Analysis Of The Effect Of Conflict Resolution Mechanism Of Fadama II Project On Benefiting Rural Communities In Adamawa State, Nigeria

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ABSTRACT
This study assesses conflict resolution mechanism among Fadama II project communities. The Project is first of its kind and largest agricultural and rural development project in Nigeria. The Project focused on increasing the incomes of fadama users on sustainable basis, by providing capacity building, advisory services, productive assets, rural infrastructure and by resolving conflicts among its beneficiaries. This study used multistage sampling procedure to select 200 comparable project beneficiaries and non-beneficiaries. The study uses bar-charts and percentages to assess the conflict resolution mechanism among the Fadama II Project communities. Statistical test for difference (T-test analysis) was also used to compare means and determine the significant impact of the project. The result shows that participation in the project has significantly reduced conflict among the community members. The findings also revealed that the project has enhanced harmonious relationship among community members. The unique feature that could have contributed to the significant impact of the project in a short time is its participatory and demand driven approach that gives voice to the communities. It is suggested therefore, that the strategy of participatory and demand-driven development should take a centre stage in resolving conflicts for any effective rural development process.

Keywords: Effect, Rural, Community-driven development, Fadama, conflict resolution

INTRODUCTION
Conflict as a word is not very ambiguous, even when lightly taken to mean disagreement (which may mean clash, dispute, argument, quarrel, discord, tension or fracas), which translates to lack of concord. Taken heavily according to Tukur (2002) and Ekong (2003), conflict may also suggest or signifies battle (fight, war, struggle, encounter or skirmish). Thus either way, it is directly and generally understood to mean lack of peace or agreement.

Resolution on the other hand is not so simple to define as it could positively be considered as verdict (declaration, decision, and motion), assurance (pledge, oath, vow) or doggedness (determination, steadfastness, tenacity, firmness or perseverance) and/or resolve as reasoned by Tukur (2002). Within the context of this study, however, resolution could only connote solution (answer, end, and outcome). It is imperative therefore, to understand how active disagreement or fighting between people or groups of people with opposing opinions is brought about and what could be done to minimize or bring to end situations of conflict.

Several theories have attempted to explain types, causes and consequences of conflict using both economic/social premises and empirical evidence. Most of such theories focused on how too much of inequality and relative poverty may generate envy, animosity, crime and conflict. The thrusts of most of these theories were to demonstrate the potential effect of inequality on private and collective violence and
substantial economic loss arising from such (Bourguignon, 2000). Thus Rubio (2000) maintained that apart from easily quantifiable immediate social and economic cost of conflicts such as loss of lives and poverty, citizens and businesses that are not victimized become insecure. Production, transaction, and investment decision may be affected (Tukur, 2002).

Inequality and conflict between groups does not imply just economic but also, social and political factors. This generally held view is, however, that most conflicts are property conflicts and whatever the predisposing factors they are argued to be orthogonal to economic factors (Ekong, 2003). This reasoning is buttresses the argument of Tukur (2000) that while clear cases of discrimination or deprivation of socio-political nature may often lead to conflict, most conflicts in Adamawa State are economic in character except that in most localities, economic engagements often take ethnic or religious pattern. Conflict at local and regional levels, especially in Nigeria, are fuelled by dispute over natural resources, ethnic and religious passion with actual or perceived discrimination or deprivation (marginalization) being the thrust. This may not only be attributed to economic differences and inequalities among various communities but also poverty and ignorance of groups and individuals (Tukur, 2002). According to this view, ignorance and poverty are regrettably pervasive in our rural areas and cuts across cultural and religious groups. This situation is often persistent among subsistence farmer besieged with basic tools on marginal fields and the wandering nomads with famish flock.

Fadama II project, which is one of the largest agricultural and rural development project in Nigeria, was designed to reduce poverty by providing support to the communities to acquire infrastructure and productive assets, providing demand-driven advisory services, enhancing the capacity of communities to manage economic activities, and most importantly, reducing conflicts among resource users (Nkonya & Davis, 2008 ; cited in Umar, 2013). From the foregoing therefore, it can be seen that one of the responsibilities of Fadama II was to resolve conflict among Fadama resource users, strengthen peaceful coexistence and encourage the community members to imbibe the culture of team spirit and harmonious relationship. Each group under the project was encouraged to form conflict resolution committees to manage conflict situations in their communities. It against this backdrop therefore, that this study focuses on the assessment of conflict resolution mechanism of the Fadama II among the benefiting communities in Adamawa State.

