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EVALUATION OF SECOND NATIONAL FADAMA DEVELOPMENT PROJECT IN NIGERIA: A RAPID POLICY APPRAISAL

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ABSTRACT

The Second National Fadama Development Project was borne out of the need to ensure all year round agricultural production using available Fadama resources in Nigeria and also a follow – up to Fadama 1 that was adjudged successful. Its approach was Community Driven Development (CDD) with emphasis on social inclusiveness and empowerment of the rural people to take charge of their development agenda. The Project focused on increasing sustainably the incomes of Fadama Users via empowerment in terms of capacity building, advisory services, acquisition of productive assets and rural infrastructure development. As at mid – term, beneficiaries have increased their income by about 25%. So far, an estimated 2.3 million Fadama households have benefited from the expansion in incomes and wealth (asset) derived from the previously unavailable services provided by the project. The project had created about 126, 000 permanent jobs and an additional savings of more than \$40.8 million have been realized by the majority of the participating states.

Keywords: Fadama, Agricultural production, food security, poverty alleviation

ACRONYMS

AIDS – Acquired Immuned Deficiency Syndrome

ASA – Advisory Services Activity

CB – Community – Based

CBO – Community - Based Organization

CDD – Community - Driven Development

FCA - Fadama Community Association

FCT – Federal Capital Territory

FUG – Fadama User Group

HIV – Human Immunodeficiency Virus

IGAs – Income Generating Activities

LDPs – Local Development Plans

MTR – Mid – Term Review

NFDO – National Fadama Development Office

NFDP – National Fadama Development Project

NGOs – Non – Governmental Organizations

RI – Rural Infrastructure

PAA – Pilot Asset Acquisition

PRA – Participatory Rural Appraisal

WB – World Bank

BACKGROUND

Increasing reduction in production and productivity has continued to characterize Nigerian agricultural sector thereby limiting the ability of the sector to perform its traditional role in economic development. In order to break this cycle and improve the performance of the agricultural sector, the Nigerian government over the years introduced and implemented several policies and programme aimed at revamping the sector (Ajibefun and Aderinola, 2004). A recent effort towards boosting production and enhancing farmers' welfare was the introduction of Second National Fadama Development Project. Fadama II is a follow - up to Fadama I (phase I of the National Fadama Development project), which was implemented during the period 1993-1999. Fadama I focused mainly on crop production and largely neglected support of post production activities such as commodity processing, storage and marketing (downstream agricultural sector). The emphasis was on providing boreholes and pumps to crop farmers through simple credit arrangements aimed at boosting aggregate crop output (Nkonya *et al*, 2008).

Fadama – the Hausa name for irrigable land are flood plains and low-lying area underlined by shallow aquifers and found along Nigeria's river systems (Ingawa *et al*, 2004). Fadama also refers to a seasonally flooded area used for farming during the dry season. It is defined as alluvial, lowland formed by erosional and depositional actions of the rivers and streams (Qureshi, 1989). They encompass land and water resources that could easily be developed for irrigation agriculture (World bank, 1992). Fadama are typically waterlogged during the rainy season but retain moisture during the dry season. The areas are considered to have high potential for economic development through appropriate investments in infrastructure, household assets and technical assistance. When Fadama spread out over a large area, they are often called 'Wetlands' (Nkonya *et al*, 2008; Blench and Ingawa, 2004).

Wetlands are recognized by the RAMSAR convention (Ramsar is a place in Iran where the convention was signed) and it is of worldwide significance because of the biodiversity they support. Nigeria is a signatory to this convention. The Ramasar

convention of 1971 defined wetlands as areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres. In addition, there are human made wetlands such as fish and shrimp ponds, farm ponds, irrigated agricultural lands, saltpans, reservoirs, gravel pits, sewage farms and canals (Anon, 2004). Land currently used in crop production in the developing countries (excluding China) amounts to some 760 million ha of arid and hyper arid land made production through irrigation (FAO, 1995).

The National Fadama Development Project (NFDP) was established to ensure all year round production of crops in all the states of the federation through the exploitation of shallow aquifers and surface water potentials in each state using tube well, wash bore and petrol – driven pumps technology (World Bank, 1992; BSADP, 1994). This was the era of Fadama 1 which many states of the federation were involved. The project, NFDP 1 was adjudged successful both nationally and international and that culminated in the Federal Government of Nigeria requesting the World Bank for the preparation of a follow – up project (World Bank, 2003b; Blench and Ingawa, 2004).

