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Appraisal of Beneficiaries' Level of Satisfaction in the Utilization and Maintenance of Rural Infrastructures Provided via the Fadama III Project in Delta Central Zone of Delta State, Nigeria

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ABSTRACT

This study was aimed at appraising beneficiaries' levels of satisfaction in the utilization and maintenance of rural infrastructures provided by means of Fadama III project in Delta Central Agricultural zone of Delta State, Nigeria. The objectives were to describe the socio-economic characteristics of Fadama III project beneficiaries, ascertain the Fadama III project beneficiaries' level of satisfaction in utilization of rural infrastructure provided by Fadama III project, and identify the Fadama III project beneficiaries' level of satisfaction in maintenance of rural infrastructure provided by Fadama III project. A total of ninety (90) beneficiaries constituted the sample by use of simple random sampling technique. Data were analyzed by use of simple percentages and means. The findings revealed that majority of the beneficiaries were male (70%) and had secondary education (38.89%). The mean age of the beneficiaries was 55 years and had an average experience of 13 years in community development. Majority of the respondents (51.1%) had contact with Fadama III project facilitator fortnightly. It was found that beneficiaries expressed satisfaction in the utilization of culverts ($\bar{x}$ = 4.18), cold rooms ($\bar{x}$ = 3.98), roads ($\bar{x}$ = 3.91) and market stalls ($\bar{x}$ = 3.39). Beneficiaries were not satisfied with the utilization of wooden bridges ($\bar{x}$ = 2.67). On infrastructure maintenance, beneficiaries were satisfied with culverts ($\bar{x}$ = 4.29), cold rooms ($\bar{x}$ = 4.16) and roads ($\bar{x}$ = 3.62). Beneficiaries expressed low satisfaction with market stalls ($\bar{x}$ = 2.83) and wooden bridges ($\bar{x}$ = 2.78). Owing to the low satisfaction levels in maintenance of market stalls and wooden bridges, it was recommended that efforts should be aimed at enlightening the Fadama III project beneficiaries to increase maintenance culture in both market stalls and wooden bridges for efficient utilization. The current positive contact between the local facilitator and Fadama III project beneficiaries should be encouraged.

KEYWORDS: Fadama III project, Rural Infrastructures, Beneficiaries' satisfaction, Utilization

INTRODUCTION

The Federal Government of Nigeria, the World Bank and States Governments designed and implemented the National Fadama Development Project. The National Fadama Development Project is an intervention project for agricultural development designed chiefly to supply the small scale farmers with inputs and assets needed to boost food production with the overall purpose of enhancing rural livelihood. The project started in 1991 when low-cost petrol driven pumps were used to extract shallow ground water for purpose of irrigation in the Fadama. The word Fadama is an Hausa word, connoting "low lying" flood plains along Nigeria's rivers or major stream (Idoge and Ovwigho, 2003; Ingawa, Oredipe, Idefor and Okafor, 2004). 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 (Qureshi, 1989). Fadama, although a Hausa word has become accepted in the Nigerian Agricultural Vocabulary to the extent that Donor Agencies now use it as title of project that bear relevance to artificial supply of water for agricultural purposes and especially during dry season farming. Hence Fadama I, II, and now Fadama III are used to denote the various phases of the Fadama projects.

Recently, the Delta State Government, in collaboration with the World Bank and Federal Government of Nigeria implemented Phase III of the National Fadama Development Project to replicate the Fadama II concept in the remaining communities of the State that did not benefit from the Fadama II. Fadama III is a poverty alleviation and empowerment programme designed to meet a wide array of needs which the beneficiary communities identify as critical to their welfare. Delta Fadama III was expanded in scope to include activities, production assets acquisition and provision of rural infrastructure. The State Fadama III is non-discriminatory in terms of gender, age, social class, occupation, physical disability and religion.

The Delta State Fadama III contributed to Agricultural Development through provision of Production Asset and Rural Infrastructures (RI) such as Market Stalls, Culverts, Road and Cold room. The Production Assets and Rural Infrastructures were of great importance in rural agriculture, community development, human capital development and environmental

sustainability. However, in spite of the good intention of the several acquired Production Assets and provided Rural Infrastructures through the Fadama III project, the expected level of satisfaction in the utilization and maintenance of the production Assets and Rural Infrastructure has been a major area of concern. From the above background information, the Fadama III beneficiaries' level of satisfaction in the utilization and maintenance of Production Assets and Rural Infrastructure need to be appraised to ensure that the Fadama III projects meet its over-all goal and the beneficiaries derive the utmost benefit from the acquired Production Assets and provided Rural Infrastructures.

Objectives of the Study

The general objective of this survey was to appraise the Fadama III Beneficiaries levels of satisfaction in the utilization and maintenance of rural infrastructure in Delta State, Nigeria. The specific objectives were to:

i. Describe the socio-economic characteristics of Fadama III project beneficiaries;
ii. Ascertain the Fadama III project beneficiaries' level of satisfaction in utilization of rural infrastructure provided by Fadama III project; and
iii. Identify the Fadama III project beneficiaries' level of satisfaction in maintenance of rural infrastructure provided by Fadama III project.

