

Assessment of the Implementation of World Bank Assisted Fadama III Project in Capacity Building: Experience of Makurdi Local Government Area of Benue State

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Abstract

This study assessed the implementation of World Bank assisted Fadama III project in capacity building in Makurdi LGA of Benue State-Nigeria. Descriptive statistics of tables and simple percentages were used to analyze the data gathered from the 287 participants of Fadama III project in the study area. It was found out that Fadama III project achieved 92.93% implementation success in capacity building in the study area. It also revealed that Fadama III project impacted positively on the income of participants, and as well improved the capacity of participants in the areas of group management technique, conflict management and resolution records keeping, assets management and maintenance, savings and credit mobilization and sensitization on health. The study therefore, recommended that the project be consolidated by expanding the scope of the project, particularly to accommodate vulnerable groups which were seen to be excluded in order to ensure robust and inclusive capacity building as well as a sustained self-reliance even after the project is completed and closed.

Keywords: Assessment, Implementation, Fadama III Project, and Capacity Building.

Introduction

Nigeria as a country is blessed with potentially good land and water resources required for sustainable agricultural development. However, increasing reduction in production and productivity has continued to characterize Nigerian agricultural sector thereby limiting the ability of the sector to perform its traditional role in economic development (Ajibefun & Aderinola, 2004; and Zira, et al., 2020). In order to break this cycle and improve the performance of the agricultural sector, the Nigerian government over the years introduced and implemented several policies and programmes aimed at revamping the sector (Vehe, Ijuo & Iortyom, 2020).

In this connection, World Bank through National Fadama Development Project (NFDP), introduced small-scale irrigation in selected states in Nigeria with the aim of boosting food production and raising

the standard of living of people by financing the development of Fadama lands. In affirmation, Akinbile, et al. (2006) observed that Fadama development was an initiation to finance small scale irrigation practice characterized by flexibility of farming operations, low inputs requirement, high economic values, and minimal social and environmental impact and hence conform to the general criteria for sustainable development.

The first phase of this project started in the early 1990s, and it was known as Fadama I. The Fadama I programme focused mainly on production but largely neglected downstream activities such as processing, preservation and conservation and rural infrastructure to ensure the efficient evacuation of farm output to markets. Furthermore, the project did not take into consideration other agricultural production activities and resource uses such as those for livestock and fisheries production. This resulted not only in increased conflicts between the users but also restricted benefits to only those accruing from crop production. Sokoto, Kano, Bauchi, Jigawa, Gombe, Zamfara and Kebbi were the states that participated in the first phase of the project (Okechukwu, 2015).

The Second National Fadama Development Project was introduced thereafter as one of the major instruments for achieving overall development of the agricultural sector in Nigeria. The project declared disbursement effective on May 27, 2004, with funds from World Bank and the African Development Bank to the tune of US\$ 100 million and US \$ 30 million respectively. The following states participated, namely, Adamawa, Bauchi, Gombe, FCT, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo, Borno, Jigawa, Kastina, Kogi, Kwara, Plateau and Taraba (NFDO, 2007). Fadama II was designed to operate for six years (2004–2010) with an overall goal of contributing to poverty reduction in Nigeria. Actual implementation did not begin until September 2005. The project had a target of 50 percent male and female Fadama resource users to benefit from the project-supported activities.

Following the relative success of Fadama II, it was decided by the funding partners that a third phase was good and then Fadama III was introduced. This was as a realisation of government to use the project as a strategic instrument to enhance growth in sectors other than oil in order to sustainably increase the incomes of Fadama users (farmers, fisher folks, hunters, pastoralists, and gatherers) to take charge of their own development agenda through the provision of financial services, matching grants for small scale productive/economic infrastructure sub-projects, such as fish ponds, cold rooms, boreholes, feed mills, feeder roads, small bridges, culverts, rural markets, etc. According to Okechukwu (2015), the project has six main components:

- i. Capacity Building, local government and communication

- ii. Small scale community-owned infrastructure
- iii. Advisory services and input support development
- iv. Support to the agricultural development programs (ADPs) sponsored research and on-farm demonstrations
- v. Asset acquisition for individual Fadama Users Groups (FUGs)/Economic Interest Groups (EIGs)
- vi. Project management, monitoring and evaluation.