The Second National Fadama Development Project is one of the major instruments for achieving overall development of the agricultural sector in Nigeria. The project, which was declared disbursement effective on May 27, 2004, is funded by the World Bank and the African Development Bank to the tune of US\$ 100 million and US \$ 30 million respectively. Out of the 18 states that are participating in Fadama II, 12 of them are assisted by the World Bank. The states include Adamawa, Bauchi, Gombe, FCT, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun, Oyo and Taraba (NFDO, 2007). The project was designed also to assist project – contracted facilitators and participating Local Government Areas to undertake project – related activities at the level of Fadama Community Associations (FCAs) and other beneficiary groups. Fadama II was designed to operate for six years (2004–2010) with a goal of contributing to poverty reduction in Nigeria. Actual implementation did not begin until September 2005, however. The project set a target of 50 percent of male and female Fadama resource users who benefit from the project-supported activities

PROJECT OBJECTIVES

The project development objective is to sustainably increase the incomes of Fadama Users – those who depend directly or indirectly on Fadama resources (farmers, Pastoralists, Fisher folks, hunters, gatherers and service Providers) – through empowering communities to take charge of their own development agenda, and by reducing conflict between Fadama users. The project adopted a demand – driven approach. In this case, users of Fadama resources were encouraged to develop participatory and socially - inclusive local Development Plans (LDPs). The LDPs were the basis for support under the project.

TARGET POPULATION

Direct beneficiaries are the 2 million rural families living in the participating states now pursuing their livelihoods in the Fadama lands. These are not only farmers. A significant aim of the project design was to ensure that the various Fadama User Groups learn to each other's rights to a common resource pool which they share and take individual decisions keeping in mind the impact such actions may have on others and on the Fadama environment at large. In the past, Fadama use has been dominated by sedentary farmers who are the majority group and also the most vocal and influential. A primary aim of this project was to ensure that other less dominant Fadama Users (Fisher folks, Pastoralists) and even marginal Users (hunters, gatherers) were recognized as Fadama Users and that their role in maintaining these lands are acknowledged and respected. Moreover, vulnerable sub – groups such as widows, elderly, etc were targeted to ensure that they are beneficiaries of project – funded activities. Such an approach was aimed at avoiding situations of elite capture and conflict (formal and informal) - a primary obstacle to the success of the first Fadama Development Project (Ingawa *et al*, 2004).

PROJECT STRATEGY

The basic strategy of the project was that of a Community – Driven Development (CDD) approach with strong emphasis on stake holder participation, especially at the community level. Facilitators supported under the project helped in organizing the Fadama Community Associations (FCAs) and guided them through an intensive process of group

decision - making using a range of participating techniques, resulting in LDPs. In this manner, the project ensured that every activity funded by the project were conceived after informed discussion by the whole community, which resulted from consensus building and social inclusiveness (Ingawa *et al*, 2004). The Community – Driven Development (CDD) approach has become a major strategy used by both government and development assistance programs (Gillespie, 2004; Mansuri and Rao, 2004; Platteau, 2004). The popularity of the CDD approach has been propelled by its potential to develop projects and programs that are sustainable and responsive to local priorities, empower local communities to manage and govern their own development programs, and more effectively target poor and vulnerable groups (Dongier *et al*, 2001; Gillespie, 2004). Empirical evidence of the effectiveness of CDD in achieving these objectives is mixed (Mansuri and Rao, 2004). Among the interesting questions capturing the attention of scholars are the sustainability of donor - supported CDD and its effectiveness in targeting the poor and vulnerable. Khwaja (2001) observed that projects managed by communities were more sustainable than those managed by local governments because of better maintenance. However, Cleaver (1999), Kleimeer (2000), and Mosse (1997) found that CDD projects that lacked external institutional, financial, and technical support were not sustainable. Targeting the poor has been one of the challenges of development and emergency response programs (Farrington and Slater, 2006). One argument in favor of CDD asserts that it can improve targeting because CDD projects make better use of local knowledge to define and identify the targeted groups (Mansuri and Rao, 2004). However, there has been mixed empirical evidence concerning the effectiveness of targeting using the CDD approach. One review concluded that in heterogeneous communities with high social inequality, the performance of CDD projects in targeting has been worse than that of externally managed programs (Conning and Kevane, 2002). However, the review also revealed that in egalitarian communities with open and transparent systems of decision making, targeting was better with CDD than with development approaches using external project management.

