Evaluation of national Fadama III development project: Catalysim for rural development in Rivers State, Nigeria

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ABSTRACT

Agriculture is the bedrock for combating poverty and developing rural areas. This motivated government policies on agriculture. Objective of this paper was to evaluate the performance in terms expenditures, Fadama III User Groups and Fadama III Corporative Associations' activities in Rivers State. The motivation was to reveal the concept, approaches and implementation process of economic interests groups and government financial commitments to various farming activities in the local government areas. Materials for the study were provided through secondary sources; Fadama office reports and published materials. The study adopted descriptive method of analysis. Findings revealed that there are remarkable improvements in rural development in the participated local government areas. Assessment further revealed committed efforts by officers and management of the programme which ensured effective implementation of rural infrastructure in participated communities. It is recommended that expenditure control measures adopted by management of Fadama programme in Rivers State should be applied in future agricultural projects to ensure quality deliverables. Government should pursue only rural development oriented agricultural policies, and finance projects that has certified Local Development Plans. Seemingly bottleneck criterion that would delay release of funds should be relaxed for agricultural programme managers to be proactive to beneficiaries' requests and function effectively. Finally, Fadama programme should be extended to increase communities' dual opportunities of experiencing both agricultural and rural development.

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1. Introduction

Beside agricultural productivity and capacity building, one of the objectives of National Fadama Development programme was to positively impact on rural development through the provision of rural infrastructure. Fadama is a Hausa word for wet land, internationally accepted in soil science literature as wetland

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soils or hydromorphic soils which are the seasonally or permanently poor drained soils of River valleys and flood plains of the coastal and Delta swamps. These productive soils can be utilized in both wet and dry seasons. Fadama is a tripartite funded project with the World Bank as a major player. Its major objective was to assist developing countries refocus and redouble their efforts in improving rural lives. It is believed that agriculture, being the spring board for rural development, has the capability to improve rural lives, to change Nigeria from consumer nation to exporting nation. This paper is divided into five sections. The first section introduced the work and stated the problems objectives of the study. The second section considered relevant concepts on Fadama III and review of related works. Third section evaluated the farming, infrastructural and expenditure activities of Fadama III. The fourth summarized the evaluated activities while the fifth section concluded the study with recommendations.

Out of the obvious curiosities to resolve challenges in the rural areas, Fadama I programme was designed in 1992 and became disbursement effective in 1993. The design of Fadama I did not support rural infrastructure development and resource users such as livestock producers, fisher-folk, pastoralists, and hunters, among others. It focused on crop producers contributed to increased conflicts among the users of Fadama resource. Without supporting post-harvest technology, contributing to reduced crop prices and increased storage losses. And most importantly, it adopted top-down development approach or strategy (Madu & Phoa, 2002).

Rivers state participated in Fadama I but did not participate in Fadama II. However, success story of Fadama II in the participated states called for the introduction of Fadama III of which Rivers State participated from its inception in 2009. Fadama II did not take place in South-South States except Imo state. The reason was due to non-commitment in writing by state governments in the South-South on funding formula. A total of eighteen states participated throughout the country. The cumulative positive impact of both Fadama I and II projects which targeted small-holder farmers by using the Community Driven Development (CDD) approach attest to its robustness (Fadama III Coordinating Office Report, 2013). The later ensured optimal participation of the primary beneficiaries as resource and decision making power which devolved to them through the preparation of all-inclusive Local Development Plans (LDP). Under this approach, the project funded activities in the LDP's, thereby ensuring that the interest of every project beneficiary was protected.

Apart from the project objective of poverty reduction, increasing rural land and water resources, increased food security was an attribute to the achievement of a key Millennium Development Goals (MDGs), Fadama III was saddled with the strategic objective of enhancing growth in sectors other than oil, in order to achieve increased food security, reduce poverty, and create employment in the rural areas, increase opportunities for rural economic development and; contribute to the realization of the agenda for a secured future thereby acting as a catalyst to rapid and sustained development at the grassroots level (Akinleye, et al, 2005).

To a large extent, performances of these projects yielded no commensurate results compared to their huge financial costs (Tamuno, 2009). It was against this backdrop, the three tiers of government in partnership with the World Bank, came up with the Fadama programme to tap the resources from irrigable low-lying plains underlain by shallow aquifers found along Nigeria's major river systems to enhance crop production, fishing and traditionally provide feed and water for livestock. To substantiate this fact, it became pertinent to conduct an evaluation of the activities of Fadama III in Rivers State.

This study was set out to evaluate the activities of Fadama III with respect to;

1. *Fadama User Group (farming activities) in Rivers State.*
2. *Fadama III Corporative Association (infrastructural projects) in Rivers State.*
3. *Expenditures on Fadama farming activities and infrastructural projects.*

This study limited its investigations to Rivers State, Southern part of Nigeria. The study will be significant as its findings will be utilized for future and further studies. Financiers of this project are itching to get a comprehensive and disaggregated appraisals of performance of this World Bank initiated project from nooks and crannies of participated countries and states. This will motivate them to either continue or extend the project mostly in countries that the project is considered to have performed well.

The remaining section of the paper is divided into four parts. Section two focuses literature review, section three dwells on the methodology. Section four gives the presentation of data, analyses and discussions and the last section focuses on conclusion.

2. Literature review

2.1 Conceptual Clarification

2.1.1 Fadama Concept

In Nigeria, the irrigable land, flood plains and low lying areas which are underlined by shallow aquifers are found along Nigeria coastal and Delta river swamps and systems. It is against this backdrop that Fadama programme is considered important as an approach to all-round agriculture. Fadama is a Hausa word for wet land, internationally accepted in soil science literature as wetland soils or hydromorphic soils which are the seasonally or permanently poor drained soils of River valleys and flood plains of the coastal and Delta swamps. These productive soils can be utilized in both wet and dry seasons. The World Bank through its Fadama Projects has consistently supported the development of agriculture in a bid to help Nigeria achieve food self-sufficiency in the nearest future. It is a tripartite funded programme adopted by Nigeria with International Donor Agency (World Bank), Federal and State Governments as sponsors.

The programme was projected to last for the period of five years; 23rd March, 2009 – 31st Dec, 2013. It was a nationwide programme and covered twenty Local Government Areas in each of the thirty six states of the federation, targeted small holders farmers involved in pastorals, fisher folks, traders, processors, hunters and gatherers, the disadvantaged and physically challenged. Besides capacity building, the Third National Fadama Development Project was multi-disciplinary in nature, which involved capacity building, communication and information support: Asset acquisition and market system Development; Small

Scale Community owned infrastructure (roads, markets, boreholes, culverts, pumps, sprayers etc.), processing and storage centre, advisory services and training. Pertinent about the project was that its services were offered on grant basis with the Community Driven Development (CDD) principle where the rural farmers determined their needs, and it was all about inclusive (production, processing, marketing, storage, etc) in areas of agriculture. The project used trained facilitators to ensure that various Economic Interest Groups (EIG's)/Fadama Users Groups (FUGs) and Fadama Community Associations (FCA's) were guided.

2.1.2 Fadama Counterpart Funding Outlay

State government and local governments provided 35 per cent funding for capacity building while World Bank made available 30 per cent and Local Government Areas contributed 35 per cent. For advisory services, 70 per cent came from World Bank while 30 per cent was provided by the state government. The Pilot Assets were funded 70 per cent by the World Bank 30 per cent came from the beneficiaries as shown on in table 1. Input Support had 50 per cent funding from World Bank while 50 per cent came from Project Beneficiary Contribution. Funding for Rural Infrastructure had 90 per cent funds provided by International Donor Agency (IDA)/World Bank while 10 per cent came from Beneficiary Contribution which largely came by way of logistics to facilitate activities of Fadama III in the area. This arrangement was purely on matching Grant Basis of Project/Beneficiary Contribution of Fadama Users/Fadama Community Associations.