Generally, the project was characterized by training, skill development and increased diversification of on-farm and off-farm activities. The beneficiaries also include groups considered to be disadvantaged by society such as; women, widows, widowers, the handicapped, the sick including people living with HIV/AIDS and the unemployed youth. In addition, the Fadama project aimed to reduce natural resources based conflicts among farmers and other economic interest groups including indirect exploitation of resources in the Fadama (lowland) aquifers found in Nigeria's major river system as well as surface irrigation perimeters (World Bank, 2003).

Presently, the National Fadama Development Project is being widely implemented in all the 36 states of the federation and the Federal Capital Territory (FCT), including Benue State with 20 participating Local Governments namely, Makurdi, Gwer, Gwer-West, Guma, Tarka, Gboko, Buruku, Ushongo, Kwande, Vandekya, Konshisha, Katsina-Ala, Ukum, Logo, Oju, Otukpo, Okpokwu, Apa, Ogbadibo and Agatu (SFDO, 2010). However, the success of the implementation of the project in Benue State has not been empirically assessed. Most of the studies (Oladoja & Adeokun, 2009; Osondu, Ijioma, Udah, & Emerole, 2015; Pius, 2014; Okechukwu, 2015; Yunana, Abubakar & Adebayo, 2013; Agbarevo & Okwoche, 2014; Adeyemi et al, 2020) carried out with regard to the project were either conducted in different locations or tend to consider different component of the project.

Against this backdrop, this study assessed the implementation of fadama III project in Benue State with specific reference to the capacity building component of the project; to examine the implementation success level and how the project has impacted on the income of participants in Makurdi Local Government Area of the state.

Literature Review

Fadama (a Hausa name for irrigable land) are flood plains and low-lying area underlain by shallow aquifers and found along Nigeria's river systems (Ingawa, 2004; Usanga, 2018). Fadama also refers to a seasonally flooded area used for farming during the dry season. It is defined as alluvial, lowland

formed by erosion and depositional actions of the rivers and streams. They encompass land and water resources that could easily be developed for irrigation agriculture (Qureshi, 1989 and Khan, 2020).

Fadama are typically waterlogged during the rainy season but retain moisture during the dry season. The areas are considered to have high potential for economic development through appropriate investments in infrastructure, household assets and technical assistance. When Fadama spread out over a large area, they are often called 'Wetlands' (Nkonya, 2008; Ingawa, 2004; Usanga, 2018 and Ovharhe, 2019). On the whole, the seasonally waterlogged or flooded land-known as Fadamas in Nigeria-comprises of:

- (a) Enclosed or open depressions;
- (b) Streamside Fadamas, which are found adjacent to river channels in intermittent or continuous strips, or
- (c) Floodplain Fadamas, which are characterized by back swamps, levees, point bars, meander scrolls and oxbow lakes.

In the northern Nigerian states, the Fadamas are mainly low-lying flood plains composed of fluvial deposits and containing extensive exploitable aquifers. Fadamas vary in width from a few hundred meters to 20km and encompass the land and water resources that could be developed for irrigated agriculture. Fadamuni is actually the plural of Fadama, but it is more common in literature to see 'Fadamas'. In other parts of Africa, features similar to Fadamas are called dambos (Zambia); vleis (Zimbabwe and South Africa); mbugas (East Africa) and bolis (Sierra Leone). However, the word Fadama is no longer restricted to the Hausa usage alone. It is called Jande in Tiv, Aje-Eho-Oto, and Eru-Uwah which is a description of mouldy farm land in Idoma and Igede (Iortyom, 2013). The enormous potentials for irrigated agriculture in the Fadama and flood plain are unquestionable. It is now internationally adopted for use in describing projects used by the International Development Association (IDA) to reduce poverty among farmers and other users of Fadama resource.

Nigeria, whose population accounts for nearly one-fourth of sub-Saharan Africa's poor, has been hugely involved in small-scale Fadama irrigation investments so as to boost the opportunities for poor people to gain and maintain secure access to productive assets (e.g., land, water and other natural resources) and social assets (e.g., extension services and education). In Nigerian Fadama lands, the rationale for resource utilization hinges on the availability of valuable agricultural resources in zones where agricultural prospects are poor due to the low and erratic nature of rainfall, vagaries of weather and extended periods of drought. Evaporation and evapo-transpiration are high in Nigerian Fadama lands.