PROJECT COMPONENTS

The project designed the following five components to achieve its goal:

1. *Capacity Building*: This aims to increase the ability of its beneficiaries to assess their needs, participate in planning, and implement and manage economic activities, and to increase the capacity of the project coordinators to conduct monitoring and evaluation. Fadama II provides capacity building through trained facilitators. In addition, FUG members are trained to negotiate and manage contracts and to conduct basic financial analysis. Apart from capacity building support to Fadama Community Associations (FCAs) and Fadama User Groups (FUGs), the component inculcates skills and know – how in them to enable them to take charge of their development agenda.
2. *Rural Infrastructure Investments*: The Rural infrastructure component is responsible for the creation of economic infrastructure and local production methods in order to improve the productivity of Fadama User households. It finances the construction or rehabilitation of eligible small – scale infrastructural projects specified as priorities in Local Development Plans (LDPs) and also larger subprojects that cut across development plans which are considered priorities by the Fadama Community Associations. Such infrastructure include: Feeder roads, culvert, drift stock routes, grazing reserve and service centres. Others are market infrastructure such as VIP latrine, drainages, boreholes, cold rooms, cooling sheds, rice processing, post - harvesting and maize processing equipment (Ingawa *et al*, 2004).
3. *Pilot Productive Asset Acquisition Support*: The overall objective of this component is to enhance the improvement in Fadama Users’ productivity and income by facilitating the acquisition of productive assets by individuals or Fadama User Groups (FUGs) to mobilize their own funds and by providing matching grants for income – generating activities (IGAs) to Fadama User Groups. The pilot Scheme will promote the acquisition of productive assets, and reduce the impact of market failures in rural finance sector on the poor Fadama User Groups through matching grants. A matching grant of Seventy percent (70%) will supplement the beneficiaries financing share of thirty percent (30%) of cost of the assets (Okonjo, 2005).

4. *Demand – Responsive Advisory Services*: This component supports advisory services that will enable Fadama Users to adopt output enhancing technologies and more profitable marketing practices in their Fadama enterprises. The project finances (a) advisory services that are required for new investment activities in Fadama area on request by the User groups (b) advisory services that support ongoing activities by Fadama Users (NFDO, 2007).
5. *Project Management, Monitoring and Evaluation*: This lends support to new or existing entities and mechanisms at the state and local government levels of government for overall project coordination and supervision and would help to strengthen the effectiveness and quality of project operations. The monitoring and evaluation sub - component will measure performance at various project milestones and has two components: Management Information Systems (MIS) and Impact Evaluations and Beneficiary Assessment. The project will finance consultant services to develop and implement studies to evaluate the impact of the sub – projects and provide feed back to improve project implementation performance including an impact assessment at the mid – term and end of the project (Imo SFDO, 2004).

Fadama 11 had the following allocations to the components:

a. Capacity Building	-	\$ 17, 401, 413.90
b. Rural Infrastructure Investments	-	\$ 52, 855, 77.80
c. Pilot Productive Asset support	-	\$ 23, 436, 666.70
d. Demand Responsive Advisory Services	-	\$ 11, 084, 015.80
e. Project Management	-	\$ 19, 055, 208.10

(NFDO, 2004)

PROBLEM STATEMENT (PRE – IMPLEMENTATION SITUATION)

Smallholder agriculture is the dominant occupation of rural Nigerians which is mainly rain-fed and characterized by low land and labor productivity due to a combination of problems including poor macroeconomic and sector policies. Yet, Nigeria has a potential comparative advantage in the production of a variety of fresh and processed high value crops, especially vegetables during the dry season and livestock product (meat and milk)

and fisheries products through out the year. This is because the Country is endowed in underground and surface water reserves, rich pastures and favorable agro-ecological conditions in the Country's low-lying plains with alluvial deposit called Fadama.

