

Distortion of Land Value Trends and Growth Patterns in Rural Communities in the Niger Delta Region of

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Key words: Oil pipelines; land value; EIA,

SUMMARY

Nigeria is a major oil producing country and over 90 percent of its export earnings come from oil and gas production. On-shore and off-shore production; refining of crude oil; transportation and marketing processes are enabled by a maze of thousands of kilometres of pipelines criss-crossing the region. The positioning of the pipelines seriously interferes with the future land development potentials and land value growth patterns of rural communities. With increased awareness on global environmental management issues in Nigeria, environmental impact assessment studies (EIA's) are conducted prior to the citing of major projects including pipelines and the enabling rights-of-way acquisitions. Unfortunately, such studies tend to concentrate more on environmental issues; health and safety; socio-economic and certain other factors. Little or no attention is given to the possible interference of these rights-of-way with the existing land value trends or the future land use development potential and growth. The result is that the restrictions of vehicular access over buried and /or surface pipelines rights-of-way has led to very slow, uncoordinated and haphazard development patterns within rural or semi-urban communities.

The Igbo-Etche community in Etche Local Government area of Rivers state in Nigeria is a typical case. Despite its close proximity to the rapidly expanding and sprawling oil city of Port Harcourt, it has failed to develop in response to the pressure of demand because of the pipeline network and existing access restrictions. The Etche Local government is therefore deprived of revenue which could accrue from ground rents through development these lands. Another issue which further aggravates this position is that these rural communities do not have clearly defined or surveyed boundaries or development plans so they suffer terrible cases of severance which may sometimes fragment land with high value potentials before the acquisition, into value-less plots deprived of accessibility.

The study suggests that there is the need for a re-evaluation of the interference of existing pipeline R-O-W's close to the Port-Harcourt metropolis in order to release the value potentials of 'pipeline locked lands'.

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1. INTRODUCTION

Oil and gas exploration and production operations have the potential for a variety of impacts on the environment. These impacts depend upon:

- The stage of the process
- Complexity of the project
- Nature and sensitivity of the environment
- Effectiveness of planning, pollution prevention, mitigation and control techniques.

These potential impacts may be avoided, minimized or mitigated through proper planning, design and control of operations such that oil and gas development activities can be carried out safely with minimum adverse impact on land use patterns. The value of agricultural land not under the influence of a nearby urban area tends to be differentiated on the basis of soil fertility, drainage, moisture content, etc. In terms of impact assessment it is important that land uses for oil and gas production do not interfere with soil fertility and consequently the value of land as an agricultural asset. Most EIA efforts are targeted at maintaining this balance and this has been done successfully in many countries so far...

By contrast however, undeveloped land under the influence of a nearby urban area may currently be in an agricultural use, but the value of this land is often driven by factors other than soil fertility, etc. The considerations here are not necessarily tied to factors that affect soil fertility but other determinants of the price of large parcels of vacant land near the growing urban area. This paper suggests how land value trends can be properly controlled through visionary planning efforts with respect to the potential human, socio-economic and cultural impacts of oil and gas production. The oil producing communities in Rivers State and the Igbo Etche communities in particular are used for illustrative purposes.

2. OIL PRODUCTION IN NIGERIA

According to World Bank statistics¹, Nigeria has a population of around 144.7 million (2006) and an area of 923,800 sq km, making it both the most populous and one of the largest countries in Africa. Despite being rich in natural resources, principally petroleum, the country is facing numerous problems hampering development. To date, it has not been possible to use oil revenues to develop the economy and combat poverty.