Irrigation is highly essential for crop and food production in Nigerian Fadama lands during the dry season and even during wet season irrigation is useful to reduce crop risks. Fadama utilization, which has been a major feature of the agricultural, food, economic and demographic experience of the Nigerian dry belt, has largely benefited from dry season irrigation investments by Northern Nigerian Agricultural Development Projects (ADPs) since the mid-1970s and early 1980s (Okechukwu, 2015).

Food crop production in the Fadamas has traditionally depended on rain fed agriculture during wet season and on residual moisture after flood recession in the dry season. Until early 1980s, irrigation in Nigerian Fadama lands was undeveloped and limited by available technology (the traditional water lifting devices, such as, the labour-intensive shadoof, calabash and bucket irrigation from channels, which are used to lift water onto the land). Water lifting by such devices can only irrigate land area limited to about 0.1 ha per shadoof. In the mid-1970s, the World Bank provided assistance of up to US\$1.16 billion for the initiation of state-level ADPs in northern Nigeria as the country's oil production and revenues were rapidly expanding and stimulating rapid urban growth. The ADPs were designed to increase smallholder income and food crop production with emphasis on extension, rural infrastructure and input supply. Only one percent of total lending of the World Bank for agriculture through the ADPs was specifically meant for small-scale irrigation in the Fadamas (World Bank, 2003).

Although there was no specific small-scale irrigation development in the Fadamas through the ADPs, the ADPs in Bauchi, Kano (now Kano and Jigawa since August 1991) and Sokoto (now Sokoto and Kebbi since August 1991) states contained features that supported and promoted Fadama development. These three states (now five states) were not only the first states to have the state-wide ADPs but have also performed better than all other Nigerian states in Fadama development because at least 60 percent of the total irrigated land in the Fadamas in Nigeria are located in these states. The ADPs in these northern Nigerian states started by attempting to promote village perimeters using large diesel pump sets, however, there was little demand. The ADPs adjusted by, first, promoting tube wells with small gasoline powered pumps, and, later, wash boring (introduced from India), a low-cost technique suitable for shallow aquifers overlain by coarse materials (World Bank, 2003).

Capacity Building, Local Government and Communication

This component is responsible for the provision of support for capacity building of Fadama Community Associations (FCAs) as well as financing of technical assistance training, equipment and other institutional support to the participating local governments. It is also responsible for awareness creation

and understanding of the project goals, approach and implementation to all stake holders particularly on community driven approach whereby all users of Fadama resource will be encourage to develop participatory and socially inclusive local development Plans (LDPs) and reducing conflicts between Fadama Users (NFDO, 2007).

The project is targeted at the rural poor engaged in economic activities. These include, crop farmers, pastoralists, fisher folks, nomads, traders, hunters, processors, gatherers as well as other economic interest groups. It also targets relatively disadvantage groups including women, widows, widowers, the handicapped, the sick including people living with HIV/AIDS and the unemployed youth. The service providers included the government agencies, private operators, and professional associations operating in the project areas.

The purpose of including all private economic agents who legitimately share the common land and water resources is to help acknowledge and address conflict arising from the use of such resources. The beneficiaries under the Fadama III project are encouraged to form themselves into economic interest groups (EIGs) or Fadama User Groups (FUGs).

Funding of Fadama Programme in Nigeria

In 1992, when the Fadama project started, it was estimated that US\$91.6 million would be the project base costs for the 4-year disbursement period of the project, with a foreign exchange amount of US\$49.8 million. Apart from the costs associated with salaries, studies and technical assistance, all other costs were estimated with a 10 percent physical contingency. Total project costs, including all contingencies, amounted to US\$105.9 million. The World Bank loan of US\$67.5 million was expected to finance about 64 percent of total project costs, by covering 100 percent of foreign exchange and 20 percent of local costs.

