

Implications Of Oil Exploration On Agricultural Development In Delta State, Nigeria

Irhivben, Bright Odafe¹ and Omonona, Bolarin Titus²

Department of Agricultural Economics University of Ibadan, Nigeria.

ABSTRACT: *This paper examines the implication of oil exploration to the development of Agriculture in Delta State. It was reviewed using information from personal interviews, journals, publications and books. The findings were that while oil exploration has brought increased funding's to the State, there were severe negative implications associated with it. Oil exploration has led to environmental problems in the producing communities of the State and has virtually affected livelihood outcomes such as low productivity, low income, reduced food security and severe health hazards among farming households. Partnership arrangement between farmers, Multinationals Oil companies and the State government should be put in place to bring about the development.*

I. INTRODUCTION

The Nigerian oil industry is governed by laws that are seen as instruments of disempowerment (Nina, 1998). For instance the Petroleum Act of 1969 (CAP 350) vests the ownership and control of oil resources in the Federal Government. Accordingly, the Federal Government legislates on all matters relating to the oil industry. Section 17 of the Petroleum (drilling and productions) Regulations (LN 69 of 1969) prohibits oil-based activities in the following areas such as any area held to be sacred; any part set apart from, used, appropriated, or dedicated to public purposes; any part occupied for the purposes of the government of the federation or a state; any part situated within a township, town, village, market, burial ground, or cemetery; any part consisting of private land and any part which is the site of or within fifty yards of any building, institution, reservoir, dam..It is important to note two observations here. First, the authority to recognize or certify an area to be sacred lays with “state authority” and not the people whose culture defines such areas to be sacred. Secondly, the restrictions in the above laws can be set aside by seeking the written consent of the Minister of Petroleum Resources; again, not the consent of the people. Following the above regulatory laws, operators of the oil industry, practically have no restrictions.

The requirement to pay adequate compensation for damages is clearly vague and deceptive as the government fixes compensation rates. For this reason, compensations are not adequate, as the rates fail to capture reality. For example, the rates for damaged crops are not the same for young and matured crops. The sum paid for a young crop is much lower. The implication is that victim loss financial benefits that would have accrued to them if the crop had matured (Ikporukpo, 2004). Because the Nigerian State is a weak peripheral capitalist state (Ake, 2001) that depends on oil rents, taxes, and profits for its survival, it has failed to enforce the law adequately. Following this, the laws have become neglectful and thereby ignored by oil multinationals, leading to environmental problems. The ineffectiveness of the law is evidenced by frequent and avoidable oil spills. It is discernible here that the Petroleum Act places emphasis on operational issues. The environmental costs of oil exploration and exploitation are not adequately addressed. Worse, it denies the people the right to negotiate the value of their properties destroyed by the oil companies through their operational activities, community's area, thus, short-changed despite loss of livelihoods that result from such damages.

II. PROBLEMS ASSOCIATED WITH OIL EXPLORATION

Oil exploration and exploitation in the State has not been of much benefit to the local communities, it has been rather a source of agony and anguish for them. Their farmlands, which were hitherto fertile and encouraged enough food production for the populace, have become highly infertile due to oil spills and gas flares. Their creeks and rivers that used to serve as their main source of protein in their diets in the form of fish, have all become covered with oil films causing accelerated fish kills.

Despite the tremendous natural and human resource base, the region's potential for sustainable development remains unfulfilled and its future is being threatened by environmental degradation and deteriorating economic conditions which are not being addressed by present policies and actions (O'Rourke and Connolly, 2003). Fifty years of oil development have not brought significant benefits to the region. Resource-use decisions are being driven by a lack of development, poor health care and social facilities, stagnant agricultural productivity, and rapid population growth (Nwankwo and Irrechukwu, 1981).