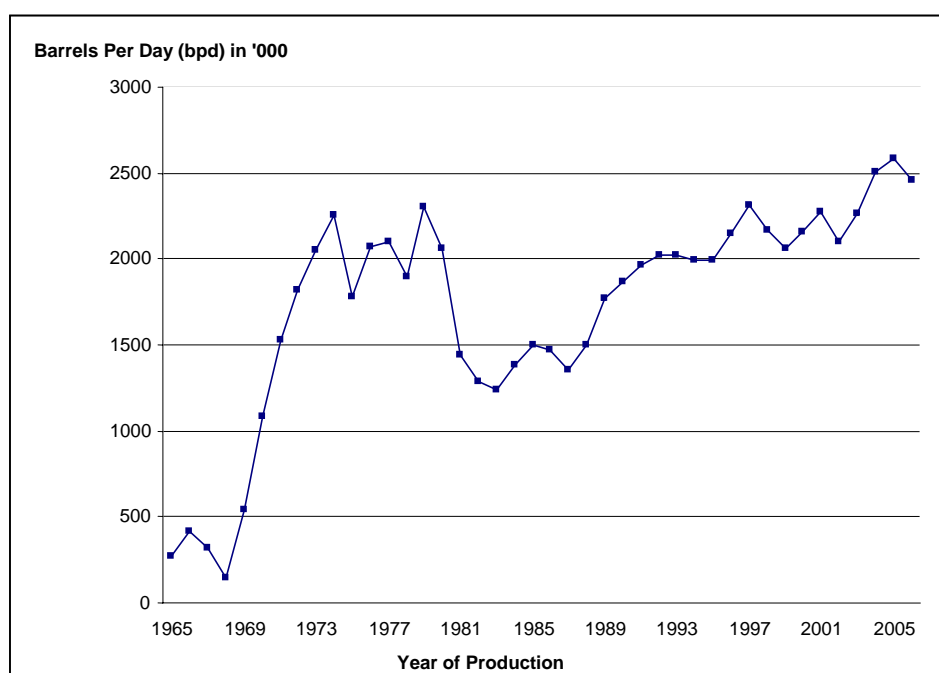
¹ <http://devdata.worldbank.org/external/CPProfile.asp?CCODE=NGA&PTYPE=CP>

Oil was first discovered in commercial quantity at Oloibiri in the Niger Delta in 1956 after almost half a century of exploration. Following the discovery of oil by Shell D'Arcy Petroleum who at the time was the sole concessionaire, pioneer production began in 1958 from the company's oil field in Oloibiri. For the first time, Nigeria joined the ranks of oil producing countries producing about 5,100 barrels per day (bpd). The production rose to 2.0 million barrels per day in 1972, by which time Nigeria was ranked the 7th largest oil producer in the world, and peaked at 2.4 million barrels per day in 1979. It has since grown to become one of the largest oil producing countries in the world. Although production figures dropped in the eighties due to an economic slump, 2004 saw a total rejuvenation of oil production to a record level of 2.5 million barrels per day.

A number of multinational corporations of international repute who operate in many other parts of the world are involved in the oil and gas production process in Nigeria. These include companies such as Shell, Exxon-Mobil, Total, Chevron-Texaco and ENI who operate primarily through Joint Venture partnerships with the Nigerian Government represented by the Nigerian National Petroleum Corporation - NNPC

Current development strategies in the oil industry in Nigeria are aimed at increasing production to 4 million barrels per day by the year 2010. Petroleum production and export plays a dominant role in Nigeria's economy, accounting for about 90% of her gross earnings, see figure 1-1.

Figure 1 Statistical Review of Oil Production in Nigeria



Data source: BP Global Statistical Review 2007²

3. OIL PRODUCTION IN THE NIGER DELTA

Virtually all current oil and gas production activities take place within the Niger Delta region of the country. The Niger Delta is situated in the southern part of the country. It occupies about 112,110 square kilometres of land mass which is about 12% of Nigeria's total surface area. The Niger Delta itself is the largest wetlands in the world, covering an area of 70,000 square kilometres and spreading over a number of ecological zones: sandy coastal ridge barriers, brackish or saline mangroves, freshwater permanent and seasonal swamp forests and lowland rain forests which make up 7.5% of Nigeria's land mass. Historically, the Niger Delta, i.e. the delta of the Niger River in Nigeria, is a densely populated region sometimes called the Oil Rivers because it was once a major producer of palm oil. The area was the British Oil Rivers Protectorate from 1885 until 1893, when it was expanded and became the Niger Coast Protectorate. It is home to over 28 million people of more than 40 ethnic groups, speaking some 250 dialects and distributed over 9 of Nigeria's constituent states. A majority of the population have fishing and farming as their primary means of livelihood.

