**An Appraisal of Livelihood Diversification Strategy among Fadama II Farmers in Makarfi Local Government Area, Kaduna State**

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**Abstract**

The objective of this study is to assess the livelihood diversification of the Fadama II farmers in Makarfi LGA of Kaduna State, Nigeria. The study specifically examined the economic factors that influence livelihood diversification strategy among Fadama II farmers, identified the economic activities that they engage in through the livelihood diversification strategy and the economic impacts it has had on them. Multi-staged cluster and purposive sampling techniques were used to select the sample of 330 Fadama II farmers. The data for the study were collected using questionnaire, focus group discussion and in-depth interviews. The quantitative data were analyzed using Statistical Package for Social Sciences (SPSS) version 20 software, while the qualitative data were analyzed using content analysis. The findings revealed that Fadama II farmers predominantly diversified into agricultural related activities and non-farming activities. The findings of the study revealed that diversification was mainly in the non-farming income sources. The contribution of non-farm sources was more than the farm sources of income to the total household income. The study recommends further improvements in both farming and non-farming sources of income for sustainable livelihood and this can be achieved through investing more in the productive capitals of the rural households.

**Keywords:** Fadama II Farmers, livelihood, diversification, farming and non-farming activities.

**Introduction**

Many programmes have been introduced by governments aimed at enhancing agricultural production and improving rural dwellers’ living standard through livelihood diversification in Nigeria. Such programmes include the Operation Feed the Nation (OFN, 1976), to teach farmers how to use modern farming tools, the Nigeria Agricultural and Co-operative Bank (NACB, 1976), to help farmers finance agricultural activities and the Green Revolution programme (1986), to reduce food importation and increase local food production, among others, which were conceived to replace the previously failed programmes. According to the United Nations Development programme (UNDP) human development report 2008-2009, income inequality worsened from 0.43 to 0.49 between 2004 and 2009. This is correlated with differential access to infrastructure and amenities. In particular, there are more of the rural poor than the urban. Thus, livelihood diversification helps to raise rural households out from poverty. Diversification can be said to have a positive impact on individuals because it makes rural dwellers more secure and reduces the adverse effects of poverty, which is often influenced by not doing anything at some period in the year, for example, during the dry season. Livelihood diversification as a strategy has helped farmers who had been engaging in small scale or subsistence agricultural activities to engage in a number of different farming and non-farming activities in order to generate additional income to improve their household standard of living. It implies that the livelihood diversification strategy refers to the processes in which farmers and individuals introduce a variety of economic activities, ranging from farming to non-farming activities to generate additional income. This does occur via the production of agricultural and non-agricultural goods and services, such as irrigation, wage laboring, petty businesses, livestock production, breeders, dairy farming, sharecropping and other activities undertaken to improve the living standard of farmers’ households. The farmers usually diversify into other economic activities, as it is apparent that agricultural activities, such as crops production and the rearing of livestock alone cannot provide the means of escaping poverty for the majority of the rural poor.

The National Fadama Development Project (NFDP) was designed in the early 1990’s to promote simple and low cost improved irrigation techniques. The project was developed by the Federal Government of Nigeria in collaboration with the World Bank and the African Development Bank. The project adopted a wide-spread technique that enabled farmers to increase production by more than 300% in some cases (NFP, 2003). The Federal Government was impressed by the achievement of the Fadama I intervention in scope and in size and consequently initiated Fadama II. The National Fadama Development Project II (NFDP II) was implemented in 2004. In order to achieve the broad objectives of the programme, the Fadama Development Project II (FDP II) adopted the Community-Driven Development (CDD) approach, which is also in line with the World Bank Policy and strategies on poverty reduction, private sector leadership and beneficiary participation (World Bank, 2001).

The aim of the National Fadama Development programme II (NFDP II) is a follow up to the first phase of the National Fadama Development programme I (NFDP I), with its main objectives of exploiting and making effective use of ground water, using simple drilling technique to increase Fadama production and assist small scale farmers with grants and the construction of Fadama infrastructures, cost recovery and better access to credit, providing vehicles, pumps and other equipment. The grants are to enable the farmers to replace low value crops with high value ones, livestock and other agricultural and nonfarm activities. The Fadama II objectives were to ably sustain and increase the income of Fadama Resources Users (FRU) and those who depend directly or indirectly on Fadama resources (e.g. farmers, pastoralist, fishermen and service providers). These are to be achieved through empowering communities to take charge of their development agenda (i.e. each community would decide what they want before funding any project). The Fadama Project comprises of five components, which include: capacity building, Fadama infrastructures and plot assets acquisition support, demand advisory services and project management, monitoring and evaluation.