Overview of the Fadama II Project
According to Hausa connotation, Fadama is a low-lying flood plains, usually having accessible shallow groundwater (Ingawa et al., 2004, cited in Umar, 2013). Fadama lands are normally waterlogged during the rainy seasons and retain off-season moisture. If supported with proper infrastructure, productive assets, and needed technologies, Fadama lands have high potentials for economic development (NFDPII, 2003; Ingawa, et al., 2004). National Fadama Development Project (Fadama I) which started in 1993 and ran thorough 1999, was mainly designed to encourage poor farmers to embark on dry season cropping to realize increased income and alleviate poverty (Ingawa et al., 2004; Bajoga, 2007). The project which was established to tap the potential benefits of fadama resources in Nigeria, focuses basically on crop production paying less or no attention to postharvest activities such as processing, preservation, and marketing. Fadama I did not also take into account conflict resolution mechanism and the provision of rural infrastructure to ensure efficient transportation of farm output to markets (NFDP II, 2003). The focus on crop producers contributed to increased crop production, which contributed to reduced crop prices and increased storage losses (Ingawa et al, 2004). And above all, the project employed service oriented and supply-driven approach (top-down strategy), which never consider the plight of the beneficiaries.

The establishment of Fadama II came as a follow-up to Fadama I implementation, and seeks to address the noted shortcomings in the design and implementation of the Fadama I. Fadama II’s strategy represents a shift from public sector dominated service oriented strategy (top-down) to a community-driven development approach (bottom-up). The project’s activities were centred on Fadama User Groups (FUGs) having common economic interest, termed economic interest groups (EIG). This is one of the
unique features of the project since collective action helps to overcome many problems that face poor farmers in production and marketing. *Fadama II* supports major enterprises which include crops, livestock production, agro forestry, fishing and fish farming. It also support non-productive activities that are directly connected with productive activities such as agro processing, rural marketing and financial management practices at the community level. *Fadama II* project also target groups of youth, women (especially widows), physically challenged, the elderly and people with HIV/AIDS (NFDP II, 2003).

The project afford beneficiaries the opportunity to choose the kind of activities they want to pursue. However, the project does not activities that could lead to degradation of natural resources or large-scale change of land use. Participatory and socially inclusive Local Development Plans (LDPs) were encouraged among all the beneficiaries. This means that all the beneficiaries have a stake in the design and implementation of the sub-project meant for the whole group within the communities.

Eighteen (18) out of thirty (36) states were selected to participate in the project. Of these, 12 states were supported by the World Bank, while the remaining six were supported by the African Development Bank. The benefiting states under the World-Bank assisted aspects of *Fadama II* were Adamawa, Bauchi, Gombe, Federal Capital Territory, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo, and Taraba (NFDP II, 2003, as cited in Umar, 2012)

*Fadama II* was designed to operate for six years (2004 – 2009) with a goal of contributing to poverty reduction in Nigeria. The project set targets to achieve the following outcomes at the end of its six-year period:

- 50 percent of male and female fadama resource users who benefit from the project supported activities should increase their average real income by at least 20 percent compared to the baseline.
- At least 60 percent of Fadama Community Associations (FCAs) should successfully implement their local development plans (LDPs) and other project supported activities.
- Conflict among fadama users should be reduced by at least 50 percent compared to the baseline (NFDP II, 2003, Ingawa et al., 2004)

**METHODOLOGICAL FRAMEWORK**

**Study Area**

The study was carried out in Adamawa State in 2012. The state which lies between latitude 7 28”N and 10” of the equator and longitude 11 30” E and 13 45” E of the Greenwich Meridian is located in the moist agro-ecological zone of Nigeria. The State has a land mass of 39, 743.12 sq. km., with a population of 3,194,781 (NPC, 2006). Major source of livelihood for majority of the population is derived from subsistence agriculture. Only ten Local Government Areas (LGAs) participated in the project’s activities in Adamawa State. This study was conducted in five participating Local Government Areas and five non-participating LGAs. The participating LGAs includes: Ganye, Gombi, Mubi North, Fufore, and Guyuk, while non-participating LGAs include: Maiha, Hong, Girei, Jada and Numan.

**Sample Selection**

To determine conflict resolution status among *Fadama II* benefiting rural communities, the respondents were classified into two categories. These categories are: Direct *Fadama II* participants and Non-*Fadama II* participants living outside *Fadama II* LGAs. The non-participants have comparable socio-economic characteristics to the *Fadama II* communities. The grouping has become necessary to allow for actual estimates of the effects of *Fadama II* project.

