



**IMPACT OF COMMUNITY DRIVEN DEVELOPMENT STRATEGY OF THE NATIONAL FADAMA DEVELOPMENT PROGRAMME IN BILLIRI LOCAL GOVERNMENT AREA OF GOMBE STATE, NIGERIA**

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**Abstract**

The study assessed the impact of Community Driven Development Strategy (CDDS) of National Fadama Development Programme in Billiri Local Government Area of Gombe State. Data were collected using a well- structured questionnaire from 120 randomly selected respondents, made up of 40 participants and 80 non-participants. The data collected were analyzed using descriptive statistics, Likert scale, chi-square and t-test. Result of chi-square test revealed that participants had favorable attitude towards NFDP-II strategy ( $P < 0.05$ ;  $X^2 = 17.3$ ). T-test result indicated a significant difference in the income of participants before and after the NFDP-II ( $P < 0.001$ ) and between the incomes of participants and non-participant ( $P < 0.001$ ). The Likert weighted mean score of 3.0 indicated significant increases in participant's productive socio-economic attributes. The study also identified the major constraints to NFDP-II strategy in the study area to include untimely disbursement of fund, lack of down payment and inadequate counterpart funding. To this end timely disbursement, increased counterpart funding and creating effective awareness for knowledge and resources management will promote the participation, adoption and success of the CDD strategy.

**Key words:** Impact, Community Driven Development Strategy, Fadama Programme.

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## INTRODUCTION

### 1.1 Background of the Study

One of the major problems confronting Nigeria today is how to improve the quality of life in the rural areas and reduce the level of poverty. In spite of the dominant role of petroleum sector as the major foreign exchange earner, agriculture remains the main stay of the Nigerian economy. Apart from contributing the largest share of Gross Domestic Product (GDP), it is the largest non-oil export earner, the largest employer of labour and a key contributor to wealth creation and poverty alleviation, as the large percentage of the population derives their income from agriculture and related activities (NEEDS, 2004). However, the rate of growth in agricultural production has stagnated over the years, and failed to keep pace with the needs of the rapidly growing population resulting in a progressive rise in import bills for food and industrial raw materials. Yet, only one third of the 72 million hectares of agricultural land is being put to productive use, almost entirely by small holder farmers (less than three hectares) using rudimentary techniques resulting in very low yield.

The early and conventional research/ extension approaches from colonial era to an era of professional extension service-Training and Visit (T&V) system of Agricultural Development Programme (ADPs) in 1980s (which aimed at increasing productivity in rural sector, where about 57% of the population resides) did not achieved the desired success in boosting the productivity and living standard of rural farmers .Amongst the reasons advanced for their failure are: Top-down Planning with no clientele participation in planning and implementation, flawed extension policy which termed farmers as traditional, fatalistic, ignorant and resistant to change. Linearity in concept i.e. uni-directional proliferation of irrelevant technology that could not be sustained and collapsed at seizure of the World Bank support due to high implementation cost (Omotayo, 2001). This among others led to a call for demand -driven extension (a participatory approach) which involves a shift from conventional extension delivery system to a negotiated partnership with demand responsive organizations and service providers with community groups given control over decision and resources based on their needs (Omotayo, 2001). It is in view of the above, that this study becomes imperative to answer some pertinent questions: -

- (1) Has the Community Driven Development Strategy been able to effect changes in the level of production and farm income of the beneficiaries?
- (2) Is there any prospect for the Community Driven Development Strategy in Billiri LGA and Gombe State?

### **Objectives of the Study**

The main objective of this study is to assess the Impact of Community Driven Development Strategy of the National Fadama Development Programme in Billiri Local Government Area of Gombe State. Specifically the research work will:-

- (a) Determine the effects of NFDP-II on the output and income of farmers.
- (b) Determine the effects of NFDP-II on socio-economic attributes of participants in Billiri Local Government Area of Gombe State.
- (c) Examine the attitudes of the people towards the NFDP-II Programme in Billiri Local Government Area of Gombe State.
- (d) Identify the constraints to the implementation of Community Driven Development Strategy of NFDP-II in Billiri Local Government Area of Gombe State.
- (e) Determine the prospect for Community Driven Development Strategy of NFDP-II in Billiri Local Government Area of Gombe State.

### **Hypothesis**

1.  $H_0$ : There is no significant difference in the attitudes of farmers toward NFDP-II Programme in Billiri LGA, Gombe State.
2.  $H_0$ : There is no significant difference in the output and income-levels of participants before and after the NFDP-II Project.