Table 1: Sub-Projects Funding Arrangements

S/N.	Area Covered	Funding Percentages (%)			
		World Bank/Int'l Donor Agency (IDA)	State Govt.	Local Govt.	Beneficiary Contribution
1.	Capacity Building	30	35	35	Nil
2.	Advisory Services	70	30	Nil	Nil
3.	Pilot Assets	70	Nil	Nil	30
4.	Input Support	50	Nil	Nil	50
5.	Rural Infrastructure	90	Nil	Nil	10
6.	Empowerment of Vulnerable Groups	85	Nil	Nil	15

Source: Extracted from Rivers State Fadama III Co-ordination Office Report, 2013

In the projected financial plan, 100 per cent expenditure for Fadama III programme shared among the stakeholders showed that World Bank was to provide 250m dollars (55.6 per cent), Federal Government 23m dollars (5.1 per cent), State Governments 77m dollars (17.1 per cent), Local Government Areas 40m dollars (8.9 per cent) and Communities 60m dollars (13.3 per cent).

2.1.3 Eligibility Criteria and Participation

Based on the World Bank guideline, the following criteria were spelt out for any state to participate. Such as;

- A state was eligible to participate if government of that state had written a letter indicating interest and commitment for payment of counterpart fund.
- Recruited through a competitive and transparent process the key officials of State Fadama Development Office (SFDO); State Project Co-ordinator (SPC), monitoring and Evaluation Officer, Procurement Officer, etc.
- Demonstrated evidence of good counterpart funding on similar past or ongoing Project in the state

For the Local Government Areas:

- If the Local Government Area had provided office space in their council area.
- Assigned two staff of the local government council on secondment as desk officers to the project.
- If the council had provided two million naira (N2m) annually for the operational expenses of the local office.

Farmers, who participated in the Fadama III project, had to fulfil the following criteria which enabled them to benefit from the project;

- Organized themselves first as Fadama User Groups (FUGs) and then as Fadama Co-operative Associations (FCAs) and registered it along their line of farming interest such as; yam, cassava farming, poultry, fishery, processors marketers etc.
- Open a bank account in any commercial bank, and elected officers (Presidents, Secretaries, and Treasurers etc.) to run their affairs.
- Prepared and submitted a Local Development Plan (LDP) or project proposal to the Local Fadama Desk Officers in their respective local Government headquarters.
- Upon the approval of their plans, each co-operative paid 30 - 20 per cent of the project cost or 10 per cent in the case of rural infrastructure.

World Bank recommended the use of Service Providers for proper implementation of Fadama III Sub-projects. These are group of agricultural experts in different areas; crops, fisheries, livestock, processing, agro-forestry and others. They were regarded as “Service Providers” (SP) usually out-sourced to act as intermediary (middlemen) between the Project Staff and farmers’ groups (Fadama Participating Farmers). Farmers were given free hand to choose their Service Providers through competitive bidding process. These Service Providers were remunerated based on agreed minimal monthly fee. They were held accountable for any failure of the projects. The process helped to ensure that farmers do not divert funds provided for the execution of sub-projects.

Project staff ensures that cheques are released to Service Providers. It was the duty of the Service Providers to team up with farmers’ groups to execute the sub-projects according to their areas of economic interests. The Project Staffs effectively monitored the sub-projects and certified their status before funds were released at each stage. Cheques were released to farmers’ groups in tranches of first 40 per cent, second, 30 per cent and third, 30 per cent. Service Provider and his group (team) are held accountable for non-judicious utilization of funds and were made to complete the sub-project to satisfactory level before further funds were released to them. The Project Staff supervised the overall activities of the Service Providers and the farmers.

2.1.4 Community Development Driven (CDD) Approach

Because of the Community Development Driven (CDD) approach, beneficiaries are given the chance to choose the kind of activities they want to pursue. However, there are some activities that the project does not support, such as activities that could lead to degradation of natural resources or large-scale changes in land use (National Fadama Development Office, 2005). Under the CDD approach of all users of Fadama resources are encouraged to develop participatory and socially inclusive local development plans. The project set a target of 50 per cent of male and female Fadama resource users who benefit from the project-supported activities achieving an increase in average real income by at least 20 per cent compared with the baseline. Community-Driven Development (CDD) is a development approach that gives power to local communities and local governments to participate in the decision making, control, and management of development programs. The approach differs from programs and projects that treat beneficiaries as passive aid recipients. Community Development Driven approach has poverty reduction as its main focus.

2.1.5 Fadama User Group (FUG) and Fadama Community Association (FCA)

Fadama Community Associations (FCA’s) is an apex organisation of economic interest groups, which derive their livelihood from the shared natural resources of the Fadama land. Fadama Users Groups (FUGs)/Economic Interest Groups (EIG’s) are groups of persons (Fadama farmers), average of (20) persons who share common economic interest usually operating in a given area while FCAs are the associations of FUGs. Each FCA designs and oversees the implementation of a Local Development Plan (LDP), which is the blueprint of the Fadama II’s development project. FCA was also adopted for effective implementation of Fadama III. The difference is that while FCA initiated the communities’ request for rural infrastructure; FUGs are concerned with farming activities such as cassava, oil palm processing, garden eggs, yam farming, artisanal and others. Essential fact remains that every FUG is certificated and the groups must under-take the economic interest activities for which the Fadama programme issues them certificate based of their area where their interest is indicated. Again, no group or beneficiary goes to undertake on economic activity outside the type of agriculture they indicated interest and certificated. Considering the fact that besides the FCA projects, which aids the activities of farmers ranging from farming (depending on the type) to harvesting, processing and distribution, greater task of Fadama programme also hinged on both farming and non-farm economic activities for employment generation and increased food sustainability. For instance, tricycle found among the Fadama User Group (FUG) activities could empower the youths (transportation and distribution business) and also be used to evacuate farm produce to communities and markets.

2.2 Empirical Review

Generally, agriculture is the anchor that propels rural development. It denotes economic and community development actions and initiatives taken to improve the standard of living in non-urban neighbourhoods, remote villages and the countryside. On the other hand, rural development relates not only to a sustained increase in the level of production and productivity by all rural dwellers, including farmers, and a sustained improvement in their wellbeing, manifested by increase in per capita income and standard of living, but also leads to a sustained physical, social and economic improvement of rural communities. In order to achieve the broad goals of agriculture on rural development, agricultural projects need to be focused on specific objectives (Danso, Keraita, & Afrane, 2002; Titilola & Igben, 1992). Titilola and Igben (1992) in this vain has aptly defined “a progressive rural structure as one having several elements including market towns as outlets for farmers’ products and where supplies may be purchased: rural roads to aid the flow of commodities, trainings that determine best farm practices in the light of local conditions and extension service through which farmers can learn about new technologies”. In addition, Danso *et al*, (2002) argued that rural development priority should not be based on the amount of crops that could be harvested or the profit that a person or group could make, rather, such priority should be based on the social, economic, political and general welfare of the greatest number of people. While the attainment of specific agricultural goals encompasses the provision of adequate food, fibres and industrial raw materials, employment and foreign exchange generation, the goals of rural development embrace in addition a systematic improvement of other institutional, physical and social infrastructures in such rural communities (Onibukun, 1988). To a large extent, apart from playing an indispensable part in the overall strategy of sustaining rural households, agriculture has come to be regarded by many economists as essential condition for economic growth and development (Johnson & Mellor, 1961). Fadama III is one of the government agricultural projects that encompasses both farming activities, agriculture and rural development aiding infrastructure with huge expenditures. To this end, has come to offer such activities to buttress the fact that agricultural roles are not domiciled in only food productions.

Studies have identified efforts made by both federal and state governments to rebrand Nigeria from importing to exporting nation and emphasised that if development is to take place and become self-sustaining, it will have to include the rural areas in general and agriculture in particular (Gbosi, 2001:

Akinleye, Awoniyi & Fapojuwo, 2005; Titilola & Igben, 1992 and Nwanyanwu, 2012). They aptly emphasised on past rural development programmes such as National Poverty Alleviation Eradication Programme (NPAEP), National Accelerated Food Production Programme (NAFPP), Operation Feed the Nation (OFN), Presidential Initiatives on Cassava (PIC) and others. The discussion is opened by the study on the “Effects of National Fadama III Programme on the Scope and Scale of Beneficiaries’ Farming Activities in South West, Nigeria” by Agunloye, Fasina & Akinlagbe (2017) using descriptive statistics, revealed a significant increase in beneficiaries’ crop production and agro processing. Significant increase was also found in livestock production. Sustenance of the programme at its expiration was advocated as to also sustain the increased food production experienced in the programme.