METHODOLOGY

Sampling Technique and Sample Size

The population of the study comprised all Fadama III beneficiaries in Delta Central Senatorial District. The registered Fadama Community Associations (FCAs) and Fadama Users Groups in Delta Central Senatorial District were sixty-three (63) and six hundred and twenty-two (622) respectively. Simple random sampling technique was engaged in composing the sample size. Transect walk method was embarked upon to familiarized with the acquired production asset, provided rural infrastructures and Fadama Users Groups. Four (4) Local Government Areas (LGAs) randomly drawn out of the nine (9) LGAs in the Delta Central Senatorial District were studied. Thus, the Fadama III beneficiaries were selected from these LGAs. Twenty (20) percent of the FUGs were randomly selected from the 227 FUGs in the selected four (4) LGAs.

This corresponded to 45 FUGs. The lists of the Fadama beneficiaries were taken from the Secretary of the sampled FUGs. A FUGs has an average of 10 beneficiaries. Two (2) Fadama beneficiaries were randomly selected from each of the selected FUGs because of their homogeneity in composition. Thus, the sample size of the beneficiaries was made up of ninety (90) Fadama III project beneficiaries.

Method of Data Collection and Measurement of Variables

Data were collected by use of structured questionnaire and interview schedule. The questionnaire and interview schedule consisted of three main parts- socioeconomic characteristics, level of satisfaction in utilization of rural infrastructure provided by Fadama III project and level of satisfaction in maintenance of rural infrastructure provided by Fadama III project. Socio-economic characteristics of the beneficiaries included the following. Age was measured in years; Sex as in male or female; marital status as in whether the beneficiaries was never married, married, divorced, separated or widowed; educational level as in possession of no formal education, primary, secondary school, OND/NCE, and HND/First Degree. Community development experience was measured in years. Farmers' average Income was assessed in Naira. While contact with Local Facilitator was estimated on weekly, fortnightly, monthly or quarterly basis. Project beneficiaries were asked to indicate their levels of satisfaction in utilization and maintenance of project in culverts safety, cold rooms equipping, Roads preservation, market stalls sanitation and wooden bridges protection. Ten satisfaction statements made up of five satisfactions in utilization and five satisfactions in maintenance statements were constructed. The statements were measured by the use of a Likert rating scale. Ranging from very satisfied (5), satisfied (4), uncertain (3), fairly satisfied (2) and not satisfied (1). A cut off mark of 3.0 was used to determine the degree of satisfaction. Scores at 3.0 and above were considered satisfactory; while scores below 3.0 were considered not satisfactory.

Method of Data Analysis

Data on socioeconomic characteristics were analyzed by simple percentage. Data on level of satisfaction in utilization of rural infrastructure provided by Fadama III project and level of satisfaction in maintenance of rural infrastructure provided by Fadama III project were analyzed by use of mean.

RESULTS AND DISCUSSION

Socio- economic characteristics of respondents

Table 1: Distribution of respondents according to socio-economic characteristics

Characteristic	Frequency	Percentage (%)	Mean/Mode
Age (years)			
31 – 40	15	16.67	
41 – 50	23	25.56	
51 – 60	26	28.89	55.2
61 – 70	14	15.56	
71 – 80	12	13.33	
Gender			
Male	63	70.0	Male*
Female	27	30.0	
Marital Status			
Never Married	8	8.89	
Married	64	71.11	Married*
Divorce	2	2.22	
Separated	1	1.11	
Widowed	13	14.44	
Educational Level			
No Formal Education	15	16.67	
Primary School	23	25.56	
Secondary School	35	38.89	Secondary
OND/NCE	12	13.33	education*
HND/First Degree	5	5.56	
Community Development Experience (Years)			
1 - 5	7	7.78	
6 – 10	18	20.00	12.85
11 – 15	30	33.33	
16 – 20	20	22.22	
21 - 25	15	16.67	
Average Income/annum (Naira)			
0 – 100,000	24	26.67	
101,000 – 200,000	53	58.89	₦ 162,500.00
201,000 – 300,000	13	14.44	
Contact with Local Facilitator			
Weekly	12	13.33	
Fortnightly	46	51.11	Fortnightly*
Monthly	32	35.56	
Quarterly	0	0.00	

Note: Values in asterisks implies mode. Source: Field Survey, 2015.

The distribution of respondents according to selected socioeconomic characteristics (age, gender, marital status, level of education, experience, average income and contact with facilitator) is shown in Table 1.