**Statement of the Problem**

The National Fadama Development Programme II was introduced in the year 2004 to increase the income of farmers through agricultural and non-agricultural activities, so as to improve their living standards. The NFDP II adopted a Community Driven Development (CDD) approach that seeks to put farmers in the driving seat to determine what types of economic activity they would want to engage in for greater productivity unlike the National Fadama Development Programme I that focused mainly on irrigation and improving subsistence farming.

The approach adopted various diversification strategies that enable farmers to engage in farm and non-farm economic activities to increase the income level of farmers and tackle the failure of agriculture to provide them with sufficient means of livelihood. Contrary to expectation, farmers resorted to non-agricultural activity, which seems to impact negatively on food production via agricultural activity, which hitherto was the mainstay of the economy. International Fund for Agricultural Development (IFAD, 2007) held that about 90% of agricultural production in Nigeria was carried out by small scale farmers who cultivate small plots of land. This development seemingly occasioned by the introduction of the community driven development approach by the National Fadama Development Programme II with the need to encourage farmers toward the non-agricultural activity to the neglect of agricultural activity. These arguments notwithstanding, most studies on Fadama II programme in the study area have ignored or touched little on the factors that influence the livelihood diversification among Fadama farmers. The present study therefore, seeks to find out the economic factors that influence livelihood diversification strategy among Fadama II farmers in the study area; identify the economic activities that Fadama II farmers engage in through the livelihood diversification strategy in the study area; and find out the socio-economic impacts of livelihood diversification on Fadama II farmers in the study area.

**Literature Review and Theoretical Framework**

According to Ellis (1999), diversification occurs when natural resources-based livelihood are no longer able to provide a secured long-term livelihood on their own for a variety of reasons. Some of these are land sub-division at inheritance causing the plot to become less viable for family food security, adverse environmental change or cyclical trends that increase the risks associated with natural resources-based livelihood activities, decline in agricultural markets relative to non-farm wage levels, marketing agriculture less viable as a source of livelihood, rises in input costs due to the removal of subsidies under structural adjustment programmes (SAP), and deterioration in access to rural public services, such as health or education due to poor economic performance, civil war or cost recovery policies under SAP. These reasons are in addition to what might be called a “classic” or generic reason for diversification, namely mitigating seasonality and spreading risk in order to reduce individual and family vulnerability to adverse events and trends. Diversification could have “positive and negative effects” (Ellis, 1999:3-4).

Livelihood diversification can occur by the direct utilization of land and other natural resources, as well as indirect utilization (trading or processing natural resources products) in addition to non-natural resources diversification (Ellis and Freeman, 2004). Livelihood diversification means adding new activities to the original farming activities. These include agricultural or non-agricultural work; work for one-self or for an employer and home-based work or work at other places. Rural livelihood diversification can be described as the process in which rural households construct a complex portfolio of activities and assets in order to survive and improve their standard of living (Ellis, 2000). Countries have generated from engagement in nonfarm activities and from transfers from urban areas or abroad (remittance and pension payments being the chiefs’ categories of such transfers) (Brycesson and Jamal, 1997).

According to Hussein and Nelson (1998), livelihood diversification may take place when farmers change the composition of the agricultural products they produce. This is said to be a natural starting point for the poor farmers’ producers with the low level of capital, who may be able to restructure their production through diversification in other non-agricultural areas, such as livestock integration, food crops, cash crops and agricultural processing. Livelihood diversification is, therefore, an attempt to combat the chronic or adverse effects of poverty, especially in the poor communities by encouraging households to engage in multiple activities or diversifying sources of livelihood, thereby maximizing the use of their potential, resources and time in the most productive way. Therefore, identifying the asset base of the poor is the starting point to poverty reduction. The assets are reflected in the natural resources base, human capital, financial capital, political capital and social network (Ekong, 2003 and Kinsella, Wilson, Jong, and Renting 2000).