About 75% of Nigeria's total production of crude oil comes from Rivers State and Bayelsa State. See table 1-1 below.

² Data used in preparing this graph was obtained from the BP Global Statistical Review of 2007, http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_ergy_review_2007

Table -1 Nine States of the Niger Delta Region

State	Land Area in Square Kilometres	Projected Population in 2005	Capital City
Abia	4,877	3,230,000	Umuahia
Akwa Ibom	6,806	3,343,000	Uyo
Bayelsa	11,007	1,710,000	Yenagoa
Cross River	21,930	2,736,000	Calabar
Delta	17,163	3,594,000	Asaba
Edo	19,698	3,018,000	Benin
Imo	5,165	3,342,000	Owerri
Ondo	15,086	3,025,000	Akure
Rivers	10,378	4,858,000	Port Harcourt
Totals	112,110	28,856,000	

Source: Niger Delta Regional Development Master Plan (2007)

Port Harcourt is the administrative capital of Rivers state and its importance to the economy of the State and Nigeria cannot be over-emphasised. Port-Harcourt was overwhelmingly the best endowed administrative centre with good infrastructure after independence in 1960 bare four years after the discovery in Oloibiri which was at that time within the territorial jurisdiction of Rivers State but is now part of Bayelsa State. Its locational advantages; educational centre, seaport, state headquarters, Prime industrial and economic centre made Rivers State, a one-city State which has expanded rapidly into the nearby rural areas that are fast becoming part of the Port Harcourt metropolis.

The city served its purpose as an administrative capital until 1993 when the Federal Government requested that all major operators within in the Oil industry relocate their administrative headquarters to their respective areas of operation. This action brought Shell Petroleum Development Company, Exxon-Mobil, Total, Chevron-Texaco and ENI and other oil servicing companies to Port-Harcourt resulting in a serious population explosion not experienced within the region before. This singular political decision and action led to an influx of people from other states of the federation into Port Harcourt, an increase in the expatriate community, rural-urban migration all resulting in an overbearing effect on the cities infrastructures, increasing house rents and land values.

Port-Harcourt has followed the “multi-nuclei” concept of city growth and currently has several business districts replacing the single CBD in the early eighties. Today the distinct ones are at the Azikwe Road axis close to the seat of Government, Creek Road in Port-Harcourt Township, Okporo Road in Woji district and Eneka road in the Rumukrushu-Eneka district and the trans-amadi industrial layout.

The Location of major employment magnets has continued to dictate the pace of development in the various districts. However, optimal resource and land use in the region is constrained by a lack of development, stagnant agricultural productivity, very limited

opportunities in urban areas, rapid population growth, the generally poor health of the expanding population and tenuous property rights. Conflicts have developed between local communities and private and public developers over resource ownership and use, particularly tied to oil activities.

4. CASE STUDY ON IGBO ETCHE

The methodology involved participant observation of land value trends in different parts of Port Harcourt and the Igbo Etche area. It included field surveys on current land values within the suburbs of Port Harcourt relative to their distance from the nearest CBD.

Historically, the presence of oil and gas exploration and production activities had induced social, economic and cultural changes into the rural life styles of communities in the Igbo Etche area which is one of the suburbs of Port Harcourt. Within the last four decades, there have been numerous instances of compulsory acquisition of land for oil well locations, flow lines, flow stations, manifolds, oil pipelines and trunk lines within the case study area. Land had also been acquired for the construction of access roads to several well locations and flowstations.

