

Changes in Rural Livelihood Systems in Oil Producing Communities: Implications for Agricultural Development

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Abstract

The study focused on changes in livelihood systems of oil producing communities in Rivers State. A structured interview schedule was used to elicit information from 200 respondents. Multi stage sampling technique was employed and data collected were subjected to descriptive statistics. Findings from the study revealed that there were changes in farm size, fish ponds and fallow period. Farm sizes of 15-20 hectares owned by rural people were reduced from 56% to 18.8%, fish pond range of 1-5 from 33.1% to 15.4% and fallow period of 5-10 years to 3-5 years. However, the income level increased from ₦5000 to ₦500000 per month. These changes resulted in cultural, social and economic distortion, low agricultural produce, migration, unemployment, high cost of living, and land displacement. It is therefore recommended that the development of agriculture be encouraged in the study area.

Introduction

Rural inhabitants have livelihoods such as farming, fishing, food processing, commerce, lumbering, pottery, mining and art work. Although agriculture is mainly subsistence in nature, yet most of the surplus produce is sold in the cities. The national food production and supplies come mainly from rural areas through the efforts of rural dwellers who supply food and industrial raw materials needed for economic development. According to Ekpo (2004) and Olaniyi (1995), rural inhabitants produce 90% of food marketed and consumed in Nigeria and 2.4% of official exports. That lends credence to the study of Williams (1993) that the rural population of Nigeria forms the most important sector of the economy and therefore the economic development of the rural sector is a critical factor in the development of the national economy.

Before petroleum exploitation began, the traditional economic base of the people of Rivers State was agriculture. Farmlands, forests,

streams and rivers were predominant extractive sources of livelihood. It was a state where most of the population in rural areas depended on crop farming and fishing for their livelihood. According to Barrett & Reardon (2001), the livelihoods of most people are directly dependent on their involvement in a range of trades/markets as private agents or as employees and indirectly dependent on the wider economy for the demand of goods and services. The most important is the development of livelihoods which depends critically upon demand for the outputs (goods and services) supplied by these livelihoods. Livelihood is a job, work or source of income. It provides income, means of support and maintenance for an individual to live on. Most rural people engage primarily in agriculture to survive (Arowolo, 2008). But there has been a trend to move from rural to urban areas and, within rural areas to move out of agriculturally-based occupations, often due to growing pressure on natural resources, declining terms of agricultural trade and other broad ranging trends in society.

Before the advent of petroleum, agriculture was the main stay of the national economy. 7.2% GDP came from agriculture in 1950 as against 1.1% from mining (Aluyor, 1998). This is because the country was predominantly rural and about 75% of the estimated population depended either directly or indirectly on agriculture for their livelihood. But the arrival and aggressive search for petroleum signaled the beginning of great distortion and destruction of the rich ecosystem and biodiversity of the Rivers people (UNDP, 1992). This distortion impacted negatively on their socio-economic life and the foundation of their livelihoods became threatened and to some extent even extinguished. This scenario resulted in the emergence of alternative livelihoods and lifestyles. As a new socio-economic life became inevitable, people had to grapple with its attendant challenges without adequate preparation and this resulted in frustration for

some, unemployment and the search for new economic opportunities. The result is that other means of livelihood now exist in the communities affected by oil exploitation. One characteristic of man is adaptation to the environment. This innate characteristic is fully deployed in the changing circumstances of oil exploitation in the rural communities.

The incursion of multinational oil companies into the rural areas of Rivers State changed the economic life pattern of the people. Prospecting for oil impacted directly on farmlands, residential areas, streams and rivers and over time, the local economy of the affected communities changed dramatically to an urban industrial economy (Obuzor, 1998). The prospecting of petroleum usually involves seismic operations which employ the use of explosives. The acquisition of land for oil fields, oil wells, access ways, flare and waste pit for effluent discharges have resulted in massive loss of arable land and ponds and fishing grounds. It is on this premise that the research is founded to unravel any change in the livelihood systems of the rural people and its effects on rural livelihoods and agriculture.