The concept of National Fadama Development Programme II (NFDPII) is a follow up to the success of the implementation of the Fadama I from 1993-1999, with support from the World Bank. Fadama is a local Hausa word which refers to low-lying flood plains usually with easily accessible shallow groundwater. The main thrust of the National Fadama Development Programme II (NFDPII) is to sustainably increase the income of Fadama users through empowering communities to take charge of their own development agenda priorities (NFP, 2003). The Federal Government’s concern in establishing the National Fadama Programme, which is financed by the World Bank, the African Development Bank and the Federal Government of Nigeria, is aimed at reducing poverty and increasing the income of the rural farmers. The NFDP II uses a demand-driven approach where all Fadama users group identify their development priorities and use this approach, while building their capacity to enable them to make use of scarce resources (Bello, 2006).

Fadama II project was implemented in 2004 and it lasted for six years. The target states of the World Bank support were Adamawa, Bauchi, Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo, Taraba and the Federal Capital Territory. On the other hand, the target states of the African Development Bank support were Borno, Jigawa, Katsina, Kwara and Plateau states. The Federal Government of Nigeria requested for the finance of the Third National Development Project, known as Fadama III, in which the World Bank agreed even though the Fadama II has just started by then (Babatunde, 2006).

There are many studies that have been carried out in different parts of Nigeria and on different aspects of the impact analysis of the National Fadama Development Programme. For example, Bajoga, Adebayo and Babatunde (2006) examined the impact of the project specifically on the living standard of dry season farmers. Similarly, Adegbite, Adubi, Oloruntoba, Oyekunle and Sobanke (2008) carried out an assessment on the impact of Fadama II on small-scale farmers’ income in Ogun state with emphasis on the implication for agricultural financing in Nigeria. Using multi-stage stratified random sampling in their study, villages were selected each for both beneficiaries and non-beneficiaries in Fadama endowed communities of the Obafemi-Owade Local Government Area. Evidence from their study revealed no significant increase in the income of the Fadama beneficiaries compared to the non-beneficiaries of the Fadama programme in the study area were recorded or witnessed.

In another studies, for instance Kudi, Usman, Akpoko and Banta (2008) examined the impact of the Fadama II on poverty alleviation among farmers in the Giwa Local Government of Kaduna State, especially how the programme has affected the socio-economic status of the farmers and their production efficiency. They found that there was little improvement in their income. The implication is that better income gives better purchasing power and hence the improvement of living standards. Adeoye, Yusuf, Balogun and Carim-Sanni (2011) also undertook a study to examine rural infrastructure and the profitability of farmers under the Fadama II programme in Oyo state, using infrastructural index and gross margin. They compared the infrastructural development between Fadama II local government areas and non-Fadama II areas. Their findings revealed that more than half of the villages in the Fadama II local government areas have more infrastructures than non-Fadama II villages. This implies that the Fadama II programme had contributed significantly to the development of infrastructural facilities in Oyo state.

Umar (1994) posits that the introduction of Fadama Development Programme through the use of both traditional and modern irrigation technology allows the production of a variety of crops throughout the year. Adeoye, Yusuf, Balogun and Carim-Sanni (2011) argued that the National Fadama II Development Programme has contributed to increase in the income of Fadama II farmers as a result of modern farm implements provided by the programme, which have helped in large-scale and all-season farming, thereby increasing agricultural production and infrastructural development in the rural areas.

The theoretical framework adopted for this study is the modernization theory. The theory shares the ideology and assumptions similar with the intervention of the National Fadama II Development Programme. The modernization theory is largely based on the view that to develop means to become ‘modern’ by adopting Western cultural values and social institutions. It is suggested that undeveloped societies subscribe to value systems and institutions that hinder the development process. Lerner (1958) and many others are of the above view. One of the leading scholars of the modernization theory is Rostow (1960), who suggested that the growth model is one of the major historical models of economic development. This theory can be incorporated into agricultural development in the sense that if a country, such as Nigeria, wants to develop agriculturally, it should follow the way agriculture is being practised in the Western World. The Western world has moved from the use of crude implements, such as cutlass and hoes, in agricultural activities to the use of modern implements, such as tractors, riggers and harvesters, among others.

The modernization theory is used to explain the process of modernization within societies. The theory looks at the internal factors of a country while assuming that, with assistance, “traditional” countries can be brought to development in the same manner more developed countries have. The theory attempts to identify the social variables which contribute to the social progress and development of societies and seeks to explain the process of social evolution. The theory did not only stress the process of change but also the responses to that change. It also looks at the internal dynamics while referring to social and cultural structures and the adaptation of new technologies. According to the theorists of modernization, each society can develop from traditionalism to modernity and those that make this transition follow similar paths.