The financing plan for the project entailed that the World Bank loan would only finance the capital costs of the project, while the beneficiary states of Nigeria and the FGN would finance the recurrent project costs completely. Only 4 percent of total project costs, *i.e.*, US\$4.5 million were required to be contributed by the beneficiary state governments namely, Bauchi, Jigawa, Kano, Kebbi and Sokoto States to cover local salaries and other operating costs. 27 percent of the total project costs, *i.e.*, US\$29.2 million were required from the Fadama beneficiaries as their contributions towards the project. The FGN was to contribute the remaining amount of US\$4.7 million (4 percent of total project costs). The FGN's contribution includes US\$3.9 million on duties and taxes (World Bank 2000).

The total cost of US\$168 million was expected to be the financing cost of the second phase of Fadama programme out of which the World Bank credit was US\$ 100 million, the African Development Bank approved a loan of US\$35.190 million, a grant of US\$7 million from Global Environmental Fund and the remaining 15% which was US\$25,810 million was counterpart fund from the Federal Government and the participating states (World Bank, 2003 and ADF, 2004).

The third phase of the National Fadama Development Project has an indicative total cost of US\$ 450 million with the shared contributions and project cost detail presented in Tables 1 and 2.

Table 1: Counterpart funding as agreed by Stakeholders

Counterpart Funding	Amount	Percentage
IDA Credit	USD 250m	55.6%
Federal Government	USD 23m	5.1%
States Government	USD 77m	17.1%
L.G.A.	USD 40m	8.9%
Communities	USD 60m	13.3%
Total Cost	USD 450m	100%

Source: National Fadama Development Office, Abuja

Table 2: Cost of Project Budgeted to various project Components

S/No	Component	Indicative Cost (inUS \$M)	% of Bank Total	% of Bank Financing	% of Bank Financing
1.	Capacity Building, Communication and Information Support	87.50	19.44	28.20	11.28

2.	Small Scale Community-Owned Infrastructure	73.57	16.67	6.07	27.00
3.	Advisory Services and Input Support	39.50	8.78	24.60	9.84
4.	Asset Acquisition for Individual FUGs/EIGs	150.0	33.33	105.0	42.00
5.	Support to ADPs and Adoptive Research	37.43	8.11	6.43	2.20
6.	Project Administration, Monitoring and Evaluation	59.30	13.07	17.50	6.60
7.	Project Preparation Facility	2.70	0.60	2.70	1.08
Total Project Cost		450.0	100%	250.0	100%

Source: National Fadama Development Office, Abuja

As shown in Table 2, capacity building component attracted the highest funding cost (87.5 million USD) with 11.28 percent bank financing.

Empirical Literature

Using multi-regression analysis on a sample of 100 benefiting farmers in Ogun, Nigeria, Oladoja and Adekun, (2009) appraised the activities of the national Fadama development project and found out that the project has positive and significant impact on the output level of farmers in the State. Also, Osondu et al (2015) examined the impact of National Fadama III Development Project on poverty status of households of participating food crop farmers in Abia state, Nigeria, with specific objectives to determine and compare poverty levels among Fadama III and non-Fadama III participating food crop farmers and determine effects of Fadama III programme on participating farmers' income, farm output, farm size, labour and fertilizer use levels using descriptive statistics and head-count ratio on a sample of 360 respondents consisting of 180 Fadama III and 180 non-Fadama III food crop farmers and found out that Fadama III Programme impacted positively and significantly on the income of farmers who participated.

In a related work, Pius (2014) carried out a comparative study, assessing the income level of Fadama III beneficiaries after the project mid-term review relative to non-beneficiaries on a sample of 240 respondents (consisting of 120 beneficiaries and 120 non-beneficiaries) in Delta State using the Difference in Difference (DD) analytical tool and revealed that the Project intervention in the State has

impacted positively on the income of small scale farmers—both direct project beneficiaries and non-project beneficiaries.

While adopting ordinary least squares (OLS) and t-statistic in Two-Sample T-test on a sample of 72 crop farmers who benefitted from the Fadama III project in Enugu State, Okechukwu (2015) found that the project was significantly effective as farmers' income, farm size and output level increased after benefiting from the project. Yunana et al (2013) also evaluated the impact of Fadama III project on income and wealth of beneficiary farmers in FCT, using descriptive statistics on a sample of 200 beneficiaries and found out that the value of productive assets of Fadama beneficiaries increases from N81, 240.97 before Fadama III to N84, 9577.5 after Fadama III project indicating a positive contribution of the project in the state.