Objectives of the Study

The general objective of the study was to describe changes in rural livelihood systems in oil producing communities of Rivers State and their effect on agricultural development. The specific objectives were to:

- determine the socio-economic characteristics of the respondents;
- describe changes in livelihood systems; and
- examine the effect of distortions in livelihood systems on agricultural development

Methodology

Rivers State is made up of twenty-three local government areas and divided into two geographical settings - upland and coastal. Sixteen of the local government areas are predominantly upland areas while seven are predominantly coastal areas (Orubo, 2005). The population of the study was all the households in the communities that constitute the number of oil fields/wells owned by oil companies in the state. Multi-stage sampling procedure was employed.

The first stage involved the purposive sampling of all the oil fields in the state and the communities that constituted each oil field. The second stage involved the random sampling of upland communities and the purposive sampling of the coastal communities because the coastal communities are few. The last stage involved the random sampling of ten households from fifteen upland communities (150 households) and five coastal communities (50 households) from an average of 35 households. A total of two hundred respondents were selected from twenty communities. Data collected were analyzed using percentage and a three point Likert-type scale with options ranging from "very effective" and "less effective" to "not effective" to ascertain the effects of changes in livelihood systems on the rural people. They were scaled 3 to 1 respectively. The value were added to give 6 and divided by 3 to get a mean score of 2.0. Responses of the three-point scales were later categorized according to their mean scores using the methodology of Ozor *et al* (2009). In terms of reliability, mean scores of 2.0 and above were classified as high effects while those with mean scores below 2.0 were regarded as not effective.

Results and Discussion

Social-economic characteristics of the respondents

Table 1 shows that the majority (37%) of the respondents were in the age bracket 41 – 50 years. The mean age was 50 years. This implies that the respondents are about to retire from their productive age which suggests high aspirations to contribute to the survival of their families. They had witnessed the advent of oil exploitation in the study area.

91% of the respondents were male. The instrument was administered mostly on men as head of households who traditionally own and protect land in the patriarchal society characteristic of these communities.

87.5% of the respondents were married. This is an important factor in the socio cultural setting of the area and the questionnaire was set to target heads of households who had families. The standard of living of the family determines the overall quality of life in the community.

75.5% of the respondents had post- secondary school certificates, 14.5% had SSC/GCE/NECO while 10% stopped at primary level. This implies that the respondents are literate and can analyze the activities of oil exploitation very well. Entries in Table 1 show that a high proportion (48%) of respondents had a household size between 6 and 10 people. The remaining 28%, 16% and 6% had household sizes of 11 – 15 people, 1 – 5 people and 15 and above, respectively. The mean household size was 9. This number is an indication of large family size

and underscores the need for livelihood activities to be sustainable. The large family size is indicative of a low standard of living and inadequate education.

Table 1: Socio-economic characteristics of respondents (n-200)

Variables	Frequency	Percentage	Mean
Age			
31-40	52	26.0	
41-50	74	37.0	
51-60	41	20.5	
Above 60	33	16.5	
Total	200	100.0	50years
Sex			
Male	18	9.0	
Female	182	91.0	
Total	200	100.0	
Marital Status			
Married	175	87.5	
Single	-	-	
Widow/Widower	25	12.5	
Separated/Divorced	-	-	
Total	200	100.0	
Educational Level			
Primary	20	10.0	
SSC/GCE/NECO	29	14.5	
Teacher Training College	31	15.5	
College of Education	32	16.0	
Polytechnic	34	17.0	
University	54	27.0	
Total	200	100.0	
Household Size			
1-5	36	18.0	
6-10	96	48.0	
11-15	56	28.0	
Above 15	12	6.0	
Total	200	100.0	9