Durkhiem (1893) and Parsons (1951) focus on the social system as a whole, how they operate, how they change and the social consequences they produce. In trying to explain an aspect of social change, they ask several basic questions. How is this aspect related to other aspects of the system? What is its place in the overall operation of the social system? What kinds of consequences result from this? And how do these consequences contribute to the realization of the cultural values on which the system is based? Parsons viewed society as a system. He argued that the social system has four basic functional prerequisites: adaptation, goal attainment, integration and pattern maintenance. These can be seen as problems that society must solve if it is to survive. The function of any part of the social system is understood as its contribution to meeting the functional prerequisite. Adaptation refers to the relationship between the system and its environment. In order to survive, social systems must have some degree of control over their environment. Goal attainment refers to the need for all societies to set goals towards which social activity is directed. Procedures for establishing goals and deciding on priorities between goals are institutionalized in the form of the political system. Integration refers to the primary adjustment of conflict. It is concerned with the coordination and mutual adjustment of the parts of the social system. Pattern maintenance is the maintenance of the basic pattern of values institutionalized in the society.

Parsons maintains that any social system can be analyzed in terms of the functional prerequisites he identified. Thus, all parts of society can be understood with reference to the functions they perform. Parsons claimed that society is the way in which social structures are interconnected and dependent on each other. He, therefore, sees change as evolutionary, that change in one part of the society will eventually occur due to value consensus and believes that as society changes, it develops and the pattern variable within it will become more complex. Change, therefore, trickles throughout society. Parsons summed this as the organic analogy.

Durkhiem (1893) highlights the interdependence of the institutions of a society and their interaction in maintaining cultural and social unity. His work, ‘The Division of Labor in Society,’ describes how social order is maintained in the society and how primitive societies can make the transition to more economically advanced societies. In addition, McClelland (1961) approached this subject from the psychological perspective with his motivation theory, arguing that modernization cannot happen until a given society values innovation, striving for improvement and entrepreneurship.

The organic analogy implies that change in agricultural activities will also bring change in other sectors of the economy and these can be possible through adaptation, goal attainment, integration and pattern maintenance, which posit that the intervention strategy adopted by the Fadama II programme among farmers will drastically change the farming system and may automatically bring changes in other parts of the system as a whole. The intervention strategy of the National Fadama Development Programme II (NFDPII) among farmers introduced to them the new innovation strategy of Fadama II, which is a source of social change. Since modernization deals with social change, it is important to look at the technological point of view among the farmers and system of farming and how the project affects other sectors of the economy as a whole through innovation. However, a new innovation does not merely add something. It changes things. People in society are always coming up with new ideas and better ways of making life easier and more enjoyable. The modernization theory posits that technology makes it possible for a more innovated society and broad social change. What becomes of this is a dramatic change through centuries that have evolved socially, industrially and economically, summed up by the term “modernization.” For example, cell phones have changed the lives of millions throughout the world. This is especially true in Africa and other parts of the Middle East.

This study lays emphasis on the modernization theory because of its ideology and assumption similar with the intervention of the NFDP II. The modernization scholars are of the view that with the intervention of the western world, the traditional societies can also become developed. The modernization theory does not only stress the process of change, but also the factors responsible to that change, i.e. the introduction and adaptation of new technologies in which the traditional society will drastically change from an undeveloped to a developed nation. Also, one of the processes to transform the rural societies is the intervention of the NFDP II. Its basic idea is to transform the traditional farmers by introducing new technologies into agricultural activities, so as to transform the agricultural sector to a modern one.

**Materials and Methods**

The population of this study comprises of farmers who are in the Fadama Users Groups (FUGs) and the officials from the Fadama Community Association (FCAs). It also comprises of middle-aged and older men and women receiving or had received various forms of assistance from the National Fadama II Development Programme in Makarfi Local Government Area of Kaduna state. A total sample size of three hundred and thirty (330) respondents was drawn from the total population of one thousand and nine (1009) total Fadama users’ groups of the five selected political wards in study area. Multi-staged cluster and purposive sampling techniques were used to select the respondents. The first stage involved the random selection of five (5) political wards out of the ten (10) political wards in Makarfi Local Government Area, using simple random sampling technique. The second stage involved the random selection of one Fadama community from each of the five political wards, making a total of five Fadama communities. The third stage involved the selection of 120 Fadama farmers from each of the five Fadama communities, totaling 300 farmers. Purposive sampling technique was also used to select another 20 Fadama farmers (four from each of the five Fadama communities) for the focus group discussion; and ten (10) Fadama farmers (two from each of the five Fadama communities) for the in-depth interviews.