Generally, the future land use patterns in the Igbo Etche communities and several other oil producing communities³ have been seriously interfered with by the presence oil related rights-of-way and as a result are not able to respond to development in the same manner as other suburbs have done which are of similar distance in terms of their proximity to the city of Port Harcourt. Due to sporadic population increases in the bursting capital city, most of the suburbs have experienced changes in land-use patterns due to the increasing demand for land for housing development and this has resulted in a large number of unplanned settlements springing up within the Port Harcourt suburbs. However the manners in which different suburbs have been able to respond to this increasing demand for development land, is quite different and this reflects in the current land prices obtainable in different neighbourhoods. The Igbo Etche area has witnessed very slow response comparatively when a comparative assessment is made of current land values within the region and the level of development activity in the area. Also, other socio-economic factors have led to the slow pace of development in this region.

A comparative review of current land values in different suburbs based on distance from different CBD's in Port Harcourt shows that the land values in the Igbo Etche area are currently quite low comparatively. In addition most of the development activities connected with land sales in the area are largely speculative purchases and resale. Not much in terms of meaningful development activity is taking place in the region today and there are possible explanations for this.

³ Several other oil producing communities within the Niger Delta region with such as Oloibiri, Kolo creek field, Rumuekpe field, Enwhe field etc share similar experiences to that of Igbo Etche due to the presence of oil and Gas production activities.

Some of the possible reasons for the apparent lack of commensurate growth in land values, and the existing trend of continuous speculative purchases and re-sale of land only without meaningful development as follows.

4.1 Land Fragmentation Caused by Pipeline Right-of-way

The pipeline rights-of-way granted to the oil industry is usually determined by their choice of what is usually the shortest route from oil wells to flow stations and then to refining plants or export terminals. This process in the past was done without regard to the future land use patterns and or community boundaries and as a result, land parcels usually get fragmented so badly that even where compensation is adequate, the reduction in value of the remaining land is such that it is almost rendered un-inhabitable for future generations. There is the need for sustainable development intervention in land acquisition for oil and gas production...

4.2 Land Fragmentation Caused by Flow Lines

Flow lines rights-of-way have the same effect as pipelines on the land in terms of fragmentation of the land into small bits which may not be amenable to future development because by reason of subdivision they become smaller than a standard plot of land. As these flow lines converge at the flow stations, the land-use patterns are more seriously interfered with as the area resembles a spider's web under the ground.

4.3 Land Fragmentation Caused by Location Access Roads

Access roads are often created in a complicated network connecting location wells to the flow stations. In addition to the loss of land to the pipelines and flow lines, the access roads also lead to further fragmentation.

4.4 Boundary Disputes amongst Communities

Community lands do not have clearly defined boundaries and as such many years after a right-of-way restriction has existed or an access road created, land boundaries on either side of the road which were once aligned cease to be. This results in a series of disputes. Since communities lack the capacity to have their land properly surveyed and beacons established the effect of these disputes also serves as a deterrent to land speculators and private property developers as well.

5. KEY QUESTIONS

Some of the key questions which this paper addresses from an environmental management perspective are as follows:

- Is it possible to have addressed the potential impacts on land use patterns during the initial acquisition over 30 years ago?