## **METODOLOGY**

### **The Study Area**

Billiri Local Government Area is one of the eleven local government areas of Gombe State, Nigeria. Billiri Local Government is located between latitude 9° 33" and 10° 25" North of the equator, and Longitude 8° 33" and 9° 24" East of Greenwich meridian. The area has common border with Akko Local Government Area to the North, Shongom Local Government to the South, Balanga Local Government Area as well as Kaltungo Local Government Areas to the North-East and Eastern part respectively. Billiri Local Government Area also has common border with Alkaleri Local Government Area of Bauchi State to the South West.

### **Demographic Features**

Billiri LGA has a landmass of about 2638.49 km<sup>2</sup>. The area has a population of about 202, 680 people (National Population Census, 2006).

The area experiences average rainfall of about 1,600mm. It has two well defined seasons (rainy and dry). Rainy season is experienced between May and October with July and August being the highest months of rainfall. The dry season is experienced between November to April and it's characterized by cold, dry harmatan with no rainfall. Billiri LGA has a Vegetation of a typical Sudan Savannah with wide range of soils: sandy-loam, rich clay-loam, and heavy-clay soil which supports the production of varieties of arable crops.

### **Socio–Economic Set–Up**

The Local Government is predominantly agrarian in nature. About 80% of the inhabitants are engaged in farming and its related occupations, with majority of farmers producing at subsistence levels (small scale). Thus, the choice of the area hinges on the fact that, it's a typical representation of the diverse social, economic, cultural and rural-urban settings obtained in Nigeria and other developing countries of the world. It is also one of the early beneficiaries of world-bank sponsored Gombe Agricultural Development Programme (ADP) Pilot Project outreach, during the 1<sup>st</sup> Pilot ADP Era of 1975. The major tribes in the area includes: - Tangale, Wurkun, Jukun, and Fulani (Nabinta, 2002).

**Sampling Technique/design**

Multi-stage random sampling technique was used to collect data for the study. First of all Billiri LGA was stratified into ten wards. Fadama User Groups (FUGs) in these wards were then randomly selected. From each FUG /ward 14 participating and 27 non-participating farmers were randomly sampled.

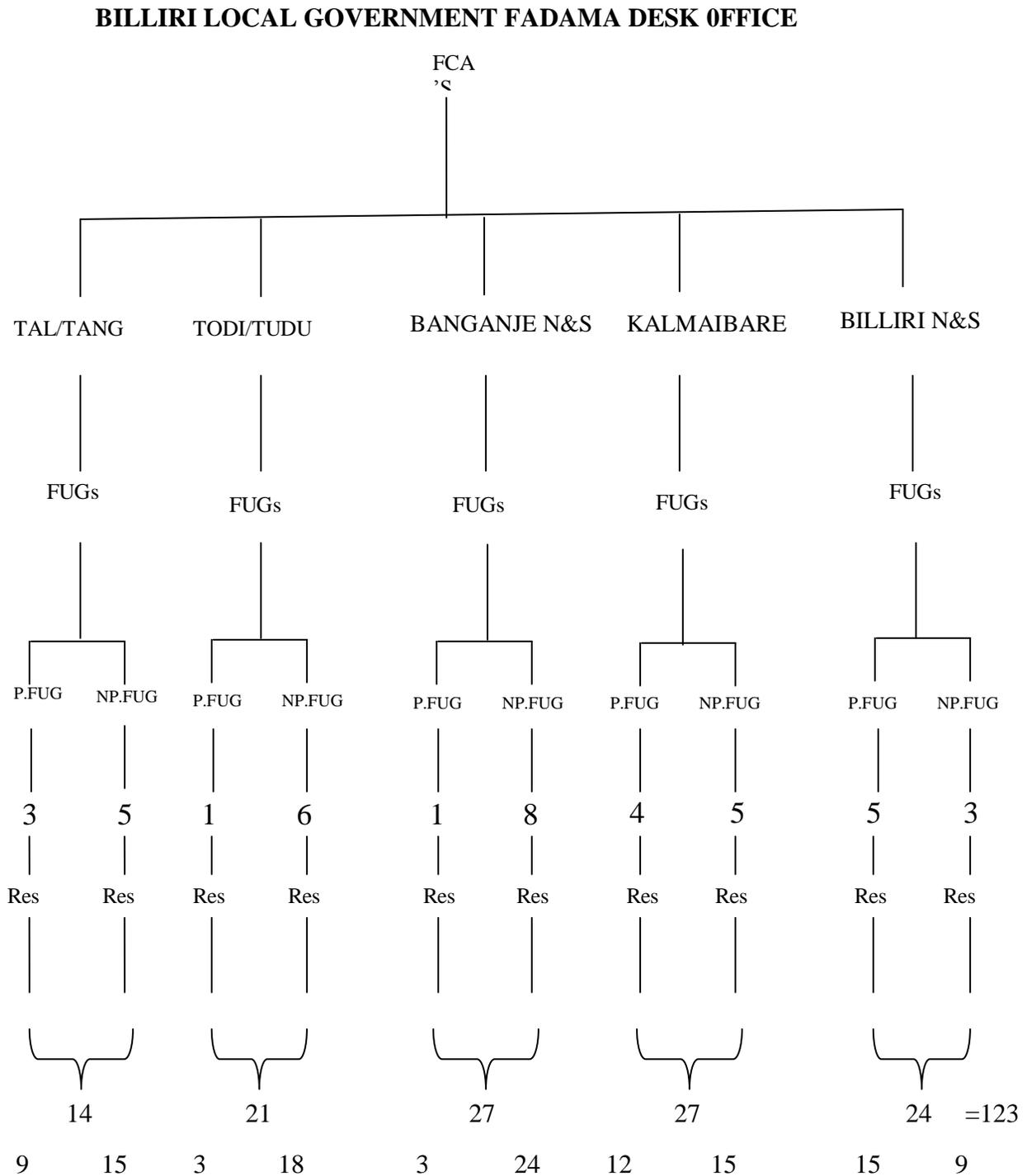
**Population, Sample and Sampling Techniques**