One peculiar paradox of poverty in Nigeria is that of poverty in the midst of plenty. Despite the rich endowment of Nigeria, especially rural Nigeria, with abundant natural and human resources, poverty is more acute in the rural area where about 70% of the total population of over 120 million live (NPC, 2005) than in the urban areas. The Fadama expansion program is considered to be an instrument for technical transformation in agriculture which would empower the small holder farmers to get out of the poverty trap. On the evaluation of success of Fadama 1, it was learnt that this phase 1 failed to attend to some key sectors of the economy as can be explained below:

1. Fadama 1 project helped producers increase output, but not to store, preserve and market their surpluses. As a result, much of the output was either not sold at all or sold at low prices due to supply glut (World Bank, 2003)
2. It did not involve and empower key stakeholders such as producer organizations, local government organizations, the private sector and civil society organizations in designing and implementing projects and in providing advisory services. It thus raised concern about project ownership and sustainability.
3. Fadama 1 did not address mechanisms for conflict resolution in the Fadama project areas. It failed to adequately consider the needs of other users of Fadama resources other than sedentary farmers. As a result, conflict sometimes broke out between them and pastoralists who found their traditional routes to water and pasture blocked. These confrontations result in physical injury and destruction of properties.
4. Fadama 1 gave little support to the establishment of rural non – farm enterprises. It narrowly focused on crop production neglecting opportunities to add values through processing and other activities.

METHODOLOGY

Tools in National Fadama Development Project

Logical Framework

Logical Framework (Logframe) is a set of interlocking concept which must be used together in a dynamic way for the planning and implementation of a successful project. The approach allows project planners, monitors and evaluators to specify the components of their activities, state project and identify the logical linkages between a set of means and a set of ends. The local development plan of the Fadama 11 project is all based on the logical framework demand from the need analysis or the problem tree. The log – frame provides a format for organizing information in order to highlight the relation between ends and means in the project design. It clarifies the project design by bringing out the targets and the indicators of success which form the basis for designing monitoring and evaluation systems (Idefor, 2005; Arene, 2002).

Participatory Rural Appraisal

Participatory Rural Appraisal is a contemporary approach used to understand rural needs from the perspectives of community members and the group themselves. The information generated on these needs are analysed by the community and the community goes further to prioritise these needs and design solutions to these needs in the light of available and potential community resources. PRA therefore becomes a potential tool for community and rural development because of its ability to involve rural communities in needs assessment, prioritization, project formulation, design and implementation. It is participatory because the exercises on activities involved are largely community led. PRA techniques are varied and include semi - structured interviews, direct (systematic), observation, diagramming, mapping, transects, ranking, scoring etc. (Okafor, 2004).

Local Development Plan (LDP)

The project has adopted a demand – driven approach whereby all users of Fadama resources are encouraged to develop participatory and socially – inclusive Local Development Plans (LDPs). The various economic interest groups, which include crop farmers, pastoralists, fisher folks, hunters, gatherers, women, youths, other vulnerable

groups (widow, elderly, physically impaired and people suffering from ill health), non – farm rural businesses, are expected to participate actively in the development of the LDPs and in their implementation to ensure sustainable increase in the groups’ incomes. The LDPs comprise:

- a. An agreed list of priority public infrastructure subprojects that are technically and economically feasible, environmentally sustainable, consistent with the existing development plans of local and state government authorities;
- b. Opportunity for procurement of eligible productive assets through own funds and matching grants
- c. A list of advisory needs in terms of production and marketing constraints and opportunities
- d. An agreed mechanism to manage and resolve conflicts, especially, those concerning Fadama Users
- e. Agreed mechanisms for financing the operations and maintenance of subproject investments and
- f. A plan for training and building the capacity of FCAs in financial management, community – based procurement, social and environmental impact screening of subprojects, and other aspects of organization and management of the associations.

Key Performance Indicators

By the end of year six, it is expected that the following key performance indicators are to realized

- 50 percent of male and female Fadama resource users, who benefit from project – supported activities, have increased their average real incomes by at least 20 percent compared to the baseline.
- At least 60 percent of Fadama Community Associations (FCAs) have successfully implemented their LDPs and other project – supported activities
- Conflicts among Fadama Users have been reduced by at least 80 percent compared to the baseline.