Further study on Fadama III investigated FUGs mid-term performance of the programme in Southeast Nigeria was carried out by Ugwumba & Okechukwu (2014). The work was a post assessment which did a comparative analysis on income level of beneficiaries before and after participating in Fadama project. Ordinary Least squares multiple regression and Descriptive statistics were adopted for the analysis. It was discovered that farmers engaged in cassava farming generated more income than their counterparts. Distance to market, farm size and other productive resources affected farmers productivity significantly. The paper suggested to government assistance on those inputs that generate more income to farmers. In Nasarawa state, a study conducted by Kuza, Okwoche & Age, (2018) adopting descriptive statistics, mean and student t-test, found that more of the beneficiaries were male folks with not less than six households. More beneficiaries had farming experience less than ten years. The study suggested for more participation in Fadama project and reduced administrative bottlenecks to enable farmers have unhindered access to improved farm seedlings and other agricultural aiding implements.

3. Methodology

The method used in conducting the study is presented in this section. The work is centred on sixteen Fadama III participated local government areas in the three senatorial zones; Rivers South-East, West and Rivers East. The state was formed in 1967 with the split of the Eastern Region of Nigeria. Until 1996 the state contained the area which is now in the Bayelsa State. (FMI, 1998). The research design for this study is quasi-experimental as it is associated with qualitative data and involves gathering and describing, computing and interpreting secondary data.

Secondary materials from Rivers State National Fadama III Development Programme Coordinating Office Report, (2015) on implementation of National Fadama III projects in Rivers State and bulletins from the state ministry of agriculture formed our sources of information. Since data came from secondary sources, no targeted population sample was utilized. Rather the numbers of economic farming activities, infrastructural projects and expenditure figures form our utilized data. Analytically, the study adopted descriptive statistics- mean, frequency, percentages, bar and pie charts. This study followed the analytical framework of Olutayo (2009) and, Akinleye, Awoniyi & Fapojuwo, (2005) who investigated Fadama infrastructure and development in Ajibo resettlement area of university of Lagos and, Evaluation of the National Fadama Development Project Approach to Rural Development: Lessons for Local Government Councils in Nigeria respectively.

3.1 Presentation of Data, Analyses and Discussions

3.2 Implementation of Fadama User Groups (FUGs) Interest/Economic Activities

Tables 2-4 explained the number of economic activities (sub-projects) implemented by Fadama III under Fadama user groups. These activities involved the areas of farming and other economic activities in which registered farmers/beneficiaries participated in the Rivers State. This section is also divided into three comprising the three senatorial zones in Rivers State namely; Rivers South-East, West and Rivers East.

Table 2: Fadama User Group (FUG) Economic Interest Activities (Sub-Projects) Implemented Rivers South East

Local Govt. Area Economic Activity	RIVERS SOUTH EAST Number of FUG Sub-projects and Local Government Area									
	Eleme		Gokana		Khana		Oyigbo		Tai	
	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Cassava Farm	8	12.6	15	12.2	14	18.1	11	13.4		
2. Goatry Farm	5	7.9	7	5.7	5	6.4	4	4.8		
3. Fish Farm	10	15.8	32	26.2	13	16.8	20	24.3		
4. Snail Farm	5	7.9	4	3.2	1	1.2	4	4.8		
5. Poultry Farm	5	7.9	20	16.3	2	2.5	8	9.7		
6. Plantain Farm	6	9.5	6	4.9	3	3.8	2	2.4		
7. Cassava Processing	2	3.1	2	1.6			2	2.4		
8. Vegetable Farm	9	14.2	8	6.5	8	10.3	3	3.6	1	100
9. Yam Farm	3	4.7	17	13.9	2	2.5	6	7.3		
10. Oil Palm Processing			2	1.6	8	10.3	9	10.9		
11. Piggery			1	0.8	3	3.8	6	7.3		
12. Tricycle	8	12.6	1	0.8	1	1.2				
13. Okro					1	1.2	1	1.2		
14. Maize					1	1.2	1	1.2		
15. Grass Cutters			2	1.6	1	1.2				
16. Cocoa Yam			1	0.8						
17. Pineapple Farm	2	3.1					1	1.2		
18. Corn Processing			2	1.6						
19. Pepper Farm			1	0.8						
20. Rabbitry			1	0.8						
21. Livestock Farm					2	2.5				
22. Garden Egg							1	1.2		
23. Artisanal							4	4.8		
24. Soap Making					1	1.2				
25. Palm Kernel Processi					1	1.2				
Total = (345)	63		122		77		82		1	
Percentage (%)	(18.5)		(35.3)		(22.3)		(23.7)		(0.2)	

Source: Author's Compilation, 2018.

Table 2 showed extracted numbers of farming (economic) activities that were established by farmers through Fadama User Group (FUG) in Rivers South East. It revealed that out of a total number of three hundred and forty-five (345) numbers of farm sub-projects were implemented while beneficiaries from the zone participated in twenty-six (26) different types of farming activities. Comparing the activities in different local governments, the highest economic interest activity was in Gokana with thirty-two (32) fish farms representing 26.2 percent. This is followed by twenty (20) fish farms in Oyigbo and twenty (20) poultry farms in Gokana local government area representing 24.3 per cents and 16.3 per cents respectively. The number of yam farm sub-projects in Gokana was seventeen (17) which reflected 13.9 per cents and was followed by fifteen (15) for cassava farm sub-projects representing 12.2 per cents all in Gokana local government. Khana and Oyigbo local governments had fourteen (14) and eleven (11) sub-projects on cassava farming showing 18.1 and 13.4 per cents respectively. In Eleme, ten (10) fish farm sub-projects were implemented. This reflected 15.8 per cents of the entire sub-projects in the local government. The least number of sub-projects were found in several local government areas in most economic activities such as pepper, okro, maize and others. Pertinent to note is the involvement of beneficiaries in non-farm agricultural sub-projects such as artisanal, soap making, tricycle and others. These non-farm economic activities created opportunities for venerable members of the group to engage in areas they could participate to earn incomes and improve on their lives.

Table 3: Fadama User Group (FUG) Economic Interest Activities (Sub-Projects) Implemented Rivers East

Local Govt. Area	RIVERS WEST									
	Number of FUG Sub-projects and Local Government Area									
	Ahoada West		Akuku/Toru		Ahoada East		Degema		Onelga	
Economic Activity	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Fish Farm	33	30.0	10	34.4	11	24.4	6	15.3	16	21.3
2. Cassava Farm	14	12.7	1	3.4	9	20.0	6	15.3	7	9.3
3. Vegetable	7	6.3	1	3.4	1	2.2	5	12.8	7	9.3
4. Piggery	3	2.7	1	3.4	3	6.6	1	2.5	4	5.3
5. Cassava Processing	4	3.6			2	4.4	2	4.4	2	2.6
6. Oil Palm Processing	4	3.6			3	6.6	1	2.5	5	6.6
7. Goatry Farm	5	4.5			3	6.6	3	7.6	2	2.6
8. Poultry Farm	16	14.5			5	11.1	3	7.6	8	10.6
9. Plantain	14	12.7			4	8.8	4	10.2	7	9.3
10. Livestock	3	2.7	1	3.4			1	2.5		
11. Snail Farm	5	4.5	1	3.4					2	2.6
12. Yam Farm					2	4.4	2	4.4	3	4.0
13. Periwinkle Gathering			1	3.4			1	2.5	1	1.3
14. Fish Processing			1	3.4			1	2.5	1	1.3
15. Cocoa Yam Farm	1	0.9								
16. Rentals	1	0.9								
17. Hat Beading							1	2.5		
18. Artisanal			12	41.3			1	2.5		
19. Pineapple					1	2.2	1	2.5		
20. Grass Cutter					1	2.2				
21. Tricycle									9	12.0
22. Agro Processing									1	1.3
Total = (298)	110		29		45		39		75	
Percentage (%)	(36.9)		(9.7)		(15.1)		(13.0)		(25.1)	

Source: Author's Compilation, 2018.