III. AGRICULTURAL DEVELOPMENT PROBLEMS IN DELTA STATE

The availability of accessible road and transport system is a necessity for agriculture to thrive in Delta State. Many farmers get discouraged when they remember the stress that they will have to go through by bringing their farm produce to the end users (consumers). The prices of the products are usually outrageous when they eventually hit the market. It is generally recognized that transport operating costs, are higher on rough roads than on good quality bitumen roads and generally this will be reflected in passenger fares and freight tariffs. The proportion of transport charges to the final market price will vary with a range of factors such as commodity type, the efficiency of the transport and marketing sectors and travel distance.

Moreover, agriculture is best served by consistent high urban and international demand. This is best brought about by an efficient, high volume; transport and marketing system where the transporting and marketing unit costs are low. If the margin between what the farmer receives from the sale of his produce and what the urban consumer pays for his produce is high then the effective demand transferred to the farmer will correspondingly be reduced. (J. L. Hine and S. D. Ellis, 2001) The proportion of transport charges to the final market price will vary with a range of factors such as commodity type, the efficiency of the transport and marketing sectors and travel distance.

Fertilizer plays a key role in the productivity of agricultural land. Already at the beginning of the twentieth century there was considerable concern on the part of scientists that nitrogen available from natural resources was proving inadequate. Without chemically fixed nitrogen, agriculture could not support today's population even at the expense of environmental degradation. And the nitrogen must evidently be accompanied by the other plant nutrients. From the above analogy the importance of fertilizer to the growth of Agriculture in the State cannot be over emphasized. Following land degradation and oil pollution depleting soil fertility in the State, the need to make maximum use of the available land becomes imperative hence the use of fertilizer to enhance crop productivity in the State.

Provision of loans to farmers is equally very vital to the growth potential of Agriculture in Delta State. Finance is the backbone of every worthy venture of which agriculture is one of them. Adequate financing of agriculture in Delta State will surely boost food production. One way that the government can do this is to imbibe the culture of good financial management and strategic asset allocation technique into governance. Many able bodied men who are supposed to go into farming in the State instead of looking for non-existing white collar jobs cannot do so because of finance. Finance or capital is an essential ingredient in managing the other factors of production and there is little one can achieve without finance as the totality of the production cycle revolve around finance. Many young men and women are roaming the streets of Delta State because they have no access to bank loans to farm and even the micro credits run by the State government is politically managed. Food production levels for the majority of the countries in the region have either declined or remained stagnant, while population growth continues to soar.. One of the strategies for poverty reduction through increased agricultural productivity is to promote the production of high yielding crop varieties (Nkonya et al., 2004). Food scarcity in the State will be a thing of the past if new and improved varieties food crops and cash crops seedlings are distributed to Farmers through agricultural development project coordinators state-wide. Also new and improved breeds of Livestock that adapt to our climatic conditions should be trained and raised here in the State.

The success or otherwise of any agricultural technology is a function of the availability of rural and urban electrification. The problem of rural electrification in Delta State is enormous in the sense that farmers lose a great chunk of their harvest to spoilage. During the harvest season in the State, every farmer scampers to sell all their products even at a loss as they have no electricity to freeze their products till the next day. Many farmers visited in the State could not account for any form of storage facilities less that of electricity..