GENERAL ASSESSMENT OF FADAMA 11 IN WB STATES

At mid – term review (MTR), the development objective of Fadama 11, which is to increase the incomes of Fadama Users and reduce conflicts, is already being efficiently achieved on a significant scale. Micro – level analysis showed that the target objective of increasing incomes of Fadama Users by 20 percent has already been surpassed (incomes increased by 25.7% by January 2007) and resource conflicts have virtually been eliminated, due to the rapid internalization of the principles and mechanisms of social inclusion.

Substantial contributions have been made to both the quality of life of the beneficiaries and the local economy. Localized improvements of feeder roads and construction of Fadama access roads to link farms to primary and secondary markets; investments in community – owned productive infrastructure and improvements in livelihood opportunities, have assisted in transforming the socio – economic outlook of the communities in all the participating states.

So far, an estimated 2.3 million Fadama households have benefited from the expansion in incomes and wealth (asset) derived from the previously unavailable services provided by the project. The estimated total of \$33 million of community subproject investments disbursed through the Local Development Plans (LDPs) since effectiveness in May 2004 has resulted in : (i) the creation of about 126, 000 permanent jobs (ii) an additional income or savings of more than \$40.8 million for all the participating WB states.

The successes of Fadama 11 are also responsible for the positive response of other donors to the project. Fadama 11 was recognized and awarded the African Award of Excellence by the World Bank. Its selection was a demonstration of an important example of how a client – driven agricultural and rural development project can have significant development impact on the rural population (NFDO, 2007).

ASSESSMENT OF PROJECT COMPONENTS

Capacity Building: In most of the states, the capacity of FCAs and their constituent FUGs were built in the area of Record Keeping, Participatory rural Appraisal, group Dynamics, Business Management, Organizational Principles, Agricultural Insurance Policy,

Participatory monitoring and Evaluation, Community - based Procurement and Financial Management. The role of facilitators which is to sensitize beneficiaries on the objectives of the project and set the procedure for preparing Local development Plans (LDPs) also assisted in the implementation of this component. In all the 12 states, all the trainings recommended by the World Bank, NFDO and other implementation agencies were exhaustively conducted and documented with strict adherence to the procurement procedures. In the entire sub – committees within the FCAs, women were given a fair percentage, The results of post – training evaluation carried out by FCT, Gombe, Kaduna, Kebbi, Lagos, Niger and Oyo showed positive impacts on beneficiaries. Training has enhanced FCAs and beneficiaries, knowledge on (i) organization and management of groups and subprojects; (ii) ability to list financial disbursement requirements; (iii) Keeping of records and minutes of meetings; (iv) linkage with NGOs for sustainability ;(V) identification of market outlets for products of beneficiaries activities (vi) women involvement in group activities. The output indicators for the capacity building include number of meetings attended, number of meetings held by FUGs, monitoring visits to sub – projects by monitoring and evaluation sub – committee, contribution by FUGs in Naira, sub – projects prepared by FUGs, number of sub – projects implemented by FUGs and advisory services sub – projects implemented as shown in Tables 1 and 2.

Table 1: FADAMA 11 MTR – NUMBER OF FCAS AND THEIR CONSTITUENTS

S/N	SFDO	FCA	FUGs
1	Adamawa	108	1540
2	Bauchi	62	525
3	FCT	87	338
4	Gombe	58	467
5	Imo	114	386
6	Kaduna	65	478
7	Kebbi	90	645
8	Lagos	96	605
9	Niger	102	577
10	Ogun	121	888
11	Oyo	151	1048
12	Taraba	133	911
	Total	1190	8577

Source: NFDO, 2007

Table 2: MTR CAPACITY BUILDING OF FCAS ON LDP PREPARATION AND IMPLEMENTATION

S/ N	SFDO	No. of LDP prepared	LDP Approved	LDP Implemented	%of LDP Implemented	On – going LDPs	% of On – going LDPs
1	Adamawa	108	88	65	73	23	26
2	Bauchi	86	63	62	98	1	2
3	FCT	92	87	87	100	-	-
4	Gombe	58	58	50	86	8	14
5	Imo	200	200	200	100	-	-
6	Kaduna	65	65	65	100	-	-
7	Kebbi	134	134	90	67	44	33
8	Lagos	90	90	78	87	12	13
9	Niger	235	102	96	94	6	6
10	Ogun	121	121	121	100	-	-
11	Oyo	153	151	151	100	-	-
12	Taraba	133	133	133	100	-	-