Fadama User Groups economic activities in Rivers West revealed that beneficiaries participated in twenty-three (22) different activities (farm and non-farm economic activities). The highest participation by beneficiaries was in fish farm, in Ahoada West with thirty-three (33) sub-projects reflecting 30.0 per cent. Fish farm for Onelga and poultry farm for Ahoada West revealed sixteen (16) projects with 21.3 and 14.5 per cents respectively. Again, in Ahoada West, both cassava farm and livestock showed both economic activities had fourteen (14) projects representing 12.7 per cents on both sub-projects. Fish farm sub-project in Ahoada East was eleven (11) showing 24.4 per cents.

Akuku-Toru had twelve (12) pineapple sub-projects implemented which was 41.3 per cents of the entire sub-projects implemented in local government. Beside Pineapple, in Akuku-Toru, cassava, vegetable, piggery, livestock, snail farm, rental and fish processing all had one (1) sub-projects uniquely reflecting 3.4 per cents respectively. Also, in Onelga, plantain, cassava and vegetable showed that each had seven (7) sub-projects of 9.3 per cents. Grass cutter was nine (9) sub-projects of 12.0 per cents. Processing activities were three (3); oil palm, fish and agro processing in the zone. Non-farm cultivation activities such as periwinkle gathering one (1) each for Akuku-Toru, Degema and Onelga reflected 3.4 per cent respectively. Other non-farm cultivation economic activities such as rentals, hat beading, artisanal, tricycle and others have were implemented to accommodate the physically challenged and vulnerable in the society to find opportunities in Fadama programm.

Evidently from the table is that more sub-projects were implemented in most local governments than others which showed the ability of the FUGs to in meeting set Fadama criteria for projects request approvals.

Table 4: Fadama User Group (FUG) Economic Interest Activities (Sub-Projects) Implemented Rivers East.

Local Govt. Area	RIVERS EAST											
	Number of FUG Sub-projects and Local Government Area											
	Etche		Emohua		Ikwerre		Okirika		Obio/Akpor		Omuma	
Economic Activity	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)	No	(%)
1. Cassava Farm	34	25.7	20	18.0					4	8.1	14	21.8
2. Cassava Processing	3	2.2			2	1.9			4	8.1		
3. Fish Farm	27	20.4	20	18.0	7	6.7			7	14.2	9	14.0
4. Grass Cutter	2	1.5	3	2.7	3	2.8	2	18.1				
5. Poultry Farm	13	9.8	18	16.2	14	13.4			11	22.4	13	20.3
6. Goatry Farm	8	6.0	2	1.8	2	1.9					2	3.1
7. Oil Palm Processing	11	8.3	11	9.9	14	13.4			3	6.1	1	1.5
8. Plantain Farm	10	7.5	2	1.8	11	10.5	1	9.0	5	10.2	5	7.8
9. Vegetable	5	3.7	10	9.0	3	2.8			4	8.1	8	12.5
10. Yam Farm	4	3.0	7	6.3	11	10.5			3	6.1		
11. Pineapple	6	4.4	2	1.8	8	7.6					1	1.5
12. Snail Farm	1	0.7	2	1.8	2	1.9	2	18.0	5	10.5	3	4.6
13. Maize	4	3.0	4	3.6	2	1.8						
14. Livestock Farm	1	0.7	2	1.8					1	2.0		
15. Piggery	8	6.0			6	5.6					2	3.0
16. Feed Mill	1	1.4										
17. Rice Farm	1	0.7										
18. Rental	1	0.7										
19. Banana Farm	1	0.7										
20. Feed Processing			1	0.9								
21. Tricycle			4	3.6	1	0.9						
22. Garden Egg			2	1.8							8	12.5
23. Groundnut			2	1.8							1	1.5
24. Okro Farm			1	0.9								
25. Cucumber			1	0.9								
26. Moringa Farm					3	2.8			1	2.0		
27. Food Processing									1	2.0		
28. Spice Processing							2	18.1	1	2.0		
29. Artisanal							4	36.3	1	2.0		
Total = (470)	132		111		104		11		49		64	
Percentage (%)	(28.0)		(23.6)		(22.1)		(2.1)		10.4		(13.6)	

Source: Author's Compilation, 2018.

Fadama User Groups economic activities in Rivers East showed diverse participation than other senatorial zones. This stems from the fact that thirty-four (34) different types of farm sub-projects were implemented, indicating greater activities when compared to other senatorial zones. In Etche local government, implemented cassava farm sub-projects revealed a total of thirty-four (34) which is 25.7 per cents. It shows that the people of Etche cultivate cassava more than any other farm economic activities. This is followed by fish and cassava farming, all in Emohua local government that showed twenty (20) cassava farms and twenty (20) for fish farms presenting 18.0 respectively. A total number of eighteen poultry farms were implemented in Emohua local government area revealing 16.2 per cents of the entire sub-projects for the local government.

In Etche and Obio/Akpor local government had eleven (11) oil palm processing and eleven (11) numbers of poultry farms implemented, representing 8.3 and 22.4 per cents respectively. This is also applicable to Ikwerre local government with eleven (11) yam farms and eleven (11) plantain farms sub-projects showing 10.5 per cents respectively. In Omuma, nine (9) cassava processing Centre were built which represented 14.0 per cent. Most salient economic activities such as spice processing, banana, rice, garden egg, moringa and cucumber farming were implemented in the zone. Non-farm agricultural activities implemented to accommodate vulnerable persons in the zone are tricycle, artisanal, spice processing and rentals. The highest number of sub-projects was implemented in Etche local government representing 28.0 per cent.

4. Fadama Community Association (FCA) Rural Infrastructural provisions Implementation

The table below reflects rural infrastructural projects executed by Fadama in Rivers State. The projects were implemented based on the request of Fadama Cooperative Association (FCAs) in benefited communities. Of interest in this discussion is the fact that these projects are being classified according to the three senatorial zones in the state. Rivers State has twenty three local government areas and three senatorial zones. At the inception of this programme, it was the intention of the programme to impact on every community in the state based on indication of interest through counterpart funding payment, provision of a liaison office and desk officer in the council premises as pointed out earlier in this work hence, managers of the programme did not exclude any community from participating.

Table 5: Implemented Fadama III Community Association (FCA) Rural Infrastructure in Rivers South East

S/N	IMPLEMENTED FCA RURAL INFRASTRUCTURE IN RIVERS SOUTH EAST SENATORIAL ZONE			
	L.G.A	Community	Project	Cost (₦)
1.	Gokana	1. Bera	10 tons capacity Cold Room	1,888,670.45
		2. Nweol	Culvert (small bridge project)	1,888,670.45
		3. B-Dere	Road Grading and Culvert	1,888,670.45
		4. Kpor	Market stall Project	1,888,670.45
		5. Mogho	Market Stall Project	1,888,670.45
		6. Deeyor	Market Stall Project	1,718,670.45
		7. Barako	Road Grading	1,308,670.45
		8. BuaYeghe/Gbeneyagoro	20 tons Cold Room	4,588,670.45
		9. Deken	Market Stall Project	1,888,670.45
		Sub-total =	18,948,034.05	
2.	Eleme	1. Eteo	Road grading	1,888,670.45
		2. Ebubu	Market Stall Project	2,028,670.45
		3. Alode	Road Grading	1,438,670.45
		4. Ekpororo	Road Grading	1,888,670.45
		Sub-total =	7,244,681.80	
3.	Khana	1. Bue Gure	Market Stall Project	1,888,670.45
		2. Kon	Market Stall Project	1,888,670.45
		3. Bionu Banga	Market Stall Project	1,888,670.45
		4. GbeneNyokuru	Road Grading	1,888,670.45
		5. Baen	Market Stall Project	1,888,670.45
		6. Zaakpon	Market Stall Project	1,888,670.45
		7. Okwale	10 ton Cold room	1,888,670.45
		8. AabueBaen	Road Grading	1,888,670.45
		Sub-total =	15,109,363.60	
4.	Oyigbo	1. Obeama	Borehole	1,179,670.45
		2. Mirinwanyi	Borehole	1,110,670.45
		3. Umualek	Borehole	1,103,670.45
		4. Umuagbai	Cold Room (10 ton Capacity)	1,888,670.45
		5. Mgboji	Borehole	1,418,670.45
		6. Nwankpoche	Cold Room (10 ton Capacity)	1,888,670.45
		7. Ayama	Cold Room (10 ton Capacity)	1,888,670.45
		8 Kom-kom	Cold Room (10 ton Capacity)	1,888,670.45
Total Sub-project = 29			Sub-total =	12366,363.60
			Gross Expenditure =	55,697,113.68