During the preliminary survey at the Local Fadama Desk Office (LFDO), we found out that there were five registered Fadama Community Associations (FCA's) who participated in the NFDP-II with unequal numbers of registered Fadama Users Groups (Table 1) yielding a total of 123 FUGs in the five FCAs of the entire (10) ten wards of the Local Government Area. Out of which 42 FUGs participated (participants' FUG's}, while 81 FUGs although had Local Development Plans (LDP's) but, could not participate in the Fadama Programme, (Non Participants FUGs) hence, were designed as the two groups of respondents. For this study, a total of 14 (33%) and 27(33%) participants and non-participant FUGs respectively were randomly selected. To give fair representative samples (Table 1), three (3) respondents were further selected in each of the selected FUG by a simple random sampling technique. This gives a total of 42 and 81 participants and non-participants respectively.

**Table 1: Names of fadama community associations with number of registered Fadama user group (participants and non-participants)**

<b>FADAMA COMMUNITY ASSOCIATION (FCAS)</b>	<b>NUMBER OF REGISTERED FUGS</b>	<b>NUMBER OF PARTICIPATING FUGS</b>	<b>NUMBER OF NON-PARTICIPATING FUGS.</b>
Tal/Tanglang	24	8	16
Todi/Tudu	21	4	17
Banganje North & South	28	3	25
Bare/Kalmai	27	13	14
Billiri North & South	23	14	9
Total	123	42	81
Sample FUGs	41	14 (33%)	27 (33%)
Respondents	120	40	80

**Fig. 1: Sampling Procedure chart**



**Key:**

P. FUG = Participants FUGs, NP.FUG= Non Participants FUG, Res =Respondents, FUGs =Fadama User Groups, FCA=Fadama Community Association, LFDO = Local Fadama Desk Office.

**Methods of Data Analysis****Attitudes of Respondents**

To determine the significant difference in the attitudes of participants and non-participants towards CDD of NFDP-II. Chi-square model was used to determine the goodness of fit of the observed distribution. Thus if

1.  $X^2_{cal} \geq X^2_{tab}$  at 5% significance level = significant difference
2.  $X^2_{cal} \leq X^2_{tab}$  at 5% significance level = non-significant difference

**Effects of National Fadama Project 11 on Socio-economic Attributes of Fadama Farmers**

To assess the effects of the NFDP-II approach on the socio- economic attributes of the farmers. A five point Likert scale model was used. The weighted mean scores of the variables calculated and compared with Likert mean =3.0.