Source: NFDO, 2007

Advisory Services Component: A total of 1278 ASAs were executed by all the participating States (see Table 3). These included crops with the highest value of 324 and the least value of 15 activities from the agro – forestry sub – sector. Livestock had 304, Agro – processing 275, Marketing 154, Fisheries 147, and others 59. Whereas the value from the crops livestock cut across all the geopolitical zone, higher values from fisheries come from the South west of Lagos, Oyo and Ogun, while higher values from Agro - processing and marketing are more prevalent in the Northern part of the country

The component also through its management and coordination conducted specific activities in form of exploratory visits, interactive sessions, training/workshops and linkages in areas of research, market and inputs (see Table 4)

Table 3: ADVISORY SERVICES ACTIVITIES EXECUTED

STATE	CROPS	L/STOCK	FISHERIES	AGRO PROCESSING	AGRO FORESTRY	MARKETING	OTHER	TOTAL
Adamawa	28	44	5	32	5	13	13	140
Bauchi	22	23	46	16	-	10	4	121
FCT	18	3	1	6	1	-	13	42
Gombe	59	41	38	19	1	21	6	185
Imo	7	6	-	-	-	-	-	13
Kaduna	22	14	-	12	5	5	-	58
Kebbi	22	4	14	-	-	15	10	65
Lagos	31	40	17	13	3	-	9	113
Niger	43	24	12	115	-	62	1	257
Ogun	25	32	-	10	-	16	2	85
Oyo	2	37	6	12	-	-	1	58
Taraba	45	36	8	40	-	12	-	141
	324	304	147	275	15	154	59	1278

Source: NFDO, 2007

Table 4: ADVISORY SERVICE BY MODE OF DELIVERY

STATE	LEARNING EVENT	INTERACTIVE SESSION	EXPLORATORY	ORIENTATION	RESEARCH LINKAGE
Adamawa	1	1	1	3	-
Bauchi	-	6	4	1	1
FCT	2	2	2	5	-
Gombe	2	2	1	3	-
Imo	2	6	1	2	10
Kaduna	2	2	1	2	3
Kebbi	2	2	2	2	-
Lagos	2	5	2	5	3
Niger	2	2	2	3	2
Ogun	1	2	1	3	3
Oyo	1	4	2	2	2
Taraba	1	1	1	1	1
Total	30	35	20	32	25

Source: NFDO, 2007

Pilot Productive Asset Support: The expected overall project outcomes and outputs at project completion in Year 2009, are that 50 percent of male and female Fadama resource

users, who benefit from Project – supported activities, have increased their average real incomes by at least 20 percent compared to baseline; and that at least 60 percent of FCAs have successfully implemented their Local Development Plans (LDPs) and other Project – supported activities. As at Mid – term Review, a total of 7,511 subprojects were undertaken under this subcomponent representing 67% of the total number of all subprojects of all the subcomponents in Fadama 11. It implies that at least 67% of all PAA subprojects under the LDPs have been completed while 27% are ongoing. This means that 94% of PAA subprojects have been funded and almost completed. The rationale for the easy acceptability of the PAA component could be attributable to:

- a) Financial entry level for the subcomponent allows all the FUGs to acquire moderately priced productive assets at affordable costs;
- b) The CDD approach to decision – making fosters group decision – making rather than individual decision - making. All subprojects thus had the benefit of income and profitability analysis and rigorous prioritization considerations by the community groups;
- c) The rural communities relate readily to a concept that allows the vesting of ownership in assets immediately upon purchase in the FUGs rather than earlier interventions which gave ownership to local governments and other agencies;
- d) The beneficiary contribution of between 30 – 50% appears affordable especially in communities that have made earlier attempts at assessing micro credit loans through cooperative societies or through esusu (local credit scheme) group to purchase similar equipment; and
- e) The vulnerable groups especially the disabled and women groups such as widows are allowed through the subproject a window of opportunity to own productive assets, despite the challenges they face in making counterpart contributions.