Source: Author's Compilation, 2018

Table 5 revealed that twenty-nine (29) communities benefited from Fadama Corporative Associations (FCAs) rural infrastructural provision in Rivers South East. In this regard, the areas of interest of the FCAs fell within the infrastructure implemented by Fadama namely; road grading, culvert, market stalls, one-stop shop, boreholes, cold rooms, integrated chicken processing, road and others. Every agricultural aiding project is directly and indirectly essential to rural development. Worthy of note is that to a large extent, apart from playing an indispensable part in any overall strategy of sustaining rural households, agriculture has come to be regarded by many economists as essential condition for economic growth and development through inter-sectorial linkages such as: supply of surplus labour to firms in the industrial sector, supply of food for domestic consumption, provision of market for industrial output, supply of domestic savings, supply of foreign exchange from agricultural export earnings to finance import of intermediate and capital goods (Johnston and Mellor, 1961). If development is to take place and become self-sustaining, it will have to include the rural areas in general and agriculture in particular. This is the essence of Fadama programme in the Nigerian economy.

Twenty nine (29) rural infrastructural projects were implemented by Fadama iii. In Gokana, eight (8) projects spread in different sub-projects were provided namely; two cold rooms, two graded roads, four market stalls and one culvert to aid agriculture and general development in the communities and towns in the zone. Eleme had four projects spread in different forms namely; three graded roads and one market stall. Khana had eight (8) market stalls in the form of five market stalls, two graded roads and one cold room. Oyigbo local government area benefited a total of (8) projects comprised of four boreholes and four cold rooms.

Table 6: Rivers West Implemented Fadama III Community Association (FCA) Rural Infrastructure

S/N	IMPLEMENTED FCA RURAL INFRASTRUCTURE IN RIVERS WEST SENATORIAL ZONE			
	L.G.A	Community	Project	Cost (₦)
1.	Ahoada West	1. Akinima	Market Stall Project	1,888,670.45
		2. Eberiba	Market Stall Project	1,888,670.45
		3. Olokuma	Road Rehabilitation/Culvert	5,038,670.45
		4. Okarki	Market Stalls	1,888,670.45
		5. Odierke	Cold Room (10 ton Capacity)	1,888,670.45
		6. Ukpeliède	Cold Room (10 ton Capacity)	1,888,670.45
		7. Isua	Borehole	1,888,670.45
			Sub-project =	16,370,693.15
2.	Akulga	1.Ogboinkirilkrirko	Cold Room (10 ton Capacity)	1,888,670.45
			Sub-project =	1,888,670.45
3.	Ahoada East	1. Ihugbogo	Borehole	1,019,670.45
		2. Okporomini	Market Stall Project	1,888,670.45
		3. Ihuaje	Borehole	979,670.45
		4. Odiabidi	Culvert	1,888,670.45
		5. Ihuaba	Road Grading	1,888,670.45
			Sub-project =	7,665,352.25
4.	Degema	1. Bukuma	Cold room	1,888,670.45
		2. Obuama	Cold Room (10 ton Capacity)	1,849,200.45
		3. Usokun	Market Stall Project	1,888,670.45
		4. Degema	10 ton Cold room	1,888,670.45
			Sub-project =	7,515,211.80
5.	Onelga	1. Aggah	10 ton Cold room	1,888,670.45
		2. Mgbede	Road Grading	1,888,670.45
			Sub-project =	3,777,340.45
	Total Projects =	19	Gross Expenditure =	37,217,268.63

Source: Author's Compilation, 2018

In Rivers West, nineteen (19) Fadama FCA projects were established in five local government areas. Out of the implemented nineteen sub-projects, seven (7) were implemented in Ahoada West and when disaggregated, they had three market stalls, one rehabilitated and graded road, two cold rooms and one borehole. Akuku Toru local government had one ten ton cold room. In Ahoada East, a total of five (5) projects were constructed showing two boreholes, one market stalls, one culvert and one graded road. Degema local government benefited four (4) projects which reflected two cold rooms, one market stall and one cold room. The least number of sub-projects were implemented in Onelga comprising; Ogba, Egbema, Ndoni local government area with one graded road and one cold room constructed. The rural people of Onelga are predominantly hard farmers working especially in the areas of cassava and yam productions. Their choice of market stalls may have been borne out of their areas of economic interest since agricultural produce has to reach final consumers hence must be sold in a commercial market since they are mostly perishables.

Table 7: Implemented Fadama III Community Association (FCA) Rural Infrastructure in Rivers East

S/N	RIVERS EAST SENATORIAL ZONE			
	L.G.A	Community	Project	Cost (₦)
1.	Etche	1. Ulakwo	Parking Store	1,226,670.45
		2. Okomoko	Borehole	1,168,670.45
		3. Ozuzu	Borehole	1,078,670.45
		4. Akwa	Rehabilitation and Road Grading	2,288,670.45
		5. Mba	Road Grading	1,888,670.45
		6. Umuechem	Road Grading	1,888,670.45
		7. Egwi	Market Stall Project	1,888,670.45
		8. Isu	Market Stalls	1,888,670.45
		9. Umuanyagu	Road Grading	1,888,670.45
		Sub-project =	15,406,034.05	
2.	Emehua	1. Ibaa	Borehole	1,042,670.45
		2. Omodioga	Borehole	1,084,670.45
		3. Ogbakiri	Road Grading	1,248,670.45
		4. Emohua	Borehole	1,043,170.45
		5. EleleAlimini	Road Grading	1,135,370.45
		6. AgbaNdele	Market Stalls	1,908,670.45
		7. Ovogo	Road Grading	1,748,670.45
		8. Akpabu	Market Stalls	1,888,670.45
		9. Rumuodogo	Market Stalls	1,888,670.45
		10. Egbeda	Market Stalls	1,888,670.45
		11. Rumuji	Road Grading	808,670.45
		Sub-project =	15,686,574.45	
3.	Ikwerre	1. Isiokpo	Borehole	1,078,670.45
		2. Ubima	Mini-Cold Room	1,348,670.45
		3. Uzuaha	Borehole	1,016,470.45
		4. Umuauwa	Market Stalls Project	1,888,670.45
		5. Apani	Borehole	1,095,630.45
		6. Ipo	Market Stalls Project	1,888,670.45
		7. Omuokpo	Tricycles (4 nos.)	1,888,670.45
		8. Omuademe	10 ton Cold room	1,888,670.45
		Sub-project =	12,094,123.60	
4.	Okirika	1. Ogoloma	Cold Room (10 ton Capacity)	2,052,610.45
		Sub-project =	2,052,610.45	
5.	Obio/Akpor	1. Rumuodomaya	Chicken Processing Centre	7,288,670.45
		2. Odani	Cold Room (10 ton Capacity)	1,888,670.45
		Sub-project =	9,177,340.90	
6.	Omuma	1. Umuajiloke	Market Stall Project	1,888,670.45
		2. Umuokwa	Boreholes (2 nos.)	1,294,670.45
		3. Amaji	Borehole (2nos.)	1,653,242.45
		4. Obiohia	Road Grading	1,888,670.45
		5. Umuakirikpo	Road Grading	1,888,670.45
		6. Eberi	Borehole (2 nos.)	985,670.45
		7. Ohimogho	Road Grading	1,888,670.45
	Total Projects=	38	Sub-project =	12,498,265.15
			Gross Expenditure =	66,713,719.72

Source: Author's Compilation, 2018.