A multi-stage sampling technique was used for selecting respondents for this research. The first stage involved purposive sampling of five out of the ten *Fadama II* benefiting LGAs at 50 per cent (5 LGAs). The second stage was the selection of 50% of Fadama Community Association (20 FCAs) from each of the five LGAs, while the last stage involved purposive selection of five (5) households from each FCA, making a total of 100 *Fadama II* Project beneficiaries. This sampling procedure also applied to project non-beneficiaries outside and within *Fadama II* LGAs. In all, a total of 300 comparable beneficiaries and non-beneficiaries were selected for the study. To ensure that there is no biasness in the sampling
procedure, all the economic interest groups (EIGs) such as crop farmers, fisher folks, pastoralists, hunters, processors among others, were represented in the sample of the beneficiaries and non-beneficiaries alike. The sampling frame of household was also stratified by gender and vulnerable groups. This choice is to ensure that not less than 25% of respondents from each FCA are female.

**Survey Instruments for Data Collection**

To collect a reliable data, a structured survey instrument was used to collect the required information from households. Structured questions were used to determine the effect of project on conflict resolution status among the project participants and non-participants. The survey instrument was administered by the researcher with assistance of trained enumerators who were supervised by the researcher.

**Baseline Data Collection**

Double difference analysis employed in this study requires baseline data. The baseline data was collected using recall information, one year before the inception of *Fadama II* – i.e. for the cropping year 2004. The recall information includes only data on conflict status.

**Data Analysis**

Experimental method was used to ensure true estimate of the counterfactual situation by randomly assigning respondents to treatment and control groups. Random assignment ensures that both groups are statistically similar in observable and unobservable characteristics, thus avoiding project placement and self-selection biases.

In this study, only beneficiaries and non-beneficiaries with comparable propensity scores were used to determine the effect of the project. Double–difference compares changes in outcome from before and after the project between beneficiaries and non-beneficiaries, instead of just comparing outcome levels at one point in time.

\[
DD = (Y_{p1} - Y_{p0}) - (Y_{np1} - Y_{np0})
\]

Where $Y_{p1}$ = outcome (Conflict status) of beneficiaries after the project started; $Y_{p0}$ = outcome of beneficiaries before the project started; $Y_{np1}$ = outcome of non-beneficiaries after the project started; and $Y_{np0}$ = outcome of non-beneficiaries before the project started.

To estimate the effect of the project on the beneficiaries, bar charts and percentages of the conflict status among the beneficiaries and beneficiaries alike were used. Statistical test (T-test) for difference between the project participants and non-project participants was also used to determine statistical significance.

**RESULTS AND DISCUSSIONS**

**Conflict Status and Resolution Mechanism of Fadama II Project**

Conflict resolution to address one of the shortcomings of previous projects by increasing the capacity of *Fadama User Groups (FUG)* to manage conflicts which were particularly serious and more frequent between pastoralists and crop farmers was one of the major priorities of the project. The project set an objective of reducing conflicts situation by 50 percent by 2010 (NFDPII, 2005). Conflicts, especially among large group of farmers over natural resources such as land, water; trees, etc. were common in Adamawa state.

As the result shows, over 80 percent of the conflicts among the beneficiaries were either resolved or completely brought to an end (see Figure 1). This is a demonstration of remarkable achievements by *Fadama II* in resolving conflicts and uniting the beneficiaries. In comparison, only 20 percent of conflicts were resolved among the non-beneficiaries outside *Fadama II* LGAs. Spillover effects also manifested as over 50 percent of the conflicts were resolved among the non-beneficiaries within *Fadama II* LGAs against 20 percent among non-beneficiaries outside *Fadama II* LGAs.
Finally, statistical test for difference between the project participants and non-project participants is significant at $p = 0.05$ (Table 1). This suggests huge achievement by *Fadama II* in resolving conflict among the participants of the project. In other words, the impact of *Fadama II* on conflict resolution and mechanism is significant and large. The unresolved conflict among the beneficiaries is not significant compared with non-beneficiaries (Table 1). From the foregoing therefore, it can be concluded that the project has really helped the project communities to resolve conflict among them. The activities of *Fadama II* have created harmonious and cooperative relationship, devoid of rifts and conflicts among members in the project communities.

**Table 1: T-test Analysis of Conflict Resolution and Mechanism**

<table>
<thead>
<tr>
<th>Outcome variables</th>
<th>Beneficiaries ( n = 100 )</th>
<th>All Non Beneficiaries ( n = 200 )</th>
<th>T-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion reporting conflict resolved after inception of FII</td>
<td>2.3065(1.40944)</td>
<td>0.6855(0.91391)</td>
<td>8.232</td>
<td>0.000**</td>
</tr>
<tr>
<td>Proportion reporting still having conflict</td>
<td>0.1613(0.37080)</td>
<td>0.5161(0.501770)</td>
<td>-5.444</td>
<td>0.125</td>
</tr>
</tbody>
</table>

Note: Numbers in bracket are standard deviation of the corresponding mean. ** significant at 5% level of significance

This trend of the finding is due in part to conflict management techniques being taught to the farmers during workshops and seminars as the project progresses (Kudi *et al.*, 2008). This may not also be unconnected with trainings among different categories of participants or users such as pastoralist and crop farmers. There is no doubt that harmonious relationship enhances productivity, encourages better output and raises standard of living. A study by (Mansuri and Rao, 2004), suggests that the effectiveness of participatory projects like *Fadama II* hinges on how well heterogeneity is managed, the type of resources and approaches used to bring cohesion among the communities, and how effectively differences are argued. This suggests an association between the level of some indices of participation and project effectiveness.

