# Socio-economic and Demographic Profile of Agricultural Labour Force in Delta State, Niger Delta Region of Nigeria

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## ABSTRACT

*There has been no concerted attempt to study agricultural labour force in the Niger delta region that has been degraded by petroleum exploitation activities. Consequently, this study examines the socio–economic and demographic characteristics of the labour force with a view to providing a framework for a comprehensive planning. Data utilized are obtained from primary and secondary sources. The former is through a multi-stage sampling technique which involves the purposive selection of one State and three agrarian settlements. The systematic random sampling was used to select 350 households, on which a one-time questionnaire is administered. Descriptive statistics is used to analyze data collected. The study revealed, among others, an ageing and large illiterate labour force. Consequently, adequate planning by government to make agriculture more attractive and retraining of farmers is recommended to improve productivity in the sector.*

*Keywords: Agricultural labour force; family and hired labour; petroleum exploitation; agricultural productivity; Niger Delta Region; Nigerian.*

## INTRODUCTION

Agricultural labour force refers to that segment of the population that is engaged in agriculture, where agriculture is conceived as the retrieval from mother earth or indeed nature of cash and food crops, animal husbandry or fishery (Yesufu, 2000). According to Deniran (2013), agriculture composes of crops production, livestock, forestry and fishery. Thus, it is far more than the mere cultivation of the soil, rather it is the modification of the natural land environment for the production of plants and animals, crops for subsistence and exchange. It is an activity that has occupied the greater part of humanity for millennia and upon which over half of the world population still depends. The agricultural labour force in Nigeria constitutes a significant proportion of the working population; hence, it is estimated that over fifty percent of the country's workforce is engaged in agriculture (FOS, 1995; NDDC, 2004; NBS, 2010; Wilkipedia, 2014; FAO, 2016; Nations Encyclopedia, 2016; The Report 2016). Furthermore, the country agriculture labour force has been classified into four categories on the basis of production scale by Ihemegbulem (1991); namely, farmers, farm labourers, agricultural support and advisory staff, and agricultural

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hazard consultants. All agricultural production processes involve team work though there are distinguishing attributes of the various classifications. In addition, agricultural productions can be divided into human and physical aspects. The former constitutes the agricultural labour force while the latter is the physical environment including soils, crops grown and animals reared. All aspects of agricultural production are carried out on land. Consequently, the dynamics in land resource such as soil, forest, and water bodies induced by other human activities would inevitably affect agricultural production and subsequently the agricultural labour force. The human activities that can lead to dynamics of land resources are urbanization, mining and industrialization, oil spillages and general degradation of the environment.

The Niger Delta Region (NDR) is devastated by petroleum exploration and exploitation activities such are land acquisition, seismic surveys drilling, pipe laying, storage, gas flaring and associated waste dumping and oil spillages. These are manifested in several ways on the environment, some of which are contamination of streams and rivers, problems of oil spillages, forests destruction and bio-diversity loss, environmental effects of gas flaring effluent discharge and disposal, and the destruction of farm crops and farmlands (Nwankwo and Ifeadi; 1988; NEST. 1991; Aweto 2002; Kiikpoye, 2003; Omatete, 2003; Akpofure, Efere and Ayawei, 2003; Igben, 2012). Though the impact of petroleum exploitation on land resources and agricultural production has formed the foci of numerous studies, there has been very few or no study on the profile of the agricultural labour of oil producing settlements in the Niger Delta Region. Most of the available studies dwell on the resultant impact of petroleum exploitation on agricultural activities. For instance, Okezie and Okeke (1987) study gas flaring, an activity associated with petroleum exploitation and reveal a 100 percent loss in agricultural yield of crops cultivated about 200 metres away from the Izombe flare in Bayelsa State, Nigeria. It further revealed a 45 percent loss of yield of crop cultivated about 600 metres away and about 10 percent loss of yield of crops cultivated about one kilometre away.

Similarly, Agbogidi, Okonta and Dolor (2005) examine the impact of petroleum exploitation in Edjeba and Kokori (both in Delta State, Nigeria) and indicate that petroleum exploration and production have caused damage to farmlands and water bodies as a result of oil spillage, and consequent decrease in agricultural output. Furthermore, Igben's (2011) study on petroleum exploitation and dynamics of labour force in Delta State, Nigeria reveals a decrease in the primary sector's labour force including the agricultural labour force between 2001 and 2006. The size of the labour force decreased from 691 households in 2001 to 560 households in 2006. Of this number, the size of the labour force in arable farming decreased from 359 households to 231 households in 2001 and 2006 respectively.

