

# Assessment of Rural Infrastructures and Productive Assets Provided by Fadama Development Project in Okigwe Agricultural Zone of Imo State, Nigeria

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## Abstract

The study was designed to assess the rural infrastructure and productive assets provided by Fadama Development Project in Okigwe agricultural zone of Imo State, Nigeria. Two sets of interview schedules were used. One was administered on Fadama User and the other on Non- Fadama users. One hundred and eighty respondents made up the sample size for the study. Data collected were analyzed using descriptive statistics. The results from the socio- economic characteristics of the farmers show that majority of the respondents were educated and had appreciable experience in farming which enhances their activities. The provision of pump-water, fish ponds, and cold rooms among other essential infrastructure by Fadama Development Project reduced the high incidence of drudgery that characterised subsistent system of farming in the Okigwe agricultural zone. It becomes imperative that more enlightenment should be done to encourage more farmers in the study area to join Fadama user groups in order to be part of the benefits accruable from the project.

**Keywords:** Fadama users; non-Fadama users, productive assets

## INTRODUCTION:

With more than one in four of its 856 million people undernourished, Sub - Saharan Africa remains the world's most food - insecure region. Food security, as defined by the 1996 world leaders' Food Summit, means that people can consistently access sufficient and nutritious food to meet their dietary needs for an active and healthy life at a price they can afford. (UNDP, 2012)

The need to have sufficient and adequate food for all Nigerians is an important one. Many factors of demand and supply affect the Nigerian food situation. On the demand side, the factors we are more familiar with include the annual increase of the population and the desire of 164 million Nigerians to move up the food chain and consume more grains, tubers, fruits, vegetables, livestock, etc. There is also the recent sharp increase in the global use of grain and oil palm to produce diesel/fuel for driving cars, which could soon pose a major food security challenge. On the supply side, there is limited new land to cultivate. Even when more new areas have been cleared, it is with growing environmental and climatic costs. These costs include the release of sequestered carbon, loss of plant and animal species and increase in rainfall runoff and soil erosion. There are also crop/livestock pests and disease challenges associated with climate changes. Drought and desertification continue to pose challenges for crop and livestock production. (UNDP, 2012)

Agriculture is the main non - oil sector of the Nigerian economy. Crop production, fisheries and animal husbandry are the dominant activities. Agriculture is an important sector contributing 42 percent to the national Gross Domestic Product (GPD). It provides employment for 56 percent of the population out of which 70 percent reside in rural areas. Nigeria's agriculture is practiced in three major types of agricultural land namely upland or rainfed (94%), lowland or swamp (8.3%) and irrigation (1.5%). It is largely rain-fed and vulnerable to climate variabilities. Total area planted to various commodities is on the increase in response to growing demand for food. Similarly, national production of exportable agricultural commodities is on the increase. According to Central Bank of Nigeria (CBN) Report (2010) on National Survey of Exportable Agricultural Commodities, cassava production in 2010 was 38,022,490mt, cocoa 363,510mt, cotton 531,480mt, palm oil 1,233,050mt and sorghum, 9,300,000mt. Agricultural production systems in the past are inefficient and yield relatively low. Increase in output therefore has been more in terms of planting new areas than raising productivity. International market opportunities for some exportable commodities have been low on account of the sector's inability to be competitive. (UNDP, 2012)

The prevalent food shortage and food insecurity in Nigeria can largely be attributed to over dependence on oil. This problem has become a perennial one. It has led to increase in poverty level in the country. The World Bank in her analysis of the poverty trend in Nigeria noted that poor families are in higher proportion in farming households who are mainly in the rural areas (World Bank, 2013). Nigeria currently ranks 156 out of 187 economies (UNDP, 2011). This position underscores not only the limited choices of Nigerians, but also defines the critical development challenges being faced by government. According to the 2011 National Bureau of Statistics' (NBS) report, about 69.1 percent of the Nigerian population or approximately 100 million people are living below the poverty level (UNDP, 2012).