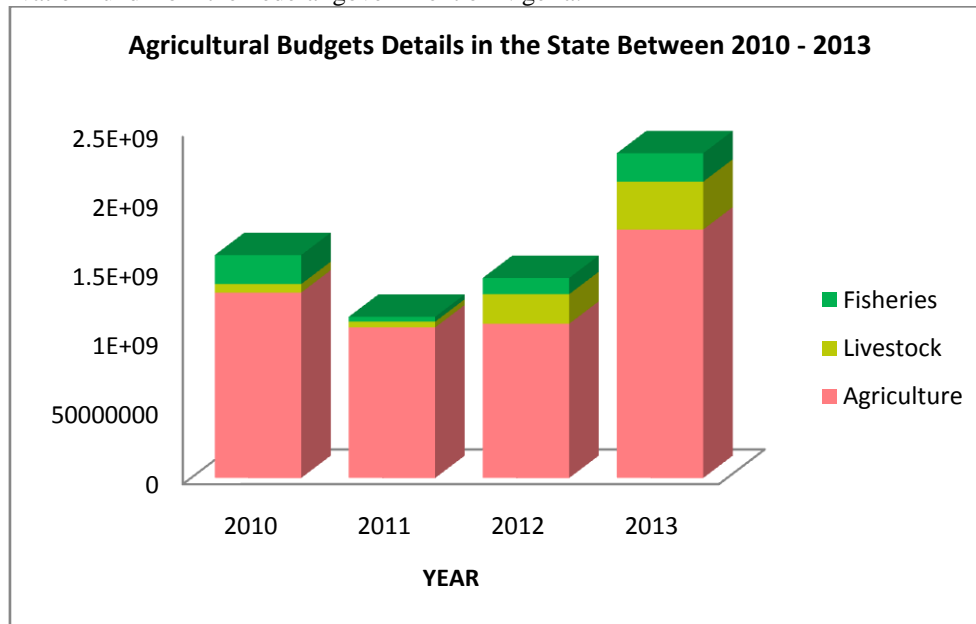
Losses are inevitable in all works of life and needs to be insured against. Farmers are not encouraged to take up agricultural insurance policies to help re-instate them in times of loss. Little is known about the existence of the Nigerian Agricultural Insurance Corporation (NAIC), a body that is overseeing the agriculture insurance in Nigeria. Farmers are not also encouraged to form cooperative societies in order to obtain micro credits from both the government and financial houses.

Corruption in the ministry of agriculture has been one of the major causes of the appalling state of agriculture in the State. Until corruption is put under check, agriculture and other sectors of the State economy will not be healed of this 'life threatening sickness of our dear state

IV. MULTINATIONAL OIL COMPANIES AND AGRICULTURAL DEVELOPMENT

From the foregoing, one could realize the need for the various Multinational Oil companies to engage in partnering with the Ministry of Agriculture in providing these basic facilities and necessary support through: provision of improved varieties of seeds and seedlings to farmers; assisting the government in building rural roads for farmers; embarking on rural electrification; assisting in agricultural technology through provision of tractors and liaison with the State government through funding of rural micro credits scheme.

Available records and statistics have it that Multinational Oil Corporations operating in the state have made tremendous progress in the area of Finance. Financial capabilities of the State have improved following the discovery of large quantities of oil deposits in the State. Funding from the State Ministry of Agriculture has improved in recent times courtesy of oil exploration activities as reflected in the graph below. Year 2013, has the highest amount of funding in the State Ministry of Agriculture and this can be attributed to more funds from the Oil derivation fund from the Federal government of Nigeria.



Source: Delta State Ministry of Agriculture, 2013

The role of manpower development to the growth of Agriculture in Delta State cannot be over emphasized. Multinational Oil companies are involved in the training and re-training of Agricultural Extension Staff. These Agricultural Extension Staff is then required to go to the field to train local farmers on the latest agricultural technology and farming practices. Shell Petroleum in the past has opened up demonstration farms where appropriate agricultural technologies have been shown to farmers through Agricultural Extension Officers. Also improved seedlings have equally been given to farmers through farms established by multinational oil companies.

Oil exploration activities in the State have led to the provision of Infrastructural facilities. Infrastructure contributes to economic development by increasing productivity and providing amenities which enhance the quality of life in rural areas. The services generated as a result of inadequate infrastructure base will translate to an increase in aggregate output and total income among rural households that are mainly farmers.. Though infrastructure linkage to an economy may come in a multiple of ways, it is often known to be complex and sometimes convoluted, creating both positive and negative add-on effects, due to the large flow of expenditure. Activities of Oil exploration in the State has led to the opening up of some rural roads in the State with the farmers being the ultimate beneficiaries.