As mentioned earlier, conflict at local and regional levels, especially in Nigeria are mostly fuelled by dispute over natural resources, ethnic and religious passion with actual or perceived discrimination or deprivation (marginalization) being the thrust. The provision of water pump machines, tube wells and other productive assets by the state *Fadama* office made the harnessing of these natural resources easy.
Customary and statutory mechanisms were also instituted to prevent and resolve conflicts when they arise. Among the Miyetti-Allah pastoralists, for instance, allowing one’s animals to graze on another person’s farm is punishable by twelve strokes of the cane and or a fine amounting to the value of the damaged crops. Besides, no member of the community is allowed to move about with machetes and other offensive weapons, and the presence of a stranger in the community is reported to the village head. In addition, migratory pastoralists in some communities are required to meet the district or village heads. Settlement areas outside the farmlands are allocated to them, pending crop harvest. The pastoralists were then allowed to migrate to the farmland areas and graze their livestock on the crop residues. These measures were aimed at preventing conflicts.

The local government authorities also play vital roles in conflict prevention and resolution. Under the auspices of the authorities, certain land areas in the communities are designated “grazing land” for the pastoralists. Such grazing lands are, however, very fertile due to the animal dung, and are sometimes encroached upon by the farmers, resulting in damage of crops and conflicts among pastoralists and farmers.

The roles of *Fadama* Community Associations (FCAs) and *Fadama* User Groups (FUGs) in conflict prevention and resolution in their areas cannot be over-estimated. As gathered from the respondents during community survey, the *Fadama* Community Associations have united the farmers in the communities into a single village or clan, irrespective of economic interest, religion, ethnicity or social class. Thus, conflicts arising among members were resolved within the *Fadama* Community Associations. Each *Fadama* Community Association and *Fadama* User Group has a conflict resolution committee with the village head of each community as the chairman, secretary of the *Fadama* Community Association as the secretary, one Desk Officer, the *Fadama* facilitator and any other four members of the *Fadama* Community Association, preferably, respected religious leaders. Members of the committee convene only when there is conflict for resolution. The presence of the *Fadama* Community Associations and *Fadama* User Groups has created harmonious and cooperative relationship devoid of rifts and conflicts among members. Members of a *Fadama* User Group now perceive themselves as friends and partners in progress. World Bank (2007) maintained that this measure has reduced conflicts from a total of 98 cases (Farmer-Pastoralists) between 1996 and 2002 to zero between 2004 and 2006. Also the improved standard of living provided by *Fadama II* project has created an atmosphere of self-dependence, actualization and tolerance, and eschewed sense of aggression and bitterness among members (Umar, 2012).

In essence, the foregoing results have facilitated beneficiaries’ economic activities and subsequently reduction in poverty which is a pointer to improved wellbeing. Some studies (Bourguignon, 2000; Rubio, 2000; Tukur, 2002), have maintained that apart from easily quantifiable immediate social and economic cost of conflicts, local population and business enterprises not affected become insecure. Productive activities, transactions, and investment decisions may also be affected (Bourguignon, 2000; Rubio, 2000; Tukur, 2002).

**CONCLUSION AND POLICY IMPLICATION**

From the foregoing results, it can be concluded that *Fadama II* has really achieved one of its objectives by reducing conflict among fadama resource users. The project has significantly reduced conflicts among large group of farmers over natural resources. The findings suggest that conflicts over the use of natural resource use were reduced to the lowest level or completely eradicated among the participating communities compared to non-participating communities. The project has also educated and enlightened the beneficiaries on how to resolve conflict in their communities. Specifically, the project has established conflict resolution committees and created harmonious relationship among Fadama User Group (FUG) and Fadama Community Association (FCA) members, to regard themselves as partners in progress. The level of community cohesion, or social capital, is expected to improve the quality and sustainability of projects.

The government and non-governmental organizations should therefore, consider community driven approach in resolving conflict among the farmers. There is the need also to encourage farmers or entire
community member to participate in projects or programmes that seek to solve numerous problems rather than the ones that focuses on single problems of the beneficiaries.

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