The sustainment of two agricultural development projects in Osun State, Nigeria

by

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DECLARATION

I declare that the dissertation, which I hereby submit for the degree Masters of Science in Agricultural Extension at the University of Pretoria is my own work and has not been previously submitted by me for a degree at this or any other tertiary institution.

Signature……

Date……

DEDICATION

I would like to dedicate this project to almighty God, the alpha and omega, who has been the source of my inspiration and strength all through.

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ABSTRACT

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ABSTRACT

The main objective of this study was to assess the impact and sustainment of NPFS (ADP) and FADAMA III projects for rural farmers in Osun State in Nigeria. The specific objectives of the NPFS project were to foster the development of smallholder agriculture and income generation in the rural areas, improve national food security and reduce poverty on an economically and environmentally sustainable basis. The development objective of the FADAMA III project was to increase the incomes of users of rural land and water resources on a sustainable basis.

The NPFS (ADP) project study was carried out in five local governments, while the FADAMA III project study was carried out in six local governments. The research method used involved the administration of structured and semi-structured questionnaires as the research instrument. The study used a sample of 316 project beneficiaries from respectively NPFS (216) and FADAMA III (100) randomly selected. The study also conducted research on 43 project staff and facilitators from these two selected projects. Descriptive statistics involving percentage frequency distribution and correlation analysis was used to analyze the impact and sustainability of these two projects on the beneficiaries in Osun State.

The findings showed that few youths (less than 30 years) were involved in the projects and 42.4% of the households have a household size of more than five with relative high numbers of dependants. Majority of respondents (78.5%) has relative small land size (<5ha) where respondents rear poultry (13%) and livestock (12.7%). 89.1% respondents combined farming with other sources of household income. Fifty seven percent of the

respondents are depending mainly on off-farm income and more than 50% of their household income.

NPFS project beneficiaries were a bit more satisfied with their involvement and participation during all the stages of the project cycle than FADAMA III project beneficiaries. Staffs of both projects showed dissatisfaction with beneficiaries' involvement during the planning and evaluation stages. All three tiers of government were satisfactorily linked to the two projects while the World Bank was a strong external donor for FADAMA III project. Both project beneficiaries and staff were well trained prior to the projects as the extension workers, project facilitators and service providers were effectively involved in beneficiaries' training.

The respondents perceived that the scope of FADAMA III project was overall more relevant in addressing food security and agricultural development needs than the scope of NPFS project. Beneficiaries perceived both NPFS and FADAMA III projects to have relative high impact on their household feeding status, means and easiness of transport, and household water supply. However, the impact of the two projects on electricity supply to households was generally perceived to be low. Beneficiaries from both projects showed dissatisfaction with the selection criteria used to select participants for these projects, while project staff on the other hand perceived it to be acceptable. The speed of releasing funds to beneficiaries was perceived to be very slow by beneficiaries of both projects.

Sixty eight percent of NPFS and 84.7% of FADAMA III project beneficiaries are still participating in the projects since its inception, which is a good indicator of sustainability of these projects. Currently, only 38.6% of NPFS project beneficiaries are directly benefitting from the project while even FADAMA III beneficiaries who had not made their counterpart fund payments are still participating through their membership of the FADAMA User Group (FUG). The major challenges participants of both projects revealed were: poor weather conditions, poor communication and road network, poor participation and cooperation of beneficiaries, political attitudes and interference, unstable government tenure and policies and incompetent and dishonest project officials.

This study therefore recommends that future projects should endeavour to attract and sustain stakeholders' interest in agricultural development projects through loans, credits, grants and other incentives so as to increase the sustainability level of these projects. The use of the agricultural innovation system approach in agricultural development projects was

recommended in order to yield impact on different facets of beneficiaries' livelihood and the society at large. To ensure better effectiveness of future related projects, beneficiaries and staff recommended timely necessary support; discouragement of politics; quality extension support; support in identifying of appropriate markets; full participation of the youth and possible subsidizing of agricultural inputs.

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ACRONYMS

AATF	African Agricultural Technology Foundation
ACGS	Agricultural Credit Guarantee Scheme
ADB	African Development Bank
ADLI	Agricultural Demand-Led Industrialization
ADP	Agricultural Development Programme
ADPEC	ADP Executive Committee
ADWG	Agriculture Donor Working Group
AETA	Agricultural Extension Transformation Agenda
AERDAs	Agricultural Extension and Rural Development Agencies
AEZs	Agro-Ecological zones
AFAN	All Farmers Association of Nigeria
AgGDP	Agricultural Gross Domestic Product
AIAG	Agricultural Industry Advisory Group
AIS	Agricultural Innovation System
ARCN	Agricultural Research Council of Nigeria
ASM	Agricultural Sector Ministries (in Kenya)
ATA	Agricultural Transformation Agenda
ATPG	Agricultural Transformation Policy Group
AUC	African Union Commission
CAADP	Comprehensive African Agricultural Development Programme
CBN	Central Bank of Nigeria
CDD	Community-Driven Development

CIF	Children's Investment Fund
CNA	Comprehensive Needs Assessment
CP	Community Plans
CSOs	Civil Society Organizations
DANIDA	Danish International Development Agency
DFID	Department for International Development
DIFRRI	Directorate of Food, Roads and Rural Infrastructure
DSIP	Development Strategy and Investment Plan
EA	Extension Agent
EAOPS	East African Organic Products Standards
ECOWAS	Economic Community of West African States
EIG	Economic Interest Groups
EPZ	Export Processing Zone
EU	European Union
FAFIN	Fund for Agricultural Finance in Nigeria
FAO	Food and Agricultural Organization
FCAs	Fadama Community Associations
FCT	Federal Capital Territory
FFS	Farmers Field School
FGN	Federal Government of Nigeria
FMARD	Federal Ministry of Agriculture and Rural Development (Nigeria)
FMAWR	Federal Ministry of Agriculture and Water Resources
FME	Federal Ministry of Environment

FNFDP	First National Fadama Development Project
FPRS	Federal Planning, Research, and Statistics
FSC	Farmers Service Centre
FSR	Farm System Research
FUGs	Fadama User Groups
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESS	Growth Enhancement Support Scheme
GH¢	Ghana Cedi (currency)
GM	Genetically-Modified
GR	Green Revolution
GSS	Ghana Statistical Services
GTZ	*Deutsche GesellschaftfürTechnischeZusammenarbeit* / German Technical Cooperation Agency
IARC	Institute of Agricultural Research Council
ICPC	Independent Corrupt Practices and Other Related Offences Commission
ICT	Information and Communication Technology
IDA	International Development Association
IDG	International Development Group
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
Ksh.	Kenya Shilling (currency)

LASCOREP	Land Conservation and Smallholder Rehabilitation Programme
LDPs	Local Development Plans
LGAs	Local Government Areas
LGC	Local Government Council
LOIs	Letter of Intents
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries (in Uganda)
MoA	Ministry of Agriculture
MoFA	Ministry for Food and Agriculture (in Ghana)
MDAs	Ministries, Departments and Public Agencies (in Ghana)
NAADS	National Agricultural Advisory Services (in Uganda)
NAERPM	National Agricultural Extension Review and Planning Meeting
NAFPP	National Accelerated Food Production Programme
NARIs	National Agricultural Research Institutes
NARO	National Agricultural Research Organization
NBS	National Bureau of Statistics
NCA	National Council on Agriculture
NDP	National Development Plan
NEEDS	National Economic Empowerment and Development Strategy
NEPAD	New Partnership for African Development
NFCO	National Fadama Coordination Office
NFDP	National Fadama Development Programme
NFIDC	Net Food Importing Developing Country
NFRA	National Food Reserve Agency

NGN	Nigerian Naira (currency)
NGOs	Non-Governmental Organizations
NIRSAL	Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending
NISER	Nigerian Institute for Social and Economic Research
NLSP	National Livestock Sector Project
NOA	National Orientation Agency
NPFS	National Programme for Food Security
NRCRI	National Root Crops Research Institute
NSPFS	National Special Programme for Food Security
OFN	Operation Feed the Nation
OSSADEP	Osun State Agriculture Development Project
PDI	Preference for Development Intervention
PER	Public Expenditure Review
POIOEIB	Project Objectives, Inputs, Outputs, Effect, Impact and Beneficiary model
R&D	Research and Development
RMU	Resource Mobilization Unit
RTEP	Root and Tuber Expansion Programme
SADC	Southern Africa Diplomatic Countries
SAPs	Structural Adjustment Programmes
SATA	State-level Agriculture Transformation Activities
SCPZ	Staple Crop Processing Zones
SEEDS	State Economic Empowerment and Development Strategy

SIP	Strategic Investment Programme
SLM	Soil and Land Management
SNFDP	Second National Fadama Development Project
SPSS	Statistical Package for the Social Sciences
SRA	Strategy for the Revitalization of Agriculture
SSA	Sub-Saharan Africa
SSC	South-South Cooperation
SUN	Scaling Up Nutrition
TMC	Technical Management Committee
T&V	Training and Visit
UNCCD	United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa
UNCTAD	United Nations Country Team
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations International Children's Emergency Fund
USAID	US Agency for International Development
USD	United States Dollar (currency)
UShs.	Uganda Shillings (currency)
WEF	World Economic Forum
WEMA	Water Efficient Maize for Africa

CHAPTER 1
INTRODUCTION

1.1 Background information

Generally, about 75% of the world's poor resides in rural areas with majority depending on farming. It is therefore important to include agriculture in world economic growth, poverty reduction, and environmental sustainability (Oyakhilomen and Zibah, 2014; Gollin, 2009; Tsakok and Gardner, 2007 and Zimmermann et al., 2009).

Agriculture constitutes the backbone of most African economies, providing 60% of all employment in most countries, and remains the largest contributor to GDP. It is also known to be the biggest source of foreign exchange that accounted for about 40% of the continent's hard currency earnings and the main generator of savings and tax revenues. The agricultural sector also maintains the dominant source of industrial raw materials, making up about two-thirds of manufacturing value-added in most African countries that are based on agricultural raw materials (Union, 2006).

Agriculture plays a vital role in the Nigerian economy ranging from provision of food for the increasing population; supply of adequate raw materials (and labour input) to a growing industrial sector: a major source of employment; generation of foreign exchange earnings and provision of a market for the products of the industrial sector (Eze et al., 2010). Nigeria is a vast agricultural country endowed with substantial natural resources including 68 million hectares of arable land; fresh water resources covering about 12 million hectares, 960 kilometers of coastline and an ecological diversity which makes it possible for the country to produce a wide variety of crops, livestock, forestry and fisheries products (Arokoyo, 2012 cited in Oyakhilomen and Zibah, 2014; Buren, 1998 cited in Bakare, 2013).

Despite the natural agricultural bequest, Nigeria is yet faced with huge food insecurity and poverty challenges (Omadjohwoefe, 2011) with about 70% of the population living on less than 100 naira (US$ 0.70) per day. The agricultural sector contributes more than any other sector of the economy as it provides over 40% of GDP, while the population involved in farming is between 60 and 70% (Aigbokhan, 2001; Ajibade et.al, 2013; Balogun, 2001; Onyeahialam, 2002; Olagunju,2007; Odoemelam, 2011).

Various intervention programmes by government especially the agricultural credit schemes of Central Bank of Nigeria (CBN) and other development projects have been directed

towards the boosting of the agricultural sector. Nevertheless, the difficulties in the agricultural sector still persist as some of it were linked to the 70's oil boom (Obiora, 2014; Ogbalubi and Wokocha, 2013) as well as inconsistencies in official policies accompanied by natural disasters like droughts and ineffective general policies (Olomola et al., 2014; Ugwu and Kanu, 2012).

The Nigerian government embarked on a transformation programme which was meant to shift Nigeria from food importation and boost domestic food production (Obiora, 2014). This transformation will require the following: restructuring in the input supply regime; a targeted "region-specific" increase in the production of priority commodities; post-harvest systems development; a strong orientation towards agri-business and promoting value-addition in the product chain (Akinwumi, 2012). The success of this transformation was said to majorly depend on restructuring the fertilizer supply mechanism (Akinwumi, 2012), but corruption is one of the major factors affecting agricultural interventions in the country (Ladele and Fadairo, 2013).

National efforts to boost food production through programmes such as Accelerated National Food Programmes failed to have impact on the nation's agricultural outputs performances. Though, the value-added in agriculture increased tremendously to more efficient fertilizer distribution. Other factors ascribed to the increase in the sector growth include continued government support in providing accessible roads infrastructures and availability of credit facilities and other essential inputs to farmers (Idachaba, 1980; Anthony, 2010). Nevertheless, much is expected from the Agricultural sector through development investments with the aim of achieving project sustainability; food security; poverty eradication; employment generation and equality in Nigeria, Africa and the world at large.

1.2 Problem statement

According to Omonijo et al. (2014), several agricultural programmes and projects have been introduced over the years to reduce abject poverty among rural dwellers, mostly farmers, in sub-Saharan Africa (SSA). Some of these programmes and agencies include: United Nations Development Programme (UNDP), International Fund for Agricultural Development (IFAD), Agricultural Development Programme (ADP), Food and Agricultural Organisation (FAO), National Economic Empowerment and Development (NEED), the Directorate of Food, Roads and Rural Infrastructure (DIFRRI), National Orientation Agency (NOA), National Accelerated Food Production Programme (NAFPP), Green Revolution

(GR) and Operation Feed the Nation (OFN). Unfortunately, it seems these efforts have yielded little or no impact on the rural population and consequently the rate of poverty in rural areas keeps increasing steadily (Omonijo et al., 2014).

Community and integrated rural development approach used during the last few decades did not bring about substantial alleviation of rural poverty (van Heck, 2003). A number of studies (Coady, Dai and Wang, 2001; D'Silva and Bysouth 1992; Holt 1991; Isham, Narayan-Parker and Pritchett, 1994; Shah, 2001 and Mundial, 1995) have established the importance of involving beneficiaries for successful development like evident in countries such as China, Uganda, Philippines, India, Brazil and Kenya. The case is different in Nigeria as beneficiaries are not involved in key stages of development projects, which have led to limited success recorded (Ijaiya, 2006). Ajibade, Ocheni and Adefemi, (2013) said Nigerian agricultural sector still performs poorly despite huge investment by the World Bank (over $1.2 billion) accompanied with yearly federal and state governments allocation for Agricultural Development Projects in the country since 1974. Draper, Kiratu and Hichert (2009) stated that although more money can be made available for investment into the agricultural sector, the real task is to ensure that such funds are well managed with expected positive impact. The focus of structural adjustment programmes in many developing countries has been mainly fiscal integrity and efficacy, in which the results have not been appropriately implemented.

Some challenges in agricultural development projects might as well be linked to an elongated stereotyped protocols operating in the country as Farinde (1996) stated. He is of opinion that common official routine in the Ministry of Agriculture and Natural Resources, under which research institutes operate in Nigeria, is one of the important factors preventing research to meet the technology needs of farmers.

The perceived problem that this study attempt to solve originated from the lack of sustainment of numerous projects in Nigeria. Also, the methods by which many of these projects are imposed on farmers call for candid attention. Sustainment in this context means the short and long term benefits, continued application and relevance of the development projects in the executed areas. Agol, Latawiec and Strassburg, (2014) said "sustainability intrinsically involves the maintenance or continuity of outcomes over time", while "selection of indicators that would show whether impacts would be sustained after the project exits" was one of their criteria used in selection of sustainability indicators. The

sustainability of a project as a result of derived benefits will depend on several factors, including, financial sustainability of sub-projects, ownership and recipient commitment, capacity of beneficiary associations and other enabling institutional environment (CAADP PID, 2008). Some projects in Nigeria are often abandoned (Ugwu and Kanu, 2012) or discontinued by the beneficiaries. Many of the projects fail to contribute to the fulfillment of their interests and eventually bring no sustainable solution to their problems (Bekele, 2006).

ADP is a programme housing many development projects (ADPs) (Auta and Dafwang, 2010; Omonijo et al, 2014). The National Programme for Food Security (NPFS) project under the ADP was executed in Osun state 15 years ago with general objectives of fostering the development of smallholder agriculture and income generation in the rural areas; improve national food security; and reduce poverty (Onyemauwa, Orebiyi, Onyeagocha, Ehirim, Nwosu and NG, 2013). The impact especially in Osun State has not yet been determined. The programme was funded by joint collaboration of the Federal, State, Local government councils, beneficiaries' communities, Food and Agricultural Organisation of the United Nations (FAO) and other donors. The probability of Agricultural Development Programmes contributing to food security for rural dwellers is yet to be ascertained (Omonijo et al., 2014). Moreover, the likelihood of farmers having easy access to improved seeds, pesticides and fertilizer for farming has never been investigated. The probability of ADP granting farmers adequate access to credit facilities has to be determined (Omonijo et al, 2014).

The third National Fadama Development Project (FADAMA III) came about from the successes recorded from the second National Fadama Development Project (FADAMA II) which was only implemented in 18 states of the Federal Republic of Nigeria between 2004 and 2009 (Dimelu et al, 2014). Fadama III was implemented in Osun state between March 2009 and December 2013 with a development objective of increasing the income of users of rural land and water resources in local communities on a sustainable basis, which will help to reduce rural poverty, increase food security and contribute to the achievement of a key Millennium Development Goal (NFCO, 2008).

These two projects and many others in the country support the government's strategic objective to enhance growth in sectors other than oil to achieve increased food security. Nigeria is presently at an economic sphere where oil, the main revenue source has practically lost and still is losing its value. The Nigerian president in his statement while

presenting the year 2016 national budget acknowledged the economy crisis posed by the world devaluation of oil and emphasized that the solution to the problem resides on the country's farm land. Nevertheless, a warning light keeps flashing if investments on agricultural development projects in the country are not positively contributing to food production.

1.3 Purpose statement

This study is aiming to assess the impact of the NPFS (ADP) and FADAMA III projects carried out in Osun State and to what extent the needs of beneficiaries were taken into considerations with planning and execution. The results will be used to make policy and operational recommendations for improvement of similar programmes.

On the long run, this will contribute to sustainability of agricultural development projects towards increase in food security, eradication of poverty and hunger in the country and the world at large.

1.4 Research objectives

The main aim of the study is to assess the impact and sustainment of NPFS (ADP) and FADAMA III projects for rural farmers in Osun state under the following specific objectives;

a. To profile the characteristics of farmers and farms in the chosen study areas of Osun State.

b. To determine the perceived effectiveness of NPFS and FADAMA III on addressing food security, agricultural development and institutional improvement in Osun State.

c. To assess the sustainability of NPFS and FADAMA III projects in the study area.

d. To identify the existence of a relationship between intervening processes and outcomes of NPFS and FADAMA III projects.

1.5 Research questions

This study is conceived to provide answers to the following questions:

1. What are the factors that determine the effectiveness of NPFS and FADAMA III project in Osun State?
2. What is the level of sustainability of NPFS and FADAMA III projects in the study area?

3. What are the relationship between intervening processes and outcomes of NPFS and FADAMA III projects in Osun State?

1.6 Academic value and contribution of the proposed study

The value of this work is that governments and stakeholders will reference Agricultural Extension studies and methods to implement sustainable and impactful agricultural projects. Also, consideration and effective assessment of both the felt and unfelt needs of projects beneficiaries before embarking on developmental projects will be given more importance and therefore emphasized in Agricultural Extension studies and programmes.

1.7 Delimitations and assumptions

This work was limited to few chosen agricultural development projects in the selected farming communities in some local governments in Osun state. There was lack of proper records and some political interference in terms of preventing projection of failure of some private official projects. Some of the projects' vital beneficiaries were unavailable for questioning due to migration or lack of record. Some beneficiaries also failed to respond well to the questions, to save their face and prevent negative effect that might emerge from it. Some who have experienced lots of questioning in the past and already fed up with reoccurrence as well as their time required for the questioning felt reluctant to provide useful information. Nevertheless, different groups, extension workers and other willing stakeholders were approached for the questioning with enough time frames for the collection. This made it possible to get full and accurate required details of NPFS and FADAMA III projects in the study area.

CHAPTER 2
OVERVIEW OF AGRICULTURAL SITUATION IN AFRICA

2.1 Introduction

Africa is regarded as a rural continent with agriculture exceptionally substantial to its development. Some benefits attached to an agriculture-led development initiative include addressing; hunger and poverty in rural areas, stimulate economic growth, reduce food importation and expand exports. The records of 1997 to 1999 showed that some 200 million people in Africa (which is 28 percent of the population) were chronically hungry (Zimmermann, Bruntrüp, Kolavalli and Kathleen, 2009) while Babatunde, Omotesho and Sholotan, (2007) indicated that this figure will increase to 30% in 2010. In Nigeria, 40% of the population is food insecure and therefore the country could not meet the Millennium Development Goals target in 2015 (Babatunde et al., 2007).

Agriculture is recognized to be important and able to positively contribute to the continent's economy but many African governments still allocate less than 1 percent of their budgets to this sector. Records showed that 39 percent of the loans of World Bank (the prime funding source for Africa) had gone to agriculture in 1978, but this dropped to 7 percent in 2000 (Union, 2006). Agriculture currently accounts for about 30 percent of sub-Saharan Africa's (SSA's) GDP; at least 40 percent of export value, and approximately between 70 and 80 percent of employment. More than 75 percent of the total population lives in rural areas and the majority of them are smallholder households involved in agricultural activities as their employment in the agricultural sector which gives them an opportunity to earn their livelihood mostly by a combination of subsistence and market production (Zimmermann et al., 2009).

In the sub-Saharan region of Africa, the condition of agriculture seems to be worse compared to the continental situation. The performance of agriculture in sub-Saharan Africa has not been up to expectations and has been characterized over the decades by huge fluctuations. Though some improvements were recorded, evidences showed that the growth did not lead to improved food security and poverty reduction. Successes were recorded in sub-sectors such as; production of cassava, exports of fruits and vegetables, tea production and exports, and fish catch (Boussard et al., 2005).