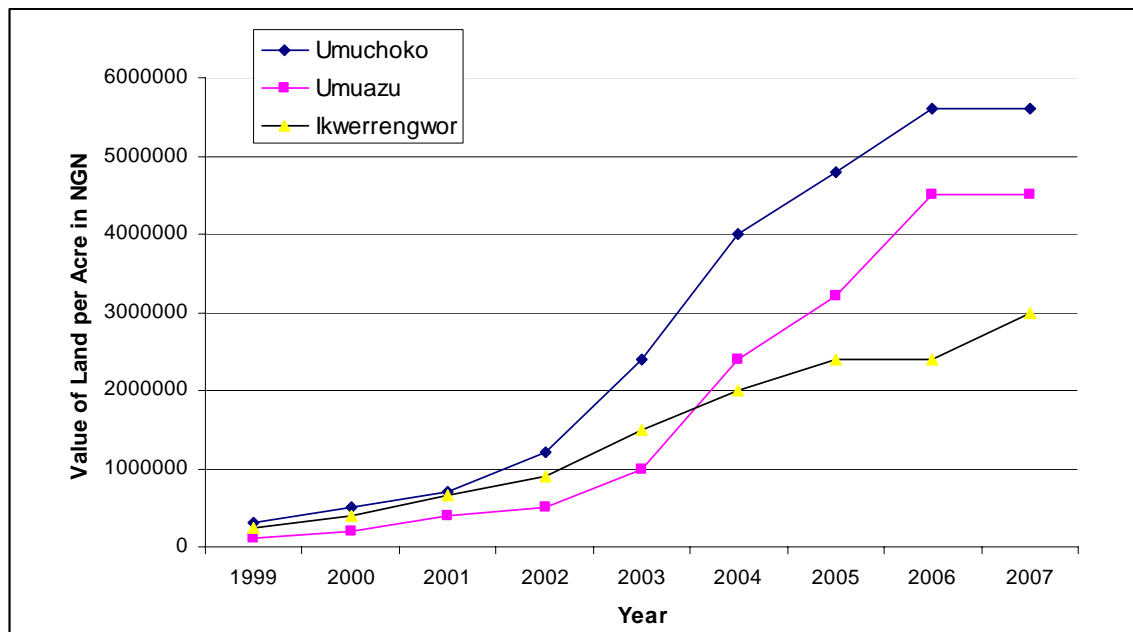
- If this was not done at that time due to lack of capacity, are there possible steps that can be taken to mitigate the effect of the presence of these pipelines on land use practices and land values in the area?

The Oil Pipelines Act Cap 338 LFN 1990 provides that in the event that a R-O-W interferes with access, alternative measures such as the construction of bridges and other crossings over the pipelines should be provided. In the past, the land use was mainly for agrarian purposes so pedestrian access over the existing R-O-W did not constitute a problem. Currently, as the area witnesses a transition from rural to semi-urban, the demand for land and land use patterns are changing. There is now the need to re-visit the statutory provisions for the construction of vehicular access to enable land owners reap the potential benefits from enhanced value of their land.

6. LAND VALUE TRENDS IN IGBO ETCHE

The purpose of land speculation is to buy undeveloped areas that are expected to see a building boom then you have the option of selling this land as development reaches an area or by developing it yourself. The attraction in buying undeveloped land is that it is cheap compared to buying land with property on it. Property investors prefer to buy sections of land near an expanding population base, because they can turn around and sell it during a building boom and this has been the experience of land speculation and sales in other major capital cities in Nigeria. The problem here is that professional speculators realize the double-digit profits they expect to make but the expense of holding the land while they wait for the economic growth is particularly high in these areas. If the expected growth doesn't boom like the speculator hoped or doesn't happen at all, profit may completely disappear. To hedge against this risk, successful speculators buy land in multiple locations that meet a certain profile. Other areas have witnessed slower waiting times than land speculation within the Igbo-Etche communities. See figure 2 below.