**Significant Difference between the mean income of participants and non- participants and also between income of participants before and after the projects**

To determine the significant difference between the mean income of beneficiaries and non-beneficiaries pooled 't' - test analyses was conducted. Also, to further determine the significant difference in the mean income of the participants before and after the NFDP-II paired 't' - test analysis was conducted. Therefore if:

' $t'_{cal} \geq 't'_{tab}$  at 5% probability = significance difference

' $t'_{cal} \leq 't'_{tab}$  at 5% probability = non-significance difference

**Constraints to the implementation of NFDP-11 programme**

To identify the constraints to implementation of NFDP-II the scores of the expressed opinions were analyzed using simple percentages. Then the result was ranked to show the level of the constraints.

## RESULTS AND DISCUSSION

### Composition of participants of NFDP-11 based on their sub projects

The distribution of participants of NFDP-II based on their sub-projects in Billiri LGA is shown in Table 2. The table revealed that 25% of participants purchased work bulls/carts as their sub-projects, while 20% of the participants went for procurement of crop farm input, livestock input supply accounted for 12.5% of participants, 10% each of the participants went for provision of modern storage facilities and milling machines procurement. Also 7.5%, 5% and 2.5% of participants went for construction of boreholes and roads/culvert, Poultry projects and purchase of motorized pump. This finding implied that, majority of beneficiaries were interested mostly in acquisition of oxen in order to ease their cultivation of crops and to generate income from hiring services. Also, the farmers were interested in input procurement projects so as to boost their production activities. This also implies that, although being mostly famers, the people are engaged in some off-farm activities like marketing, processing and storage facilities in order to promote their income. The result implied diversity in sub-projects based on individual economic interest and request; hence, famers may be willing to adopt and sustain such projects. This agrees with World Bank (1996) which reported that participatory approach is a holistic approach to agricultural development; it's a demand based and sustainable services taking accounts of the diversity, perception and resources of the users'.

**Table 2: Composition of participants of NFDP-11 based on their sub projects**

<b>Sub-Project</b>	<b>No. of Participants</b>	<b>Percentage</b>
Purchase of oxen/cart	10	25
Borehole (land and solar)	3	7.50
Motorized pump	1	2.5
Milling machines	4	10
Poultry enterprise	2	5
Procurement of Storage facilities	4	10
Livestock production inputs	5	12.5
construction of roads/culverts	3	7.5
<b>Farm input procurement crop inputs</b>	<b>8</b>	<b>20</b>
<b>Total</b>	<b>40</b>	<b>100</b>

### Mean Income of Participants Before and After NFDP-II

The mean income of participants before and after NFDP-II is shown in table 3. The result of t-test analysis shows a significant difference in the incomes of the participants before and after the NFDP-II. The mean income of participants before and after NFDP-II was ₦ 69,285.0 and ₦108,749.0 respectively (Table 3). This implies that there was a significant increase in the income level of participants that participated in the project. This shows that, NFDP-II impacted positively on the production and income of participants'. This finding agrees with Haruna (2002) who reported that the net returns and benefit-cost ratio for all the sampled Fadama farmers' categories in Bauchi were found to be very high.

**Table 3: Mean Income of Participants Before and After NFDP-II**

CATEGORY	MEAN SCORE (₦000)	MEAN OF DIFFERENCE ( $\bar{d}$ )	T <sub>cal</sub>
Before NFDP –II	69.285	35.78	7.74***
After NFDP-II	108.749		

Key: \*\*\* = significant at  $P < 0.001$

### Mean Income of Participants and Non-Participants of NFDP= II

Table 4 shows the mean income of participants and Non-Participants under NFDP-II. The result of the t-test analysis revealed significant difference between the incomes of participants and non-participants of NFDP-II. This implies that, NFDP-II have highly increased the incomes of participants than non-participants. The mean income of participants under NFDP-II was ₦ 108,749.0 while that of Non-Participants was ₦ 43,078.0 (Table 4). Haruna (2002) reported a similar finding on Fadama-I. This finding also agrees with World Bank (2003) "that by the end of NFDP-II, incomes of Fadama users will increase by 20% from those enterprises.

**Table 4: Mean Income of Participants and Non-Participants of NFDP= II**

CATEGORY	MEAN INCOME (₱000)	MEAN DIFFERENCE	POOLED VARIANCE	T <sub>cal</sub>
Participants	108.749			
		54.313	66.928	34.31***
Non-Participant	43.078			

\*\*\* = significance at  $P < 0.001$

### **The Effect of NFDP-II on Socio-Economic Attributes of Farmers**

The effect of NFDP-II on socio-economic attributes of participants is shown in Table 5. The table shows that enhanced income, increased food production and provision of marketing facilities among others are the important benefits derived from NFDP-II, followed by farm input procurement, improved production method and water supply, improved access to credits, also enhanced decision making power, acquisition of capital infrastructure and improved risk management skills of farmers were significantly improved (Table 5). This finding implies that, CDD of NFDP-II had a positive influence on socio-economic situations that determines farmer's productive ability.