2.2 Challenges of Agriculture Development in Africa

Mwaniki (2006) listed the following challenges and issues facing food security in Africa: an underdeveloped agricultural sector; barriers to market access; effects of globalization; disease and infection; and handicapping policies. The author further stated that the underdeveloped agricultural sector manifest mainly because of low fertility in soils, minimal use of external farm inputs, environmental degradation, significant food crop loss both pre- and post- harvest, minimal value adding and product differentiation, and inadequate food storage and preservation.

The African continent is continuously plagued with various serious diseases such as malaria, tuberculosis and HIV/AIDS. These do not only reduce the man-hours available to agriculture and household food acquisition, but also increase the inconveniences of households to acquire food. Food and Agriculture Organization of the United Nations (FAO) estimates that by 2020, AIDS epidemic would have claimed the lives of 20 percent or more of the population working in agriculture in many Southern African countries. HIV-affected households also lack enough resources and means to supplement their diet through the purchase of more nutritious and varied foods (Mwaniki, 2006).

Dethier and Effenberger (2012) identified mainly two challenges related to agriculture:

- The first is the need to increase food productivity and production in developing countries, most especially regarding smallholder farmers and in Sub-Saharan Africa. This can be achieved after addressing the following interrelated problems; property rights, R&D for seeds and inputs, irrigation, fertilizer, agricultural extension, credit, rural infrastructure, storage, and connection to markets.
- Another challenge is the volatility of food prices which persist due to ineffective and weak food price control policies of some poor countries. There are also challenges around technologies suitable for the continent's conditions and effective adoption of such technologies.

Natural disaster and global crises can also contribute immensely to the poor performance of the agricultural sector. Drought, fires, and monsoon floods have rendered lots of harvests useless in many countries (Dethier and Effenberger, 2012). All these and many more have led to hunger, worsening food insecurity and vulnerability to poverty which render the agricultural sector handicapped and unfruitful.

2.3 Case study of past policies and agricultural sector performance in few African countries

From the research project on Agricultural Policies in sub-Saharan Africa by Zimmermann et al. (2009) and other publications such as Comprehensive Africa Agriculture Development Programme (CAADP), (2003); Taylor and Howard (2005); Sukhdev, Stone and Nuttall, (2010); Policy Brief, November, 2010; World Bank Draft Final Report(2011); specific country cases of Ghana, Kenya, Uganda and few SADC countries are highlighted. Illustration of the oscillating policies and performances that were and are prevailing in most of SSA are described below;

2.3.1 Ghana

2.3.1.1 Agricultural contributions, influence and policies

The contribution of Agriculture to the Ghanaian GDP since 2000 was between 36 and 40 percent after its fall from about 50 percent in the 1980s. Agriculture remains the main source of livelihood especially in rural Ghana. The country's latest population census in 2000 revealed that 50.6 percent of the labour force (4.2 million people) is directly engaged in agriculture. The staple crop subsector, particularly roots and tubers, is the dominant sub-sector and stands for about two-thirds of the agricultural GDP (GSS, 2002). Agricultural production is therefore a major contributor to food security. Cocoa, the largest foreign exchange earner, provides 12 to 13 percent of agricultural GDP. Two-thirds of foreign exchange earnings derive from agriculture. Growth in agriculture is essential for poverty reduction in the country because of the size of the population which depends on the sector for their livelihood and the relatively high incidence of poverty in their rural areas. Agriculture also supplies the raw materials (palm oil, cotton, cocoa, and more recently horticultural produce such as mango and pineapple) for industries.

However, Ghanaian agricultural policies have played a key role in determining the performance of its economy. Agricultural price alterations were mainly a chief cause of the crumbling state of the economy after independence. There were deliberate price settings in cocoa, whereas domestic prices for food crops were determined by import restrictions rather than pricing policy. Over all, distortions were at the disadvantage of agriculture since the price distortions caused by inflation and inflexible exchange rates could not be offset by increased producer prices or subsidization of agricultural inputs.

2.3.1.2 Expenditure allocation to agriculture

According to Zimmermann et al. (2009), Government expenditures in the agricultural sector in Ghana have risen steadily by about 9.1 percent per year on average in real terms, increasing from GH¢ 30.4 million in 2000 to GH¢ 58.2 in 2005. Government expenditure on the sector accounted for about 6 percent of total government expenditure between 2000 and 2005. In terms of expenditure allocation to agriculture relative to the economy, spending on the sector accounted for about 4.1 percent of agricultural gross domestic product (AgGDP) and 1.5 percent of GDP. In 2015, Ghana spent 6.4% of its annual total expenditure on agricultural sector with 3.9% GDP growth rate (MoFA, 2017).

The overall, though not always steady, increase in real government agriculture expenditure relative to several macroeconomic indicators shows a higher commitment of the government in investing in the sector compared to the 1990s. Government spending on agriculture ranks third after spending on education and health sectors. The allocation to the Ministry for Food and Agriculture (MoFA), responsible for livestock and crops other than cocoa, has declined from 48 to 57 percent in the pre-1999 era, to less than 25 percent in 2005, indicating a shift away from MoFA to other Ministries, Departments and Public Agencies (MDAs) with roles in the development of the sector (Zimmermann et al., 2009).

2.3.2 Kenya

2.3.2.1 Agricultural contributions, influence and policies

Kenya agricultural sector strongly influences the performance of its economy and shows both the internal and external challenges that the country has faced. During the early post-independence period (1964 to 1973), there was an impressive economic growth rate of 6.6 percent which was mainly attributed to expansion in cultivated area, increase in yields following the adoption of high yielding maize and wheat varieties, and agronomic research in tea and coffee with heavy government investments. This was followed by a lower overall economic growth period (1974 to 1979) of 5.2 percent matched by a reduced agricultural growth rate due to the following various factors; the oil shocks of 1973 and 1979, fluctuations in international commodity prices of key agricultural exports like coffee and tea, poor implementation of state run agricultural development projects, as well as the collapse of the East African Community regional agreement in 1977.

2.3.2.2 Expenditure allocation to agriculture

The overall budget allocation to the Agricultural Sector Ministries (ASM) of Kenya, in nominal terms, increased steadily from Ksh. 11.05 billion in 1999 and 2000 to Ksh. 30.33 billion in 2007/2008. However, in relative terms the percentage of government budget allocated to agriculture dropped from a peak of 12.5 percent in the mid-1980s to 4 percent in 2000. There has been a steady improvement since 2000 with the allocation reaching 6.8 percent in 2007. Development expenditure to ASM increased by 24 percent from 21 percent in 2001 to 45 percent in 2007. However, the share of Ministry of Agriculture's (MoA's) development expenditure allocation declined from 65 percent in 2003 to 38 percent in 2007 (Zimmermann et al., 2009).

2.3.2.3 Kenya's strategy for the revitalization of agriculture (SRA)

According to Zimmermann et al. (2009), the Strategy for the Revitalization of Agriculture (SRA) in Kenya was developed to address the challenges and constraints faced by its agricultural sector. SRA was developed in 2004 and encompasses the whole range of economic activities in rural areas, including the transformation of primary production, trade, and services. It proposes modernization and mechanization of the farm structures, improvement of the infrastructure, and increase in agricultural services. It also identifies six fast tracks requiring immediate action which are:

1. Reviewing and harmonizing the legal, regulatory, and institutional framework.
2. Improving delivery of research, extension, and advisory support services.
3. Restructuring and privatizing non-core functions of parastatals and ministries to bring about efficiency, accountability, and effectiveness.
4. Increasing access to quality farm inputs and financial services.
5. Formulating food security policy and programmes.
6. Taking measures to improve access to markets, for example rural roads and internal taxes.

2.3.3 Southern Africa Diplomatic Countries (SADC)

As extracted from Draper et al. (2009), the case study briefly highlights some important issues regarding the region's agricultural sector:

In spite of agricultural endowment in the region, such as abundant agricultural land and favorable climate, southern Africa is still suffering from high food prices and food insecurity while its large proportions of its population still resides in rural areas. Agriculture is

performing poorly compared to other regions in the world and investment complex, uncertain and difficult to tackle. Draper et al. (2009) stated that more money will be made available for investment into the agricultural sector of this region but the real task will be to ensure that such funds are well managed with expected positive impact.

Agriculture is the most predominant sector in most SADC member countries and about 70% depend on the sector for their livelihood: food, income and employment. Agriculture directly employs an average of 53.8% of the region's working population. The sector maintains the status of being the engine of growth as it constitutes for more than 20% of GDP in most SADC member countries in spite of its relative decline in recent years. In most countries in the region, agricultural growth linkages remain higher than those in other sectors in both rural and urban areas.

Mozambique for instance was affected by the increase in global food prices of rice and wheat which impacted on domestic prices of these commodities. The limited domestic production of these food commodities made the effect severe. Also, the country's poor investment in agriculture and its inadequate participation in markets of key agricultural inputs brought a negative impact on its food production. Programmes like the 'Green Revolution' strategy; the Food Production Action Plan and sustained investment in key agricultural infrastructure was expected to improve the food production in this country. These actions were expected to result in full utilization of the agricultural potential of the country, thereby resolve food shortages and high prices. Private sector participation was also identified to be essential for the development of the country's agricultural sector development if the government could improve the country's investment climate situation, roads, marketing infrastructure and credit markets and resolve the land tenure problems.

In Namibia, the agricultural sector's performance strongly depends on weather conditions, making the national food self-sufficiency to vary between 35% and 75% of total demand. To thwart the effects of climate change and rising food prices on the national food security situation, the government of Namibia adopted a set of measures which include: the usage of natural water courses for irrigation farming; the construction of national storage capacity for staple grains; increased long-term production through title deeds and targeted extensions, and targeted food assistance. Additionally, the government controls imports of staple food and horticultural products with the intention of increasing food security and utilizing the country's agricultural production potential to the fullest.

Zimbabwe's worsened economic crisis was said to have been aggravated by the effect of global food crisis. Though the country was previously known to be the breadbasket of Southern African, its food production and agricultural productivity has remained below subsistence levels since year 2000 which was majorly caused by neglected price controls and failed land reform programmes in the state. Nevertheless, the government embarked on several support programmes for impartial production, acquisition and distribution of food. Farmers obtained a variety of subsidies which were in the form of seeds, fertilizers and equipment, etc. Additional domestic and trade policy measures were therefore recommended to improve investment and development in agriculture for the benefit of Zimbabweans and the region as a whole.

Malawi's success regarding the input subsidies investment to boost domestic agricultural production served as an attracting model for the region to explore. Although there are some concerns about the fiscal sustainability of this programme which was donor funded, more attention should therefore be paid to lessons that other countries could learn from Malawi's experience. These lessons should be adapted to their national conditions as appropriate for improved agricultural sector performance and food security.

2.3.4 Uganda

Unlike the previous three case studies above (Ghana, Kenya and SADC), Uganda's case study is broadly recorded in this section as extracted from Zimmermann et al. (2009) and World Bank Draft Final Report (2011).

2.3.4.1 Agricultural contributions, influence and policies

Agriculture is also a core sector for economic growth, food security, income enhancement, and employment in Uganda. The sector's share in total GDP declined from over 50 percent in the early 1990s to 21.4 percent in 2007 and 2008. Nevertheless, due to faster growth in the service and industrial sectors, agriculture socially remains the most important sector because most Ugandans derive their livelihood from agriculture.

Regarding policy, the Uganda Organic Standard was accepted in 2004, while they also adopted the regional standard, the East African Organic Products Standards (EAOPS) developed under a joint UNEP-UNCTAD initiative in 2007 as a reason of their membership in the East African Community. In July 2009, the government released a Draft Uganda Organic Agriculture Policy. The policy's objectives and strategies was to support the

development of organic agriculture as an avenue to deliver self-sustaining growth so that individual farmers can improve productivity, add value and access markets. These are important keys to achieve Poverty Eradication Action Plan objectives. Such inclusive policies that benefit local farmers; solve food insecurity; eradicate poverty and inequality should be more encouraged in Africa.

2.3.4.2 Expenditure allocation to agriculture

In Uganda, a comprehensive Public Expenditure Review (PER) of the agricultural sector (crops, livestock, fish, forestry, water for production, and agriculture land-related issues) conducted in 2007 revealed the aggregate long-term expenditure to agriculture decreased steadily from 9.6 percent in 1980/1981 to 3.0 percent in 2006/2007. The report also stated that since 1991/1992, agriculture has not received more than 3 percent of the total budget allocation.

2.3.4.3 Brief overview of Agricultural development projects in Uganda

The five-year National Development Plan (NDP) was launched in 2010. The plan encompassed series of proposals aimed to firmly set Uganda on a path to becoming a middle-income country. It outlined strategic programmes for the socio-economic transformation of Uganda to a modern and prosperous country from a peasant economy within 30 years. The essential principles of the plan were to improve road, rail networks and energy sector, create employment opportunities, improve labour force and use the private sector as the engine of growth and development.

To align its strategic objectives with the national vision, the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), which is the parent ministry to the National Agricultural Research Organization (NARO), designed the following Development Strategy and Investment Plan (DSIP) with a focus on key priority areas of investment to spur agricultural growth:

a. Enhancing production and productivity
b. Market access and value addition
c. Improving the enabling environment for the agricultural sector, and
d. Institutional development.

The summary of the whole extractions and illustrations above point to the fact that: agriculture and its growth can be a potential fundamental instrument for sustainable

development, poverty reduction and inequalities reduction in Africa. Structural transformation can successfully be achieved through a smooth process of smallholder agricultural commercialization, policy and strategy interventions strongly required to improve investment climate, develop rural infrastructure, make land market more flexible, improve access of smallholders to rural finance, enhance the provision of agricultural services, and general sustainable investment.

2.4 Interventions to Agricultural Challenges in Africa

The main constraints for agricultural development and improved food security are political unrest and armed conflicts. These have prevented farmers from producing, displaced populations, destroyed infrastructure and littered the countryside with land-mines (Boussard, Daviron and Voituriez, 2006).

As a result of recent policy improvements, backed by higher commodity prices until mid-2008, real agricultural GDP growth in Sub-Saharan Africa has accelerated from 2.3 percent per year in the 1980s, to 3.8 percent per year between 2000 and 2005. Growth is even higher in countries such as Ghana which has recorded an average agricultural growth of 5.2 percent over the periods 2000-2006 respectively (Zimmermann et al., 2009).

Some success stories in the region's agriculture also include technological change, which is often a trigger for development. One of the requirements for this change apart from the establishment of market information systems is also the creation and support for smallholder farmer organizations and professional organizations of other private-sector operators. Also, there should be devices of consulting them before taking important decisions, in order to guarantee the establishment of the trust and mobilization which are essential for investment (Boussard et al., 2006).

Three major points on modeling growth and poverty reduction in Africa were extracted from Diao et al. (2010):

- The first idea pointed out the linkages between agriculture and the rest of the economy to be an important factor determining the contribution of agriculture to economic growth. Agriculture is found to have strong growth-linkages in many countries. Apart from the general attribute of agriculture providing labour and food supply, it also plays an active role in economic growth through production and consumption linkages. For instance, agriculture can provide raw materials to non-

agricultural production or demand inputs from the modern sector. On the consumption side, higher productivity in agriculture can increase the income of the rural population, thereby creating demand for domestically produced industrial output. Such linkage effects can increase employment opportunities in the rural non-farm sector, thereby indirectly generating rural income. Agricultural goods can also be exported to earn foreign exchange in order to import capital goods (Dethier and Effenberger, 2012).

- Another suggestion is to allow producers and consumers to shift between domestic and foreign markets depending on changes in relative prices (Diao et al., 2010). This will maintain balance between domestic and foreign markets and much effort should be made to develop and strengthen domestic agricultural products which the continent has in abundance.
- Lastly, diversification in rural household livelihoods should also be encouraged thereby creating off-farm employments and several rural sources of income as it was also stated by Dethier and Effenberger (2012).

It is important to stress the consequence of making inputs available to farmers as well as increasing the capacity of industries that supply these inputs; as these will lead to the generation of new locally specific knowledge and improve education about new seeds and technologies (Dethier and Effenberger, 2012). There is a need for better targeting of research to prevailing conditions of African countries and significant reduction in the barriers to technology adoption in the continent. Research should have a regional focus and target specific needs through regional strategies and initiatives such as NEPAD. Farmers' engagement should also be emphasized in such efforts through participatory activities which would enable access to valuable information to the research process. There is a need for an effective extension system that follow a private-public partnership approach to provide services as well as a publicly funded but privately managed system to reach both small-scale and commercial farmers (Dethier and Effenberger, 2012).

CHAPTER 3
AGRICULTURAL DEVELOPMENT PROJECTS OR PROGRAMMES IN NIGERIA

3.1 Introduction to the concept of agricultural development

Excerpted from Ajibade et.al, (2013), the concept of agricultural development has been described by different writers such as Olayemi (1980) and Okpanachi (2004). For instance, Olayemi (1980) defined agricultural development as an improvement in the traditional system of production in order to raise productivity in the agricultural sector of the economy for improved income and standard of living of the small-scale farmers. Agricultural development can therefore be termed as the creation of an enabling environment for the smallholder farmers to produce efficiently. Okpanachi (2004) defined agricultural development to be a reduction in poverty, rural transformation, employment generation, food security and improved national health profile of the citizenry. Agricultural development was viewed as a continuous and systematic attempt to utilize the agricultural resources of a nation in order to benefit agricultural workers and the general populace (Ajibade et.al, 2013).

Ajibade, Ocheni and Adefemi (2013) concluded with a statement that agricultural development can be described as the sheer act of transforming the crude methods of agricultural production to a modernized or mechanized system in order to boost large scale production in the agrarian sector.

3.2 Past development in Nigerian agricultural sector

The Nigerian economy during the first decade after independence (1960-1995) could reasonably be described where agriculture served as the major source of growth of the overall economy (Ogen, 2003).During this period Nigeria was known to be the world’s second largest producer of cocoa, largest exporter of palm kernel and largest producer and exporter of palm oil. The nation was also a leading exporter of other major commodities such as cotton, groundnut, rubber, hides and skins (Alkali, 1997). Despite the reliance of Nigerian peasant farmers on traditional tools and indigenous farming methods, they produced 70% of Nigeria's exports and 95% of its food needs and contributed over 60% of the GDP in the late 1960s (Lawal, 1997). However, the agricultural sector was neglected during the prime of oil boom in the 1970s (Ogen, 2007; Iwuchukwu and Igbokwe, 2012).

Development in the agricultural sector is important in the transformation and re-structuring of the economy of Nigeria as the majority of the labour force is primarily dependent on agriculture (Olagunju, 2007 cited in Ajibade et.al, 2013). The Nigeria agricultural sector is known to be characterized with: low farm incomes; ancient methods of production and low capability to meet the food and cash crop needs of the country. This accrues to low production output and high poverty occurrence among the rural agrarian populace (Ajibade et.al, 2013). According to Aliyu and Shaib's (1997) classification, Nigerian farming scale can be rated into three broad categories namely: small scale (0.10 to 5.99 hectares); medium scale (6 to 9.99 hectares) and large scale holdings (10 hectares upward). Several reports revealed that small scale farm holdings prevailed in Nigeria, accounting for up to 81% of the total area and produce about 95% of agricultural output (Alimi and Awoyomi, 1995; Azih, 2004).

From the 1970s, the decline in the contribution of agricultural sector to national GDP fell sharply from 54% in 1969 to 33% in 1974 which also marked the breaking point period in Nigerian economic history through the 1973 and 1974 crude oil price stocks (Aigbokhan, 2001). Weighing the contribution of agriculture and crude oil to national GDP between 1981 and 2003, records showed that agricultural exports accounted for 86% of the total export in the 1955 to 1959 period; it then reduced to 26% in the period 1970 to 1974. The contribution further decreased to 5.7% in the period 1975 to 1979; 2.7% between the period of 1980 and 1984; 5.6% in 1985 to 1989 and dropped to the lowest of 1.8% in 1990 to 1994 before it increased back to 8.6% in the period of 1994 to 1998 (Balogun, 2001; Aigbokhan, 2001).

Moreover, Nigeria's total expenditure on agriculture, as a percentage of overall expenditure, varied from 4.57% between1986 and 1993 to an average of 4.51% annually between 1994 and 1998 to 3.53% between 1999 and 2005. This continuous reduction in agricultural expenditure over the years compared to the total spending of Nigeria has brought about insufficient funds for the sector (Oyinbo, Zakari and Rekwot, 2013) which made Okoro and Ujah (2009) to emphasize the lack of sustainability of Nigerian agricultural sector.

The above overview therefore calls for a need to restructure the agricultural sector towards increasing its collective contribution to the national GDP and economic development of the country. Hence, it requires the development and application of agricultural techniques; adoption of appropriate technologies by farms households as well as formulation and

implementation of appropriate policies that will enhance increase in productivity at the farm household level (Olagunju, 2007). In addition, budgetary allocation to the agricultural sector should be substantially increased in order to make adequate funds available for operating the activities of the sector (Oyinbo et al., 2013).

3.3 Agricultural technology transfer in Nigeria

Agricultural technology generation has been important in improving the productivity of the agricultural sector in Nigeria and is carried out by National Agricultural Research Institutes (NARIs) with specific focus on arable crops, forestry, tree crops, livestock, fisheries, extension and training, and processing and storage. This programme has a mandate to increase the number of the national and international agro-research institutes from three in 1963 to 18 in 2002 in Nigeria (Madukwe, Okoli and Eze, 2002). The aim of agro-technology generation programme addressed techniques of land development, crop and animal management and achieved higher yields. It also provides modern technology and facilities to communities through the application of mechanical, chemical and biological inputs such as tractors, fertilizers, agro- chemicals, livestock breeds, high yielding crops, storage and processing facilities, to improve food production (Madukwe et al., 2002).

