span of the asset. In **Case A**, the capital value of the income lost from the degraded oil palm estate is the discounted value of each block of ₦ 184, 500 lost per annum to the damage for 39 years for which the loss of income from the oil palm estate is estimated to last and is in the value of ₦ 1, 225,000. The same approach is applicable to the assessment of compensation for injurious affection to fishing rights in **Case B**. The valuation methodology adopted for the assessment of compensation for the oil palm trees affected by gas flare in the region as shown in **Case B** is applicable to the assessment of compensation for all economic trees affected by gas flare in the region.

Conclusion

In remediating environmental damage caused by gas flare in the Niger Delta region of Nigeria, the payment of adequate compensation to the owners of environmental assets affected by the pollution is very necessary. Such compensation should be based on the principles of adequacy to stem the current tide of discontent and agitation by oil producing communities in the area. However, valuation techniques prescribed for the assessment of compensation under Nigeria’s Land Use Act of 1978 cannot achieve this aim. This is because the

basis of compensation provided in Section 29 of the Act cannot capture the income-yielding potential of land-based assets damaged by environmental pollution. Hence, there is need for the enactment of an appropriate legislation that would provide effective legal support for the assessment of fair, just and adequate compensation for environmental damage in the Niger Delta region of Nigeria, based on market value as the central basis of compensation assessment.

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