The rural - urban dimension of poverty show that poverty remains largely a rural phenomenon in

Nigeria with about 75 per cent of the poor residing in rural areas as at 2010. When extreme poverty is taken into consideration, however, about 95 per cent of them reside in rural areas. (UNDP, 2012)

Agricultural development is an integral part of national development. It is that aspect of development that is related to agrarian reforms. Considering the contribution of agriculture to the socio-economic development of many countries, several scholars have postulated theories linking agriculture with national development. (Daneji, 2011)

Once again, the rising global food prices has brought to the fore the issue of food security in developing countries especially sub-Saharan Africa which is traditionally prone to food crisis due to adverse climatic conditions. Peoples of developing countries face a bleak future due to the food shortages brought about by rising energy prices, adverse weather condition among other factors. (The Economy, 2014)

Agriculture is an important component of most rural economies especially in the developing countries. It was shown that the size of agriculture within the local economy is sometimes used to define rurality. Therefore, any successful rural development strategy will contain an agricultural development component; but they are not the same thing. While agricultural development aims at improving the welfare of populations through sustained improvements in the productivity of the agricultural sector, rural development aims at the improvement of welfare of rural populations through the sustained growth of the rural economy, which includes agriculture, but may not be its only component and not necessarily the most dynamic (Nchuchuwe and Adejuwo, 2012).

There is very limited access to modern improved technologies and their general circumstance does not always merit tangible investments in capital, inputs and labour (Yemisi and Aisha, 2009). Household food and nutrition security relies heavily on rural food production and this contributes substantially to poverty alleviation. Consequently, the first pillar of food security is sustainable production of food. It has been noted that in the early 1980s, while the population grew rapidly, food production and agricultural incomes declined in many African countries (Odurukwe et al, 2006).

The target of Nigeria in achieving a degree of food sufficiency is still far from been reached. This no doubt, could be traced to the widespread use of traditional farming methods and implements. Other major problems that has contributed to this include, the absence of storage facilities, insufficient rural infrastructure development, low level of farm mechanization among others. Also, regions where agriculture is the major source of employment have the higher incidence of poverty. One of the suggested ways of reducing poverty is utilizing of the poor factor endowment for improved income earnings and in living standards. In other words enabling the rural poor to increase their level of production of economic goods to increase their income level and thereby their living standards. An obvious way of achieving this is enabling the farming poor to increase their agricultural output, so as not only to improve their income but to lift them above the subsistence level (Khan, 2000). In this situation, two major options that are open to the farming population of the country are:

- ✓ Increasing the farmland area
- ✓ Increasing the yield per unit area.

Indeed, National food security has become an important yardstick for determining if agricultural development is taking place or not along the desired direction. To an increasing extent, food self-reliance as contrasted from food self sufficiency is accepted as the appropriate goal for national food security in Nigeria. According to Ngoddy (2007), this goal seeks to achieve food security by a mix of interlocking strategies which encompasses four factors namely:

- ✓ Domestic production of crops and livestock of high comparative advantages for local consumption and export
- ✓ Export of surplus crops/livestock/fish of high comparative advantage.
- ✓ Regulated impact of crops and livestock production of low comparative advantage but needed mandatorily for domestic consumption
- ✓ Maintenance of a robust strategic reserve of foods dealing with food emergency situation and price stabilization.

Agricultural development programmes have contributed substantially towards rural development to achieve a conducive environment for rural dwellers majority of who are farmers. These projects, the world over facilitate improvements in the socio-economic condition of farm families. In Nigeria, a wide range of strategies has severally been employed to promote agricultural production and enhance the economic base of the small-scale farmers. But a feature common to these strategies is a government-sponsored development projects instituted by government to assist the small scale farmers through provision of infrastructure and productive assets to improve their productivity and increase their farm income by adopting the scientific farming technique where necessary.

Imo State, Nigeria is among the 12 World Bank assisted states implementing National Fadama Development Project. This is aimed at to sustainably increase the income of all users especially those residing in the rural areas through embarking on agriculture, industry and community development projects that add returns

to investment. The Fadama Project was also initiated to address some of the factors that militated against the full realization of the potential benefits of agricultural production activities. Among these factors are poor development of rural infrastructure, lack of storage and processing facilities and market outlets. Others are low investment in irrigation technology, poor organization of farmers as well as lack of capital and adequate techniques for greater productivity. (Ezeokeke et al, 2012)

The Project will reach approximately 2.2 million direct beneficiary households, or about 16 million household members. In addition, it is expected that the Project will also reach at least 2 million indirect beneficiary households, as members of the Fadama communities not benefiting directly from subprojects, and non-Fadama communities will gain from the investments in public infrastructure and from additional income and employment effects (National Fadama Development Project, 2014)

The study population was farmers engaged in the Fadama Development Project as well as those who were not engaged in the Fadama Development Project.