Nearly two decades after independence, the Nigerian agricultural technology transfer policy for a first time emphasized transfer of technical information on specific cash crops using regional Ministries of Agriculture (MOA) in the north, west and east. During this period, agro-research institutes like the Institute of Agricultural Research Council (IARC) in northern Nigeria; Moore Plantation in the west part; and National Root Crops Research Institute (NRCRI), Umudike in eastern Nigeria were established to link research and extension services. In 1968, the main focus of the agro-technology transfer policy was to improve food production through federal and states' MOA, while during 1976 local government reform gave some specific agricultural technology transfer functions to Local Government Councils (LGCs) (Madukwe et al., 2002).

Currently, the Agricultural Development Programmes (ADPs) and universities are the prominent government funded agro-technology transfer systems in Nigeria. There is a possibility of duplication of efforts and waste of resources with this pluralistic approach of government participation and funding. This confirms the statement made by Beyon, 1998 as cited in Madukwe et al. (2002) that African countries spend between 10 and 20 times more on agro-technology transfer compared to developed countries. ADP's used the

Training and Visit (T&V) approach, which focuses on improving the knowledge and skills of small-holder farmers, by making use of testing and transferring of techniques nationwide. The university on the other hand placed emphasis on generating relevant agricultural technologies within the faculties of agriculture and using available resources to transfer these technologies to farmers at selected farming communities (Madukwe et al., 2002).

Technology generation is influenced by the needs of clients as well as research and management capacity of technology generating institutions (World Bank, 1994). Previous research reports blamed ineffectiveness in technology generation on the stereotyped method of research activities operated in Nigeria. This method does not consider farmers' problems, skills, scale of operation and financial status (Zaria et al., 1994). The generation of appropriate technologies suitable to existing farming systems and accepted by farmers is as a result of Farm System Research (FSR) adopted as a policy for agricultural technology generation subsystems (Asiabaka, 1998).

In the 1990s, the emphasis on agricultural technology generation shifted from focusing on improving farming practices to appropriateness and applicability of technologies in existing farming systems. Appropriateness of an agricultural technology is determined by the cost-effectiveness of productivity with minimal consequences on the environment. A key issue to ensure appropriateness of technologies is the developing of it at local levels, using skills and perception of the dwellers in the rural communities. In Nigeria, technology generation is known for poor and uncertain funding, frequent government administrative changes and lack of clear policy guidelines in research (Madukwe et al., 2002).

Vengara and McDicken (1990) stated that technologies that are able to improve food productivity at farm level should be initiated from well-funded autonomous research sub-system. Technology generation efforts should be oriented towards social desirability, economic feasibility and existing practices of the farmers as a priority (Monu and Omole, 1983; Farinde, 1996). Hussain, Byeric and Heisey (1994) stated the reasons for poor adoption and ineffectiveness of most agro-technology transfer programmes are non-consideration of the socio-cultural practices and because technology is incompatible with the economic status of farmers. This reiterates the statement made by Ayichi (1995b) that the success of any agricultural technology transfer system should be measured by the changes recorded in the socio-cultural and economic characteristics of farmers.

In order to enhance orientation of technologies towards utilization and overall participation of farmers in extension systems, a feasible relationship is largely required to exist between institutional technology generation and local knowledge systems (Rajasekaran, Martin and Warren, 1993). Several studies by researchers (Igodan and Adekunle, 1993; Röling and Pretty, 1997; and Anyanwu, 1997) have highlighted the necessity for indigenous knowledge to generate suitable technologies and overall sustainability in food production.

3.4 Major agricultural policies and projects in Nigeria

Full regeneration of agricultural production in Nigeria according to Ajibade et al. (2013) stimulated the Federal Government to establish series of agricultural policies. These policies include the National Accelerated Food Production Programme; Operation Feed the Nation; Agricultural Credit Guarantee Scheme; River Basin Development Authorities; The Green Revolution; National Agricultural Land Development Authority (Aigbokhan, 2001; Akande, 2006). The World Bank assisted Agricultural Development Projects (ADP's) since 1972 (Balogun, 2000; Okeke, 2000) has the aim to improve the traditional systems of production and raise the productivity, income and standard of living of small-scale farmers who provide over 90% of gross domestic food supplies (Olayemi, 1980; Ayichi, 1995a; Obasi,1995).

For the purpose of boosting agricultural development and reducing hunger and poverty in Nigeria, the Federal Government launched a series of Agricultural Development Programmes, policies and institutions (Ogunsumi, Farinde and Alonge, 2010; Omadjohwoefe, 2011) on the assumption that only combined efforts applied in harmony can reduce the problem of low productivity of farmers. Unfortunately, these projects did not yield positive results to improve Nigerian economy (Yamusa, 2014; Kamar et al., 2014). Most of the improved activities towards rural development from the late 1980s did not lead to corresponding improvement in rural development practice because of factors like weak institutional arrangements, corruption and absence of coordinated practices among competing agencies (Akpan, 2012). Table 3.1 shows major agricultural policies that have been executed in Nigeria, while more detail description of agricultural projects, policies and institutions are highlighted in the work of Okoro and Ujah, 2009; Phillip et al., 2009; Eze et al., 2010; Akpan, 2012; Agber, Iortima and Imbur 2013; Ogbalubi and Wokocha, 2013; Olomola et al., 2014; Dipeolu et al., 2014.

Table 3.1: Major agricultural policies in Nigeria

Agricultural Policy	Year of Introduction	Objectives
National Acceleration Food Production Programme	1973	To increase local production of food
Operation Feed the Nation	1976	To mobilize the nation towards self-reliance and sufficiency in food production Encourage general pride in agriculture as a viable and profitable industry
Green Revolution	1980	To increase local production of food towards national food security Increase agro-allied industry operations in the country
Abolition of import duties on fishing vessels, agricultural machinery and equipment	N/A	To provide easy access to cheaper agricultural production inputs
Establishment of the Nigerian agricultural and cooperative bank	N/A	To provide credit and loan facilities for agricultural development Provision of low interest rate loans to farmers
The agricultural credit guarantee scheme	1977	Provision of loans to farmers through banks Provision of guarantee for loans provided by commercial and merchant banks to the agricultural sector. To increase level of bank credit to the agricultural sector
Increasing Agricultural Loans in the banking sector from 60 to 80 percent	1980	To increase commercial and merchant bank participation in the agricultural sector
Back to Land Programme	1984	To increase local food production in the country To encourage participation of the younger labour force in agricultural production activities
First and Second National Fadama Development programme	1999 & 2004	To sustainably increase the income of Fadama users

Source: Olagunju, (2007)

Regardless of these policies, according to Ogen (2007), it is disheartening to note that as from the mid-70s, Nigeria became a net importer of various agricultural products. Between 1973 and 1980, a total of 7.07 million tons of wheat, 1.62 million tons of rice and 431 thousand tons of maize were imported. The cost of food imports in Nigeria rose from 47.80 million Naira in the 60s to 88.20 million Naira in 1970 and 1 027 million Naira in 1988. In 1982 alone, Nigeria imported 153 000 metric tons of palm oil at the cost of 92 million USD and 55 000 metric tons of cotton valued at 92 million USD (Alkali, 1997). Since the 1990s, Nigeria has been spending an average of 60 million USD annually on importing rice. In 1994, the agricultural sector realized less than the projected 7.2 per cent of budgetary output (Lawal, 1997).

The new Agriculture Policy was formulated in 2001 and has been striving to achieve self-sustaining growth in all sub-sectors of agriculture, a structural transformation of a unified socio-economic development of the country and improvement of livelihoods improvements (Ugwu and Kanu, 2012; Dipeolu et al., 2014).

3.5 Agricultural Transformation Agenda (ATA) in Nigeria

3.5.1 Overview

Nigeria embarked on an Agricultural Transformation Agenda (ATA) as excerpted from detailed highlights by: Nigeria, FMARD (Federal Ministry of Agriculture and Rural Development) (2011); Tijani (2011); Issa (2013); Akinwumi (2013); Oyinbo et al. (2013); Obiora (2014); Olomola et al. (2014); Babu, Gyimah-Brempong and Nwafor (2014). The ATA includes proposed chains of prioritized commodities that would provide more income to farmers, processors, and marketers; and provide opportunities for both local and foreign investment into the agricultural sector; thereby ensuring food security, poverty reduction, and job and wealth creation. The agricultural value chains of focus under the ATA include cassava, cocoa, horticulture, fruit juice, sorghum, fisheries, dairy, cotton, and livestock as each value chain has a particular line of activities and targets.

According to Nigeria, FMARD (2011), the ATA envisioned to “achieve a hunger-free Nigeria through an agricultural sector that drives income growth, accelerates achievement of food and nutritional security, generates employment and transforms Nigeria into a leading player in global food markets to grow wealth for millions of farmers”. The major targets of the agenda are as follows:

- Create 3.5 million jobs in the agricultural sector by 2015

- Provide more than US$2 billion of additional income for Nigerian farmers
- Increase domestic food production by 20 million metric tons
- Make Nigeria self-sufficient in rice production by 2015, and
- Ensure that Nigeria shifts from being a net importer of food to a net exporter of food.

ATA therefore contains the following transformation policies and financing structures to steer growth in agriculture:

- Deregulation of the seed and fertilizer sectors
- Marketing reforms to structure markets
- Innovative financing in agriculture, and
- A new agricultural investment framework.

The four main components of the agenda are;

i. Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending (NIRSAL)
ii. Growth Enhancement Support Scheme (GESS)
iii. Staple crops processing zones
iv. Commodity-marketing corporations

3.5.2 Agricultural Extension Transformation Agenda (AETA) under ATA

ATA was developed in close correlation with the Nigerian Vision 20:2020 Plan and buttresses it through many of its objectives. It pursues a rethinking of agriculture as a business and conveys the government's role as provider of an enabling policy environment. ATA also acknowledges the important role of agricultural extension in achieving its objectives which influences the Federal Ministry of Agriculture and Rural Development (FMARD) to launch the Agricultural Extension Transformation Agenda (AETA) in 2011. This launch demonstrates tangible efforts directed at extension policy implementation.

The objectives of the AETA are to:

1. Oversee, monitor, and provide the leadership needed for efficient and effective agricultural extension and advisory service delivery in Nigeria;
2. Review the agricultural extension policies within the subsisting agricultural policies and recommend appropriate policies that will ensure the effective participation of all stakeholders in a stable policy environment as well as adequate funding;

3. Recommend appropriate institutional structures and arrangements for the delivery of effective and efficient agricultural extension and advisory services using a value chain approach; and
4. Recommend demand-responsive extension systems or approaches and tools that will ensure the delivery of efficient and effective agricultural extension and advisory services for all multi-actors in the targeted commodity value chains of interest to the government.

The AETA was known to be a road map for addressing critical challenges of agricultural extension and advisory services in Nigeria with the purpose of transforming agricultural extension into a participatory, demand-responsive, market-oriented, and information and communication technology (ICT-driven) service that provides for the extension needs of all actors along targeted commodity value chains.

3.5.3 ATA development partners

Below are a list and brief contributions of development partners who was recorded to have shown incredible continuous support to the ATA;

1) **World Bank:** They contributed 81 billion Naira ($ 500 million) to FMARD and another 81 billion Naira plus ($ 500 million plus) for rural roads, irrigation and other infrastructures.
2) **IFAD:** They contributed 12 billion Naira ($ 74 million) loan plus 81 million Naira ($ 500 000) grant to support rice and cassava value chain development in six states. IFAD board approved loan/grants of 81 million naira ($ 85.5 million)in December 2013.
3) **African Development Bank**: They contributed 81 billion Naira ($ 500 million) as a first portion to start in January 2014. Working to secure 162 million Naira ($ 1million) for transaction advisor to help with SCPZ financing (proposal which was submitted on December 2013) and preparing Middle Income Country proposal to support infrastructure in SCPZ.
4) **USAID**: Beyond the established programme of MARKETS II, funding secured includes Institutional Assessment of FMARD; Monitor/Deloitte engagement to assist with LOIs for New Alliance membership (June 2012); second Deloitte engagement to assist the private sector in completion of LOIs; and cost/benefit analysis of rice importation practices.

5) **DFID-UK AID**: Funding secured beyond established programmes include Cassava Value Chain analysis (Techno serve); analysis of Kogi infrastructure needs (GEMS3); analysis of GES rollout (Prop Com) and current £2.35 million GES pilot study for FCT and Sokoto to address offline e-wallet options. In addition, secured funding for Martin Fregene to continue his advisory role for 1.5 years and funding for a nutrition/food security advisor for two years.
6) **KFW**: Involved in early stages of Fund for Agricultural Finance in Nigeria (FAFIN) design, 27 million. The presence of senior investment advisor in the team, always make efforts turned over to her. Worked with fund manager to develop proposal for technical assistance for FAFIN to be submitted to donor agencies.
7) **IDG**: Key facilitator resulting in their 40.5 billion Naira ($ 250 million) investment in an oil palm and sugar cane production facility.
8) **New Alliance Membership**: Key driver in securing Nigeria's membership in the G8 Food Security and Nutrition programme, New Alliance. While the increased benefits of membership in New Alliance have yet to be fully seen, Nigeria's inclusion was useful in helping secure private sector investment.
9) **Grow Africa**: Serve as key liaison with this WEF/AUC programme. Private sector letters of intent (LOIs) contributed 649 billion Naira ($ 4 billion). Monitor/Deloitte, through USAID funding, did much of the work in securing the LOIs. Grow Africa has offered to co-produce a video and manual for other countries to learn from and replicate Nigeria's GES scheme. If agreed upon, this was to be available at the May 2014 Grow Africa Abuja meeting.
10) **Bill and Melinda Gates Foundation**: Nigeria is a priority country and the Foundation is establishing a regional office in Nigeria. They are also involved in the provision of short-term support for two advisors and UNDP providing funding for five advisors.
11) **Ford Foundation**: Ford has provided 121.7 million Naira ($ 750 000) to support technical assistance and a stakeholder's conference.
12) **Tony Elumelu Foundation**: The foundation is supporting a senior technical advisor on investments.
13) **Scaling Up Nutrition (SUN)**: The Resource Mobilization Unit (RMU) and sorghum value chain advisors are collaborating with the Ministry of Health. The RMU has also been connecting the DFID health advisors and the FMARD team regarding the

development of a sorghum energy bar and is exploring collaboration with USAID and UNICEF.

14) **Other Bilateral and Multilateral Agencies**: Regular engagement with JICA, European Union, GTZ, and Netherlands on their agricultural investments. Working on EU funding for horticulture and climate change initiatives. ECOWAS proposal of 811 million naira ($ 5 million) for rice production under review.

15) **Engagement of Agriculture Donor Working Group (ADWG)**: Collaboration with ADWG to develop a policy framework matrix as part of New Alliance membership and sensitization of G8 countries to Nigeria's bold reforms in agriculture. Now working to sensitize and acquire support for staple crop processing zones and state-level Agriculture Transformation Activities (SATA). Other activities include developing a donor scorecard, with a target presentation by May2014 WEF Africa meetings, and establishment of three donor taskforces to assist FMARD with GES scheme, policy reforms, and mainstreaming nutrition across the value chain.

16) **Monitoring of External Grants**: Worked with Director of Policy, Research, and Statistics to begin the process for grant reporting.

17) **Global Visibility for Nigeria's Agriculture Transformation Agenda**: Worked with FMARD to help recruit international public relations firm of Weber Shandwick and serve as key liaison with firm and aided the Honourable Minister of Agriculture in numerous global events, including: Council on Corporations for Africa Nigeria investment Forum (Washington, DC); High Level Investors Forum (London);Olympics Hunger Event (London); Clinton Global Initiative (New York);Africa Green Revolution Forum (Arusha); World Economic Forum (Davos); EU Agriculture Forum (Brussels); World Economic Forum Africa (Cape Town); Nutrition for Growth side event for G8 (London); AU, Lula Institute Food Security Forum (Addis); Rockefeller Summit on Agriculture (Abuja); Columbia University Inauguration of Agriculture Center (New York); World Food Prize(Des Moines); SAFE 20th Anniversary Symposium (Accra); and AU, Kofi Annan Foundation, BMGF Innovations in African Agriculture (Addis).

18) **Partnership with Brazil**: Member of April 2013 learning mission to Brazil and became key facilitator in moving partnership forward. Organized a major conference in August 2013 to bring representatives from Brazil to Nigeria and developed action plans for Northern Guinea Savannah, reform of Agriculture Research Council of

Nigeria (ARCN), and School Feeding Programmes. Working with Martin Fregene to develop action plan for Northern Guinea Savannah.

19) **State-Level Agriculture Transformation Actions (SATA)**: Serve as key connection between Phillips Consulting/Synergos and the FMARD in developing and implementing this programme. Organized two day workshop in Abuja between consultants and FMARD directors, and continue to assist with engagement.
20) **Marketing Corporations**: Helped facilitate search for and recruitment of agency (TechnoServe) to design and implement marketing corporations for grains, roots/tubers, cotton, and cocoa.
21) **Nutrition**: Working to develop programmes with Scaling Up Nutrition (SUN) and to recruit an advisor.
22) **Children's Investment Fund (CIF)**: The RMU met the founder of the CIF at the Olympics Food Security and Nutrition event. The FMARD also supports the CIF proposal under development to work with the Minister of Health on community management of severe malnutrition.

3.5.4 Achievements of ATA

The ATA in its second full year was recorded to have proved that keen and smooth investment in farmers as well as creating enabling environments for the private sector to invest in agriculture can generate tremendous returns for the country in the form of increased food supply, employment, and income generation. With production of another 7.5 million metric tons in its second year of existence or 15.5 million metric tons of additional food in two years, ATA was said to have returned Nigeria to its former position of an agricultural powerhouse in the region and in the world. Nevertheless, it is difficult to trace the effect of such change to the country's economy and down to the grassroots.

Some states and local governments embrace the federal government-led ATA and started its operations. For instance, Cross River state participated actively in GESS which is a critical component of the ATA with the aim of increasing production yields per acre to make average crop yields in the state meet the international averages. This sub-project provided affordable and subsidized agricultural inputs like fertilizer and hybrid seed, rice, maize, cocoa, and cassava to farmers across the state.

3.5.5 Challenges and criticism of ATA

The sustainability of the ATA remained questionable according to Olomola et al. (2014). The first critique stated that the discussions and consultations that brought about the commencement of the ATA seem deficient in comparison to the Vision 20:2020. Thus, limitations exist in its public awareness and understanding. Other shortcomings included funding by the legislature; marketability to stakeholders (including state governments, who are compulsorily meant to be important forerunners of its success); sustainability beyond the current administration; unavailability of an annual plan of investments as the FMARD was yet to do a detailed estimation of the agenda's activities and programmes which made its financial implications to be undetermined.

The ATA was also criticized to have appeared too ambitious and expensive. The lack of a results framework was also identified as a shortcoming, making it difficult to measure performance of the agenda in terms of output, outcomes, and efficiency. The institutional structure of the ATA was not clear and therefore roles of all stakeholders, such as the federal, state, and local governments and non-state actors were not clearly defined and the coordination among them was ineffective. Finally, continuity of the agenda beyond the previous administration was also identified as a challenge given the possibility for policy reversal by subsequent administrations in the country.

3.5.6 Recommendations to improve ATA

Recommendations highlighted from Babu et al. (2014) regarding improvement and effectiveness of ATA in Nigeria are as follow:

A. Recommendations for improving the capacity of the ATA policy process

Generally, the complex top-down policymaking process in Nigeria could be easily modified to incorporate sectorial priorities set at national level. However due to a lack of capacity throughout the policy process, the effects of the policies on the welfare of Nigerian society are often limited. The following important suggestions were made to improve the ATA policy process:

1. Fortify the legislature's capacity in order to bring effectiveness to the monitoring process of food and agriculture goals progress (for example, those related to poverty and hunger reduction); by monitoring specific outcomes (for example, agricultural growth and improvements in trade) and utilizing this information.

2. Regarding capacity building, the members of the value chain teams require training on the concept of effective value chain for better understanding of their roles. Capacity strengthening is also needed for NCA and its sub-committees so as to improve national coordination.
3. Strengthen the capacity of AFAN and similar national organizations in terms of their internal processes to better enable participation of different categories of farmers.
4. Strengthen farmers' organizations and other CSOs in order to use them as a channel to reach the millions of rural farmers. This would lead to reduction in the transactions costs of interacting with farmers individually.
5. Use the NBS annual economic survey to obtain national data that is capable of providing guidance on the design and review of agriculture policies, programmes and projects. Provide capacity building of stakeholders such as; FMARD, CSOs, legislature, and farmer organizations, for them to understand how to use the NBS data as a national tool for M&E.
6. In order to increase transparency and improve accountability, FMARD key indicators for monitoring its performance should be uploaded to the FMARD website.
7. There is a need to improve communication and efficiency in an affordable way. FMARD should possess an active intranet and website for the Ministry. The intranet can cover information which should only be accessible to staff of the Ministry and its parastatals. This will enable FMARD staff across the country to obtain documents needed for their work at any time. Members of the legislative committees on agriculture can also have access to the FMARD intranet in order to facilitate their work. This can strengthen federal-state links, government- private sector links, FMARD-farmer links and many other important links in the policy process.
8. In the same disposition as above mentioned point, an actively populated website should be launched to improve national engagement and consultations in agricultural policy processes.
9. Constitute the Agricultural Industry Advisory Group (AIAG) as indicated in the ATA organogram (Figure 3.1) as a means of stimulating the private sector in the ATA process. The AIAG will also improve accountability in the policy process.
10. Create the Agricultural Transformation Policy Group (ATPG) as indicated in the ATA organogram in order to provide policy support to the ATA. This should be instituted as a joint group of policymakers and knowledge providers that meet twice a year to ensure

that the ATA policy process is evidence-based by spurring all knowledge related institutions in the country to work towards supporting the ATA. This group will include the FPRS Department, ARCN, NBS, NISER, think tanks, and other knowledge producers.