Also, Ahmadu and Egbodion (2013) in their study of cassava production in relation to oil spillage in Otor – Udu (Udu Local Government Area) and Olomoro and Uzere (Isoko South Local Government Area) all in Delta State observe that farmers perceived that crop failures, poor yield, rotting rubbers, and stunted crop

growth with a mean of 4.80, 4.78, 4.75 and 4.75 respectively, were some of the effects of oil spillages in the area. Other negative effects perceived by the farmers included increased soil temperatures and toxicity, reduction of soil fertility, degradation of farmland and general low land productivity. Nevertheless, there have been a few studies on the agricultural labour force in Nigeria, for example, Ogidu (1989) carries out a geographical study of the agricultural labour force in Uturu (Abia State, Nigeria). The study reveals that a higher percentage of 53.2% of farmers were males while 46.8 per cent were females. Furthermore, more than 70 per cent of the labour force was made up of family labour, and a large number of family labour consisted of females while the reverse was the case with hired labour. Apart from 86 per cent of the hired labour comprising of males, the age range of the labour force was between 15 and 44 years. This finding, according to Ihemegbulem (1991), is expected since hired labour is likely to be more productivity conscious than family labour. Similarly, Ihemegbulem's (1984) study on the agricultural labour force in some tin-mining settlements on the Jos Plateau, Nigeria reveals that 90 per cent of the agricultural labour force had no formal education, a situation that is unlikely to enhance agricultural productivity. It also shows that agricultural population is ageing with more than 76 per cent over 49 years. This situation, according to Igben (2005), can be attributed to the effect of declining tin-mining activities on the plateau which had led to old miners returning to agriculture.

From the above, it is evident that there has not been any concerted effort to study the characteristics of the agricultural labour force in the oil-rich Niger Delta Region; hence this study aims to analysis the socio-economic and demographic characteristics of the agricultural labour force in the region. An understanding of the profile of the agricultural labour force in the region would be useful in designing a comprehensive programme for the planning and improving the welfare of the farmers whose physical environment has been devastated by petroleum exploitation activities. In addition, the study would provide a better data base that highlights the effect of deteriorating physical environment on agricultural labour force in order for efforts to be made toward improving the well-being of the non-oil producing areas.

The Niger Delta Region is located in the southernmost model part of Nigeria between the estuaries of the Benin River in the west and the Cross River to the east, approximately between latitudes $4^o$ and $7^0$ north and longitudes $6^0$ and $7^0$ east. It occupies an approximate area of 112,100 sq. km, which is about $12^{1/}_2$ percent of the country's land mass. The region is bordered to the south by the Atlantic Ocean, to the east by Cameroun republic and to the west by Lagos, Ogun and Osun States. To the north, the region in bordered by Benue, Kogi, Anambra and Enugu States.

The Delta area was defined narrowly in colonial days to comprised Ahoada, Brass, Degema, Opobo, Ogoni, Western Ijaw and Warri divisions which are in the present Bayelsa, Delta and River States (Kirkpoye, 2003). However, the area has been recently defined to include any State where petroleum exploitation is carried out. Using this criterion, the region covers nine political divisions (States), and

these include Abia, Akwa Ibom, Bayelsa, Cross Rivers, Delta, Edo, Imo, Ondo and Rivers, with an estimated population of 33,616,000 persons. Furthermore, the area comprises 13,329 settlements, 99 per cent of which has a population of less than 20,000 persons. Settlements of fewer than 5,000 inhabitants constitute nearly 94 percent of the total number of settlements and only 98 settlement (less than 1%) can truly be regarded as urban centres according to their population size (NDDC, 2004). Consequently the region is mostly rural and there is the preponderance of agricultural activities.

The people of the area engage in a wide range of economic activities which include farming, fishing, hunting, trading, manufacturing etc. Of more important is farming which employs over 50 percent of the population in the area (FOS, 1995). Farming practices in the area are essentially traditional and mechanization is still at its infancy. The main food crops grown are cassava (*Manihot spp*), Maize (*Zea mays*) plantain (*Musa spp*), Yam (*Discorea spp*) and vegetables. Main cash crops cultivated include rubber (*Hevea brasiliensis* and oil-palm (*Elaes guineensis*). The major types of farming are bush fallowing and shifting cultivation. Crude implements including cutlasses, hoes, axes and spades are used in preparing the soil for planting. Livestock production is limited and includes pigs, fowls, goat, rabbit and snail.

## METHOD

This study adopts the descriptive research design. This type of design, according to Ogundipe, Lucas and Sanni (2006), is used to find the meaning and obtain understanding of the present conditions, beliefs attitudes, a careful study and methodical observation of a particular event in the real world. The choice of the design is informed by the purpose of this study, which is merely to describe and understand the socio-economic and demographic characteristics of the agricultural labour force in the study area.