The data for the study were collected using questionnaires, in-depth interviews (IDI) and focused group discussions (FGD). The questionnaire was administered to the 300 respondents; while two focus group discussions was conducted on the 20 selected Fadama farmers, based on availability, ability and willingness to provide information for the study. The first session comprised of ten males and the second session was made up of ten females (the males were separated from the females due to religious factor) purposively selected from the Fadama users’ group of farmers. In-depth interviews were held with 10 Fadama community associations’ officials based on willingness and ability to give information. The questionnaire was designed in English and administered in the local language by the researchers and assistants, where necessary. It consists of open and closed ended questions and is in two sections. The first section deals with the demographic and socio-economic characteristics of the respondents, such as district/ward/village, age, sex marital status, level of education, number of members in household and occupation. The second section comprises their responses on the issues raised in the study.

A tape recorder was used to record the interviews. The quantitative data generated were processed using the Statistical Package for Social Science (SPSS) version 20 software, while the qualitative data collected were analyzed using content analysis.

**Findings**

Table 1 presents the various reasons for the diversification practices among the Fadama farmers.

**Table 1: Reason(s) for Diversification Practice**

|  |  |  |
| --- | --- | --- |
| **Reason(s)** | **Frequency** | **Percentage** |
| Poverty Reduction | 90 | 30.0 |
| Increase Income | 70 | 23.3 |
| Improve Standard of Living | 38 | 12.7 |
| All of the Above | 92 | 30.7 |
| Others | 10 | 3.3 |
| **Total** | **300** | **100** |

Source: Fieldwork, 2015

The results in Table 1 reveal that 30% of the respondents indicated poverty reduction as their reason for the diversification practice, 23.3% and 12.7% indicated increased income and improved standard of living as their reasons for diversification respectively. This implies that farmers practice diversification so as to increase their socio-economic wellbeing. A respondent during the IDI said he practised diversification because

As a farmer in rural area I cannot only rely on farming activity to make a living, because farming is like an investment which takes at least some period of months before I can start to benefit from whatever I planted. So for me, to be able to survive, I also sell dry grains and other fresh vegetables in the market and these enable me to make some little amount of money apart from the irrigation farming which is the main source of my income (Alhaji Yahaya, crops farmer interviewed on 12 February, 2015).

A discussant during the focus group discussion explains his reasons for his diversification, thus:

These types of joining farming system and other business especially (irrigation) farming is not done always rather (seasonal) and once the time passed, it implies that till next term when the Fadama II programme will distribute goods. Therefore, I need to get into other business, so that I can improve my living standard. I cannot depend entirely on farming alone, so as a farmer I engage in other business always, so that I can combine the two activities together, because through such business I can buy fertilizer and other inputs I need for my farm (Idris, a business man on 21 February, 2015 FGD).

In the same vein, an informant during the IDI said:

The reasons are to make more income and to improve my living standard, so that I can complement the farming activity, which is the main source of my income and these farming alone cannot enable me to increase my income and improve my standard of income except I diversify into such business so as to be able to meet my daily needs (Ali, crops farmer interviewed on 24 January, 2015).

**Table 2: The Type of Economic Activities NFDP II Farmers Diversify into**

|  |  |  |
| --- | --- | --- |
| **Type of Economic Activities** | **Frequency** | **Percentage** |
| Crop Production | 113 | 37.7 |
| Livestock Production | 68 | 22.7 |
| Fisheries | 28 | 9.3 |
| Forestry | 7 | 2.3 |
| Trading | 27 | 9.0 |
| Processing | 46 | 15.3 |
| Others | 11 | 3.7 |
| **Total** | **300** | **100** |

Source: Fieldwork, 2015

Table 2 shows the type of economic activities National Fadama II Development Programme farmers diversify into, indicating that 37.7% are on crop production only, 22.7% engaged in livestock production, 9.3% in fisheries and 2.3% in forestry and 9% in trading. However 15.3% of them engaged in processing; while a relatively smaller percentage of them (3.7%) are engaged in other economic activities. A participant during the IDI said that he diversified into “crop production and the rearing of livestock.” Another respondent said she “diversify into rearing livestock and making crafts, such as mats, baskets and hand fans.” A discussant during the FGD explained in detail how Fadama users tend to diversify into different economic activities. He said:

The programme advices participants of Fadama Users Groups (FUGs) to decide on what they want to do. They, the farmers come together to either engaged themselves on farm or off farm activities, but most of the time the participants go for agriculture related activities, in which agricultural inputs are the most things that most groups apply for as a result of these, mostly of FUGs, especially the males invest into crop production, rearing of livestock and buying and selling of fresh and dry grains While, the females invest into livestock and other petty business such as sells of wrappers, ‘‘kul-kul’’, sewing, sales of cooked food, grinding machine, and machine for extracting of groundnut oil and among others (Bello, a livestock producer on 21 February, 2015 FGD).