Changes in livelihood systems

Farm size

Table 2 reveals that 72.7% respondents owned and cultivated farm sizes within the range 6-10 hectares before oil activities. The same farm size and range today is cultivated by only 33.3%. Similarly, all owned and cultivated farms, but today, 58.3% do not own farmland neither do they farm. Before oil activities, 18.2% of the respondents had 1-5 hectares of farm size. Today, 33.3% have 1-5 hectares of farm size. This means that the farm size of the respondents has been greatly reduced. A large proportion has small farm sizes while a small proportion has large farm size. The acquisition of arable lands by oil companies has reduced the farming areas of the rural populace. This confirms the findings of Obuzor, 1998 who reported that the acquisition of farmlands by oil companies resulted in the loss of their means of economic survival. Ugorji, 2000 also stated that in oil producing communities people are displaced from their traditional farming occupation.

Fish ponds

The results in Table 2 show that 63.5% of respondents in the upland areas had 1 - 5 fish ponds before oil exploitation while 36.5% had 6 - 10. Each of the respondents had at least one fish pond. At present 29.4% of the respondents have no fish pond and the percentage that had 1-5 fish ponds has been reduced from 63.5% to 55.9% while 14.7% have between six and ten ponds. This implies that oil activities led to loss of fish ponds for respondents in the upland oil producing communities. This confirms Obuzor's (1998) observation that the acquisition of massive land for oil fields, oil wells, access ways, flare and waste pits for effluent discharges have resulted in massive loss of arable land and ponds and fishing grounds among others.

Income

Findings reveal that before oil activities 40.0% of respondents in the upland communities and 35.4% of respondents in the coastal communities had a monthly income of #1000-#5000. Only 3.8% and 2.9% of the respondents in the upland and coastal, respectively, had a monthly income above ₦20000. However though the income was low, the cost of living was low and there was enough food as agriculture was doing very well.

At present, 18.5% of respondents in the upland areas and 40.3% in the coastal areas earn an annual income within the range of #50,000-#100,000. Furthermore, 7.7% of the upland areas earn above #500,000 annually whereas in the coastal areas it was 10%. The presence of oil activities have led to an increase in income for rural people in the oil producing communities. Generally, the people earned lower incomes before oil production began in comparison to present day incomes. This confirms Ekpo, (2004) who concluded that oil activities have brought a tremendous change in the economic base of the society. Apart from the obvious issue of increased revenue, infrastructural support such as roads, bridges and electricity, oil activities have intensified commercial activities.

Fallow Period

Before oil exploitation, 70.2% of respondents in the upland communities left their lands to lie fallow for 6-10 years before going back to farm them. Also, in the coastal communities, a higher proportion (37.8%) of respondents left their land for 6-10 years. This system prepared the land for the next farming thereby helping to increase productivity. Now, 55.7% leave their land to lie fallow for a period of 1-5 years.

Table 2: Changes in livelihood systems

BEFORE OIL ACTIVITIES	Upland	Coastal	AT PRESENT	Upland	Coastal
Farm size (Ha) %				%	
0 – 5	18.2	7.1	None	58.3	-
6 – 10	72.7	1.6	0 -5	33.3	8.4
11 -15	9.1	-	6 – 10	8.3	1.6
16 – 20	-	-	11 – 15	-	-
Above20	-	-	Above15	-	-
Fish ponds					
0 -5	33.1	-	None	15.4	-
6 – 10	19.2	-	0 – 5	29.3	-
11 -15	-	-	6 – 10	7.7	-
16 -20	-	-	11 -15	-	-
Above 20	-	-	Above 15	-	-

INCOME					
Income before oil activities(1970) '000(₦) per month	Upland	Coastal	Income Now '000(₦) per month	Upland	Riverine
1-5	40.0	54.3	50-100	18.5	14.3
5 -10	33.1	28.6	100 -200	35.4	40.3
10 -15	23.1	14.3	200 -300	24.6	14.0
15-20	3.8	2.9	300-4000	13.8	21.4
Above 20	3.5	2.5	Above 500	17.7	10.0
Farrow Period (Years)					
1-5	21.3	22.8	1-5	55.8	18.5
6-10	70.2	37.5	6-10	44.2	-
11-15	8.5	-	11-15	-	-
15-20	-	-	16-20	-	-