The target population for this study comprises all economically active persons in the agricultural sector of the study area. The multi-stage sampling technique was used in the selection of sample. The first stage involved the purposive selection of Delta State from the nine oil-producing States that constitute the Niger Delta region. The choice of Delta State is predicated on the fact that the geographical terrain of the region in homogenous in terms of physical and socio-economic characteristics and by extension in the profile of the agricultural labour force. Secondly, it is almost impossible to cover the whole Niger Delta area in a study of this nature, which is constrained by time and finance. The second stage involved the random sampling of three agrarian settlements from over 40 settlements that were listed in the chosen State. The settlement selected are Ugbisi (Udu Local Government Area), Iwhrekan (Ughelli South Local Government Area) and Erhoike (Ethiope East Local Government Area).

In each of the selected settlements, a list of all household engaged in

agriculture was made and this was followed by a systematic random sampling of 350 households. Of these households, 150 were from Erhoike, 75 and 125 were from Ugbisi and Ewirhrekan respectively. A one-time questionnaire was administered on each household head or their representative. The choice of household survey was deemed appropriate because of the nature of the rural economy in which occupational pattern is based on family. This is done to avoid duplication of information. At the end of the data collection exercise, 328 copies of questionnaire, representing 93.18 percent, were returned. The data collected were computed and analyzed with the aid of descriptive statistical methods such as table, means, and percentage in line with the objectives of the study.

## RESULTS AND DISCUSSION

***Age and Sex Composition of Agriculture Labour Force:*** Table 1 shows the age and sex characteristics of the Agricultural labour force. The table indicates that a majority of the sampled population, 186 respondents representing 56.7 percent are above 40 years. Out of this number, 63 respondents or 19.2 per cent were between 41 – 50 years, while those between 51 – 60 years were 70 respondents representing 21.3 per cent. Respondents above 60 years were 53 or 16.2 per cent. The youngest group trailed behind with 37 respondents (11.3%) for those below 20 years, 49 respondents (14.9%) and 56 respondents (17.1%) for those between 21 – 30years and 31 – 40 years age cohort respectively. In addition, majority of 170 respondent of agricultural labour force were females representing 51.8 percent while 158 respondents or 48.2 percent are males.

***Religions, Marital and Educational Characteristics:*** The table 2 shows the religion, marital and educational characteristics of the sampled population. It reveals that a majority of the sampled population were Christians, who accounted for 285 respondents or 87.0%, while 37 respondents or 11.2% practice African Traditional Religion (ATR), 3 respondents or 0.9% are Muslims. Other religious groups such as Eckankar also accounted for 3 persons representing 0.9% of the sampled population. The table also shows that a majority of 243 respondents or 74.1% were married. Singles accounted for 48 respondents or 14.6, while 16 respondents representing 4.9% were divorced, widowed respondents were 21, representing 6.4 per cent. Furthermore, 219 respondents (66.7%) had no form of formal education. While 55 respondent or 16.8% and 19 respondents or 5.8% had primary and secondary education respectively, 24 respondents or 7.3% had vocational training in various trades such as welding, carpentry, motor vehicle repairs, tailoring, hairdressing and others. Only 17 respondents had tertiary educational qualification such as NCE, OND and first degree.

***Types of Agricultural Labour Force:*** Basically, two types of agricultural labour force can be identified in the study area, namely: family and hired labour force.

Table 3 shows the distribution of family and hired labour according to their age and sex composition. It reveals that family labour constituted 271 respondents representing 82.6%. Out of this number, 133 respondents were males while 138 respondents were female. It also shows that hired labour constitute 57 respondents of the total labour force. Male hired labour were 25 respondents (40.5%) and hired female labour were 32 respondents or 9.6 percent

In addition, the table reveals that out of the 37 respondents who are less than 20 years of age only 5 respondents (1.5%) were hired. While 11 respondents and 10 respondents were hired in the age group between 21-30 years and 31-40 years as against 38 respondents and 46 respondents respectively. Ten (10) respondents (3.4%) were hired while 53 respondents (16.1%) were family labour in the 41-50 years age cohort. While only 7 respondents above the age of 60 years were hired, 14 respondents were in the age group of 51-60 years out of total of 133 respondents who are above 50 years. Hired labour in the study area is remunerated in cash or sharing of crops after planting on a pre-determined proportion, which is share-cropping

*Farm and Crop Numbers:* Table 4 shows the numbers of farms owned by the agricultural labour force and the number of crop grown by them. It reveals that a majority of 207 respondents, representing 63.1% owned two farms. This is followed by those who kept three farms, which account for 70 respondents or 21.4 percent. While 47 respondents (14.3%) owned one farm at a time, only 4 respondents (1.2%) owned four farms. On the number of crops grown by the farmers, a majority of 217 respondents (66.2%) grow two crops while 104 respondents or 31.7% grow only one crop. Farmers who grow three or four crops were 4 respondents (1.2%) and 3 respondents (0.9%) respectively.