This means that the kind of economic activity to engage in emanates from Fadama users through discussions at groups or association meetings rather than being imposed, and the Fadama project only facilitates such determined economic activity by providing the needed tools and credit facility for such activity after the initial 30% payment of the fund. Thus, they could engage in irrigation and raining seasons farming, rearing of livestock production and non-farming activities.

**Table 3: Access to Materials for Diversification**

|  |  |  |
| --- | --- | --- |
| **Materials for Diversification** | **Frequency** | **Percentage** |
| Car | 71 | 23.7 |
| Tricycle | 57 | 19.0 |
| Fishing Boat | 10 | 3.3 |
| Sewing Machine | 58 | 19.3 |
| Others (i.e. land, farm inputs, etc.) | 27 | 9.0 |
| No Access | 77 | 25.7 |
| **Total** | **300** | **100** |

Source: Fieldwork, 2015

Table 3 reveals that 23.7% of the respondents have access to the car and 19% have access to tricycle as the means of diversification, 19.3% of them sewing machine and 9% have access to other means of diversification, farms inputs, etc.). However, 25.7% of the respondents have no access to materials for diversifications. This suggests that many materials are accessed by Fadama II users that either facilitate their farming activities or enable them to diversify. However, a participant during the IDI said:

I am into sale of grains and of vegetable in the market. As result of diversifying practice; I have access to irrigation land, four cows, ten goats and twelve sheep among others. I acquired the means through irrigation practice under the Fadama II programme and the sale of grains and the vegetable business I am into (Mrs. Aliyu, crops farmer interviewed on 31 January, 2015).

However, there are some constraints to accessibility for materials for diversification. An informant clearly said:

The constraint to accessibility is late provisions of the inputs and inadequate in the distributions of such materials, such as seeds, fertilizers, agrochemicals, water pumps and among others, the inadequate and lateness in provision of such input, to some extent force us (farmers) to change our initial plans, just because the inputs are not available on time or inadequate, these are some of the problems attached to us farmer under the Fadama II when we decide to diversify into some new activities (Abubakar, crops farmer interviewed on 12 February, 2015).

A participant during the IDI said:

I have access, only that the materials are distributed to us late and the cost is a little bit higher to us farmers even though is cheaper than market. Finally, the materials are not enough to us because every year new members are coming into Fadama associations, so this increase of the participants of Fadama is affecting the older Fadama users groups to have complete access as we usually have when the programme was earlier introduced to us (Nana B., a livestock farmer interviewed on 24 January, 2015).

Another participant said:

The problem lies on the lateness in the distributed of the materials and the situation where the materials provisions are not enough to us. For instance, my group demanded twelve bags of fertilizers for their members but the Fadama II end up providing my group with only eight bags and the due process in registering members and the opening of account (Murtali, crops farmer interviewed on 7 March, 2015).

From the above, it can be said that although there is no constraint formally attached to accessibility, the late arrival of the materials distributed and high price, among others, may pose constraints of the Fadama II users’ accessibility.

**Table 4: The Impacts of Livelihood Diversification on Fadama II Farmers**

|  |  |  |
| --- | --- | --- |
| **Impacts** | **Frequency** | **Percentage** |
| Poverty Reduction | 48 | 16.0 |
| Increase Income | 28 | 9.3 |
| Improve Standard of Living | 12 | 4.0 |
| All of the Above | 212 | 70.7 |
| **Total** | **300** | **100** |

Source: Fieldwork, 2015

Table 4 shows the impacts of livelihood diversification on Fadama II farmers, indicating that a majority (70.7%) of the respondents indicated the impact of livelihood diversification as poverty reduction, increased income and improved standard of living. About 16% and 9% indicated poverty reduction and increased income respectively. Only a relatively smaller percentage of them (4%) indicated improved standard of living. This implies that livelihood diversification has impacted substantially on the lives of the Fadama II farmers, and this is line with the findings of Bajoga, Adebayo and Babatunde (2006), that diversification has increased the income of famers, reduced the level of poverty and improved the standard of living, among others. A participant during the IDI said the following are the impacts of the Fadama II programme:

The programme increases the income generating activity, increases crops production and enhances in rearing of livestock and introduced various forms of business to the participants. The programme also provides us with modern equipment and how best to manage land and provides us with inputs, water pumps, fishing net, fish ponds, constructions of culverts, bridges, roads and provide shops for participants and among others (Victoria, a farmer and service provider interviewed on 31 January, 2015).