In Rivers East, Etche local government area benefited with nine (9) rural infrastructure projects. These projects comprised one parking shop, two boreholes, four graded roads and two market stalls. Emohua local government got eleven (11) projects found in three (3) different sub-projects namely; three boreholes, four graded roads and four market stalls. Ikwerre had eight (8) projects made up of four (4) types of sub-projects when disaggregated. They include three boreholes, two cold rooms, and two markets stalls and one tricycle project containing four (4 nos.) tricycles were provided. Okirika local government had one (1) cold room project. Fadama constructed two (2) infrastructural projects in Obio/Akpor comprised of one (1) integrated chicken processing centre and one (1) cold room. Omuma got a total of seven (7) Fadama Cooperative Association (FCAs) which showed one market stall, three boreholes, and three graded roads. Noteworthy is that collation of FCA rural projects partnered in such an approach as to portray a vivid picture of what transpired in each senatorial zone. The idea was that every senatorial zone, having made up of several local government councils, stood better chance of benefiting from the programme in so far as counterpart funds were paid by their council are as an indication of interest in the programme.

Table 8: Types and Number of Implemented projects in L. G. As

Senatorial Zone	Non-participated L.G.As	Participated Local Govt. Areas	Types and Number of Infrastructural Projects implemented in L.G.As								Total	(%)
			Tricycle	Parking Store	Cold Room	Culvert	Market Stalls	Road Grading	Chicken Processing Center	Borehole		
Rivers South East	1.Opobo/Nkoro	1.Eleme					1	3			4	4.6
	2.Andoni	2.Gokana			2	1	4	2			9	10.4
		3.Khana			1		5	2			8	9.3
		4.Oyigbo			4					4	8	9.3
Rivers West	1.Abua/Odua	5.Ahoada West			2		3	1		1	7	8.1
	2.Asari/Toru	1.Akuku Toru			1						1	1.1
	3.Bonny	2.Ahoada East				1	1	1		2	5	5.8
		3.Degema			3		1				4	4.6
		4.Onelga			1			1			2	2.3
Rivers East	1.Port Harcourt	1.Etche		1			2	4		2	9	10.4
	2.Ogu/Bolo	2.Emohua					4	4		3	11	12.7
		3.Ikwerre	1		2		2			3	8	9.3
		4.Okirika			1						1	1.1
		5.Obio/Akpor			1				1		2	2.3
		6.Omuma					1	3		3	7	8.1
		Total	1	1	18	2	24	21	1	18	(86)	100
		(%)	1.1	1.1	20.9	2.3	27.9	24.4	1.1	20.9		

Source: Author's Compilation, 2018.

Table 8 and figure 1 reflected the number of implemented rural infrastructural projects by Fadama in the three senatorial zones in Rivers State. In Rivers South East, except Tai local government which could not fulfill the criteria set by the programme, the four local governments that participated in Fadama III had fair share of rural infrastructural provision based on their demands through their FCA's Local Development Plan (LDP). The study discovered that rural infrastructure such as cold rooms, culvert, market stalls and boreholes were built in the zone by Fadama. For Eleme local government, one (1) market stall and three (3) road grading was implemented. This showed that 4.6 percent of the projects implemented by Fadama in Rivers South East were sited in Eleme. Gokana had the largest number of projects which showed nine (9) in number representing 10.4 percent. Khana and Oyigbo benefited of eight (8) projects which is 9.3 percent respectively. A total number of 29 rural infrastructure were built by Fadama in Rivers South East.

In Rivers West, three L. G. As; Abua/Odua, Asari/Toru and Bonny did not participate while five other L. G. As participated as shown in table 5 above. A total of nineteen (19) projects were constructed by Fadama. In a disaggregated analysis, Ahoada West had the highest number of Fadama projects followed by Ahoada East. Seven (7) rural infrastructure comprising of two (2) cold rooms, three (3) market stalls, and one (1) borehole representing 8.1 percent were built in Ahoada West local government while Ahoada East had a total of five (5) projects namely; two (2) boreholes, one market stall, one (1) culvert and one (1) road graded roads howing 5.8 percent. Degema local government benefited 4.6 percent of the total projects in the zone made up of three (3) and one (1) market stall totaling four (4) projects. While Onelga had one (1) cold room and one (1) graded road, Akuku Toru benefited one (1) cold room based on FCA approved request.

Fadama Cooperative Associations' requests in Rivers East yielded thirty-eight (38) projects. All six (6) local government areas that participated benefited in one form of project or the other. The highest numbers of projects were implemented in Emohua local government with eleven (11) implemented rural infrastructural projects made up of four (4) market stalls, four (4) graded roads and three (3) boreholes representing 12.7 per cents to aid farming activities. This was followed by Etche local government with nine (9) projects spread in the following form; one (1) parking shop, two (2) market stalls, four (4) graded roads and two (2) boreholes representing 10.4 per cents of the entire FCA rural infrastructural projects implemented in Rivers State. Participated communities that met the criteria in Ikwerre local government benefited eight (8) projects representing 9.3 per cent namely; one (1) tricycle projects made up of four different tricycles, two (2) cold rooms, two (2) market stalls and three (3) boreholes. Omuma had a total of seven (7) implemented projects comprising; one (1) market stalls, three (3) graded roads and three (3) boreholes showing 8.1 per cent while Okirika and Obio/Akpor got one (1) cold room for Okirika, one (1) chicken processing centre and one (1) cold room for Obio/Akpor indicating 1.1 per cent and 2.3 per cents respectively.

Figure 1: Fadama FCA Rural Infrastructure Composition.
Source: Author's Desk Research, 2018

Table 8 focuses on Fadama III Rural Infrastructure according to Participated Local Government Areas. It should be noted that the provision of rural infrastructure by Fadama was not political rather it was based on the ability of Fadama Cooperative Association to meet the set criteria in their request for any rural infrastructure project.

4.1 Expenditure Analysis on FUGs Economic Activities and FCA's Rural Infrastructure

Comparative analyses of expenditures on Fadama User Groups (FUGs) economic interest activities and Fadama Cooperative Associations (FCAs) rural infrastructure projects are important in this work. It is also essential to note that the expenditures contained in this work only concerns farming sub-projects and infrastructural provisions, and does not incorporate logistics and other expenditures that may be required if entire expenditure on Fadama in Rivers State is discussed.

Two major expenditures, the FUGs and FCAs expenditures on economic activities and rural infrastructure were discussed in this section. While the former concerns different interest farming activities implemented, the later dwelt on rural infrastructure provided to communities by Fadama III programme.

Table 9: Analysis of FUG and FCA Expenditures

Senatorial Zones	Local Govt. Areas	FUG Project Costs(₦)	(%)	FCA Project Cost (₦)	(%)
Rivers South-East	▪ Eleme	26,584,014.00	14.4	6,890,000.00	13.0
	▪ Gokana	70,447,002.00	38.2	19,990,000.00	37.7
	▪ Khana	43,496,390.00	23.5	14,400,000.00	27.2
	▪ Oyigbo	43,830,771.00	23.7	11,657,000.00	22.0
	TOTAL =	184,358,177.00	(30.7)	52,937,000.00	(34.7)
Rivers West	▪ Ahoada-West	63,040,127.00	38.3	15,750,000.00	44.3
	▪ Akuku Toru	18,583,716.00	11.2	1,800,000.00	5.0
	▪ Ahoada-East	23,863,055.00	14.5	7,222,000.00	20.3
	▪ Degema	16,807,088.00	10.2	7,160,000.00	20.1
	▪ Onelga	42,171,760.00	25.6	3,600,000.00	10.1
	TOTAL =	164,465,746.00	(27.3)	35,532,000.00	(23.3)
Rivers East	▪ Etche	69,191,740.00	27.5	15,136,000.00	23.7
	▪ Emohua	53,587,550.00	21.3	15,431,200.00	24.1
	▪ Ikwerre	59,053,902.00	23.4	11,384,760.00	17.8
	▪ Okirika	5,355,900.00	2.1	1,963,940.00	3.0
	▪ Obio/Akpor	30,225,322.00	12.0	9,000,000.00	14.1
	▪ Omuma	34,070,150.00	13.5	10,867,572.00	17.0
	TOTAL =	251,484,564.00	(41.8)	63,783,472.00	(43.1)
Gross Expenditure =		(752,560,959.00)		600,308,487.00	100
Percentage =			(79.7)		(20.2)

Source: Author's Compilations, 2018.