*Types of Farming of Agricultural Labour Force:* Table 5 shows the nature of farming engaged by the labour force. The table shows that arable farming is the most popular in the study area as a majority of 307 respondents representing 93.5% percent were engage in it. While 15 respondents (4.5%) were engage in fish farming, only 4 respondents (1.8%) were engage in rearing of animals or livestock.

**Table 1:** Age and sex composition of respondents

| Age Group (yrs.) | Male | Female | Total | Percentage |
|---|---|---|---|---|
| Below 20 | 17 | 20 | 37 | 11.3 |
| 21 – 30 | 21 | 28 | 49 | 14.9 |
| 31 – 40 | 30 | 26 | 56 | 17.0 |
| 41 – 50 | 32 | 31 | 63 | 19.2 |
| 51 – 60 | 37 | 33 | 70 | 21.3 |
| Above 61 | 21 | 32 | 53 | 16.2 |
| **Total** | **158** | **170** | **328** | **100.0** |

*Source:* Fieldwork, 2016

**Table 2:** Religion Marital and Educational Status of respondents

| Characteristic | Status | Frequency | Percentage |
|---|---|---|---|
| Religion | Christian | 285 | 87.0 |
| | Islam | 3 | 0.9 |
| | ATR | 37 | 11.2 |
| | Others | 3 | 0.9 |
| | **Total** | **328** | **100.0** |
| Marital Status | Single | 48 | 14.6 |
| | Married | 243 | 74.1 |
| | Divorced | 16 | 4.9 |
| | Widowed | 21 | 6.4 |
| | **Total** | **328** | **100.0** |
| Educational Attainment | Primary education | 55 | 16.8 |
| | Secondary education | 19 | 5.8 |
| | Tertiary education | 11 | 3.4 |
| | Vocational education | 24 | 7.3 |
| | No formal education | 219 | 66.7 |
| | **Total** | **328** | **100.0** |

*Source:* Fieldwork, 2016

**Table 3:** Age/Sex Composition of Family and Hired Labour

| Age cohort (yrs.) | Male | Female | Male | Female | Total | Percentage |
|---|---|---|---|---|---|---|
| Below 20 | 14 | 18 | 3 | 2 | 37 | 11.3 |
| 21-30 | 18 | 20 | 3 | 8 | 49 | 14.9 |
| 31-40 | 25 | 21 | 5 | 5 | 56 | 17.1 |
| 41-50 | 28 | 25 | 4 | 6 | 63 | 19.2 |
| 51-60 | 30 | 26 | 7 | 7 | 70 | 21.3 |
| Above 60 | 18 | 28 | 3 | 4 | 53 | 16.2 |
| **Total** | **133** | **138** | **25** | **32** | **328** | **100.0** |

*Source:* Fieldwork, 2016

**Table 4:** Farm and crop Numbers of Agriculture Labour Force

| | Number | Frequency | Percentage |
|---|---|---|---|
| Farms | 1 | 47 | 14.3 |
| | 2 | 207 | 63.1 |
| | 3 | 70 | 21.4 |
| | 4 | 4 | 1.2 |
| | **Total** | **328** | **100.0** |
| Crops | 1 | 104 | 31.7 |
| | 2 | 217 | 66.2 |
| | 3 | 4 | 1.2 |
| | Above 3 | 3 | 0.9 |
| | **Total** | **328** | **100.0** |

*Source:* Fieldwork, 2016

Table 5: Types of Farming of Agriculture Labour Force

| S/N | Types | Frequency | Percentage |
|---|---|---|---|
| 1 | Arable | 307 | 93.6 |
| 2 | Fish | 15 | 4.6 |
| 3 | Animal | 6 | 1.8 |
| | **Total** | **328** | **100.0** |

*Source:* Fieldwork, 2016

## CONCLUSION

This work has analyzed the socio-economic and demographic characteristics of the agricultural labour force in the Niger Delta area of Nigeria. The socio-economic variables considered were religion, marital status, educational attainment, number of crops and farms, while the demographic variables considered were age and sex composition of the labour. The finding of the study showing that the labour force is ageing with 56.7% above 40 years and 66.7% with no formal education has a far-reaching adverse effect on sustainable food production. This may likely lead to food shortages in the near future. From the foregoing, the study recommends that the government should embark on aggressive effort to make agriculture attractive to younger population. This can be achieved through the granting of soft loans to farmers and organizing training and retraining programmes for them. The government should also provide basic infrastructure in the study area, which is mostly rural to stem the tide of rural-urban migration with a view to reducing the ageing agricultural population in the area. Finally, the government and the multinational companies involved in oil production and exploitation in the area should also put up measures that will minimized the adverse effects of their petroleum exploration and exploitation activities on land resources in which the agricultural labour force depends.

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