11. The AIAG, value chain teams, and NCA should communicate their research needs biannually to the ATPG in order to ensure that the policy process receives the necessary information, data, and analysis needed by stakeholders. This will form the ATPG's work plan for addressing the data needs of the ATA process.
12. The need for an annual meeting of stakeholders, including the legislative committees on agriculture, rural development, and MDGs, to jointly take stock of sectoral progress through a JSR. This would improve accountability and can be achieved by AIAG working with ATPG.

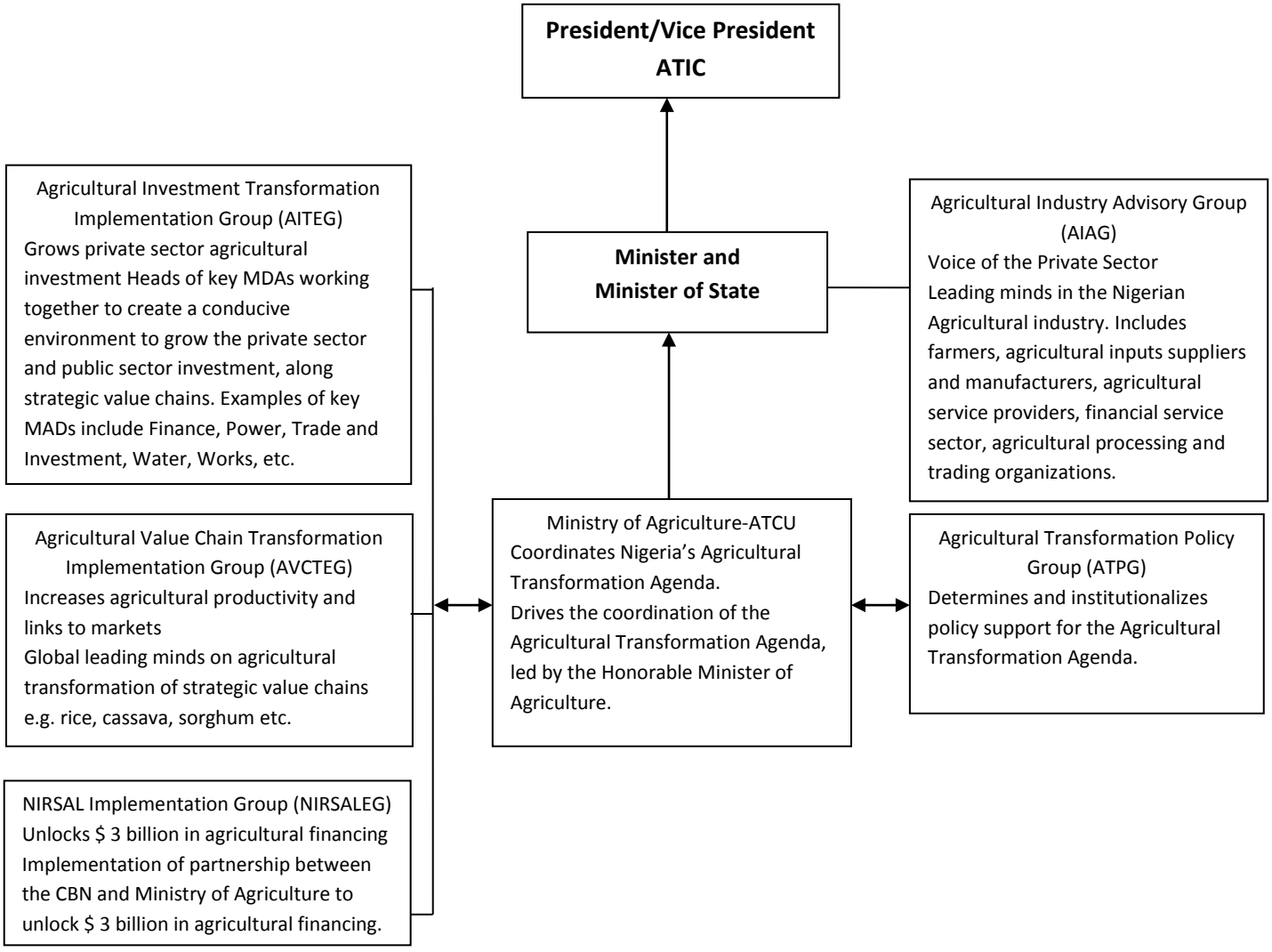

Figure 3.1: Organogram for the implementation of the ATA

Source: Nigeria, FMARD (Federal Ministry of Agriculture and Rural Development) (2011)

B. Plan of action for capacity development for ATA implementation

Below are the suggested elements within a set of capacity strengthening activities for implementing the ATA from year 2015 to 2017:

1. The capacities of stakeholders in agricultural policy processes were to be invigorated by means of regular joint information sharing sessions. Precisely, the legislative committees on agriculture and rural development were to be strengthened to play a stronger monitoring and oversight role. A capacity strengthening programme for CSOs and the private sector to play an effective role in the ATA policy process was to be implemented. Finally, annual multi-stakeholder agriculture joint sector reviews were suggested to be held.
2. Commodity value-chain teams were to be fortified so as to identify the constraints, challenges, and opportunities along their focal value chains and thereby develop strategies, funding mechanisms, and implementation plans for them to tackle these constraints, challenges, and opportunities.
3. Improving the horizontal and vertical integration of FMARD departments through organizational and institutional arrangements starting with the FPRS Department and its affiliation with its state and local government counterparts.
4. Developing leadership and management skills for directors of federal departments so as to relate with commodity transformation teams, including relevant private sector bodies.
5. Developing skills for strategic analysis, investment planning, and development of annual work plans that match the ATA targets.
6. Skill development for sector wide monitoring and evaluation and for integrating M&E systems across line departments and at state level. Effective use of monitoring and evaluation for trailing improvements under the ATA, including value chains. An importance was to be placed on project monitoring of value chain development.
7. Strengthening management information systems in the Ministry through organizational capacity development and also to connect them at state and local levels. Special importance was meant to be placed on the use of ICT and modern communication tools for intensifying communication and information sharing among line departments, specialized agencies of the federal, state and local governments, CSOs, NGOs, private sector, and other stakeholders.

8. Training of specialized agencies staff, such as ARCN in areas of their functional roles. For instance, ARCN staff were to be trained on the integration of research priority setting with the ATA; translation of research needs of value chains into research plans for various research institutions; research strategy development; strengthening of innovation platforms and conducting research on innovation in research-extension linkages.
9. A capacity strengthening programme on regulatory mechanism was to be developed and implemented for quality control of agricultural inputs, such as fertilizers and seeds. This was meant to extend to a bio-safety regulatory system which is also part of value chain development.
10. Launching of a private sector development programme: this was meant to start with business management skill and developing of rural entrepreneurs to facilitate their participation in the ATA as well as the GES programme.
11. A curriculum and course content for the above 11 activities was to be constructed through working with experts in local higher education institutions. This was meant to be a priority endeavour within the first six months of implementing the capacity development programme.

3.6 Challenges of agricultural projects and programmes in Nigeria

Historically, the sources of the predicament in the Nigerian economy can be traced to agriculture and an increased dependence on a mono-cultural economy based on oil. According to Okoro and Ujah (2009), the country has failed to achieve the objectives of the Maputo declaration namely that 10 percent of the total budget should be allocated to agriculture, which has brought about negative implications for food security. This is in contrast to the fact that during the third quarter (July to September) of year 2017, agricultural sector contributed 24.44% to Nigeria's GDP (Yemi, 2017). Embodied with good objectives and the potential of solving the problems in the agricultural sector, many of the development policies were not implemented, while the few ones being executed were terminated at a period when the policies were about yielding positive results (Aigbokhan, 2001; Olagunju, 2007). Another reason that affected the positive implementation of these policies was that most of the programmes were initiated as an instrument to siphon government funds into private account (Mohammed, 2013).

Several outstanding objectives of many agricultural development projects in Nigeria have turned out to be just an illusion mainly because of official corruption and lack of commitment on the part of those charged with the responsibility of implementing the government's agricultural policies (Ogen, 2007). Other challenges of agricultural projects in Nigeria as identified by scholars such as Agbonifo (1980); Ezeh (2007); Auta and Dafwang (2010); Daneji (2011); Olujenyo (2006); Chukwuemeka and Nzewi (2011) include non-availability of inputs, cost of establishing and running the project, inadequate skilled manpower, inadequate agricultural inputs, inadequate extension services and poor condition of feeder roads. Phillip et al. (2009) also reported on these constraints to agricultural productivity in Nigeria.

According to Eboh et al. (2004) and Azih (2004) as cited by Okoro and Ujah (2009) the economic and market potential of several agricultural commodities in Nigeria have been weakened by hindering factors like: incongruous and unstable macro-economic and structural policies, unpredictable and poorly implemented agricultural sector schemes, inefficient and disoriented public sector, non-competitive input-end subsidy administration system, poor technology and service delivery, absence of durable finance for agriculture, weak market base, and misrepresenting incentive systems.

Ugwu and Kanu (2012) with reference to some literatures draft a list of challanges facing the agricltural reforms, policies and programmes in Nigeria:

- Decaying rural infrastructure
- Declining value of total credit to agriculture, declining domestic and foreign investment in agriculture
- Increasing withdrawal of manufacturing companies from their backward integrated agricultural ventures which has led to considerable reduction in investments in the sector
- Inefficient input supply and distribution
- Ineffective agricultural institutions regarding promotion of agricultural production
- Policy instability
- Inconsistency and lack of transparency which are connected to political instability and bad governance
- Poor coordination of policies as well as poor implementation and mismanagement of policy instruments

- Subsistence nature of the country's agriculture
- Agricultural programmes and policies not sufficiently based on in-depth studies and realistic pilot surveys
- Lack of public participation in the design, formulation, implementation and evaluation of policies as well as limited implementation capacity within the sectoral ministries and a poor understanding of the details and specifics of polices by implementers
- Insecurity of investment
- Non-standardized product quality
- Non-competitive nature of agricultural products from the country in the export market due to high cost of production and lack of adequate processing facilities.

Also, rural youth in Nigeria possess the capacities needed to participate effectively in the country's agricultural development, being considered the active working group (Oyekale, 2011). Youth are not only energetic with the proficiency of replacing the older generations in agriculture, they are as well endowed with new innovations and technological competence to execute commercial and technological agriculture (Adebayo, 1999). In spite of these qualities, Ajani et al. (2015) said that youth in Nigeria especially rural youth have been disregarded for a long time in agricultural policies and programmes and that many agricultural policies and programmes that were formulated to revive agriculture through rural youth programmes, have not yielded desired results. Though, Umeh and Odo (2002) stated that various states in Nigeria have invented and implemented several self-empowerment programmes to enhance youth economic empowerment. Nevertheless, inactive involvement of youths in many agricultural development programmes implemented over the years has been reported as major stumbling block of agricultural development programmes in Nigeria (Daudu et al., 2009). Moreover, problems associated with agricultural development activities in Nigeria are very similar with the problems encountered by youth's development projects (Ajani et al., 2015).

3.7 Proposed solution to current Nigerian agricultural policies

To escape this misery, Nigerian policy makers need to be cautious regarding short-sighted development economists who allocate a relatively minor role to agriculture in the economic development. These policy makers also believe that industrialization is equal to economic development (Ogen, 2002; Ogundipe, 1998). Oyakhilomen and Zibah (2014) are of opinion that all levels of government and the private sector should be fully and actively involved in

pursuing the course of agricultural development for Nigerian economy growth and eventually poverty reduction.

According to Ogen (2007), some suggested measures for the government to execute to improve the agricultural sector of Nigeria are:

- Dynamic support for the establishment of local agro-based industries, which are capable of processing Nigeria's agricultural raw-materials for local industries and export in a most efficient way. This will create more employment opportunities and additional income will be generated.
- The provision of agricultural subsidies for fertilizer, farm implements and equipment would also increase agricultural production.
- There is the need to set up an agricultural tariff regime that would protect Nigeria's agricultural produce from uncontrolled foreign imports and competition.
- Provision of replanting grants to cash crop farmers so that they can replace their old trees with newer varieties as record showed that most farmers were reluctant to abandon their old plantations due to the high cost of replanting new ones (Ogen, 2004).
- Provision of special welfare schemes for farmers which will form part of a social policy for rural poverty alleviation and the income redistribution in favor of the rural poor.

Amassoma, Nwosa and Ajisafe (2011) suggested a need for an increase in the budgetary allocation to the agricultural sector and also introduce incentives that are capable of elevating rural farmers' activities for the purpose of raising output growth of the sector. There is also a need to implement policies and projects that support high demand for agricultural produce; availability of improved technology; efficient dissemination of information by the ADPs and value-added products that generate better income (Ugwu and Kanu, 2012). To ensure continuity of rural development projects in Nigeria, Otto and Ukpere (2014) suggested that governments should put more efforts in completing abandoned projects. In addition, new projects should be fully examined before initiation and once it's kicked off, the authors must be responsible for the full completion of such projects.

Regarding the challenge of the youth interest in agricultural issues, measures of increasing effective youth participation and involvement in agricultural project as suggested by Adebayo (1999); Ajani, Mgbenka and Onah (2015) and other relevant researchers should

be embraced for sustainable improvement of living standard and poverty eradication in the country. Rural youth should be involved in the drafting, implementation, monitoring and evaluation of policies and programmes related to agriculture. The use of innovative information and communication technologies (ICTs) should also be promoted among rural youth. In addition, education and capacity-building programmes for rural youth should be defined in a more participatory way and focused on agricultural best practices, land laws and knowledge sharing (Ajani et al., 2015). Governments at various levels are therefore encouraged to promote youth in agriculture through creating awareness of the Youth Employment in Agriculture Programme to enable young people to know about the programme and participate actively (Ajani et al., 2015). Youth should be empowered, re-energized and be genuinely involved in the mission of building the nation and socio-economic development (Adebayo, 1999).

CHAPTER 4

TWO SELECTED AGRICULTURAL DEVELOPMENT PROJECTS IN OSUN STATE

4.1 Osun state agricultural sector

This day (2013); Leadership (2014) and State of Osun publication (2013) stated that the Ministry of Agriculture and Food Security in Osun state is charged with the following responsibilities:

- Implementing government policies regarding agriculture.
- Improving the cash and food crops potentials in the State.
- Facilitate loans and grants for farmers in the State.
- Provide fertilizers and other farm inputs at subsidized rates.
- Improvement of livestock and poultry potentials in the State

These objectives show some overlapping with the responsibilities of the ADP programme, which will be elaborated in more detail in the subsequent sections.

The agricultural sector is the main stay of Osun state economy as expatiated in the SEEDS document prepared by the Ministry of Finance and Economic Development (Osun state secretariat of SEEDS, 2007). The general overview of the state's agricultural sector was highlighted under five sub-headings which are; crops, livestock, fisheries, forestry and agricultural planning. Presently, the initial claim of the sector's buoyancy is questionable as a result of the economy storm currently facing the state.

4.2 Agricultural Development Programme

The scheme of ADP approach was originally designed in Malawi, East Africa, to tackle the problem of poverty. The promotion of economic development in the rural areas of the country can be traced to a strategy which focused on the contribution of improved technologies for food crops, enhanced delivery systems for agricultural extension and input supply, and improved infrastructure. A well-designed organizational structure with professional staff was intentionally hired to implement this ADP concept (Omonijo et al., 2014).

This concept was brought to Nigeria in 1974, with the establishment of the first three enclave projects in the northern part of the country which includes: Funtua, Gusau and Gombe Agricultural Development Programmes. The project regions were chosen based on

agro-ecologically favorable areas in the northern part of Nigeria and were located in the domain of several Local Government Council (LGCs) of Bauchi, Gombe, Kaduna and Sokoto States (Idrisa et al., 2010). The evident success of these early projects stimulated both the Federal Government of Nigeria and the World Bank to initiate the replication of the ADP model in other states including Osun state.

According to Auta and Dafwang (2010), agricultural development projects (ADPs) were first introduced as practical projects in 1972 two years after the end of civil war. It was charged with two main objectives namely; the increasing of food production and raising of small-scale farmers income. During 1950-1960, agriculture in Nigeria was mainly relying on small scale farmers, while with the ADP launching in 1974; Nigeria was facing its first food and fiber shock. The funding for the ADP came from the World Bank (66%), Federal Government (20%) and State Government (14%). The ADPs started as three channeled projects in 1975 which covered three states. The successful implementation of this programme led to the expansion to other LGAs and States during the late 70s.

The Project Manager of Osun State Agriculture Development Project (OSADEP) indicated that 1 300 farmers in the state were given hybrid cassava and maize seedlings during 2014. 18 192 farmers benefited from the Federal Government's Growth Enhancement Support Scheme, while 16 900 people were empowered through various FADAMA projects in the rural areas through training in various areas of agriculture. Public-private sector partnerships with Oshin Farms, were established to create about 100 jobs using the cage fish farming method. With the cage farming, farmers have the opportunity to locate their farms at water dams where enough water for fish farming and production throughout the year are available (The Nigerian Observer, 2014).

4.2.1 Objectives of the agricultural development programme

The ADP concept was designed to provide solutions to the decline in agricultural productivity in the country through the sustaining domestic food supplies by putting the small holder sector at the center of the ADP strategy. Their goals were:

- to increase food production and farm income;
- to encourage the use of improved technology and transferring of new technology to farmers and;
- to enhance effective land development.

The Agricultural Development Programmes (ADP) aims at increasing food production for rural dwellers and raising the income level of small scale farmers by making provision for improved seeds, fertilizer, pesticides, credit facilities and infrastructural facilities (Ajayi and Ajala, 1999; Garba, 2000; Akpobo, 2007).

Agricultural Development Programmes mostly have one objective in common namely: to increase food production and farm incomes for the majority of the rural households in the defined project regions, thus improving the standard of living and welfare of the farming population, with the hope of reducing abject poverty (Omonijo et al, 2014).

4.2.2 Components of agricultural development programmes

ADP components are as follows;

4.2.2.1 The farm and crop development component

This component handles introduction of simple improved agricultural practices and improved seeds for the basic food crops (maize, sorghum, millet, rice, yam, cassava, groundnut, and cowpea). It also facilitates the introduction of an improved extension system and a more efficient system of input procurement and distribution through applied research.

4.2.2.2 Civil works or infrastructural development

This component includes the provision of feeder roads, the construction of Farmers Service Centres (FSC's) for input supply in the rural areas and the establishment of projects offices and staff houses. Adepoju and Salman (2013) proposed rural infrastructures as a possible way out of poor agricultural productivity, which is supported by: Ahmed and Rustagi (1987); Kessides (1993); Alaba (2001); FAO (2005); and Fakayode et al. (2008).

4.2.2.3 Institutional support and training

Key efforts in this component focused on self-establishing or enhancing the capacity of ADP's in order for it to implement the development projects listed under the policy guidance and supervision of committees representing the State Ministries. It also includes training staff of Local Government Areas (LGA) and therefore projects were pivoted to establish or strengthen the state-owned input supply companies to manage and service the farm Service Centres (FSC's) (Chinasa, 2008).

4.2.2.4 Consultancies

ADP initially depends greatly on foreign consultants support in executive or functional position on the following excuses: the programmes were bulky; food production had to be speedily boosted; and Nigerian professionals who are able to manage and implement such programmes were either not available or could not be employed into government service. This strive however changed later, with the establishment of the Multi-State Agricultural Development Programmes, which were managed by indigenous personnel (Toluwase, 2004)

4.2.3 ADP outcomes

The outcomes of ADP are discussed into: agricultural impact and infrastructural development, and are elaborated beneath.

4.2.3.1 Agricultural Impact

The target of ADP projects was to improve agricultural production basically through improvement of crop yield by means of improved technology and increased production inputs. The trend analysis (1982-1991) performed in areas like Bauchi, Kano, Sokoto, Ilorin and Oyo-North showed that yields increased with respect to millet, cassava and cotton in the Bauchi State, rice in Kaduna, cassava in Ilorin, yam and cowpeas in Ondo (Omonijo et al., 2014).

Therefore it can be concluded that the production for all the major crops in Nigeria improved since the initiating of ADP's.

4.2.3.2 Infrastructural Development

1. Roads

ADP's have facilitated the rehabilitation and constructed of new roads in Nigerian rural areas, which constitute approximately one sixth of tertiary road networks in the country. The programme significantly improved accessibility to rural areas and from 1991-1995, a total of 3,147.8km and 5,826.2km of road were constructed and rehabilitated.

2. Rural Water supply

Between 1991 and 1995, a total of 28 987 water points (earth dams, tube wells, wash bores and boreholes) were constructed in the rural areas which would lead to improved level of human health and economic benefit, as well as limited time required by rural women to fetch water.

4.2.4 Perceived past, present and future status of ADP

In the past, the ADP's were identified to be strong support to continue as agricultural development implementing agents in Nigeria. But in terms of budgetary funding, the ADP's has been exposed to serious funding constraints when Bank loan support decline. The constrained budget situation necessitates a critical review of the respective roles and functions of the regular state ministry departments and the ADP's. This review is essential to ensure the most cost effective services and to minimize overlapping functions and wastage of insufficient budgetary resources (Omonijo et al., 2014).

The concept of the World Bank assisted ADP's in Nigeria from 1975 made it clear that the objective of the ADPs and the strategies correlate with the scope of both the Human Development Report (2002) and World Development Report(2003) as cited in (Omonijo et al, 2014). This concept of ADP put the rural small holder sector at the center of government agricultural development strategy.