From table 9 collated data analyses revealed expenditure on both Fadama User Groups (FUGs) and Fadama Cooperative Associations (FCAs) according to senatorial zones and local government areas in Rivers State. For FUGs, in Rivers South-East, a total of one hundred and eighty-five million, six hundred

and forty-eight thousand, one hundred and seventy seven (N600,308,487.00) naira representing 79.7% of the overall expenditure, spread among local governments were in the zone. Gokana had more expenditure of seventy million, four-hundred and forty-seven thousand, two naira (N70, 447,002.00), representing 38.2 per cent of the total amount spent on FUGs sub-projects in Rivers South-East. The sum of forty-three million, four hundred and ninety-three thousand, three hundred and ninety (N43, 496,390.00) naira was spent in Khana and, forty-three million, eight-hundred and thirty thousand, seven hundred and seventy-one (N43, 830,771.00) naira was spent for Oyigbo representing 23.5 and 23.7 per cents respectively.

Further analyses of expenditures in the four participated local governments of Rivers West showed that Ahoada-West is the highest with sixty-three million, forty-thousand, one hundred and twenty-seven (N63, 040,127.00) naira representing 38.3 per cent of the total cost while the sum of eighteen million, five hundred and eighty-three thousand, seven-hundred and sixteen (N18, 583,716.00) naira, representing 11.2 per cents was spent in Akuku-Toru. Ahoada-East sub-projects gulped the sum of twenty-three million eight-hundred and sixty-three thousand fifty five (N23, 863,055.00) naira which stood for 14.5 per cents of the total expenditure.

Degema and Onelga had N16, 807, 088.00 (10.2%) and N42, 171,760.00 (25.6%) spent on FUGs sub-projects from the total expenditure for the senatorial zone. In all, a gross expenditure of N164, 465,746.00 was the cost of FUGs sub-projects implemented in Rivers West senatorial zone.

For Rivers-East, six local governments participated in Fadama programme, showing as the highest zone with more participated farmers. In this regard, Etche and Ikwerre topped the list of local governments that experienced the highest implementation of Fadamauser group with a total expenditure of N69, 191,740.00 and N59, 053,902.00 representing 27.5% and 23.3% respectively. This is followed by Emohua local government with a total sum of expenditure of N53, 587,550.00 representing 21.3 per cents. Other local government areas such as Okirika, Obio/Akpor and Omuma had FUGs expenditures of N5, 355,900.00 (2.1%) for Okirika, N30, 225,322.0000 (12.0%) for Obio/Akpor and N34, 070,150.00 (13.5%) for Omuma local government area out of a total expenditure of N251,484, 564.00 indicating 41.8% for the zone.

4.2 Summary of Fadama Activities

4.2.1 Summary of Fadama User Groups (FUGs) Sub-projects and Expenditure

Table 10 and figure 2 below showed that Fadama III management team prudently utilized a total of one-hundred and eighty four million, three hundred and fifty-eight thousand one-hundred and seventy-seven (N184, 358,177.00) naira, reflecting 30.7 per cents of the gross expenditure to implement three hundred and forty-five (345) economic activity sub-projects, representing 30.9 per cent total expenditure in Rivers South East.

In Rivers West, two-hundred and ninety eight (298) sub-projects representing 26.7 per cent were implemented with a total of one hundred and sixty four million, four-hundred and sixty-five thousand, seven hundred and forty-six (N164,465,746.00) naira only.

For Rivers East, a total of four-hundred and seventy (470) sub-projects which showed 42.2 per cent of the entire FUG sub-projects in the state were implemented with the sum of two hundred and fifty one million, four-hundred and eighty four thousand, five hundred and sixty four (N251,484,564.00) naira representing 41.8 per cent.

In all, it was observed that a great achievement on sub-project implementation was recorded by Fadama III through a reflection of one thousand, one-hundred and thirteen (1,113) different economic activities under Fadama User Groups (FUGs) sub-projects in Rivers State. A gross expenditure of six-hundred million, three hundred and eight thousand, four hundred and eighty-seven (N600, 308,487.00) naira reflecting 79.7 per cent of the gross expenditure on both FUGs and FCAs sub-projects was spent in Rivers State.

Table 11: Summarized FUG Sub-project costs

S/n	Senatorial Zone	No. FUG Sub-projects	(%)	Amount (₦)	(%)
1.	Rivers South East	345	30.9	184,358,177.00	30.7
2.	Rivers West	298	26.7	164,465,746.00	27.3
3.	Rivers East	470	42.2	251,484,564.00	41.8
Total =		1,113	100	600,308,487.00	100

Source: Author's Compilation, 2018.

A total of one-thousand, one-hundred and thirteen (1,113) sub-projects under economic interest activities was implemented in Rivers State as shown in table 5 above.

Figure 3: Bar Chart Representing Fadama User Groups Expenditure.
Source: Author's Desk Research, 2018.

4.2.2 Summary of Fadama Cooperative Associations (FCAs) Rural Infrastructure and Expenditure

In this section, a summary was considered to reflect a snap shot of what was discovered on Fadama Cooperative Associations implemented activities in Rivers State. On the provision of rural infrastructure, the sum of fifty-two million, one-hundred and seventy four (N52, 174,000.00) naira was spent, reflecting 34.2 per cent for Rivers South-East. It was further revealed that expenditure of sixty-two million, two-hundred and sixty-seven thousand, and nine-hundred and forty-two (N62, 267,942.00) naira reflecting 40.8 per cent, was committed in the provision of FCAs rural infrastructure in Rivers East. For Rivers West, the sum of thirty-seven million, eight hundred and ten thousand five hundred and thirty (N37, 810,530.00) naira only representing 24.8 per cent was spent. Gross expenditure on FCAs rural infrastructural provision gulped one-hundred and fifty-two million, two hundred and fifty-two thousand, four-hundred and seventy-two (N152, 252,472.00) naira representing 20.2 per cent of the total expenditure on both FUG and FCA in the Rivers State.

Table 12: Summary of FCAs Rural Infrastructure Expenditures

S/N	Senatorial Zone	Cost of Infrastructure	(%)
1.	Rivers South-East	52,174,000.00	34.2
2.	Rivers West	37,810,530.00	24.8
3.	Rivers East	62,267,942.00	40.8
Total =		152,252,472.00	

Source: Author's Compilation, 2018

Figure 4: Bar Chart showing Rural Infrastructure Expenditure by Fadama Cooperative Association
Source: Author's Desk Research, 2018

4.2.3 Summary of FUGs and FCAs Expenditures

The expenditure analysis in this appraisal study concerned Fadama User Groups (FUGs) and Fadama Cooperative Associations (FCAs) only and not entire Fadama programm as it does not include expenditures but not limited to officers honorariums, transportation, stationaries, overhead and others. Expenditure analysis revealed that a total of N600, 308,487.00 representing 79.7 per cent, was spent on FUGs sub-projects while the sum of N152, 252,472.00 was expended on FCAs rural infrastructure in Rivers State.