Equally, investigating the effect of Fadama III project on crop yield among farmers in Kwande Local Government of Benue State, Nigeria, using mean and t-test on a population of 100 farmers who participated in the project, Agbarevo & Okwoche (2014) and Madu (2019) found out that participation in Fadama III project significantly increased their crop yield.

The location of study, methodology and the project investigated in these empirics created a gap for this study.

Materials and Methods

Study Area

Makurdi Local Government Area is the capital of Benue State. It lies between latitude 7° 43'48" N and 7° 45'47" N of the equator and longitude 8° 31'48" E 8° 33'40" E and of the Greenwich meridian. The area is situated within the Benue trough, at the middle Benue valley and is separated into the South and the North Banks by the second largest river in the country, the River Benue.

The flow pattern exhibited by the river is highly patterned along the incidences of rainfall. But unlike many smaller rivers in the country which exhibits higher velocity and greater volume during rainy season, but almost dry up during the dry season, the River Benue has enough volume of water all year round although with greater volume in the rainy season (Ifabiyi, 2008).(See the map in figure 1).

The Local Government Area is composed of eleven council wards; Agan, Northbank 1, North bank II, Central Mission, Baa, Fiidi, Modern Market, Wadata/Ankpa, Wailomayo, Adaka and Mbalagh (Hilakaan & Ogwuche, 2015).

Table 3: Membership and Sample Size of the participating FCAs

S/N	FCA	Membership
1.	Anter	40
2.	Agan	43
3.	North Bank	45
4.	Adeke Genabe	41
5.	Tyo Mu	38
6.	Agboughul	36
7.	Avine	44
Total	`	287

Source: Author’s Fieldwork

Table 3 summarized the population of study and the number of participants per stratum.

Data Presentation, Results and Discussion of Findings

Socio-Demographic Characteristics of the Respondents

This is presented in Table 4.

Table 4: Socio-Demographic Characteristics of the Respondents

a. Age

Age Bracket	Frequency	Percentage [%]	Cumulative [%]
Below 14	1	0.3	0.3
15-29	106	36.9	37.2
30-44	120	41.9	79.1
45-59	58	20.3	99.4
60-74	1	0.3	99.6
70-74	1	0.3	100
Total	287	100	

b. Gender

Sex	Frequency	Percentage [%]	Cumulative [%]
Male	187	65.1	65.1
Female	100	34.9	100
Total	287	100	

c. Marital Status	Frequency	Percentage [%]	Cumulative [%]	Source: Author's Field work Table 4 shows the age distrib ution
Single	127	44.3	44.3	
Married	143	49.8	94.1	
Widowed	15	5.2	99.3	
Divorced	2	0.7	100	
Total	287	100		

d. Educational Status	Frequency	Percentage [%]	Cumulative [%]
No Formal Education	68	23.7	23.7
Primary Education	49	17.1	40.8
Secondary Education	128	44.6	85.4
Tertiary Education	42	14.6	100
Total	287	100	

of the respondent. It shows that the age category 30-44 years is the mode. It can be observed that participants between 30-44 years dominate the project as they constitute 41.9 % of the entire respondents. The Table also reveals that out of the 287 respondents that participated in the Fadama III programme, 110 of them representing 65.1% are males while 59 of the respondents representing 34.9% are female.

Also, from Table 4, it can be found that about 143 (49.8%) of them are married and living together in the family while, 127 (44.3%) are single. The widowed is 5.2% and divorced, 0.7% of the total respondents. This implies that, apart from the large number of youth in the programme, the more vulnerable groups are not well represented (i.e widowed & divorced) in Fadama III project in the study area.

On educational qualification, Table 4 shows that majority of the participants of the programme have secondary education with 44.6% (i.e 128) of the respondents. 49 (17.1%) of the respondents completed primary education while 42 (14.6%) of the respondents have attained higher education (Tertiary Education). However, 68 (23.7%) of the respondents had no formal education. This has great implication on the level of literacy among the respondents on the implementation of the Fadama III project as it portends great success, while the illiterates among them may perceive the project as being more of an embodiment of paper works.