Inadequate rural infrastructure exerts adverse effects on the profitability of agricultural production activities as poor rural roads hinder the efficient marketing of agricultural commodities, deprive farmers of remunerative producer prices and contribute to produce spoilage (IFAD, 2010). The rural populace therefore requires adequate infrastructural facilities to continue to live and work in the agriculture dominated rural economy (DFID, 2007). Oil exploration has led to the provision of rural electrification of which the State farmers equally benefitted.

V. IMPLICATION OF OIL EXPLORATION ON AGRICULTURAL DEVELOPMENT

The exploration of crude oil in Delta State is a major industrial development but its negative consequences concern the destruction of delicate ecology, which is a main source of livelihood in the oil-bearing

communities. In the process of oil exploration, lands are acquired where pipeline terminals and platforms are sited. When land is cleared for the laying of pipes for example, agricultural lands and ponds are usually destroyed. The effects of these may completely change the social, economic and cultural life of the communities where oil exploitation is taking place (Okoli, 2006). Also so many lands have been reclaimed and recovered from rural household through the laying of pipelines and construction of platforms.

Crude oil exploration and exploitation involved the shooting of dynamite cause seismic waves, which in turn damage buildings, crops and other landed properties of oil bearing communities. The effects on buildings result in residual stress, which further deteriorates the property or infrastructure in the State.

Oil pollution according to IPS (1990) is a result of the alteration in soil/water natural composition as a result of contamination by crude oil or a sudden change in natural soil/water processes with concomitant net detrimental effects on soil biota, composition, quality, fertility and crop performance. If spillage is within tolerable threshold of most soils, such a soil and environment cannot however be regarded as polluted. Omuta (1985), on investigating the land use pattern and environmental decay in Isoko Local Government Area (LGA) of Delta State, observed that the most visible way in which petroleum production has affected the environment is through vegetal destruction via the construction of camp sites, flare sites, drilling rigs, flow stations, saver pits, the laying of pipelines etc.

Rural Health Care has equally been affected by the activities of Oil exploration in the State. Idoniboye–Obu (1992), noted that the disturbance of the ecosystem by pollution leads to poisoning of myriad of food chains that bring about genetic mutations like cancer.

Isichei and Stanford (1996), noted that plant growth is generally suppressed due to the effects of gas flares, which diminishes the value of agricultural productivity. Omuta (1985) in the same vain noticed that flares generate tremendous heat, which makes plant growth and man's activity in conducive in areas where it is carried out. Vegetal re-growth problem also exist due to the effect of cement left in the soil as a result of the cementing of the oil well site during exploration and exploitation. In the same vain, the ecosystem and the aesthetics of the environment are destroyed during the laying of the pipelines.

The effect of oil in aquatic system is perilous. It distorts the beach aesthetics and depletes fishery potentials. It also impacts on water productivity and human health. Like in terrestrial oil pollution, the initial impact of oil on aquatic system manifests in the suffocation of native biotic communities due to the body of the oil covering water surfaces in such a way that primary producers and higher species in the food chain become impacted. Regarding Livestock production in the State, oil exploration has impacted negatively as vegetation in most land of the State suffered poor growth due oil spillage effect. The resultant effect of this implication is that there are few grazing lands that could account for the feeding of animals in the State. Apart, vegetation's available are loaded with chemicals and poisonous substances that are both detrimental to animal health and human lives.

IV. CONCLUSION

The story of crude oil exploration and agricultural development in Delta State is that of mixed blessings. The discovery of a large quantity of crude oil and its exploration in the State has brought tremendous development in the agricultural sector. Multinational Oil companies in their activities in the state have opened up rural roads; rural electrification; construction of classroom blocks; provision of improved varieties of seeds and seedlings, training and re-training of Agricultural Extension Staff and provision of rural health facilities. The huge budget provisions for the ministry of Agriculture in the State could be attributed to royalties raised through tax from Oil companies.