Effect of distortion in rural livelihood systems

Table 3 reveals that distortion in rural livelihood systems led to the cultural dislocation of the people (M=2.20), economic distortion (X =2.10),

high cost of living (X =2.20), insecurity (X =2.20), migration(x=2.10), low yield of agricultural produce (X =2.30) and alternative livelihood (x=2.10) in the upland oil producing communities. For the riverine areas, the distortion led to unemployment (X=2.10), cultural dislocation (X=2.20), social dislocation (X=2.10), economic distortion (X=2.20), high cost of living (X =2.30) insecurity (X=2.10), social vices crime (x=2.10) migration (x=2.10) and alternative livelihood (x=2.10). The most profound effect of changes in rural livelihood systems is low yield of agricultural produce resulting from land displacement and pollution of the remaining land. One obvious implication is economic downturn. In this situation, the only option is to seek for a way to augment yield from external sources with the risk of impairment of culture and social life. This factor is significant as it leads to cultural, social and economic dislocation, social vices, poverty and migration. From the study, the socio-economic impact of oil

production engendered the creation of urban industrial economies in the oil producing areas. It stimulated the growth of an industrial economy that increased the income of people but resulted in the youths who do not show much interest in agriculture but rather in white collar jobs and high cost of living in the areas. This is in line with Obuzor (1998) who opined that prospecting for oil impacted directly on farmlands, residential areas, streams and rivers; over time, the local economy of the affected communities changed dramatically to an urban industrial economy.

Unfortunately, the oil companies (including the oil servicing companies) could not engage all the youths in the areas. This has resulted in high rates of unemployment and illicit means of livelihoods such as kidnapping, militancy, oil bunkery, thuggery, armed robbery etc (Albert, 2010). On the other hand, there is a scarcity of food in the area since the available food is not enough for the large population.

Table 3: Effect of distortions in rural livelihood systems

Effects	Upland (M)	Coastal (M)	M of M	Remark
Poverty	2.00	2.10	2.05	HE
Unemployment	2.00	2.30	2.15	HE
Malnutrition	1.75	1.80	1.78	NE
Low quantity of agricultural produce/fish	2.30	2.25	2.29	HE
Cultural Dislocation	2.10	2.20	2.15	HE
Social Dislocation	2.10	2.10	2.10	HE
Economic Distortion	2.10	2.20	2.15	HE
High cost of living	2.20	2.15	2.16	HE
High income	2.20	2.10	2.15	HE
Low standard of living	1.80	1.90	1.95	NE
Land Displacement	2.10	2.00	2.05	HE
Migration	2.20	2.10	2.15	High Effect
Development	2.10	1.90	2.00	
Social vice/crime	2.10	2.30	2.20	High Effect
Alternative livelihoods	2.10	2.20	2.15	High Effect

*M is mean score

Conclusion

Changes in livelihood systems of oil producing communities have affected the traditional

economic livelihood (farming) of the people. It has made agriculture less attractive to the youths as the bulk of the farming population is the aged. The succession to the farm by the younger generation will boost the development of agriculture in the area. Therefore re-orientation programmes should be carried out in the oil producing communities to change the mindset of the youths who believe they can only make it through white-collar jobs, politics and contracting. To achieve this, efforts should be made to re structure agriculture in these areas. Given the fact that oil has polluted the rivers of some communities, which has affected their fishing occupation, oil companies should encourage aqua culture/fish farming by constructing fish ponds for farmers in their host communities for a sustainable livelihood. Also, government and oil companies should encourage intensification of agriculture by executing agricultural projects in these areas.

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