Auta and Dafwang (2010) recorded that the ADP's were able to make outstanding achievements up to 1996 when the World Bank loan was still active, while the Federal and State governments' also willfully released their parts of the funding. However, the present ADP's in majority of Nigerian states experience the following problems: poor funding; inadequate qualified extension staff and lack/inadequate serviceable; lack of staff training; high cost of input; lack of appropriate extension approach; lack of accessible road to communities; unavailability of new production package among others (Auta and Dafwang, 2010).

The study by Ashagidigbi, Abiodun and Samson (2011) revealed that farmers' productions were affected by infrastructural elements such as: roads; heath dispensary; market; potable water source; schools; extension offices station; credit society and agro service center. Therefore the role of infrastructural facilities should not be rejected regarding sustainable ADP's. This will enhance farmers' access to input and output markets as well as other important services which are absent in their communities.

For a re-awakening of the ADPs programme in the country, the following were therefore recommended:

1. The establishment of an Agricultural Extension and Rural Development Agency (AERDA) in each State.

2. Funding of AERDA should be by direct deduction from the three tiers of Government, which should not be less than 15% of their annual budget.
3. Creation of specific agencies at the federal level that will coordinate budgets, funding, international linkages and quality assurance of the services rendered by states' AERDAs.
4. Specify a structure that will rectify some of the weakness of the present ADP's structure.
5. Highlight the roles and approach for Local Government Councils to participate in AERDA.
6. Establishing fair process to appoint competent Chief Executives and Management staff of AERDA. This process should prevent new governments to change AERDA Chief Executives and Management staff.

4.2.5 ADP structure in Osun state

The Osun State Agricultural Development Programme (OSSADEP) collaborated with the following stakeholders: IAR&T on REFILS activities; Cocoa Research Institute of Nigeria, Ibadan on Cashew survey in two Local Government areas and National Rice and Maize centre for the promotion of High Quality Protein Maize.

Also OSSADEP was deeply involved in the Farmer Business School approach offered by German International Cooperation (GTZ) as part of the Cocoa Livelihood Programme implemented in four Local Government areas. A total of 2 015 were trained under this programme. Also total of 90 515 farmers were registered to benefit from the Growth Enhancement Support programme to access agrochemicals and fertilizers in the six redemption centres.

The structure of the extension component in Osun State Agricultural Development Programme is made up of two sub components: Agricultural Technology Delivery and Communication Support. Other projects in the state are: the Root and Tuber Expansion Programme (RTEP); the Agricultural Transformation Agenda (ATA). The commodities-value-chain of priority in the state are: rice; cassava[1]; oil palm; cocoa; fisheries and livestock. The NPFS project under the ADP is discussed in details in other section below.

[1] *Manihotesculenta* (commonly called cassava) is a woody shrub native to South America of the spurge family, Euphorbiaceae. It is extensively cultivated as an annual crop in tropical and subtropical regions for its edible starchy tuberous root, a major source of carbohydrates.

There are three zones in Osun state: Iwo, Osogbo and Ife/Ijesa. In these zones, there are 25 farm blocks, 248 farm cells, 148 extension agents and 256 000 farm families. Challenges facing extension activities in the state are: incident of pepper and tomato wilt; poor mobility situation of local government Extension Agents; inadequate staff in the ADP's; insufficient project vehicle; and late or non-release of fund for extension and research activities.

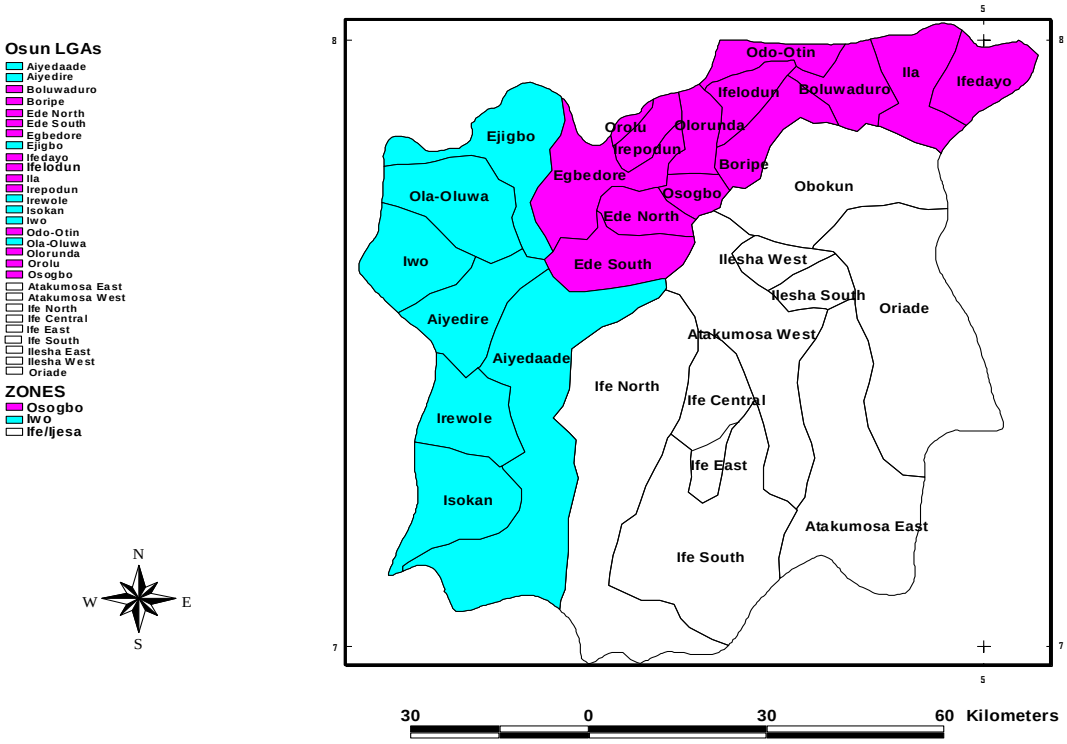

Figure 4.1: Map of Osun State showing 30 LGAs and 3 OSSADEP Agricultural zones.

Source: GEO-Spatial, Department of Geography, Obafemi Awolowo University, Ile-Ife.

4.3 The National Programme for Food Security (NPFS)

4.3.1 Overview

The National Programme for Food Security (NPFS) was built on the successful National Special Programme for Food Security (NSPFS) and the associated South-South Cooperation (SSC) initiative. The NPFS was implemented between 2002 and June 2007. It is a five-year programme jointly implemented by the Federal Ministry of Agriculture and

Water Resources (FMAWR) as well as Food and Agricultural Organization of the United Nations (FAO).

The NPFS was extended to additional six sites together with the previous three sites benefitting from NSPFS. This summed it up to a total of nine sites benefiting from the programme in each of the 36 states and two additional sites in Federal Capital Territory (FCT). These sites served as platforms for agricultural development activities and outreach into the communities which are not directly covered by the programme.

NPFS was not only designed to fund site-related agricultural support services, it also established demand-driven investments at community level in all the participating Local Government Councils (LGCs).

4.3.2 NPFS Programme Objectives

The main objective of the NPFS is to foster the development of smallholder agriculture and income generation in the rural areas. It also serves to improve national food security and reduce poverty on an economically and environmentally sustainable basis. The following are the specific objectives of NPFS:

- To improve household food security and incomes through increases in agricultural productivity, diversification and sustainable use of natural resources;
- To enhance food security of consumers through improved availability of food and access to a variety of foods.
- To increase income of producers through more efficient marketing;
- To enhance farmers' and consumers' access to support services such as extension, credit, nutrition and health education; and
- To foster participation of the poorer section of the rural population in the development of the community.

4.3.3 NPFS Programme Strategy

The approach of NPFS focuses on a variety of interventions, which are: the enhancement and diversification of agricultural production; agro-processing; market development; rural finance; extension activities; the development and upgrading of infrastructural facilities such as roads and portable water supply.

The basic strategy of NPFS concentrates on the integrated approach, which involves the development of synergies between the various components and other development

partners. It also includes a decentralized project implementation, which aim to attract greater project ownership at the state and LGC level. The programme was proposed to utilize the full benefit of participatory approach to rural development and participatory learning techniques.

In summary, the following are incorporated into the strategy:

- Production and processing demonstration sites, which serves as an anchor for LGC wide outreach.
- Capacity of staff and farmers in technical knowledge and community-based approach using Farmer Field School method.
- Addressing constraints of marketing, rural finance and infrastructure.
- Synergy between the various components and development partners.
- Decentralized project implementation and participatory approach.
- Intensive extension support at the sites with outreach coverage using Farmer Field School approach.
- The Federal Government of Nigeria will provide matching grant to the states, technical support and overall coordination.

4.3.4. NPFS project description

The programme targeted the subsistence and medium scale farmers in rural and semi-urban areas. The first group of primary beneficiaries of the project was about 70 000 farm household, which are participating in the site development programme.

As previously stated, the current NPFS Expansion Phase is following on the first phase of NSPFS which was terminated in June 2007 and which operated in 109 sites (one site per senatorial district in each state of the country). The NPFS involved expansion to three local governments per senatorial district. This adds up to nine sites from the three senatorial districts in Osun state. The expansion phase covered 327 LGCs, which is slightly less than half of the total number of LGCs in the country. Participatory selection criteria have been adopted to ensure good spread and access of the needy communities and groups to NPFS support. The nine sites/local governments that benefitted from the project in Osun state are: Osogbo, Obokun, Ayedire, Ede South, Atakunmosa West, Ola-Oluwa, Odo-Otin, Ila, Ife Central.

4.3.5. NPFS Project components

The programme has three technical components and one management component. These are: site development and outreach; community driven development; planning, monitoring and evaluation; finance and administration. Each of the components is made up of several sub-components which in turn comprise clusters of activities.

4.3.6 NPFS Loan Management

The project expected the community farmers to send proposals application to their community groups (primary group). This would then be directed to their respective apex group, which comprises of representative executives from all different community farmers groups (primary group) in a local government. The project officials at the state level are expected to relate with the farmers apex group by reviewing individual farmer's proposal. These officials would then disburse specific amount of money (in form of a loan) to the apex group which is expected to be discharged to individual farmers at the community level. The loans are disbursed according to the stipulated budget for each site. Table 4.1 shows a typical budget for Osogbo site. The total budget for the site amounts to 3 834 590 Naira while the budget limit for any crop per an individual should not exceed 79 500 Naira.

Table 4.1: A typical example of a site budget for Osogbo site

S/N	MODULE	QTY	UNIT COST (Naira)	TOTAL COST (Naira)
	CROP PRODUCTION			
1	Tomato/Pepper	5	79 500.00	397 500.00
2	Okro	5	79 500.00	397 500.00
3	Leafy vegetables	3	79 500.00	238 500.00
	ANIMAL PRODUCTION & HEALTH			
4	Poultry (Layers)	2	445 550.00	891 100.00
5	Poultry (Broilers)	1	225 080.00	225 080.00
6	Pig Fattening	1	369 950.00	369 950.00
7	Sheep & Goat improvement	1	170 460.00	170 460.00
8	Paravet Services	-	-	-
9	AHSP	-	-	-
	FISHERIES			
10	Earth Fish Pond	1	450 000.00	450 000.00
	AGRO-FORESTRY			
11	Community Nurseries	-	-	-
12	Agro-Forestry Orchards	1	184 500.00	184 500.00
13	Apiculture	1	100 000.00	100 000.00
	AGRO PPROCESSING			
14	Farm Silos	1	10 000.00	10 000.00
15	Processing Equipments	1	400 000.00	400 000.00
	Total			3 834 590.00

Source: NPFS Expansion phase 2007-2012 Programme Implementation Manual. NFRA, 2007

Cost details of crop modules (Naira)

Improved seed- 7 500.00

Agrochemicals- 12 000.00

Fertilizers- 40 000.00

Land preparation- 20 000.00

Total- 79 500.00

The state project officials and the representative of the farmers' apex groups are expected to monitor the utilization and refunding of the loans. They are also expected to train the farmers and other stakeholders that are linked to the achievement of farmers' proposals. The intention of the project is for the loans to be continually recycled among the farmers. A benefitted farmer is expected to repay the loan after a farming season into the apex group account. The repaid loan is thereafter disbursed to other applicants (farmers) within the local government.

The project officials are also expected to foster and facilitate the execution of other community development projects. These development projects must be jointly appraised and analysed by the community members as stipulated in other components of NPFS. This community-driven development component would respond to the felt needs of rural people for the development of facilities such as: roads and culverts; markets; small dams, etc.

4.3.7. NPFS cost and funding

The cost of the expansion of NSPFS was estimated to be US $ 364 million. The Federal Government of Nigeria is committed to devoting part of the annual budgets to the programme for five years, while FAO provided technical and administrative support. The Federal, State and LGCs are expected to fund 60% of this amount through annual budgetary provision while donor agencies are expected to fund 40% of the estimated project cost. The cost sharing between Federal, State, LGCs and beneficiary communities is 47%, 26%, 19% and 8% respectively.

NPFS is funded from four main sources: Federal Government; state governments; Local government councils; and donor agencies. The estimated amounts for states and LGCs annually contributions are 42.4 million Naira per state government; 32.4 million Naira for all LGCs involved in each state (9 sites times 3.6 million Naira). Therefore the total contribution of each state per annum is 74.8 million Naira. This adds up to 374 million Naira for the five year duration of the project as separate accounts were maintained for all project-related expenditures.

Table 4.2 and 4.3 highlight the NPFS funding situation in the state. In the year 2011, no fund was received from the three tiers of the government.

Table 4.2: NPFS funding situation in Osun state

Funding agency/Year		2008	2009	2010	2011	Total (Naira)
Federal Government of Nigeria (FGN)	Expected counterpart fund (Naira)	45 200 000	45 200 000	30 000 000	30 000 000	**150 400 000**
	Actual fund received (Naira)	_	_	26 846 000	_	**26 846 000**
	Outstanding (Naira)	45 200 000	45 200 000	3 154 000	30 000 000	**122 554 000**
Osun State Government (OSSG)	Expected counterpart fund (Naira)	42 400 000	42 400 000	42 400 000	42 400 000	**169 600 000**
	Actual fund received (Naira)	42 400 000	42 400 000	_	_	**84 800 000**
	Outstanding (Naira)	_	_	42 400 000	42 400 000	**84 800 000**
PARTICIPATING Local Government	Expected counterpart fund (Naira)	32 400 000	32 400 000	32 400 000	32 400 000	**129 600 00**
	Actual fund received (Naira)	32 400 000	_	_	_	**32 400 000**
	Outstanding (Naira)	_	32 400 000	32 400 000	32 400 000	**97 200 000**

Source: NPFS Expansion phase 2007-2012 Programme Implementation Manual. NFRA, 2007 assessed at Osun state agricultural development programme (OSSADEP), Iwo (2016)

Table 4.3: NPFS fund disbursement chart to Osun state sites between 2005 and 2011

Year/Sites	2004-2006	2009	2010	2011	Total
Osogbo	7 604 485	318 250	4 152 840	2 053 200	**14 128 775**
Obokun	9 397 645	318 250	4 134 380	2 067 800	**15 918 075**
Ayedire	8 309 650	318 250	4 420 790	2 017 200	**15 065 890**
Ede south	_	3 209 570	4 076 080	2 054 800	**9 340 450**
Atakunmosa west	_	3 670 490	3 795 090	2 032 800	**9 498 380**
Ola-oluwa	_	3 686 490	4 045 090	2 066 800	**9 798 380**
Odo-otin	_	3 797 490	4 015 550	2 009 600	**9 822 640**
Ila	_	3 897 570	4 051 000	2 022 000	**9 970 570**
Ife central	_	3 240 570	3 615 090	2 031 200	**8 966 860**
Total (Naira)	**25 311 780**	**22 456 930**	**36 385 910**	**18 355 400**	**102 510 020**

Source: NPFS Expansion phase 2007-2012 Programme Implementation Manual. NFRA, 2007 assessed at Osun state agricultural development programme (OSSADEP), Iwo (2016)

4.3.8. NPFS Project eligibility criteria for states, LGCs and communities

A. Selection criteria for participating states

- ✓ Written indication of interest and payment of counterpart funds for the project;
- ✓ Evidence of operational and active community apex farmers group or other economic interest groups;
- ✓ Evidence of due loan repayment under NSPFS to the tune of 90 percent;
- ✓ Submission by the ADP of an action plan for the utilization of recovery account under the NSPFS to the FMARD;
- ✓ Evidence of adequate projects management team;
- ✓ Commitment to put in place adequate financial and procurement management in the ADP acceptable to the federal government;
- ✓ Evidence of the establishment of linkages by the ADP on the LGCs;
- ✓ Evidence of functional ADP Executive Committee (ADPEC) and State Technical Management Committee (TMC);
- ✓ Submission of the reports on constraints and needs analysis and the community plans (CPs) for the first year of the project.

B. Selection criteria for participating local governments

- ✓ Written indication of interest and a commitment for regular payment of the counterpart funds to the project;
- ✓ Evidence of operational and active economic interest groups who are willing and their commitment to enabling a Community Apex Bodies;
- ✓ Evidence of functional local management committee;
- ✓ Submission of the reports on constraints and needs analysis and the community plans (CPs) for the first year of the project;
- ✓ Equal representation of senatorial zones.

C. Selection criteria for participating community

- ✓ Willingness of the community to put up a counterpart contribution;
- ✓ Representativeness of the major two ecological zones;
- ✓ Community must be within the selected participating LGA;
- ✓ Evidence of operational and active Economic Interest Groups (EIGs) who are willing and committed to establish a legally recognized community apex body;

- ✓ The community apex bodies and other EIGs have opened a bank account, which is active and good standing;
- ✓ Communities that are benefiting from similar programme are excluded.

4.4. The FADAMA Project

4.4.1. Brief overview

The need for continual cultivation in order to exploit the dry season farm income potential, motivated the government to initiate the small-scale low cost farmer managed irrigation scheme for Fadama lands development (which is also known as floods plains). It was also realized that the production increase, which is required to make food production exceed average population growth rate. Therefore, there has to be a supplementary irrigation for the major food production areas of the country.

The government therefore embarked on several programmes with the purpose of improving agricultural production. One of the programmes was the National FADAMA Development Programme (NFDP) which was prompted for small-scale irrigation development to increase the productivity of the farming system during dry and wet seasons (Agu 2002; Nwalieji and Ajayi, 2009) cited in (Olaolu, Akinnagbe and Agber, 2013). The NFDP was implemented in seven states: Bauchi, Gombe, Jigawa, Kano, Kebbi, Sokoto and Zamfara. Other states participated as facilitating states where FADAMA I activities were introduced on pilot basis. These states are: Borno; Katsina; Kogi; Kwara; Plateau; and Jigawa (the core state). The NPFS programme in Jigawa state was co-sponsored by African Development Bank (ADB) and therefore selected for FADAMA II project. As a follow up to the First National FADAMA Development Project (FNFDP), the World Bank and the ADB mutually supported the Federal Government of Nigeria (FGN) to invest in the Second National FADAMA Development Project (SNFDP) known as FADAMA II project.

The implementation of FADAMA II project which started in January 2004, lasted for six years with the following expected results: increase in farmers' income; employment; and reduction in poverty. The pursuit of FADAMA II was the development of small-scale irrigation in the low-lying alluvial flood plains or "Fadama". The FADAMA II effort was to increase the productivity, income, living standards and development capacity of the economically active rural communities. It also aim to increase the efficiency of delivering

services to an estimate of four million rural beneficiary households (Kudi, Usman, Akpoko and Banta, 2008; Nwalieji and Ajayi, 2008) cited in (Olaolu et al., 2013).

4.4.2. NFDP objectives

The objectives of National FADAMA Development Programme (NFDP) are:

- To finance the provision of shallow tube wells in Fadama lands for small scale irrigation;
- To construct FADAMA infrastructures;
- To organize FADAMA farmers for irrigation management, cost recovery and better access to credit marketing and other services;
- To provide vehicles, pumps and other equipment.

The achievement of these objectives was targeted to improve agricultural production and enhance the income of the farmers, so as to lift them out of the vicious circle of poverty and deprivation (Ayanwale and Alimi, 2004).

FADAMA II was the core project under the NFDP, which comprises the following project inputs: personnel; finance; infrastructural facilities; staff training; procurement of several farming inputs, etc. The project outputs are: fertilizer; improved seeds; herbicides; farmers' skill improvement in the areas of rice production and processing among others.

The effects of FADAMA II project objectives include: high productivity and better natural resource management (soil and irrigation water). These effects result in the project impacts on projects' beneficiaries on the long run, these are: increase in income; consumer price; economic growth; improved consumption and health. The impact of the project can also be measured by: reduction in poverty level; protected natural resource as well as sustained food security (Olaolu et al., 2013).

Based on the findings of Olaolu et al. (2013), the programme made appreciable impacts on mean household food expenditure, poverty reduction and farmers' income. This shows that FADAMA II served as the solution to the problems of food insecurity and poverty in the rural areas of Nigeria with a case of Kogi state.

4.4.3. The FADAMA III project

FADAMA III project is a comprehensive five-year action programme. It was developed by the Federal Ministry of Agriculture & Water Resources (FMAWR) in close collaboration with

the Federal Ministry of Environment (FME) and other government ministries, local governments and key stakeholders (donors, private operators and NGOs). They intend to raise productivity and incomes in rural areas, laying emphasis on production land and alternative income generating schemes. The approach taken is focused on the community-driven model which includes investing in the following: capacity building; public infrastructure; inputs; adaptive research; extension services; knowledge transfer; group-owned productive assets through matching grants; advisory services; land management improvements; and mechanisms to avoid or resolve conflicts among FADAMA resource users (National FADAMA Coordination Office (NFCO), (2008).