**Table 5: The Effect of NFDP-II on Socio-Economic Attributes of Farmers**

Attributes	Scores					Total	Weighted mean
	5	4	3	2	1		
Enhanced income	140	64	9	2	1	215	5.37
Enhances decision making power	160	56	30	8	1	154	3.85
Increased food production	130	44	60	2	1	182	4.55
Improved production method	60	68	24	6	0	158	3.95
Acquisition of infrastructure/capital	65	40	36	6	0	147	3.68
Domestic water supply	75	60	9	14	0	158	3.95
Provide marketing facilities/effective marketing	85	72	12	2	0	171	4.20
Improves access to credit facilities	60	64	27	6	0	157	3.93
Improves risk management knowledge	50	52	27	16	0	145	3.60
Provision of farm inputs	90	40	27	6	0	163	4.12

Likert Mean = 3.0      N = 40

### **The Attitude of People toward National Fadama Development Programme**

Table 6 shows the distribution of respondents based on their perception of National Fadama Development Programme (NFDP-II). The table revealed that 77.5% and 22.5% of the participants have favourable and moderate attitudes towards NFDP-II respectively. The implication of this finding is that, attitude expressed the opinion of individuals about a particular idea or practice (NFDP-II) which further implies that the more favourable attitude people have on CDD of NFDP-II, the more will be their acceptance and participation in the projects. While reverse is the case. This agrees with Newcomb (1989) that attitude expresses ones opinion, feelings, believes and answers to direct questions and is also a predisposition to perform, perceive and feel in relation to something. This finding signifies that most beneficiaries have favorable to moderate acceptance/perception about CDD implementation in the area, which agrees with Tafida (2007) who reported that farmers in Kano State have moderate to favourable attitudes towards participation in the National Special Programme for Food Security.

**Table 6: The Attitude of People toward National Fadama Development Programme**

Attitude level	Scores	Participants	
		Frequency	Percentage
Unfavorable	0-21	0	0
Moderate	22-43	9	22.5
Favorable	44-64	31	77.5
Total		40	100

**Attitudes of the participants towards NFDP-II**

Table 7 shows the attitude of participants towards NFDP-II. The result revealed that participants have positive attitude towards NFDP-II approach ( $P < 0.05$ ). This implies that participants have accepted the programme, embraced it as a right step towards improving their production and livelihood. Hence, this positive attitude will help sustain the benefits even after lifespan of the programme. This agrees with Fischer (1996), who opined that introducing a new technology or innovation to subsistence farmers depend very much on the degree to which it meets the felts need of the farmers, its' suitability to their farming practices and affordability.

**Table 7: Attitudes of the participants towards NFDP-II**

Attitude	SA	A	UD	D	SD	Total	$X^2_{cal}$	P	Decision
Positive Attitude	610	508	111	34	4	1267	7.19*	0.05	Significant
Negative Attitude	1	26	108	514	720	1369			
Total	611	534	219	548	724	2636			

\* = significant at  $P < 0.05$

**Key:** SA=Strongly A=Agreed, UD=Undecided, D=Disagreed, SDA=strongly disagreed

### **The Prospects for Community Driven Development Strategy of National Fadama Development Project**

The distribution of respondents based on their perception of projects sustainability is shown in Table 6. The table shows that 87.5% of the participants have absolutely agreed to continue to sustain their projects by themselves even after the programme, 7.5% partially accepted, while 5% of participants disagreed to self-sustain their projects after the programme. This finding may be as a result of bottom-up participatory planning which agrees with World Bank (1996) experience that, when communities are given the responsibility to participate in determining their projects, it makes the service more responsive to farmers local conditions, accountable, effective and sustainable, hence, meets their needs and reduce poverty. Also, when the value of the service is clear to them, the famers are willing to contribute to it thus reducing dependence on public fund for meeting recurrent cost. The implication of this result is that majority of famers may sustain their project by themselves even after termination of the donors funding (Table 8). Thus there is better prospect for the Programme.