Rural Infrastructure: The component supports the creation of economic infrastructure and local public goods to improve the productivity of Fadama user households. The FCAs are required to provide a 10% matching grant to the intervention’s 90% contribution to finance the construction or rehabilitation of eligible small – scale infrastructure subprojects specified as priorities in LDPs. All subproject proposals must specify components, site, cost, community contribution, environmental and social

management plan, financing agreements for maintenance needs, and arrangements for participatory monitoring and evaluation. The output of this component is to increase supply of small – scale rural infrastructure, prioritized, planned, implemented, operated and maintained by the Fadama User Groups (FUGs).

As perceived, the component appears attractive, especially in the requirements of just 10% contribution when compared to the requirement of 30% under PAA and the obligation placed on the FCAs to prioritize and decide on the most essential of PIs, to plan for the implementation and to implement and maintain the RIs. At midterm, there are a total of 2,817 subprojects and that 1,780 which constitute 63%, have been completed while 899 representing 31% are ongoing. The analysis further shows that only 8% of the subprojects under this component have not been implemented.

IMPACT ASSESSMENT OF AN INDEPENDENT ORGANIZATION, IFPRI

In its first year of operation, the Fadama II project realized significant positive impacts on households' access to markets, transportation services, and productive assets, and to household income and of asset acquisition. Using propensity score matching and double-difference methods to control for project placement and self-selection biases, we found that Fadama II reduced beneficiaries' distance and travel time to the nearest town and reduced the waiting time and fares for transportation services, relative to non - beneficiary households in Fadama II LGAs. Household access to productive assets increased dramatically, especially for the poorest households, largely because of the subsidy provided to help finance acquisition of such assets. Household incomes improved substantially more for Fadama II beneficiaries than for non - beneficiaries, with an average increase in real income resulting from participation in Fadama II of about 60 percent, well above the target of at least 20 percent increase in income that Fadama II set to achieve in six years for 50 percent of the beneficiaries. About 42 percent of beneficiaries increased their incomes by at least 20 percent within one year of Fadama II implementation, indicating that the project nearly succeeded in achieving its income goal within its first year of operation.²⁵

Comparison of the income impacts of the project across asset terciles showed that the project did not have a statistically significant impact on income among the poorest tercile (although the estimated coefficient was positive), despite the large and significant impacts

on productive assets reportedly available to the poor. However, the project may have a much bigger impact among the poorest beneficiaries in the future because of the lagged effect of productive asset acquisition. Thus, a follow-up study is needed to capture the longer-term effects of productive assets and other changes that farmers experienced as a result of participating in the Fadama II project.

The project also had more-limited impacts on income in the humid forest and moist savannah zones than in the dry savannah zone. That could be a result of the irrigation investments that beneficiaries in the moist savannah zone demanded over other types of productive assets to address the erratic rainfall in the area. Irrigation investments have a larger impact on agricultural productivity in moisture-stressed areas than in more-humid areas.

The income impacts of the project are likely to be higher in the future because the beneficiaries acquired productive assets that are likely to increase their incomes significantly. Further, it is likely to take some time to generate the full impacts on income from investments in infrastructure, possibly by leading to changes in household livelihood strategies (e.g., increased non - farm activities) and commercialization. The estimated effects on changes in these variables were either insignificant (in the case of non - farm income) or counterintuitive (in the case of commercialization). Further research is needed to assess these types of broader and longer-term impacts, after the project has had sufficient time

for the impacts to be realized. This study was conducted at an early stage of the project and does not capture its lagged impacts, especially the long-term benefits of productive asset acquisition and rural infrastructure development.

The impact of the Fadama II project on productive asset acquisition is large and statistically significant across all agro-ecological zones, asset terciles, and genders. However, the change in the value of productive assets caused by participation in Fadama II was larger and more significant for jointly owned productive assets. This reflects the policy that the project used to implement the pilot asset acquisition component. The dramatic increase in the value of productive assets resulting from participation in the project was mainly caused by the cash transfer from the 70 percent matching funds that the project provides to Fadama User

Groups. The large cash transfer used to implement this project raises the important question of whether this success story can be replicated.

Three major issues that need to be addressed in scaling up this success story are better targeting of poor and vulnerable groups, finding sustainable methods of promoting development of rural financial services, and increasing the capacity of Fadama resource users to manage productive assets efficiently.