A discussant during the FGD said:

National Fadama Development Project has increased the income of Fadama users i.e. farmers, pastoralists, fishers, hunters and service providers through rural finance the Nigeria Agricultural Co-operative and Rural Development Bank (NACRDB), it develops the interest of private sector in agriculture by contracting private organizations to support farmers with advisory and technical services, it offers support to small infrastructure by empowering rural communities to take charge of their economic activity, the proactive by ensuring that they select their own economic activities rather than supplying them through government channels alone and it helps with the availability, accessibility, and sustainability of financial services in the area (Bilkisu, a service provider on 28 February, 2015 FGD).

The secretary FCAs during the FGD said that the NFDP II supported the group’s prioritized subproject in the Local Development Plan (LDP) with the construction of fish ponds and fencing in August, 2006 at a cost of two million naira and agricultural input support in March, 2006 at a cost of three hundred thousand naira only. Thus, a discussant argued that:

Before the advent of the Fadama II project, we had only a sewing machine, but with the coming of the project we now have ten (10) sewing machines, a designing and a weaving machine from the proceeds. Through the program, we are able to give loans to our members of three thousand (N3, 000) naira each with one percent interest and repayable in four months. We also gave scholarship to two of our members to study in Nuhu Bamalli Polytechnic, Zaria. In additional, we have now diversified into rearing of livestock with three (3) cows, eight (8) sheep and twelve (12) goats (Umar, a service provider on 21 February, 2015 FGD).

**Discussion of Major Findings**

The findings of the study indicated that the main constraints attached to accessibility is the delay in the distribution of the materials and that the materials are a little bit expensive. Some of the Fadama Users Group members hardly pay their own part of the agreement (that is, the payment of 30%) and this sometimes resulted in delay in the disbursement of inputs. The findings revealed that, although the Fadama II Farmers predominantly diversified into agricultural related activities, such as crops and livestock productions, among others, many of them diversified into non-farming activities. This could be as a result of some pull and push factors. The pull factors are better returns in the non-farming sectors compared to the agricultural sector while the push factors are inadequate farm input and output, land constraints, the late distribution of farm input and loan disbursement, which influence farmers to diversify and undertake other activities, which may have a low or negative correlation with those of crop production. Amanze, Ezeh and Okoronkwo (2015) observe that Fadama II users engage in income diversification that is the process of switching from low-income crop produce to higher value crops, livestock and non-farm activities. The findings revealed that the Fadama II Programme has certain impacts, as it has helped many households to improve in their level of income generation, thereby reducing their poverty and increasing their standards of living. This is in line with Adeoye, Yusuf, Balogun and Carim-sanni (2011) and Ellis (1999) findings that the National Fadama II Development Programme has increased the income of its users, thereby enhancing their standard of living.

**Recommendations**

The following recommendations are proffered:

1. The procedures involved or the prerequisite for participating in Fadama II programme and any other rural livelihood improvement intervention programme should be made easy, so as to encourage farmers to participate. The counterpart contribution on the programme by beneficiaries should be reduced, so as to encourage prompt payment and increase participation. For instance, the 30% initial payment seems to be too high for some farmers, thereby discouraging them.
2. The government should ensure that the materials distributed and services rendered to Fadama II farmers are closely monitored to avoid being hijacked by dubious officials and be delivered to a targeted group of farmers, who are in dire need of such materials, so as to reduce their level of poverty, increase income and living standard, which the project aimed to achieve.
3. Generally, governments and non-governmental organizations should provide the needed funds on time and encourage community support through opinion leaders, community leaders, village heads and youth leaders for the sustainability of the programme and popular participation. Also, the government should improve on the rural infrastructure, such as roads, that would facilitate farming activities.

**References**

Adegbite, D. A., Adubi, K. O., Oloruntoba, A. O., Oyekunle, O. and Sobanke, S. B. (2008) Impact of National Fadama Development Project II on Small Scale Farmers in Ogun State. Implication for Agricultural Financing in Nigeria. *Journal of Sustainable Development in Africa.* Vol.10, No .3.Clarion University, Pennsylvania.