**Table 8: Perception of Participants on their Projects Sustainability after the Programme**

<b>Sustainability</b>	<b>Frequency</b>	<b>Percentage</b>
Absolute self- projects sustenance	35	87.5
Partially self- projects sustenance	3	7.5
Non-self- projects sustenance	2	5.0
<b>Total</b>	<b>40</b>	<b>100</b>

**Sources:** Field Survey

### **The Problems facing Farmers under National Fadama Development Project (NFDP-II)**

Table 9 shows the problems facing NFDP-II in Billiri Local Government Area of Gombe State. The Table revealed, untimely disbursement of funds, lack of fund to pay matching grant and inadequate counterpart funding (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>) respectively as constraints affecting the NFDP-II in Billiri Local Government Area of Gombe State. This is followed by inadequate awareness/communication (4<sup>th</sup>), incomplete funding of sub-projects (5<sup>th</sup>), influence of facilitators (6<sup>th</sup>), high charges on FUGs by FCAs (7<sup>th</sup>), preferential treatment by officials (8<sup>th</sup>), lack of cooperation and low level of education of FUGs leaders (9<sup>th</sup> and 10<sup>th</sup>) respectively.

The implication of this is that, with delay in release of Fadama fund beneficiaries may encounter losses or problems related to their farming and marketing activities since such activities are seasonal in nature. Similarly, low counterpart funding and lack of awareness might limit their projects scope and lead to incomplete projects funding.

On the other hand, beneficiaries might have lost confidence on the leadership of FCAs/facilitators due to their selfish roles, hence affects the participation and project performance. Lack of cooperation and low educational level of among leaders of Fadama User Groups affected FUG participation and performance in poverty alleviation programmes. This finding is in line with the findings of Daneji *et al* (2006) and Hamidu *et al* (2006).

**Table 9: Distribution of participants by problems of NFDP-II**

<b>Problems and bottlenecks</b>	<b>Frequency</b>	<b>Percentage (%)</b>	<b>Rank</b>
Lack of fund to pay matching grant	33	82.5	2 <sup>nd</sup>
Poor coordination by leaders of FUG/FCA	16	40	9 <sup>th</sup>
Untimely disbursement of funds	36	90	1 <sup>st</sup>
Preferential treatment by facilitators & leader	18	45	8 <sup>th</sup>
Inadequate awareness/communication	29	72.5	4 <sup>th</sup>
Incomplete funding of sub projects	25	62.5	5 <sup>th</sup>
Facilitators influences most decisions	20	50	6 <sup>th</sup>
High charges on FUGs' by FCAs'	19	47.5	7 <sup>th</sup>
Low educational level of FUG leaders	14	35	11 <sup>th</sup>
Lack of cooperation of some members	15	37.5	10 <sup>th</sup>
Inadequate counterpart fund	30	75	3 <sup>rd</sup>

**N = 40**

## Conclusion

From the analysis one can rightly say that Community Driven Development Strategy of NFDP-II centered on farmers' needs and local condition in the study area. Similarly, it focused on both on-farm and off-farm productive activities of the small scale farmers, which empowered all classes of participants. The Community Driven Development Strategy of NFDP-II led to increased income and other socio-economic attributes of farmers. Also the favorable attitudes of the beneficiaries are a reflection of high interest and acceptance of the programme. Therefore, the Community Driven Development Strategy of NFDP-II is a worthwhile agricultural/rural development strategy in Billiri Local Government Area of Gombe State. However, late disbursement of fund to pay matching grant and inadequate counterpart among others were the constraints identified in the implementation of the Community Driven Development Strategy of NFDP-II in Billiri Local Government Area of Gombe State.

## Recommendations

Consistent with these findings, Community Driven Development (CDD) strategy could be effectively used for future agricultural/rural development and poverty alleviation programmes. The following recommendations will help towards enhancing the adoption/participation of clientele in future Community Driven Development Strategy related Programmes:-

- a. Strengthening the mechanism for quick/timely disbursement of fund down to the farmers will ensure timely/quick access to productive resources, which will promote performance and participation.
- b. Provision of special credit/loan intervention schemes to Fadama User Groups and cooperatives to finance their investments or economic activities at affordable rate.
- c. Massive and intensive awareness campaign, advisory services and leadership training will improve farmer's knowledge, resource management and ability to face challenges associated with CDD activities.
- d. Increase in counterpart funding at various levels and provision for easy transfer of fund from un-patronized project component to the most patronized component will increase projects scope and promote effective projects performance.

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