The development objective of the FADAMA III Project is to increase the incomes of users of rural land and water resources on a sustainable basis. The Project was meant to support the financing and implementation of the following five main components:

i. Institutional and social development.
ii. Physical infrastructure for productive use.
iii. Transfer and adoption of technology to expand productivity, improve value-added, and conserve land quality.
iv. Support extension and applied research.
v. Provide matching grants to acquire assets for income-generation and livelihood improvements.

FADAMA III project supports the government's strategic objective to enhance growth in sectors other than oil in order to achieve increased food security, reduce poverty, create employment and improved opportunities in rural areas. More specifically, the project desires to contribute towards achieving Nigeria's stated rural development and environmental objectives as included and summarized in NEEDS and SEEDS targets. The project will also contribute to stated regional objectives including the Comprehensive African Agricultural Development (CAADP) target of 6% agricultural growth.

The fundamental strategy of the Project is a community-driven development (CDD) approach with a strong emphasis on stakeholder participation, especially at the community level. Facilitators on the project were supposed to organize the FADAMA Community Associations (FCAs) and guide them through an intensive process of group decision-making to arrive at Local Development Plans (LDPs). With such method, the project intends to ensure that every activity funded by the project has been considered through an informed

discussion by the whole community. This produces harmonized consensus building and healthy competition.

FADAMA III project was active in all 36 States and the FCT. The target groups are:

- **The rural poor who are engaged in economic activities:** farmers, pastoralists, fishermen, nomads, traders, processors, hunters and gatherers as well as other Economic Interest Groups (EIG's);
- **Relatively disadvantaged groups**: women, widows, handicapped, the sick including people living with HIV/AIDS, and the youth;
- **Service providers:** government agencies, private operators and professional/semi-professional associations operating in the project areas.

The beneficiaries were encouraged to organize themselves in EIGs and FADAMA User Groups (FUGs), with 20 individual members in each FUG. They also established FADAMA Community Associations (FCA's), which are apex organizations of 15 FUGs at the community level. The target is to establish an average of 200 FCA's in each state which corresponds to 7,400 FCAs in the 560 LG's. The project was to reach approximately 2.2 million direct beneficiary households, or 16 million household members. In addition, it is expected that the project would also reach at least two million indirect beneficiary households. These indirect beneficiaries might not benefit directly from sub-projects (LDPs) but will gain from the investments in public infrastructure, additional income and employment effects.

As previously stated, the project focused on the Community-Driven Development (CDD) approach, in which community organizations are meant to decide and manage the resources allocation among their identified priorities. Extensive facilitation, training, and technical assistance were to be provided through the project to ensure that poor rural communities (including women and vulnerable groups) participate in the collective decision-making process. The project was designed to give voice to the communities as well as advocate the principles of transparency and accountability in planning and management of public investments within the LGA's.

4.4.3.1. The FADAMA III project funding

The total cost for FADAMA III project was estimated to be $450 million, out of which the World Bank was to finance with an International Development Association (IDA) credit of

$250 million. The association is responsible for $50 million, while the borrower will contribute $200 million: Federal Government ($40 million); State Governments ($60 million), Local Governments ($40 million); and the communities, which include private sector and civil society ($60 million). 20% of beneficiary contributions will be in kind (materials and/or labor). The Global Environment Facility (GEF) also promised to provide a grant of $7 million under the Bank-led SIP umbrella.

As at 30th September, 2014, an additional financing of $31 million (15.2%) of the FADAMA III project budget was disbursed out of the approved amount of $200 MILLION (Third National FADAMA Development Project, 2014).

Table 4.4 shows FADAMA III funding arrangement among the World Bank, the three tiers of government and the community. The community (farmers' beneficiaries group) is only expected to donate 10% for rural infrastructure, 50% for input supply and 30% for asset acquisition.

Table 4.4: FADAMA III funding arrangement

COMPONENT	WORLD BANK	STATE GOVT.	LOCAL GOVT.	COMMUNITY
Capacity Building	30%	35%	35%	_
Rural Infrastructure	90%	_	_	10%
Advisory Services	70%	30%	_	_
Input Support	50%	_	_	50%
Asset Acquisition	70%	_	_	30%

Source: Fadama III implementation manual (draft) Volume 1. NFCO (2008) assessed at the Agricultural Development Programme Office, Iwo, Osun state (2016)

4.4.4 FADAMA III project in Osun state

According to Sokoya, Adefunke and Fagbola (2014), the FADAMA III project funded by the World Bank was fully launched in the Nigerian states in July 2010. The project was charged with the aim of increasing the income of users of land and water resources on a sustainable basis. The project also will help to reduce rural poverty and increase food security of each state. An important feature of the project is to empower rural community and be able to collectively decide on how resources are allocated and managed for their livelihood activities under the operation of the following components:

- ✓ Capacity building, communication and information support

- ✓ Small- scale community owned infrastructure
- ✓ Advisory services and input support
- ✓ Support to ADPs (Agricultural development programmes) sponsor Research and on-farm Demonstration
- ✓ Asset Acquisition for Individual FUGs/EIGs Component
- ✓ Project management monitory, Evaluation and EMP compliance.

The term “Fadama” means irrigable land for cultivation, usually for low-lying plains that is under-laid by shallow aquifer along major river basins. It serves as source of water for livestock during dry season, and also supports large and diverse resident or transient wildlife including herbivores, carnivores and migratory birds. The World Bank’s FADAMA III project was said to have transited from the FADAMA II project, which influenced the lives of rural farmers and raised their incomes by 63% (Sokoya et al., 2014).

FADAMA III project in Osun state operates in 20 LGAs namely: Atakumosa-west, Atakunmosa-east, Ila, Iwo, Boluwaduro, Boripe, Egbedore, Ede-north, Ife-east & Area office, Ife-central, Ife-south, Irewole, Isokan, Orolu, Irepodun, Ifelodun, Olorunda, Odo-otin, Oriade and Ola-oluwa (figure 4.1 shows the map of Osun state). A prospective Fadama user must belong to a user Group (FUG), while a minimum of 10 to 15 farmers make a group (FUG). 15 FUG’s organize themselves into a FADAMA Community Association (FCA) where they practice knowledge sharing of information, infrastructure and cooperation to access loan from FADAMA III project (Sokoya et al., 2014).

According to the report by Sokoya et al. (2014), FADAMA III project was faced with the challenges of finances, land use problem and farmers’ illiteracy. The beneficiary farmers in the state were meant to be entitled to financial assistance after training in order to commence farming. However, such farmers need to contribute certain percentage to allow them access the loan. Poverty has restrained these farmers to contribute their allocated percentage, which hinders them from securing the loan to implement their project.

The findings of Ayanwale and Alimi (2004) established that the National FADAMA Programme has some positive impact on the participating farmers in Osun State of Nigeria, thereby recommended it as a model to similar programmes in Nigeria and other developing countries. The programme was said to achieve the following: increased the asset base of the participants; tripled their income; enhanced access to farm inputs; and increased the

training and knowledge base of participants in low-land irrigation farming. The programme also ensured a high level of technical efficiency of the participants. These results suggest that the programme has a positive impact on the participants and has a wide potential of alleviating rural poverty in the study area (Ayanwale and Alimi, 2004). Nevertheless, members' difficulty in obtaining farm inputs by the respondent was identified to be a future threat to FADAMA III project in the state.

4.5 Sustainment of agricultural development projects

Several publications, research and debates have been directed to the prevalent sustainable development, which coalesce the economic, social and environmental aspects of development, while very few researchers (Adeyemo and Kayode, 2014; Egwu, 2015; Bakare, 2013 and others) have discussed the sustainment of agricultural productions and development projects. Through agricultural development, different governments and stakeholders have designed many policies (Odoemenem and Adebisi, 2011; Omadjohwoefe, 2011), which aimed at the following: poverty eradication and wealth creation; improving the livelihood of people; promoting the investment conditions to be suitable for local and foreign investors; protecting the environment and conserving natural resources; ensuring the safety and security of life and property; achieving gender equality. These policies and their applications fall within the principle of affirmative actions towards a sustainable development (Country Report to the Rio + 20 Summit, 2012).

Agricultural and rural development projects are part of the activities to ensure a combined sustainable development. Failure to adopt and sustain development projects by the beneficiaries would create a loophole in the space of achieving general sustainable development in the country. For the purpose of this research, sustainment is apparent and can be measured in several ways: the achievement of the programme's objectives; the impacts on the beneficiaries' productions, livelihood and human capital; the compatibility with beneficiaries' needs; the continuity and relevance of the programmes within the context of the target community.

Adeyemo and Kayode (2014) in their study realized some factors that influenced the sustainability of Community-Driven Development approach of World Bank assisted projects in south western Nigeria. To achieve enduring and sustaining programmes in the local communities, all stakeholders (men and women, rich and poor, young and old, and other groups) are to be involved.

Egwu (2015) in his study grouped the constraints limiting the respondents from ensuring sustainable agricultural production in the study area into three factors:

Land and environmental constraints: erosion, land tenure, limited farm land and use of degraded land.

Economic constraints: inadequate impute, high interest rate, high cost of labour and High cost of machines.

Institutional constraints: poor access to extension agents and inefficient marketing (Egwu, 2015).

Bakare (2013) in his study said “assisting the rural poor to enhance their livelihoods and food security in a sustainable manner is an evidence of agricultural sustainability”. He found that an indication of unsustainable agriculture is the diminishing capacity of agriculture to provide for household food and nutrition security. This was said to be in sequence with that of Uniamikogbo (2007), Abayomi (2006) and Child (2008) who also found that the calculated food production growth in Nigeria measured against the sequential population growth has made agriculture to be unsustainable, while rural development deteriorated.

The findings and conclusion of Bakare (2013) suggested the need for the policy makers to promote agriculture to a sustainable level. In order to sprout up more sustainable production systems, agriculture and rural development efforts should be directed towards three essential goals which are: food security, employment; and income generation in rural areas. He concluded with the following measures to promote agricultural sustainability:

- Active participation by rural people in the development of integrated farming systems, by means of organizations such as agricultural cooperatives. Such groups will help prevent an increase in the influence of the middleman.
- Agricultural policies should be adjusted to promote production systems that can help attain the objective of sustainability. This includes promoting the demand for crops and livestock which can be produced sustainably.
- More attention should be paid to safeguard human health and environmental quality in relation to the use of dangerous pesticides and other chemicals.
- More sources of off-farm income such as food processing and handicrafts are needed in rural areas to prevent the migration of farmers to urban centers (Bakare, 2013 pp.184-193).

4.6 Determination and prioritization of farmers' felt needs

According to Pesson (1966), the planning phase of a programme processes consists of four progressive steps: collection of facts; analysis of the situation; identification of problems; and decisions on objectives. Situation analysis is essential in the planning phase as it comes before the planning phase. Situation analysis involves the collection of facts, identification and ranking of problems, determination and prioritization of needs and finally selection of most felt needs. It is on these selected most felt needs, that the planning of an innovation should be constructed (Akinyemiju and Torimiro, 2008).

Bekele (2006) pointed the fact that environmental conditions are not the same in different regions, and even from site to site within the same region. He also made a point of differences in the survival strategies for different socioeconomic background in rural areas using an example of those with land and the landless. Therefore, it is always necessary to compile various needs of the beneficiaries with determining factors and prioritize them for necessary sequential attention (Bekele, 2006).

Susanne (2006) used examples of Malawi, Lesotho and Uganda in 1980 and 1990 where some developmental projects failed due to some reasons. The resources were wasted and compounded problems were created for the beneficiaries and project initiators. His argument was on the relationship between the macro-level policies and the micro-level behaviors. The failure of those projects could be traced to the failure of the initiators to understand the nature, livelihood and needs of the beneficiaries. The policy makers however view different types of development intervention programmes to vary with social efficiency and request commitment of different levels of resources. It is therefore concluded that identified farmers' preference for intervention could be evaluated and assessed through their social, economic and political feasibility (Bekele, 2006).

Knowledge of farmers' preference for development intervention (PDI) will provide a better understanding on the value placed on the different programmes by farmers (Bekele, 2006). Before a particular innovation kicks off, the initial objectives of such innovation are meant to be temporary until they align with farmers' felt needs after a thorough assessment of farmers' situation. Differentiating between "what is" and "what ought to be" is an important feature in the identification of needs which always leads to the specification of the project objectives (Akinyemiju and Torimiro, 2008).

Governments often fail to consider the felt needs of farmers before approaching them with developmental projects. They perceive farmers as people who are incapable to make decisions that affect their community due to their poor status. Generally, van Heck (2003) said the rural poor are reasonably enough to discuss the nature and priority order of their felt needs and desires. Apart from needs, people also have aspirations and expectations which are different from needs: these aspirations may, however, be incompatible with their needs as perceived by outsiders (van Heck, 2003).

A project should focus on a single priority need, most especially if the action group and the community development workers are not certain of needs identification process (Matiwane & Terblanché, 2012).

Farmers' needs range from farming needs and non-farm needs, which constitute their livelihood. Situation analysis carried out would enable project initiators to identify and prioritize needs (both project and beneficiaries needs) and positively impact the project. Bekele (2006) stated that development programme interventions are planned and executed in a way that brings more benefits to the beneficiaries according to the intended development path. Such interventions will have a greater chance of being accepted and practiced in a sustainable manner, rather than programmes that are based on temporary incentives and coercive pressure.

4.7 Project's success or failure

Ika (2012) elaborated more on different approaches, contributions, challenges, complexities and solutions for international development projects especially the World Bank projects. He discovered that most of them failed to accomplish their set objectives in Africa despite huge investment of funds.

The Standish Group CHAOS Report study (1994) divided projects into three special outcomes, also called resolutions:

1. A project is said to be successful if it is completed on time with allocated budget and meets all requirements (objectives).
2. A challenged project is one completed, but could not accomplish some or all of the originally specified objectives and activities. Such project is also being over spent and/or took longer time of implementation.

3. The impaired/failed projects are the ones which were abandoned or cancelled at some point and thus became total losses.

It was concluded that successful project must be on time, on budget, and delivers quality (features and functions) as promised. Therefore, in a case of anything less, such project would be termed as either failed or challenged.

Furthermore, the Standish Group CHAOS Report (1994) identified five factors to differentiate successful and failed projects from each other: user involvement; executive management; support-clear statement of requirements; proper planning; and realistic expectations. Challenged project indicators are: lack of user input; incomplete requirements and specifications; changing requirements and specifications; lack of executive support; and technical incompetence. Failed projects' indicators include: incomplete requirements; lack of user involvement; lack of resources; unrealistic expectations; lack of executive support; changing requirements and specifications; lack of planning; lack of IT management and technical Illiteracy.

Okeh, Atala, Ahmed and Omokore (2014) said failure of project can be measured by how effective its objectives are being met. Change in crop yield, food production, farm size, income and living condition of the target beneficiaries are measured to analyze the impact or level of achievement of any agricultural programme.

The project success criteria stated by Baccarini (1999) are grouped into two components which are: project management success and the product success. He further categorised the importance of projects' goal, purpose, outputs and inputs into the following: achieving time, cost and quality objectives; satisfying stakeholders' needs; and satisfaction of users' needs which was said to be synonymous with project purpose. In comparison with agricultural projects, success could be ultimately measured when the end users or beneficiaries are impacted and satisfied with the project.

4.7.6 Relationship between farmers' felt needs and projects

The relationship between farmers' felt needs and a project depends on the scope of such project. It is generally believed that: a positive relationship exists between farmers' felt needs and any project that addresses their needs. This is as a result of farmers' motivation and impression that their welfare is being addressed. It also makes them to express their

sincere feelings, contribute their resources in terms of materials and time towards the success of the project.

The factors that determine or influence the felt needs of farmers are important to take note while accessing their needs. Bekele (2006) found out that farmers' preferences were influenced by the characteristics of the farm and the farmers together with the personal costs and benefits that farmers expect.

Effective participation in project is to ensure farmers' needs are identified, ranked and incorporated into the project objectives. This would also encourage farmers to share their resources in terms of knowledge and materials for the success of such project.

4.8 Conclusion

This chapter described the two selected agricultural development projects (NPFS and FADAMA III) in Osun state. The main objective of the NPFS is to foster the development of smallholder agriculture and income generation in the rural areas. The approach of NPFS focuses on a variety of interventions, which are: the enhancement and diversification of agricultural production; agro-processing; market development; rural finance; extension activities; the development and upgrading of infrastructural facilities such as roads and portable water supply.

The development objective of the FADAMA III Project is to increase the incomes of users of rural land and water resources on a sustainable basis. The fundamental strategy of the FADAMA III Project is a community-driven development (CDD) approach with a strong emphasis on stakeholder participation, especially at the community level.

Generally, agricultural and rural development projects are vital in ensuring a combined sustainable development. Also, failure to adopt and sustain development projects by the beneficiaries would make it difficult to achieve general sustainable development in the country.

CHAPTER 5
RESEARCH METHODOLOGY

5.1 Introduction

This study contains an investigation into two selected agricultural development projects in Osun state and provides recommendations on how to sustain these projects in future. The decision of Osun state as the study area was justified not only for the intrinsic familiarity with the state, but the state being one of the vibrant south-western agricultural states in the country. The Osun state received and executed an appreciable number of agricultural development projects. Upon all these executed projects, the state still lacks appropriate buoyancy amidst neighbouring states due to poor execution of projects which has led to wastage of the state, national and foreign donor resources.

Osun State Agricultural Development Project divided the state into three agricultural zones or senatorial districts with twenty five blocks (25) blocks. These are Osun central or Osogbo (6 blocks), Osun East or Ife/Ijesha (12 blocks) and Osun West or Iwo (7 blocks) (Oladejo, Olawuyi and Anjorin, 2011).

The Agricultural Development Programme (ADP) contains many different projects which tackle issues like poverty and hunger in the state. This research chose two development projects namely: National Programme for Food Security (NPFS) and FADAMA III project, which strived to impact changes in terms of food security, poverty reduction, employment creation and improved opportunities in rural areas. This chapter describes the characteristics of the study area as well as the method and approach used in data collection, analysis and interpretation.

5.2 The study area

5.2.1 Overview of population

Osun State Agricultural Development Project divided the state into three agricultural zones also known as senatorial districts with twenty five blocks. These are Osun central or Osogbo (six blocks), Osun East or Ife/Ijesha (twelve blocks) and Osun West or Iwo (seven blocks) (Oladejo et al., 2011). Each of these zones was further divided making six districts altogether in the state. The six districts are; Ede, Iwo, Osogbo, Ikirun, Ife and Ilesa and also known to be the administrative zones.

Figure 5.1 shows how Osun state is divided into three senatorial districts and six administrative zones. Osun state consists of 30 local government areas as shown in Figure 5.2 (Atakumosa-east, Atakumosa-west, Ayedaade, Ayedire, Boripe, Boluwaduro, Ede-north, Ede-south, Egbedore, Ejigbo, Ifedayo, Ifelodun, Ife-central, Ife-east, Ife-north, Ife-south, Ila, Ilesa-east, Ilesa-west, Irepodun, Irewole, Isokan, Iwo, Obokun, Odo-otin, Ola-oluwa, Olorunda, Orolu, Osogbo and Oriade) and one Area Office (State of Osun website).

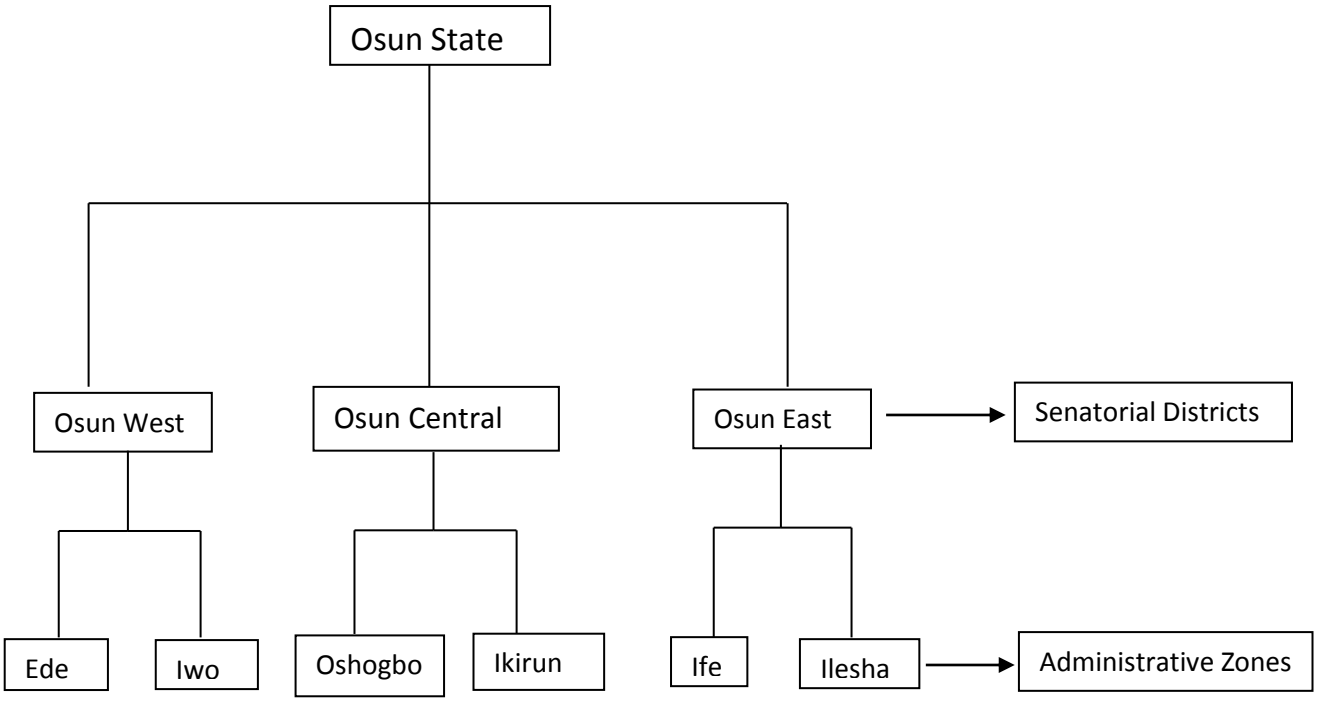

Figure 5.1: Osun state senatorial districts and administrative zones

Source: Osun State Agricultural Development Programme

The people of this state are Yoruba and they trace their origin to the Oduduwa of Ile-Ife tribe. There are also minor tribes in the state such as Hausas, Ibos, Ebiras and Fulanis. The population of Osun state is 3 423 535 (2006, Population Census) which is concentrated in a number of urban centers namely: Osogbo, Ilesha, Ile-Ife, Ijebujesa, Ejigbo, Modakeke, Ifetedo, Ede, Ikirun, Ipetu-Ijesa, Ila-Orangun, Ikire and Ode-Omu. Others include; Ipetumodu, Ejigbo, Ilobu, Gbongan, Okuku, Inisa, Ijebu-jesa, Ifon-Osun, e.t.c.