Capacity Building of Fadama III Project

The capacity building of the project aimed to strengthen the capacity of the Fadama Community Association and the constituents Fadama Users Group (FUG). The project budgeted N1, 575, 000.00 in its efforts to implement this component (see Table 5). The Fadama User’s Groups that participated in the programme are shown in Table 5. The component parts that treated include:

- (i) Group management technique
- (ii) Conflict management and resolution
- (iii) Record keeping
- (iv) Management and maintenance of assets
- (v) Saving, mobilization and credit formation
- (vi) Sensitization on HIV/AIDS.

Table 5: Capacity Building.

S/N0	FADAMA III COMMUNITY ASSOCIATION	AMOUNT ,000	AMOUNT RELEASED ,000	NO OF MEMBERS	NO TRAINED	OUTSTANDING	IMPLEMENTATION (%)
1.	ANTER	225	225	40	37	3	92.5
2.	AGAN	225	225	43	41	2	95.35
3.	NORTH BANK	225	225	45	43	2	95.60
4.	ADEKE GENABE	225	225	41	39	2	95.1
5.	TYO MU	225	225	38	35	3	92.1
6.	AGBOUGHU L	225	225	36	32	4	88.90
7.	AVINE	225	225	44	40	4	91
TOTAL		1,575	1,575	287	267	20	92.93

Source: Benue State Fadama Coordinating Office (SFCO)

Table 5 shows that 92.93% of the Fadama Users’ Groups (FUGs) participated in the training programme of the capacity building programme which also rate the implementation of the project with regard to capacity building very high. Though, information gathered from the project facilitators indicated that majority of the beneficiaries are not literate and as such affected the successes of the capacity building programme, majority of the beneficiaries indicated that the component improved on their little knowledge in the management of their limited resources; improved their group management technique, equipped them with capacity to manage and resolve conflict, keep records, manage and maintain their of assets, save out of their incomes, mobilize credit and, sensitize members about health.

Impacts of Fadama III Project

Fadama III project has a significant structure that gives voice to the communities and connects them to the government. It created employment opportunities and reduced poverty using the bottom-up approach. The project has yielded many positive results in the area of increased yield, income, better production methods among others. The impact of the project on the participants’ income is presented in Table 6 using the before and during the project comparative approach.

Table 6: Income of Participants before and during the Project

S/N	Income(N)	Before Fadama III		During Fadama III	
		F	%	F	%
1	50,000	195	67.9	09	3.1
2	50,001 – 100,000	66	23.0	78	27.2
3	100,001-150,000	19	6.7	143	49.8
4	150,001-200,000	05	1.7	41	14.3
5	200-001+	02	0.7	16	5.6
Total		287	100	287	100

Source: Author’s Fieldwork

Table 6 shows that, the income of participants of the project increased as a result of the project. Majority of the participant’s income was below N50, 000.00 before they joined the project, represented by 195 (67.9%) of the respondents. After they joined the project majority of them were earning

between N100, 000.00 to N150, 000.00 annually, represented by 143 (49.8%) of the respondents. This implies that Fadama III project intervention impacted positively on the income status of people. The finding of this study is consistent with that of Yunana et al (2013), Pius (2014), Osondu et al (2015), Okechukwu (2015), and Adetomi et al (2020) that the Fadama project improves the capacity and income of participants. In support of these findings, the study of Iortyom et al., (2018) and Iortyom et al., (2019) revealed that community driven agricultural development projects contributes positively in building the capacity of the participants as well as improving on their income levels.

Conclusion

The findings of this study showed that Fadama III project achieved 92.93% implementation success in the study area. It also revealed that Fadama III project impacted positively on the income of participants and as well, improved the capacity of participants in the areas of group management technique, conflict management and resolution records keeping, assets management and maintenance, savings and credit mobilization and sensitization on health.

It can therefore be recommended that the project be consolidated by expanding the scope of the project, particularly to accommodate vulnerable groups which were seen to be excluded. That will ensure robust and inclusive capacity building as well as self-reliance even after the project is completed and closed.

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