The exploration of crude Oil in the State has equally brought untold Hardship to the teeming farming population of the State. Most agricultural lands in the state has been degraded and polluted while others have been out rightly seized for laying of pipelines. Gas flaring has led to severe health challenges to rural households in the State. Undue delay and outright cancellation of compensation have been recorded in areas where oil spillage has occurred in the State.

RECOMMENDATIONS

There should be a partnership arrangement put in place that brings the farming population, the State government and Multinational Oil companies together in tackling all issues associated with agricultural development in the State. Assisting in the area of rural infrastructure facilities by Multinational Oil companies would go a long way in assuaging the fears of the farmers in the State. More work is equally recommended to further the knowledge of Multinational Oil company's operations and their impact on agricultural development.

REFERENCES

- [1]. Delta State Environmental Protection Agency, Report on the State of the Environment in Delta State. Ministry of Environment, Delta State Government of Nigeria, 1996, 51pp.
- [2]. DIFD, (2007). DFID Research Strategy (2008 - 2013) Consultation - Africa Country Report for Nigeria.
- [3]. <http://www.dfid.gov.uk/r4d/PDF/Outputs/Consultation/NigeriaCountrypaperFinal>
- [4]. kekwe, Eme (1986). *Class and State in Nigeria*, Longman, Nigeria. *IFAD(2010)*. Rural poverty in Nigeria. Available at: <http://www.ruralpovertyportal.org/web/guest/country/Home/tags/Nigeria>(accessed 22-02-2011).
- [5]. Idoniboye-Obu, B. (1992). Impact of industrial and economic activities on the Niger Delta environment. Seminar on the environmental impact of petroleum exploration activities on the Niger Delta. RSUST, Port Harcourt, Nigeria.
- [6]. IPS (1990). Post impact study of SPDC's river 16 delivery line oil spillage, final report. University of Ibadan, Ibadan, Nigeria.
- [7]. Isichei, O. and Stanford, A. (1996). The effect of waste gas flares on the surrounding farmlands in south eastern Nigeria. *Journal of Ecology*, 3: 250-257.
- [8]. Ikorukpo, C. O. (1983). 'Petroleum Exploitation and the Socioeconomic Environment in Nigeria' in *International Journal of Environmental Studies*, No. 21, Pp. 119–206.
- [9]. Ikorukpo, C. O. (2004). 'Petroleum, Fiscal Federalism and Environmental Justice in Nigeria', in *Space and Policy*, Vol. 8, No. 3, Pp. 321–354.
- [10]. Hine J L and Ellis, D.S (2001): *Agricultural Marketing and access to Transport Services*
- [11]. Nna, N.J (1998)., *The Niger Delta: State Legislation and Disempowerment*, Springfield Publishers, Owerri, Nigeria
- [12]. Nkonya E, Pender J, Kayuki C, Edward K, Mugarura S Ssali H, and Muwonge J(2004), *Linkages between Land Management, Land Degradation, and Poverty in Sub-Saharan Africa; The Case of Uganda*. International Food Policy Research Institute: Research Report 159
- [13]. Nwankwo, J. N. AND Irrechukwu, D. O.; (1981): *Problems of environmental pollution and control in the petroleum industry: The Nigerian experience*
- [14]. O'Rourke, D. and Connolly, S.; (2003): *Just oil? The distribution of environmental and social impacts of oil production and consumption*. *Reviews in Advance* 28: 05.1-05.31.
- [15]. The Petroleum Act, Laws of the Federation of Nigeria, CAP 350, 1990
- [16]. The United Nations Development Program (2006). *Niger Delta Human Development Report*, Lagos, Nigeria.
- [17]. Ugochukwu et al (2003) *Environmental Sustainability and Sustainable Development. Issues in the Niger* http://www-docs.tu-cottbus.de/pressstelle/public/Forum_der_Forschung/Heft_21/151-156_Kapitel20
- [18]. World Bank (1995). *Defining an Environmental Development Strategy for the Niger Delta*, Volume one and two Report.