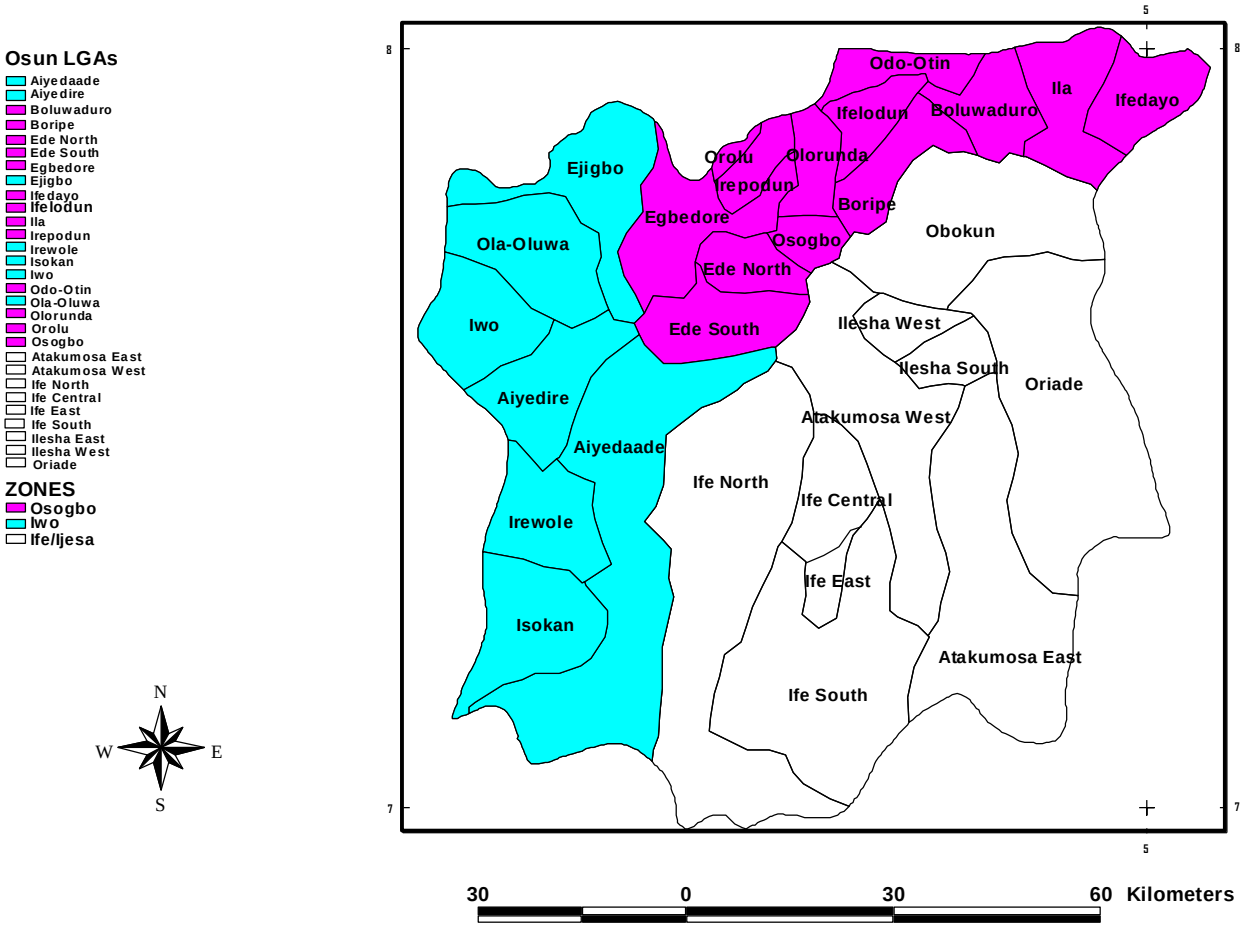

Figure 5.2: Map of Osun State showing 30 LGAs and 3 OSSADEP Agricultural zones.

Source: GEO-Spatial, Department of Geography, Obafemi Awolowo University, Ile-Ife.

5.2.2 Agricultural and land use

Farming remains the center of economy of Osun state as over 90% of the rural population are involved in farming mainly relating to crop production (Sokoya et al., 2014). The crops grown in the state either as sole crops and/or mixed crops include: yam[2], maize, cassava[3], plantain[4], cowpea[5], sorghum, soybean, okra[6], pepper, guinea corn, melon and rice while

[2]Yam is the common name for some plant species in the genus Dioscorea (family Dioscoreaceae) that form edible tubers.

[3]*Manihotesculenta* (commonly called cassava) is a woody shrub native to South America of the spurge family, Euphorbiaceae. It is extensively cultivated as an annual crop in tropical and subtropical regions for its edible starchy tuberous root, a major source of carbohydrates.

[4]Plantain is one of the less sweet cultivated varieties (cultivars) of the genus Musa whose fruit is also known as the banana.

[5]The cowpea (*Vignaunguiculata*) is one of several species of the widely cultivated genus Vigna.

cash crops include cocoa, kola[7] and oil palm[8] (Ashagidigbi, Abiodun and Samson, 2011; Oladejo et al., 2011).

5.2.3 Climate

Osun state is an inland state in the south western part of Nigeria. Its capital is situated at Oshogbo and presently known as the “Land of virtue”. The state occupies a land mass of approximately 14 875 square kilometers which was taken out of the old Oyo state on the 27th of August, 1991. The state lies between latitude 8.1^0 North and 6.5^0 South and longitude 5.4^0 East and 4^0 West. It shares boundaries with four states: Oyo state in the west, Ondo state in the east, Kwara state in the north and Ogun state in the south (National Population Commission, 2007).

Two seasons of dry harmattan (between November and February) and the wet rainy (between March and October) occur in Osun state while the climate supports the growth of a variety of food and cash crops.

5.2.4 Research design

This part of the discussion explains the approach on how the study was conducted, and what methods were used to collect data. The study mainly used quantitative and qualitative research methods which emphasized objective measurements of data collected through structured and semi structured questionnaires. Both primary and secondary data were used in the research.

To achieve the objectives of this research work, both primary and secondary data were captured from the beneficiaries, extension workers and other relevant stakeholders. Secondary data was used to collect historical records of the two selected projects. The baseline survey report of the National FADAMA Project Report (1997) revealed the involvement of about 5.8 percent of the farm families in Osun State in FADAMA cultivation. As at the time of Ayanwale and Alimi (2004) report in 2000/2001 farm year, about 15 000 farm families were involved in FADAMA cultivation in Osun state.

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[6]Okra or Okro (*AbelmoschusesculentusMoench*), known in many English-speaking countries as ladies' fingers, bhendi, bhindi, bamia, ochro or gumbo, is a flowering plant in the mallow family.

[7]Garcinia kola (bitter kola, a name sometimes also used for G. afzelii) is a species of flowering plant in the Clusiaceae or Guttiferae family.

[8]Elaeis (from Greek, meaning "oil") is a genus of palms containing two species, called oil palms. They are used in commercial agriculture in the production of palm oil.

Primary data was collected through the survey of beneficiaries and officials of these selected projects who were selected based on their experience and exposure to these selected projects.

5.2.5 Sampling

The NPFS (ADP) project was carried out in nine sites or local governments in the state. Five sites or local governments were randomly selected out of the nine sites. This research made use of 40% respondents randomly selected from an average of fifty beneficiaries from each site that amount to 20 respondents. A total of 100 respondents out of the project beneficiaries were therefore selected from the five selected sites as illustrated in Table 5.1. This research arrived at the sample size in order to capture different opinions of important beneficiaries of the project. Also, the limited sample size was used because most of the project beneficiaries are no more residing in the state. The project consisted of one facilitator per site; one manager per site; two extension agents per site and one enumerator per site. This research therefore selected five facilitators for the five selected sites, five site managers, five extension agents and five site enumerators, this sum up to 20 respondents out of the project staffs as highlighted in Table 5.2.

Table 5.1: Random selection of NPFS and FADAMA III projects' beneficiaries

NPFS project		**FADAMA III project**	
Number of selected site	5	Number of selected site	6
Total beneficiaries per site	50	Number of selected FCA's per site	3
Simple Randomly selected beneficiaries'	20	Total selected FCA's	6 x 3 = 18
Total beneficiaries' selection	20 x 5 = **100**	Selected FUG per FCA	3
		Total selected FUG's	18 x 3 = **54**
		Selected farmers per FUG	**4**
		Total selected farmers	54 x 4 = **216**

The FADAMA III project was executed in 20 local governments in the state. Using 30% random selection, six local governments were chosen. Each local government contains seven FADAMA Community Associations (FCA), three FCAs were chosen in each of the six selected local governments which amount to 18 FCAs in total. Each FCA contains 10

FADAMA User Groups (FUG) in which 3 FUGs were chosen from each FCA, this sum up to 54 FUGs in the 18 selected FCAs. Each FUG contains between 10 to 12 farmers, four farmers were randomly selected in each FUG which sum up the total farmers to be 216 that formed the respondents for this research as illustrated in Table 5.1. The project also contained nine state officers and four facilitators per local government. This research randomly selected five state officers from the nine officers and three facilitators each from the six selected local governments which amount to 18 facilitators. The total selected respondents from the project staff were 23 as highlighted in Table 5.2.

Table 5.2: Random selection of NPFS and FADAMA III projects' staff

NPFS project		**FADAMA III project**	
Number of selected sites	5	Total state officers Selected state officers	9 **5**
Facilitator per site Total facilitators	1 1 x 5 = 5	Number of selected sites	6
Manager per site Total managers	1 1 x 5 = 5	Facilitators per site Selected facilitators	4 3
Extension agents per site Total extension agents	2 2 x 5 = 10	Total selected facilitators per site	3 x 6 = **18**
Total staff	5+5+10 = **20**	Total selected staff (state officers + facilitators)	18 + 5 = **23**

5.2.6 Data collection

In contrast to Whittington (2002) conditional assessment exercises by giving respondents a theoretical set-up and suggestions, the study of Bekele (2006) extracted farmers' personal priority agricultural problems using two steps:

- The first step was asking farmers to list and rank their major agricultural production problems that cause crop failure and food shortage in order of importance.
- The second step involved asking farmers about their preferred development intervention, which they are willing to accept, practice and which they feel would be most appropriate to solve their agricultural problems according to their own experience with knowledge of their environment.

This method of obtaining farmers preference was also used in Tucker and Napier (2000) study where farmers were asked to specify the frequency of use of conservation information identified from literature and were then asked to rank the perceived relevance of most common communication channels (Bekele, 2006).

A questionnaire was constructed, which include both structured and open-ended questions. The questions were administered to resourceful and experienced personnel in the projects' field to collect the information about the past projects. Information was also gathered about the current status of those projects in relation to their relevance with the current context of the targeted communities. The impact of such projects was measured against its objectives and beneficiaries testimonies. Personal interviews were mostly done to collect information from project beneficiaries and staff, while focus group was also used to obtain information from few project beneficiaries in their groups.

The comprehensive questionnaire was structured to access the socio-economic characteristics of the beneficiaries and projects' staff. The questions were constructed to get various information about the projects from the beneficiaries and projects' officials and/or extension workers, their involvement with the projects, their needs and status before and after the projects and generally about the benefits they realized from the projects. Their different views, opinions, suggestions and recommendations for the projects were also asked. All these questions were constructed around the research purpose and objectives.

Due to their familiarity with the extension staff and local farmers and because of their past experience collecting data, junior staff and enumerators at the Osun State Agricultural Development Programme (OSSADEP) were charged with the responsibility to assist in administering the questionnaire. Before they started with interviews they were thoroughly trained to better understand the questions and know what, where and how to capture the required information needed from the interviewers. Both quantitative and qualitative research methods were used to analyze the data to arrive at valid interpretation and judgment.

5.2.7 Data analysis

Collected data was coded and analyzed using Statistical Package for the Social Sciences (SPSS). Descriptive analysis, frequency distribution and Likert scale analysis were used to describe the profile and characteristics of the respondents to address objective "1" of this

study. It was also used to determine the perceived effectiveness and intervening processes of the selected projects by both project beneficiaries and staff which addresses objective “2” of this research.

To address objective 4, Pearson’s correlation and Chi-square analysis were used to check the relationships among the following variables: respondents’ age; household size; educational level; farming experience; farm size; among others.

5.3 Ethical consideration

The following ethical considerations were considered for the research:

1. Various professional personnel who are directly and indirectly involved in agricultural development programs were approached for substantial information. This ensured the quality and integrity of this research work.
2. Permission was granted by relevant personnel of Osun State Agricultural Development Program to assess and share information regarding the projects used in this research.
3. The respondents interviewed for this research remain anonymous while their details remain confidential.
4. The participants of this study were by no means compelled to provide information and other required assistance for this research.
5. This research work is mainly for academic purpose and independent. It has no influence or contribution from any impartial organization.

5.4 Conclusion

This chapter described the study area and highlighted the methods used to collect, analyse and interpret information from the respondents. Osun state is divided into three senatorial districts, six administrative zones and 30 local government areas. Farming remains the center of economy of the state, while it occupies a land mass of approximately 14 875 square kilometers which was taken out of the old Oyo state. Beneficiaries and officials of these selected projects formed the respondents who were interviewed using structured and semi-structured questionnaires.

The NPFS (ADP) project was carried out in nine sites or local governments, while the FADAMA III project was executed in 20 local governments in the state. Using 30% random selection, six local governments were chosen. Five sites or local governments were

randomly selected out of the nine sites. This research made use of 40% (NPFS) and 30% (FADAMA III) random selection to select the sum totals of the following respondents: 100 beneficiaries and 20 staff of NPFS (ADP); 216 beneficiaries and 23 staff of Fadama III project.

Both structured and semi-structured questions were constructed to get information about the projects from the beneficiaries and projects' officials. Collected data was coded and analyzed using Statistical Package for the Social Sciences (SPSS), while descriptive analysis and frequency distribution was used to describe the profile and characteristics of the respondents. Correlation analysis was used to check the relationship among respondents' age; household size; educational level; farming experience; farm size; among others.

CHAPTER 6

PERSONAL PROFILE OF OSUN STATE FARMERS

6.1 Introduction

This chapter highlights findings on profiling of the characteristics of farms and farmers in the chosen study area. An insight into the socio-economic characteristics of farmers may help to better understand their situation and the particular intervention needed to impact their lives. The following respondents' variables were analyzed during the compiling of their personal profile: the status as household head; position in the family; age; gender; marital status; household size; number of dependents; level of education; farming experience; other occupation aside farming; share of farming in household income; type, size and scale of crop or livestock production.

6.2 Gender and household status

A total of 316 respondents were interviewed of which 88% were male, while 12% were female as shown in Table 6.1. The majority (83.2%) of the respondents interviewed were household heads. This shows that the interests of most households in the community were well represented by this study. The high percentage of male respondents confirms findings of Adams and Ohene-Yankyera (2014), that men are mostly responsible for decision-making in most African societies. Similar findings have been reported across sub-Sahara African countries (Ayalew et al., 2013; Oladejo and Ladipo, 2012; Turkson and Naandam, 2006). The report of Fakoya and Oloruntoba (2009) however contradicts this trend, as they found high female participation of small ruminant farmers in Osun-state, Nigeria (Adams and Ohene-Yankyera, 2014).

Table 6.1: Frequency distribution of gender and household position (N=316)

		Frequency (n)	Percentage (%)
Gender	Female	38	12.0
	Male	278	88.0
	Total	**316**	**100.0**
Household head	Not household head	53	16.8
	Household head	263	83.2
	Total	**316**	**100.0**
Household position	Husband	241	84.9
	Wife	28	9.8
	Brother	7	2.5
	Sister	2	0.7
	Children	6	2.1
	Total	**284**	**100.0**

6.3 Age distribution and marital status

Table 6.2 reveals that 57.3% respondents fell between the age range of 31 and 50 years of age, while 35.4% exceeds 50 years of age. Very few youth (<30 years) were involved in the project as the mean age of participants was 47 years of age. This supports findings of Ajani et al. (2015) regarding low involvement of youth in agricultural development projects in Nigeria, despite their potential capacities to actively participate effectively in the country's agricultural development projects.

Table 6.2 also shows that 91.8% of the respondents were married, while the widowed or less privileged citizens (handicapped) were scantly represented in the project. Though, the objectives of these projects as stated in National FADAMA Coordination Office of the National Food Reserve Agency (2008) and National Food Reserve Agency (2007) emphasizes the project should ensure high representation of youth and less privileged or poor people.

Table 6.2: Frequency distribution of age and marital status (N= 316)

		Frequency (n)	Percentage (%)
Age (in years) Minimum= 25 Maximum= 80 Mean= 47.24 Standard deviation= 10.555	Less than 30	23	7.3
	Between 31 and 50	181	57.3
	Above 50	112	35.4
	Total	**316**	**100.0**
Marital status	Never married	23	7.3
	Married	290	91.8
	Divorced or separated	1	0.3
	Widowed	2	0.6
	Total	**316**	**100.0**

6.4 Household size and number of dependants

Nearly 81.6% respondents disclosed their household size (Table 6.3), while 18.4% respondents refused to disclose it as a result of African cultural believes in South-west Nigeria that forbids family to reveal their household total number. Ugwu and de Kok (2015) reported that socio-cultural and religious ideologies sometimes contribute to Nigerians refusal to disclose their household size. The household size has great implications on possible labour supply for farm work and also food security (Babatunde, Omotesho and Sholotan, 2007). Fourty two percent of the households have a household size of more than five members, with the mean household size of 5.7 household members. Relative high numbers of dependants (unemployed wives and children below the working age of 18 years) were present in 21% of the households. The mean household dependency figure is 3.69, which is relatively high especially in a country where many of the households are food insecure.

Table 6.3: Frequency distribution of household size and number of dependants (N=316)

		Frequency (n)	Percentage (%)
Household size Minimum= 2 Maximum= 17 Mean= 5.71 Standard deviation= 1.946	Between 1 and 5	124	39.2
	Between 6 and 10	132	41.8
	Between 11 and 15	1	0.3
	Between 16 and 20	1	0.3
	Total Respondents	258	81.6
	No response	58	18.4
	Total	**316**	**100.0**
Number of dependants Minimum= 1 Maximum= 7 Mean= 3.69 Standard deviation= 1.179	Less than 5	193	61.1
	5 and above	65	20.5
	No response	58	18.4
	Total	**316**	**100.0**

6.5 Respondents' level of education

Table 6.4 shows that 96.8% of the respondents had formal education, which contradicts findings of Oluwasola et al. (2015) who reported a relative low level of education among cocoa farmers in Osun state. Farmers with tertiary education qualification (17.7%) in the study area are very positive as it shows that farmers are well educated and can easily learn about technologies from research institutes. Oladeebo and Oluwaranti (2014) reported that farmers' educational status has an important effect on agricultural production efficiency. Education also increases farmers' adoption speed of new technology, as well as their rationalization to enhance farm yield. When farmers are educated, it increases their ability to understand and appreciate improved technologies, as well as in using them more appropriately which enhances better and efficient use of resources (Onubuogu et al., 2014).

Table 6.4: Level of education (N=316)

Level of education	Frequency (n)	Percentage (%)
No education	10	3.2
Vocational training	5	1.6
Primary education	45	14.2
Junior secondary school	68	21.5
Senior secondary school	132	41.8
Tertiary education	56	17.7
Total	**316**	**100.0**

6.6 Farming experience

Table 6.5 reveals that 73.5% of the respondents had more than 10 years of farming experience, with a mean of 20.6 years. This shows that most of the farmers in the study area are well experienced in farming, which is important for productivity in farming (Ololade and Olagunju, 2013). Bathon et al. (2016) stated that well-experienced farmers are expected to be more proficient due to better knowledge of climatic conditions and market situations. *"As one gets proficient in the methods of production, optimal allocation of resources is expected to be achieved"*, which implies the higher the experience, the higher the profit and the lower the profit inefficiency (Oladeebo and Oluwaranti, 2014).