Adeoye, A., Yusuf, S. A., Balogun, O. L. and Carim-Sanni, A. (2011) Rural Infrastructural Development and Profitability of Farmers Under Fadama II Project in Oyo State, Nigeria. *World Rural Observation.* Vol.3 (2), Science Publication.

Amanze, J. O. 1., Ezeh, C. I. and Okoronkwo, M. O. (2015) Pattern of Income Diversification Strategies among Rural Farmers in Nnewi North Local Government Area of Anambra State. *Journal of Economics and Sustainable Development.* Vol.6 (5) Accessed on line atwww.iiste.org.

Babatunde, O. (2006) Differential Poverty Reduction Impact of Small-scale Irrigation Development between its Beneficiaries and None Beneficiaries in Nigeria. Technical Report on the Agro-polis Award.

Bajoga, Y. U., Adebayo, A. A. and Babatunde, B.(2006) The Impact of Fadama Development Project on the Living Standard of Dry Season Farmers of Gombe State. *Journal of Environment.* Vol. 1(1).

Bello, A. (2006) Fadama II Needs, Instrument for Millennium Development Goals.” An Article Written on Fadama II. Update in Bulletin of National Fadama Development Office.

Bryceson, D. F. and Jamal, V. (Eds) (1997) Farwell to Farms: Deagrarianization and Employment in African. *Research Series.* No.10, Laden, Nether lands: African Studies Centre.

Durkheim, E. (1893) *The Division of Labor in the Society.* New York: The Free Press.

Ekong, E. E. (2003) *Rural Sociology: An Introduction and Analysis of Rural Nigeria.* Uyo: Dore Educational Publishers.

Ellis, F. (1999) *Rural Livelihood and Diversity in Developing Countries.* Oxford: University Press.

Ellis, F. and Freeman, A. H. (2004) *Rural Livelihood and Poverty Reduction Strategies in Four African Countries.* Oxford: University Press.

Ellis, F. (2000) *Marking a Living: Changing Livelihood in Rural African.* London: Rout Ledge.

FAO (2004) Food and Agriculture Organization of the United Nation. Livelihood Diversification and Natural Resources Access.

FGN/FAO (2001) Plan of Operations, Abuja: FGN

Furtado, C. (1973) *Elements of Theory of Underdevelopment: “The Underdevelopment” Structures. In Bernstein, H. (Ed) Underdevelopment and Development*. London: Penguin.

IFAD (2007) Rural Poverty in Nigeria: Agriculture in Federal Republic of Nigeria. International Fund for Agricultural Development. Retrieved online at ifad.org/media/press/2007/index.htm

Jamal, V. (1995) *Adjustment Programmes and Adjustment: Confronting the New Parameters of African Economics*. In Jamal, V (Eds), *Structural Adjustment and Rural Labor Market in African*. London: St Martin’s Press.

Kinsella, J., Wilson, S., Jong, F-de and Renting, H. (2000) Pluractivity as a Livelihood Strategy in Irish Farm Households and its Role in Rural Development. *Sociologies Rurallis.* 40 (4), 481-496.

Kudi, T. M., Usman, I., Akpoko, J. G. and Banta, A. L. (2008) Analysis of the Impact of National Fadama Development Project II (NFDPII )in Alleviating Poverty among Farmers in Giwa Local Government of Kaduna State, Nigeria. *Ozean Journal of Applied Science.* 1(1). Pp.1-8.

Lerner, D. (1958) *The Passing of Traditional Society: Modernizing the Middle East*. New York: Free Press.

McClelland, D. (1961) *The Achieving Society.* Princeton, N.J: Van Nostrand Press.

National Fadama Development Programme (NFDP, 2003) accessed on line at [www.nationalFadamadevelopmentprogram/2003.com](http://www.nationalfadamadevelopmentprogram/2003.com)

Parsons, T. (1951) *The Social System.* German: Lidz and Staunmann Publishers.

Rodney, W. (1972) *How Europe Underdeveloped Africa*. Tanzania: Publishing House.

Rostow, W. W. (1960) *The Stages of Economic Growth: A Non-communist Manifesto*. London: Cam-bridge University Press.

Todaro, M. (1982) *Economic for a Development World*. London: Longman.

World Bank (2001) Rural Development and Strategies on Poverty Reduction.