These three issues are interrelated and therefore need to be considered simultaneously.

Over the first year that the project operated, the Gini coefficient of consumption expenditure for the beneficiaries decreased by about 9 percent compared with an increase of 2 percent for non - beneficiaries. This suggests that the project contributed to reduction of consumption expenditure inequality, probably through targeting poor and vulnerable groups. Consistent with this, Fadama II also succeeded in raising the value of productive assets of the poorest asset tercile more significantly than for the other asset terciles. Even though the large increase of value of productive assets suggests that the project succeeded in targeting the poor, analysis of income showed a limited impact of the project on income among the poorer beneficiaries, as previously noted. The weak impact of the project on income of poorer households could be a result of the low capacity of the poor to use and manage the new productive assets. It is also possible that the poor borrowed money from well-off individuals who in turn asked them to pay high premiums or required other agreements that lowered their income returns. This raises the need to help the poor to access affordable credit services. The supervision mission and the external medium-term evaluation recommended further reduction of the beneficiary contribution to 10 percent for women and the vulnerable (Anonymous, 2007; Nkonya *et al*, 2008).

Implementation Difficulties and Lessons from Fadama II

The failure of the poor to pay for productive assets is the absence or limited access to rural credit services. Fadama II did not involve credit service providers to help beneficiaries to pay for their contribution. There is need to involve credit service providers by helping them to offer credit at competitive interest rates to the poor using collateral substitutes such as group repayment incentives. For example, the project could help to strengthen the provision of credit services in rural areas by using strong

rural associations.. The project could also help to foster credit intermediaries or to promote rotating savings and credit associations that can help the poor to access productive assets.

One of the components of Fadama II is provision of demand-driven advisory services. The project increased the demand for post - harvest handling technologies but did not have a significant impact on the demand for financial management and marketing information. Fadama II reduced the demand for soil fertility management technologies, perhaps because of its emphasis on providing postproduction advisory services.

As the project plans its third phase, it should consider supporting soil fertility management to enhance the effectiveness of productive assets and other interventions and to address the potential land degradation that could result from higher agricultural productivity.

On the overall, the Fadama II project has achieved its goal of increasing the incomes of the beneficiaries in the first year of its operation. The project has also succeeded in targeting the poor and vulnerable in its productive-asset component, even though that did not appear to increase significantly short-term household incomes among the poorest asset tercile. The unique feature that could have contributed to the significant impact of the project in a short time is its broad-based approach, which addresses the major constraints limiting the success of CDD projects that address only one or two constraints. This has implications on planning poverty reduction efforts in low-income countries. Given that the poor face numerous constraints, a CDD project that simultaneously addresses many constraints will likely build synergies that will lead to larger impacts than will a project that addresses only one or two constraints.

This suggests the need for the government and donors to pool resources and initiate multi - pronged CDD projects rather than many isolated projects.

Lateness in disbursement was a major problem of Fadama 11 and that engendered ineffective execution of the implementation plan and abandonment of subprojects.

Fadama 11 encountered a lot of political maneuvers – in some cases - state governments made several attempts to divert project funds. Such political hijacks mar development projects.

The project suffered from inadequate publicity especially at the point of commencement and that was why acceptance was a preliminary problem. The local people, initially, likened Fadama 11 to past and failed moribund projects and this was responsible for the failure of the project in some states. Breaking the jinx of cycle of failure in agricultural project implementation was a veritable difficulty. That notwithstanding, Fadama has been adjudged successful on the overall. There is a need to increase the propaganda machinery of the project in the emerging new phase,

Generally, the PRA exercise in some areas was faulty which eventually became a problem for sustainability. Given that the real beneficiaries' concerns were not articulated at the point of PRA exercise, the project was more or less sold to politicians who needed only the money.

Oversight function was not adequate on the part of the staff officers and that brought about a gap between activity in the field and planning at the state headquarters. Feed back mechanisms were not adequately and effectively utilized. To a reasonable extent, the beneficiaries were not carried along. This engendered delay in addressing of their emerging concerns and challenges.

Service provision was poor in terms of quality of materials which was attributable to inflationary pressure on the subproject budget. The lag between time of preparation of budget and its implementation was unreasonably long and as such, increase in prices of goods and services brought about either poor execution or abandonment of subprojects.

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