Table 13: Summary of FUGs and FCAs Expenditures in Senatorial Zones

Senatorial Zone	FUGs		FCAs		Gross Expenditure (₦)
	Amount (₦)	(%)	Amount (₦)	(%)	
Rivers South-East	184,358,177.00	30.7	52,937,000	34.7	
Rivers West	164,465,746.00	27.3	35,532,000.00	23.3	
Rivers East	251,484,564.00	41.8	63,783,472.00	41.8	
Total =	N600,308,487.00		+ N159,528,002		= 752,560,595.00
Percentage (%)	79.7		20.2	100	

Source: Author's Compilation, 2018

In Rivers South East, the sum of N184, 358,177.00 was spent on FUGs sub-projects economic activities representing 30.7 per cents while FCAs rural infrastructure took a total of N52, 937,000 showing 34.7 per cents.

For Rivers West, FUG sub-projects gulped the sum of N164, 465,746.00 indicating 27.3 percent and FCAs rural infrastructure had expenditure of N35, 532,000.00 representing 23.3 per cents of total expenditure in the zone.

Figure 5: Pie Chart Showing Summary of FUGs and FCAs Expenditures

Source: Author's Desk Research, 2018.

Gross expenditure of six-hundred million, three-hundred and eight-thousand, four-hundred and eighty-seven (N600,308,487.00) naira only, showing 79.7% was spent on FUG sub-project while a total of N152,252,472.00 representing 20.2 per cents was expended on FCAs rural infrastructure Rivers State.

4.2.4 Summary of Rural Infrastructure by Type

From the summery on table 14 above, a total number of 86 rural infrastructures were implemented by Fadama III showing one (1) 1.1% tricycle, one (1) 1.1% was parking shop. Eighteen (18) 20.9% for cold room, two (2) 2.3% for culvert, twenty-four (24) 27.9% for market stalls, twenty-one (21) 24.4% for graded roads, one (1) 1.1% chicken processing center and eighteen (18) 20.9% representing implemented boreholes.

Table 14: Aggregated FCAs' Implemented Rural Infrastructure

Infrastructure	No.	(%)
1. Tricycle	1	1.1
2. Parking Store	1	1.1
3. Cold Room	18	20.9
4. Culvert	2	2.3
5. Market Stalls	24	27.9
6. Road Grading	21	24.4
7. Chicken Processing Center	1	1.1
8. Borehole	18	20.9
Total =	86	100

Source: Author's Compilation, 2018

4.2.5 Summary of Sub-projects (Economic Interest Activities) by Type

From table 15, Fadama III implemented 37 different types of sub-projects in Rivers State. It should be noted that in most of the sub-projects were other projects which operated with a single issued certificate. Invariably, on a disaggregated level, the number of projects implemented in Rivers State is higher than the stated 37 sub-projects. For instance, under livestock, a group issued a certificate for livestock economic activities were entitled to operate piggery, poultry, goatry farms and others. However, no group was permitted to operate an economic interest activity outside that for which it was issued certificate.

Table 15: Aggregated FUGs' Economic Interest Activities

S/n	Sub-project	No.	(%)	S/n	Sub-project	No.	(%)
1.	Artisanal	22	1.9	20.	Maize	7	0.6
2.	Agro Processing	1	0.08	21.	Okro	3	0.2
3.	Banana Farm	1	0.08	22.	Poultry	134	12.0
4.	Cassava Farm	157	14.1	23.	Plantain	83	7.4
5.	Cocoa Yam	2	0.1	24.	Piggery	30	2.6
6.	Cucumber	1	0.08	25.	Pineapple	14	1.2
7.	Corn Processing	2	0.1	26.	Palm Kernel Processing	1	0.08
8.	Cassava Processing	28	2.5	27.	Periwinkle Gathering	3	0.2
9.	Feed Mill	2	0.1	28.	Pepper Farm	1	0.08
10.	Fish Farm	247	22.1	29.	Rice Farm	1	0.08
11.	Food Processing	3	0.2	30.	Rentals	2	0.1
12.	Goatry	48	4.3	31.	Rabbitry	1	0.08
13.	Groundnut	3	0.2	32.	Snail Farm	35	3.1
14.	Garden Egg	10	0.8	33.	Soap Making	1	0.08
15.	Grass Cutter	14	1.2	34.	Spice Processing	3	0.2
16.	Hat Beading	1	0.08	35.	Tricycle	24	2.1
17.	Livestock Farm	11	0.9	36.	Vegetable	81	7.2
18.	Moringa	4	0.3	37.	Yam Farm	60	5.3
19.	Oil Palm Processing	72	6.4				
Total number of Sub-projects = 1,113							

Source: Author's Compilation, 2018.

4.3 Achievements of Fadama III in Rivers State

The programme recorded huge success within the period it lasted. The achievements are enormous and not limited to the following;

1. The programme at aggregated level, through Fadama User Groups, implemented greater number of sub-projects (1,113) in Rivers State.
2. Through Fadama Corporative Associations eighty-six (86) rural infrastructure projects were constructed to aid farming activities in the state.
3. Effective adoption of improved farming technologies introduced by Fadama has encouraged increased participation in agriculture with greater harvests in Rivers State.
4. Well-articulated adoption of all-season agricultural practices has sustained availability of farm produce in the market in Rivers State.
5. With meagre resources, the programme officers and supervisors were regularly trained and mobilized into remote communities in the state, to ensure compliance to Local Development Plans, effective implementation and applications of funds to rural infrastructure and economic interest activities.

4.4 Challenges of Fadama III Programme in Rivers State

Despite the financial prudence applied by the programme coordinating team, the agency was starved of funds which resulted to their inability to accommodate all requests from potential beneficiaries. People still perceive agriculture as occupation for the rural households. Such attitude denied many the opportunities that existed in the programme within the period it lasted. Release of funds was often delayed while the state, local government and even the benefiting communities were unable to pay their counterpart funds. The system of releasing funds in tranches after the coordinating agency has met the

cumbersome criteria was not in the interest of the programme as farming activities are usually timed in seasons. This resulted to late planting and low yields in most of the periods.

5. Conclusion

The study revealed that there is a remarkable improvement in rural development in the participated local government areas therefore, the National Fadama III Project performed creditably well in Rivers State as a rural development Programme that adopted “The firing from bottom approach” which was objectively pursued through private partnership participation. Social inclusiveness of the programme enabled the participation of vulnerable groups in the rural communities the opportunity to be part of government agricultural policies in developing themselves. It was also the most appropriate step to protect government’s investment in agriculture and guarantee sustained means of livelihood for the less privileged. This informed the inclusion of disabled, elderly, widows and youths in the Fadama III programme. Furthermore, farmers had the opportunity of organizing themselves into associations in their respective communities and towns which directed their activities towards achieving a common goal. Such mobilization enabled beneficiaries have access to inputs at reduced prices. Government had clear picture of the Local Development Plans of rural communities and pursued development towards those directions. Infrastructural facilities such as boreholes, cold rooms, outboard engines, market stores and shops, feeder roads, culverts, tricycles and other farm infrastructures were provided. Following the findings, this paper recommends that; government should extend Fadama or re-introduce similar programme to ensure sustainability of achievements of the programme especially in the areas of food production and provisions of rural infrastructure, the expenditure control measures adopted by management of the programme should be applied in future programmes to ensure quality deliverables, it is pertinent that government removes seemingly bottleneck criteria that would delay release of funds budgeted for agricultural projects. Furthermore, local government councils should be mandated to provide logistics that will guarantee participation of farmers in the programme. For sustainability and maintenance, local government councils should include the rural infrastructure projects such as road grading, construction of culverts, boreholes and others, into their annual work plans and budgets. Federal, state and local governments should channel more funds into agricultural programmes through soft loans to encourage increased participations and implementation of salient agricultural activities such as bee-keepings, moringa, rice, cucumber, garden egg, pawpaw, pepper farming and others, in Rivers State.

Acknowledgement

The study brought to reality; the activities of Fadama III as a single agricultural programme that provided more rural infrastructure and expanded economic interest activities in Rivers State. The study established that reason for non-participations of most local governments areas was as a result of non-compliance to set criteria and not political.

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