### SAMPLING TECHNIQUE

Two sets of interview schedules were used. One was administered on Fadama User and the other on Non-Fadama users. Three Fadama Community Associations in Ihitte-Uboma, Onuimo and Ehime Mbandi local Government Areas respectively was purposefully selected. This is because Fadama Development Projects are located only in these Local Government Areas of Okigwe agricultural zone. Three Fadama User Groups were randomly selected from list of Fadama User Groups in each of the Fadama Community Associations. Ten were randomly selected from the list of Fadama User Groups. Ten Fadama non- users were randomly selected from the villages that constituted the Fadama user groups. One hundred and eighty respondents made up the sample size for the study.

### Table 1. Socio-Economic Characteristics of the Respondents

This section shows the respondents distribution by these socio-economic characteristics.

Table 1 shows that greater percentage of the respondents (59.71% and 56.45%) for Fadama users and Non – Fadama users respectively were male. The value on marriage as a social institution in the study area is evident in the low percentage of divorce cases (2% and 1%) for users and non-users respectively.

Table 1: Socio-Economic Characteristics of the Respondents

Gender	USERS		NON-USERS	
	Frequency	Percentage	Frequency	Percentage
Male	45	59.71	35	56.45
Female	27	40.29	27	43.55
Total	72	100	62	100
<b>Marital Status</b>				
Married	42	61.94	41	66.13
Divorced /separated	2	2.24	1	1.62
Widowed	9	15.67	12	19.35
Single	19	20.15	8	12.90
Total	72	100	62	100
<b>Educational Level</b>				
Never attended school	-	-	2	3.22
Primary School Incomplete	11	15.27	5	8.06
Completed Primary School	32	44.44	11	17.74
SSCE/WAEC	10	13.88	17	27.42
OND, NCE, HND	12	16.67	8	12.08
B.SC/BA	5	6.94	11	17.74
M.SC/MA/MBA	2	2.8	6	9.67
Ph.D	-	-	2	3.22
<b>Total</b>	<b>72</b>	<b>100</b>	<b>62</b>	<b>100</b>

## Identification of Productive Assets acquired by Fadama Users

**Table 2: Productive Assets Provided By Fadama Development Project**

Productive Asset	Frequency	Percentage
Motor pumps	14	19.44
Generator	61	84.72
Cold Room	68	94.44
Vehicles	47	65.27
Palm oil processor	16	22.22
Oven	38	52.77

Source: Field Survey

Entries in table 2 shows that 19.44% of the Fadama users acquired motor pumps, 84.72% acquired generators, 94.44% acquired Cold Rooms, 65.27% had access to Vehicles, 22.22% acquired Palm Oil Processor while 38% acquired Oven from the Fadama Development Project. The provision of productive assets by the Fadama development Project is in line with the objectives of the project. Acquisition of productive assets is essential for increased productivity in agriculture as it makes farming very interesting hence encourages the participation of youths in agriculture. Also, adequate provision of infrastructure reduces the cost of labour in agriculture there increasing the net income of the farmer

## 4.2: Identification of Infrastructure Provided by Fadama Development Project

**Table 3: Infrastructure Provided By Fadama Development Project**

Infrastructure	Frequency	Percentage
Fish ponds	49	68.05
Water Borehole	52	72.22
Electricity	30	41.66
Pump water	29	40.27
Cold Rooms	18	25.00

Source: Field Survey

Entries in table 3 show that 68.05% of the fadama users consented that Fadama Development Project provided Fish ponds in the study area; 72.22% consented to the provision of Water Borehole, 41.66% consented to the provision of Electricity, 40.27% consented to the provision of Pump Water and 25% had cold rooms provided for them by the Fadama Development Project. The provision of pump-water, fish ponds, and cold rooms among other essential infrastructure by Fadama Development Project reduced the high incidence of drudgery that characterised subsistent system of farming in the Okigwe agricultural zone.

## RECOMMENDATION

1. There is urgent need for the provision of adequate community infrastructure by the Fadama Development Project in Okigwe Agricultural zone as there seem to be gross inadequacy of infrastructure in the study area when compared to the Northern states.
2. The project target of economic empowerment must be vigorously pursued through provision of productive assets.
3. The Federal Government and other donor agencies such as the World Bank involved in the funding of the Fadama Development Project should step up the grant for this project to ensure the achievement of the goals and objectives of this project.
4. More enlightenment should be done to encourage more farmers in the study area to join Fadama user groups I other to be part of the benefits accruable from the project.

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