It showed that the average age of the respondents was approximately 55 years. The implication is that majority of the Fadama III project beneficiaries were middle age people, elders and retired civil servants. This finding on Fadama III beneficiaries age distribution agreed with Ovwigho (2014) who observed that majority of the Fadama III participants were retired civil servants. Predominant proportions (70%) of the Fadama III project beneficiaries were males while 30% were females, suggesting that Fadama III project beneficiaries in the study area is dominated by males. This agrees with the findings of Ovharhe (2014) that there were more males' participation in Fadama III project. Majority (71.1%) of the beneficiaries were married, implicating that Fadama III project beneficiaries had family responsibilities that needed financial commitment. Majority (83.3%) of the respondents had at least one form of education or the other, indicating that Fadama III beneficiaries were literate. The majority of the respondents (72.2%) had average community development experience for 13 years. The implication is that many of the Project beneficiaries were old in the farming business. This finding agrees with (Issa and Kagbu, 2016) that majority (86.1%) of the respondents in an agribusiness survey in Ibadan, participate in community development activities. Analysis of the income of respondents showed an average income of ₦ 162,500.00 per annum in the study area, which indicated that Fadama III project beneficiaries were mainly subsistence farmers' and there was very weak earning power or income from their farm business. The majority of the respondents (51.1%) had contact with Fadama III project facilitator fortnightly. The implication is that Fadama III project beneficiaries had adequate contact with extension workers in the study area.

Level of Satisfaction in Utilization of Provided Rural Infrastructures

Mean rating of respondents in level of satisfaction in the utilization of rural infrastructures provided by Fadama III project. Beneficiaries expressed satisfaction in the utilization of culverts ($\bar{x}$ = 4.18), cold rooms ($\bar{x}$ = 3.98), roads ($\bar{x}$ = 3.91) and market stalls ($\bar{x}$ = 3.39). However, beneficiaries were not satisfied with the utilization of wooden bridges ($\bar{x}$ = 2.67). This could be attributed to the poor quality of wood supplied for project construction. The results (Table 2)

showed an overall mean of 3.63, which implied that the beneficiaries had high level of satisfaction in the utilization of rural infrastructures provided by Fadama III project. The high level of satisfaction could be adduced to high participation of beneficiaries in prioritized felt need ranking, thereby leading to the beneficiaries' utilization of the provided rural infrastructures.

Table 2: Response to level of satisfaction in utilization of rural infrastructures provided by Fadama III project

Provided Rural Infrastructures	**Total Score n = 90**	**Mean Response (Max = 5)**
Beneficiaries' responses in utilization of the followings:		
The culverts are safe for usage	376	4.18
The cold rooms are well equipped	358	3.98
The roads are helpful in conveying goods	352	3.91
Market stalls are in good conditions	305	3.39
Wooden bridges are firm	240	2.67
Total = 18.12, pooled mean = 3.63, Remark = Satisfactory		

Note: The cut-off point is ≥ 3.00, Source: Field Survey, 2015.

Table 3: Results of Fadama III beneficiaries' level of satisfaction in maintenance of rural infrastructures provided by Fadama III project

Selected Rural Infrastructures	**Total Score n = 90**	**Mean Response (Max = 5)**
Beneficiaries' responses in in maintenance of the followings:		
Culverts are well kept	386	4.29
Cold rooms are serviced regularly	374	4.16
Roads are without potholes	326	3.62
Market stalls are in good conditions	255	2.83
Wooden bridges are firm	250	2.78
Total = 11.68, pooled mean = 3.54, Remark = Satisfactory		
Note: The cut-off point is ≥ 3.00, Source: Field Survey, 2015		

This finding is at variance with Bature, Sanni and Adebayo (2013) which stated that beneficiaries were not satisfied with storage facilities and market stalls provided.

Level of Satisfaction in Maintenance of Provided Rural Infrastructures

Mean rating of respondents in level of satisfaction in the maintenance of rural infrastructures provided by Fadama III project. Beneficiaries were satisfied with the maintenance of culverts ($\bar{x}$ = 4.29), cold rooms ($\bar{x}$ = 4.16) and roads infrastructures ($\bar{x}$ = 3.62). However, beneficiaries expressed low satisfaction with market stalls ($\bar{x}$ = 2.83) and wooden bridges ($\bar{x}$ = 2.78). This implied that the beneficiaries' participation in project maintenance of market stalls and wooden bridges were low. Poor sanitary conditions were observed in these locations during field survey in the study area. The results (table 2) showed an overall mean of 3.54, which implied that the beneficiaries had high level of satisfaction in the maintenance of rural infrastructures provided by Fadama III project. This is in agreement with Balogun, Adeoye, Yusuf, Akinlade and Carim-Sanni (2011) who posited that presence of infrastructures of Fadama II project has impact on resource use efficiency among the beneficiaries

CONCLUSION AND RECOMMENDATIONS

It was discovered that most beneficiaries were male, middle age, married, attained secondary education, experience in farming, low income earners and had adequate contact with local facilitators. The beneficiaries were only satisfied with the utilization of culverts, cold rooms, roads and market stalls. They were not satisfied with the utilization of wooden bridges. On maintenance of rural infrastructure, Fadama III beneficiaries were only satisfied with culverts, cold rooms and roads project. They were not satisfied with the maintenance of market stalls and wooden bridges. Owing to the low satisfaction levels in maintenance of market stalls and wooden bridges, it was recommended that efforts should be aimed at enlightening the Fadama III project beneficiaries to increase maintenance culture in both market stalls and wooden bridges for efficient utilization. The current positive contact between the local facilitator and Fadama III project beneficiaries should be encouraged.

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