Figure 2 - Chart Showing Land values in Igbo Etche



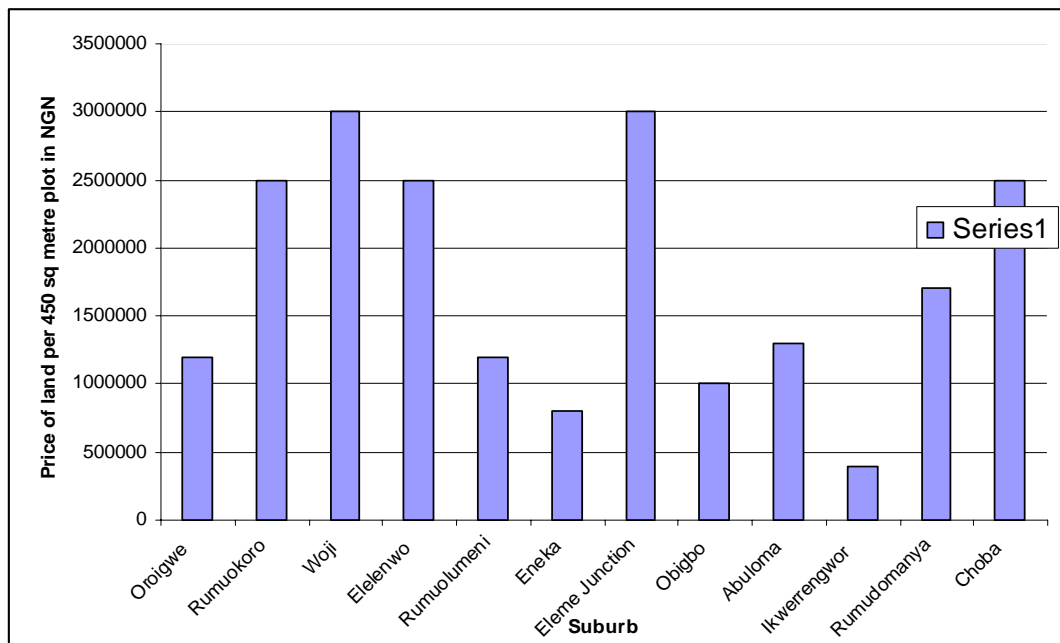
Land value statistics between 1999 and 2007 in Igbo Etche area, were obtained and analyzed. The two main components of the study are: Land values in areas close to well locations and land values in areas those further away from oil wells.

The area currently attractive to speculative buyers who are willing to dispose of their assets but because the pace of development and growth in land values is slow comparatively, they are unable to do so. The chart in the figure above shows the land values pattern in the 3 communities in Igbo Etche between 1999 and 2007.

The land value pattern exhibited by different communities is based on their proximity to the well locations and processing plant. The Umuchoko community lands are closer to Port Harcourt and exhibit the highest land values in the area. Plots close to the well locations like have lower land values. The Umuazu community lands are close to well locations and their land values are quite different from that of Umuchoko. The Ikwerrengwor communities are close to the flow station and generally exhibit the lowest land values amongst the three communities.

A comparative review of plot prices within this suburb along with other suburbs around the Port Harcourt urban area shows significant differences in current land values. See chart in fig 3.

Figure 3 Chart showing comparative land prices in Port Harcourt Suburbs



6. INCORPORATING LAND USE PATTERNS INTO BASELINE STUDIES

Baseline studies use a range of methods to establish a starting point for projects. They provide valuable social and economic information which is critical to project decision-making and predicting impacts. An integrated resource management approach is required to address such a broad range of social and environmental issues in a sustainable way (Singh et. al. 1995). Integrated coastal zone management (ICZM) is a holistic planning and coordinating process suited to ensuring that the large economic and social benefits from resources in the Niger Delta are not dissipated by destructive practices or inappropriate use. There is need to establishment of an appropriate policy framework to support coastal resource management in this region.

7. EFFECT OF PIPELINE NETWORKS ON PROPERTY VALUES

Although oil and gas pipelines are buried underground and as such do not appear to interfere with land use, the artificial subdivision of land which occurs by this process is not planned for or envisaged by the owners. The right-of-way restricts access and as such the severance process does not only have effect on the direct owner in terms of diminution in value of his asset but in the long run it has severe consequences on land development patterns

Accessibility is one of the key issues that fosters development and influences the movement of land values upwards or downwards. More attention and focus during impact assessment studies is concentrated on the environmental impacts and how these may be reduced. It is also important to look at the future of a community in terms of its growth and development. In certain parts of Etche, the pipeline distribution network interferes so much with community

lands and also the creation of location roads to access well heads. You have a combination of two forms of interference with the land use pattern. Access in the form of location roads should not be seen as a favour to oil producing communities but as part of the reward in terms of contribution to their over all development. There should be proper planning for the pipeline routes as well as the location roads to access the

8. CONCLUSION

The scope of baseline studies and EIA's should be expanded to include an appraisal of the future development potential of an area and growth potentials in land values occasioned by the presence of the project. Oil production infrastructure certainly interferes with long term planning efforts and proper planning should accompany pipeline routes and right-of-way restrictions. The fact that pipelines are under the ground constitutes an added challenge to planning authorities and land administration intervention is required.

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