Table 6.5: Farming experience in Osun State (N= 316)

Years of farming experience		Frequency (n)	Percentage (%)
Minimum= 3 Maximum= 60 Mean= 20.60 Standard deviation= 10.860	Less than 10 years	82	25.9
	Between 11 and 20 years	96	30.4
	Between 21 and 30 years	90	28.5
	Above 30 years	46	14.6
	No experience	2	0.6
	Total	**316**	**100.0**

6.7 Farming systems, scale and size

Table 6.6 illustrates that crop production is the most important agricultural activity in the study area, with 75.9% of the respondents practicing crop farming. Only 5.4% of livestock farming occurs in the area, and a possible reason for this is that 78.5% of the respondents

operate on less than 6ha farm size. This correlates with Balogun et al. (2013) who reported a higher percentage of crop farmers than livestock farmers to occur in Kwara state, Nigeria. Some farmers apply mix farming (18.7%) where crop-livestock combination provides farmers with an opportunity to have more diverse sources of food and income. This practice helps farmers to diversify labour use and recycle resources (Valbuena at al., 2012).

Table 6.6: Farming systems, scale and size for sampled households (N=316)

		Frequency (n)	**Percentage (%)**
Farm type	Livestock	17	5.4
	Crop	240	75.9
	Mixed	59	18.7
	Total	**316**	**100.0**
Farm scale	Small scale	264	83.5
	Commercial	52	16.5
	Total	**316**	**100.0**
Farm size Minimum= 1 Maximum= 40 Mean= 5.41 Standard deviation= 4.009	1 to 5 hectares	247	78.5
	6 to 10 hectares	59	18.7
	11 to 15 hectares	2	0.6
	16 to 20 hectares	2	0.6
	26 to 30 hectares	3	1.0
	31 to 35 hectares	1	0.3
	36 to 40 hectares	1	0.3
	Total	**315**	**100.0**

Since the majority of respondents (78.4%) has relative small land size (<6ha) in the study area, it correlates with the findings of Afolabi (2010) and Okoro and Ujah (2009) who are of the opinion that small scale agriculture is the most prominent agricultural activity in Nigeria. The relative high percentage of small farm sizes (mean size=5.4ha) in the study area also has a negative impact on the potential income of farmers. Ogunsumi et al. (2010) confirms that Nigerian agriculture is largely peasant in nature, while government promotes small scale agricultural development.

6.8 Cropping system

Only 16.4% of the respondents are practicing mono-cropping by planting vegetables or maize or cocoa. The majority of farmers (77.9%) are following mix crop farming system

where they cultivate maize and cassava; cocoa and cassava; cocoa, maize and cassava; and other mix cropping. This support the findings of Amujoyegbe and Alabi (2012) who reported mixed cropping as the dominant cropping system in South-west, Nigeria. The 18 respondents who did not indicate the type of crops planted are assumed to be farming only livestock.

Table 6.7: Cropping system (N=316)

Cultivated crops	**Frequency (n)**	**Percentage (%)**
Vegetables	2	0.6
Maize	45	14.2
Cocoa	5	1.6
Maize and Cassava	154	48.7
Cocoa and Cassava	15	4.7
Cassava, Maize and Groundnut	18	5.7
Cocoa, Maize and Cassava	34	10.8
Oil Palm and Vegetables	5	1.6
Cocoa, Maize, Cassava and Oil Palm	9	2.8
Kolanut, Yam and Cocoyam	3	1.0
Cashew and (Plantain or Banana)	3	1.0
Cocoa, Orange and Kolanut	2	0.6
Cocoa and other arable crops	3	1.0
Total crop farmers	**298**	**94.3**
No crop	18	5.7
Total	**316**	**100.0**

6.9 Livestock farming

Table 6.8 indicates that of the 90 respondents that are farming with livestock, 13% rear poultry, while 7.9% farm with goats, sheep and cattle. 6.1% of respondents farm with either pigs alone or together with goats. This is in support of Okoro and Ujah (2009) who listed South-west Nigeria livestock resources consist of: goats, sheep, poultry, pigs and artisanal fish production.

Table 6.8: Livestock types (N=316)

Livestock type	Frequency (n)	Percentage (%)
Poultry	41	13.0
Goat or Sheep	21	6.6
Piggery and Goat	15	4.8
Cattle and (Sheep or Goat)	4	1.3
Piggery	4	1.3
Fish and Poultry	2	0.6
Fish	2	0.6
Rabbit	1	0.3
No livestock	226	71.5
Total	**316**	**100.0**

6.10 Contribution of farming to household income

Table 6.9 illustrates that 89.1% respondents combined farming with other sources of income. Nearly 65.4% farmers combined the trading of agricultural inputs with their farming operations. These agricultural products traded include seed, fertilizers, chemicals and simple farm tools through Agro-shops. Farmers (8.8%) are also formally employed by the government. The off-farm activities are important for farmers since it serves as additional sources of household income and forms part of farmers' coping strategies during the off-production season.

On a question of how much farming contributes to household income, 57.6% of the respondents indicated they realize more than 50% of their household income generating from farming. This finding is indicative that farming is an important potential economic driver of sustaining food security and well-being of farmers in Osun state. These findings illustrate that agriculture is an important contributor to household income.

Table 6.9: Distribution of livelihood activities and percentage contribution of farming to annual household income (N=316)

		Frequency (N)	Percentage (%)
Farming		32	10.9
Farming plus other off-farm activities	Hunting	15	5.1
	Artisan	29	9.8
	Agricultural inputs trading	193	65.4
	Civil service or government job	26	8.8
Total		**295**	**100.0**
Percentage contribution of farming to household income	Less than 30%	20	6.3
	Between 30% and 50%	114	36.1
	Between 51% and 70%	104	32.9
	Above 70%	78	24.7
	Total	**316**	**100.0**

6.11 Correlations of farmer's age, household size with level of education and farm size

This part of the discussion highlights the relationship that exists between the following characteristics of respondents: age; household size; education; and farm size.

6.11.1 Age

Table 6.10 shows a significant negative correlation ($r= -0.261$; $p<0.001$) exists between age and educational level, which indicates that older generations in general obtained a lower educational qualification in the research area.

6.11.2 Household size

The effect of household size on the educational level of farmers was tested. A negative correlation ($r= -0.417$; $p<0.001$) exists between the educational level of farmers and household size (Table 6.10). This suggests that larger households have in general lower educational levels, because of the lack of resources for attending school and other education possibilities. Positive correlations exist between household size and farm size ($r=0.134$; $p<0.05$) and farming experience ($r= -0.190$; $p<0.01$). This implies that farmers with relative large household sizes are also farming on relative larger farms (>5ha) and also exhibit longer farming experience.

Table 6.10: Pearson correlation of farmers' age, household size, education, farm size and farming experience

Characteristics	AGE		HOUSEHOLD SIZE	
	Pearson correlation	Sig. (2-tailed)	Pearson correlation	Sig. (2-tailed)
Educational level	-.261**	.000	-.417**	.000
Farming experience	.709**	.000	.190**	.002
Farm size	.153**	.006	.134*	.032

**. Correlation is significant at the 0.05 level (2-tailed)*

***. Correlation is significant at the 0.01 level (2-tailed)*

6.12 Influence of education and farming experience on farm size as potential farm income generator

A negative correlation was found to exist between the educational level of farmers and farming experience (r= -0.324; p<0.001) of farmers (Table 6.11). This means that farmers with higher educational qualification are relative younger farmers with a few years of farming experience and they are also generally farming on relative small farm sizes (<5ha).

A significant positive correlation exists between farming experience and farm income as a share of household income (r=0.317; p<0.001) (Table 6.11). This implies that farmers with more farming experience are proportionally contributing significantly to their household income.

Table 6.11: Pearson correlation of farmers' educational level, farming experience, farm size and potential income (N=316)

Project Impact	EDUCATIONAL LEVEL		FARMING EXPERIENCE	
	Pearson correlation	Sig.(2-tailed)	Pearson correlation	Sig. (2-tailed)
Farming experience	-.324**	.000	–	–
Farm size	-.238**	.000	.192**	.001
Share of farming in household total income	-.036	.529	.317**	.000

**. Correlation is significant at the 0.05 level (2-tailed)*

***. Correlation is significant at the 0.01 level (2-tailed)*

6.13 Conclusion

This chapter illustrated that 88% of the respondents were male household headed, married (91.8%) and above 30 years old of age (92.7%). 42.4% of the households have a household size of more than five included with less than 5 dependants (61.1%). Seventy-three percentage of farmers had farming experience of more than 10 years. They practice mainly crop farming on relative small farms (<6ha) with the main crops cultivated: maize and cassava. A few of them combined crop and livestock production. 89.1% farmers are involved in off-farm ventures like trading of agricultural inputs, hunting, artisans and government jobs.

Older farmers have in general lower educational qualifications. A significant negative correlation ($r= -0.417$; $p<0.001$) exists between educational level and household size. Household size was positively correlated with farm size ($r= -0.134$; $p<0.05$) and farming experience ($r= -0.190$; $p<0.05$). A negative correlation was found between the educational level of farmers and farming experience ($r= -0.324$; $p<0.001$) as well as farm size ($r=-0.238$; $p<0.001$). This implies that farmers with higher educational qualification are relative younger farmers with lower farming experience.

CHAPTER 7
PERCEIVED RELEVANCE AND EFFECTIVENESS OF NPFS AND FADAMA III PROJECTS

7.1 Introduction

This chapter provides an insight into how effective NPFS and FADAMA III projects were perceived in addressing food security, agricultural development and institutional improvement in the study area. The measurement of effectiveness of these projects manifest in using of the following criteria: relevance of project; how the project beneficiaries rated the projects in meeting their needs regarding farm productivity, impact on household income and improving of livelihoods; how the project staff rated the projects in addressing the beneficiaries' livelihood and effectiveness in achieving overall objectives.

7.2 Relevance of project to beneficiaries

Table 7.1 shows that 77% of the total 316 respondents perceived FADAMA III project as relevant in addressing food security and general agricultural development. In comparison to this, only 23% of the 316 respondents participating in NPFS projects perceived it as relevant in meeting their needs on agricultural production, household income and improving of livelihoods. A possible reason for these differential perceptions may be due to the different scope of the two projects in terms of policies and execution.

Table 7.1: Perceived relevance of FADAMA III and NPFS projects (N=316)

Project	**Frequency**	**Percentage (%)**	**Relevance frequency**	**Relevance percentage (%)**
NPFS (ADP)	100	31.6	73	23.1
FADAMA III	216	68.4	243	76.9
Total	**316**	**100.0**	**316**	**100.0**

Table 7.2 shows some relationships between project relevance and important socio-economic characteristics selected. Male respondents found both projects more relevant than female (X^2=3.845, df=1, p<0.05), while married respondents also benefitted more from the relevance of both projects (X^2=8.511, df=3, p=0.05). A possible reason for this is that the criteria set for participating in the projects are more acceptable for men than women farmers. It is further important to highlight that as farmers become older (r=–0.184,

p=0.001) and gain more farming experience (r=–0.213, p=0.000), the relevance of both projects are perceived to become less relevant.

Table 7.2: Relationships between project relevance and socio-economic characteristics of respondents (N=316)

Socio-economic characteristics	**Chi-square value (X^2)**	**Df**	**Asymp. sig. (2-sided)**
Gender	3.845	1	0.005
Marital status	8.511	3	0.050
Information source of NPFS	51.992	7	0.000
Information source of FADAMA III	1.792	6	0.938
Socio-economic characteristics	**Pearson correlation**		**Sig. (2-tailed)**
Age	-.184**		.001
Educational level	.037		.514
Farming experience	-.213**		.000
Farm size	.086		.126

***. Correlation is significant at the 0.01 level (2-tailed)*

7.3 Perceived impact of projects by beneficiaries

Project beneficiaries were asked to value the impact of these two projects on their household income, farm productivity, household feeding and other needs, job opportunities and basic amenities. Impact in this research implies the effect of projects on beneficiaries' livelihood like food security, transport, water and electricity supply and potential generator of job opportunities.

7.3.1 Project impact on the household needs of beneficiaries

Respondents were asked to value the impact of projects on their livelihoods by using a Likert scale ranging from 1=low to 3=high. (Table 7.3).

Table 7.3: Perceived impact of projects on the livelihood of beneficiaries

Project Impact	**Percentage (%)**	
NPFS Project (N=100)	**Low**	**High**
Household feeding	30.7	69.3
Transportation	27.7	72.3
Job opportunity	41.6	58.4
Electricity supply	55.5	44.5
Water supply	48.5	51.5
FADAMA III Project(N=216)		
Household feeding	33.8	66.2
Transportation	48.2	51.8
Job opportunity	58.8	41.2
Electricity supply	93.5	6.5
Water supply	8.3	91.7

Impact on feeding of household

The majority of NPFS beneficiaries (69.3%) and FADAMA III beneficiaries (66.2%) perceived projects to have a high impact on their household feeding status (Table 7.3). These perceptions were raised because beneficiaries of these projects had produced relatively more food for home consumption than those members of the community not participating in these projects.

The impact of NPFS projects on household feeding was more significant for heads of households (X^2=7.934, df=2, p<0.05); respondents involved in off-farm activities (X^2=48.293, df=8, p<0.001) and elder respondents (r=0.307, p=0.002).

A strong negative correlation (r=–0.454, p=0.000) was found between respondents with relative high educational levels and the potential impact of the NPFS project on household food security (Table 7.4). This illustrates that respondents with improved educational attainment are less dependent on projects like NPFS to sustain food security.

With the FADAMA III project, respondents that are involved in off-farm activities perceived the project to have positively impacted on their household feeding needs (X^2=42.412, df=8, p<0.001). A possible reason for this significant relationship may be because farmers with

alternative income sources were financially in a better position to fully participate in the project, since farmers are expected to contribute a specific percentage of the required starting capital. Therefore it was also no surprise that relative big households perceived FADAMA III project to be less successful to address the food security needs (r=–0.154, p=0.048). Farmers with big land sizes also did not benefit from the impact of FADAMA III on securing household food needs (r=–0.189, p=0.005) since they are more independent and most possibly produce enough food for home consumption and surplus to sell (Table 7.4).

Table 7.4: Relationships between impact of projects on household feeding and certain socio-economic characteristics (N=316)

Socio-economic characteristics	NPFS project (N=100)			FADAMA project (N=216)		
	Chi-square value (X^2)	df	Asymp. sig. (2-sided)	Chi-square value (X^2)	df	Asymp. sig. (2-sided)
Household head	7.934	2	.019	3.379	2	.185
Off-farm occupation	48.293	8	.000	42.412	8	.000
	Pearson correlation		Sig. (2-tailed)	Pearson correlation		Sig. (2-tailed)
Age	.307**		.002	-.048		.483
Household size	.135		.197	-.154*		.048
Educational level	-.454**		.000	.114		.095
Farm size	-.140		.163	-.189**		.005

**. Correlation is significant at the 0.05 level (2-tailed)*

***. Correlation is significant at the 0.01 level (2-tailed)*

Impact on transport through road improvement

Both NPFS and FADAMA projects were expected to fulfill some community development activities like the rehabilitation of roads and other social amenities. One of the purposes of inclusion of this community development projects is to ensure all citizens (also those who were not selected to participate in these projects) will benefit indirectly from projects like these.

Table 7.3 illustrates that 72.3% of NPFS and 51.8% of FADAMA III beneficiaries perceived these projects to have high impact on the means and easiness of transport. It appears that

the NPFS project has greater impact on transportation than FADAMA III project because NPFS projects placed more emphasis on good road networks for effective operation.

Impact on potential job opportunities

One of the objectives of both projects was to provide participants with start-up capital to start an agricultural enterprise, which could also be used to generate job opportunities for the unemployed in the community. Fifty eight percent of NPFS beneficiaries perceived the project has impacted on the generating of job opportunities to community members in comparison to the 41.2% of FADAMA III beneficiaries (Table 7.3). The reason for this differential perception is that the NPFS project disbursed the total start-up capital required to start an enterprise, while FADAMA III on the other hand provided proportional funding to start a new enterprise.

Farmers with relatively more farming experience did not share the same opinion about potential job opportunities (r=-0.256; p=0.01) to be generated by NPFS projects (Table 7.5). Respondents with relatively high educational levels perceive the FADAMA III project more relevant in terms of generating potential job opportunities (r=0.283; p<0.001) than NPFS respondents (r=0.122; p=0.225).

Table 7.5: Relationship between potential impact of project on generating job opportunities and some socio-economic characteristics (N=316)

Socio-economic characteristics	NPFS (N=100)		FADAMA (N=216)	
	Pearson correlation	Sig. (2-tailed)	Pearson correlation	Sig. (2-tailed)
Educational level	.122	.225	.283**	.000
Farming experience	-.256**	.010	-.077	.264

**. Correlation is significant at the 0.05 level (2-tailed)*

***. Correlation is significant at the 0.01 level (2-tailed)*

Impact on electricity and water supply

As mentioned earlier, both projects were designed to improve community social development and standard of living like reliable electricity and water supply. However, the impact of both projects on electricity supply to households was perceived to be low with respectively 93.5% of NPFS beneficiaries and 55.5% of FADAMA III beneficiaries. The

general state of electricity supply in Nigeria is less than the demand, and therefore projects like these find it challenging to address electricity supply.

The term “FADAMA” means low-land water supply. The project started with provision of irrigation water for agricultural purpose. This objective is also one of the major objectives of the NPFS projects. Both projects aim to ensure constant water supply to the farming community for agricultural and household purpose. In general, the impact of these two projects on water supply to farming and community households was significant with 51.5% of NPFS beneficiaries and 91.7% of FADAMA III beneficiaries perceiving it to be highly successful. This might be as a result of the construction of many community wells and boreholes drilled in the project areas (Table 7.3).

7.3.2 Effectiveness of projects on food security and agricultural production

This section addresses the effectiveness of projects on household food security and agricultural production. “Effectiveness” with regard to this study refers to the successful execution of projects to address their objectives.

Effectiveness of NPFS and FADAMA III projects

Table 7.6 reveals that NPFS project beneficiaries perceived the project to be effective with regard to supporting agricultural production (62.7%), through loans or grants they could access *via* the project. 55.6% of NPFS project beneficiaries also perceived the project to be effective in addressing household food security, while 57.8% of beneficiaries perceived the project to be effective in improving household income. In general, respondents are of opinion that the project also ensured that the extension delivery system improved. Extension was actively involved in project monitoring to ensure productive and efficient disbursing of funds disbursed to beneficiaries. Farmers however were less satisfied with the effectiveness of the project in terms of developing infrastructures in the community. A possible reason for this might be because the NPFS project mainly focused on empowerment of beneficiaries through training and capacity building instead of infrastructural development.

Table 7.6: Perceived effectiveness of projects addressing objectives regarding food security and agricultural production

Project impact	**Percentage (%)**	
NPFS Project (N=100)	**Low**	**High**
Agricultural production	37.4	62.7
Household income	42.2	57.8
Food security	44.5	55.6
Infrastructural development	53.9	46.1
Extension delivery	38.2	61.8
FADAMA III project (N=216)		
Agricultural production	33.5	66.6
Household income	53.4	46.6
Access to agricultural input	55.7	44.3
Financial assistance	68.3	31.7
Potential job opportunity	69.6	30.3
Natural resource management	33.0	67.0
Rural infrastructure	41.2	58.8
Extension delivery	24.0	76.0

The FADAMA III project was perceived to be effective with regard to agricultural production (66.6%) through assistance rendered to farmers to boost agricultural production. Table 7.6 also reveals that FADAMA III project was also effective with promoting improved management of community natural resources (67%) as well as the delivery of extension services to farmers (76%). FADAMA III project was built on the success of FADAMA II project, which encouraged minimal tillage and ecological-friendly farming operations to prevent depletion of natural resources. The project also employed the services of competent extension workers to ensure that resources invested on beneficiaries are not misused. 68.3% of project beneficiaries perceived the project to be less effective in providing financial assistance and creating of job opportunities (69.6%), because through the FADAMA III project only a portion of the counterpart funding was disbursed to beneficiaries. The project was also perceived less effective in the creating of jobs in the

community since project ventures were mainly awarded to external contractors instead of local community contractors.

7.3.3 Effectiveness of project with regard to institutional development

The effectiveness of these two projects were assessed in terms of institutional development. Aspects like effectiveness in group promotion; improving of production and marketing skills; criteria used for selection of beneficiaries; contract outsourcing; information sources used to make people aware of the project; speed of releasing funds; beneficiary and staff training and overall extension workers performances were taken as criteria to measure the effectiveness of projects.

a) Farmer group promotion

Respondents were asked to rate the effectiveness of these two projects on a Likert scale, ranging from no benefit to highly benefit. Table 7.7 shows that 79.8% of respondents perceived both projects succeeded in promoting group formation and participation of group members in deliberations. This might be due to the procedures these two projects followed, which expect each beneficiary to be properly rooted in a functioning group before they are allowed to participate and benefit from the projects.

Table 7.7: Perceived effectiveness of NPFS and FADAMA III projects regarding improvement of institutional development

NPFS and FADAMA III	Percentage (%)	
	No benefit	High Benefit
Group promotion	20.2	79.8
Production skills	37.2	62.8
Marketing skills	53.4	46.6

b) Production skills

62.8% of beneficiaries perceived they have gained new production skills from these projects. NPFS and FADAMA III projects trained beneficiaries to improve their production skills in allocating scarce resources for optimal output production and profit in their respective enterprises. For instance, most of the beneficiaries testified to the mixed cropping techniques they are following since the inception of projects and which impacted on their overall production.

c) Marketing skills

Fifty three percent of respondents perceived little gaining on marketing skills from these projects. Most of the farmers complained about unstable market price as well as existing poor skills and knowledge to process perishable farm produce in order to attract more sales. Sound marketing skills are necessary to ensure farm produce reach the final consumers timely and in a good condition. These two projects have assisted some farmers by linking them to external markets and also have trained the farmers on how to maintain such market links.

7.3.4 Effectiveness of the execution of NPFS and FADAMA III projects

As highlighted in Table 7.8, the effectiveness of both projects in terms of their execution was assessed by the beneficiaries using the following: selection criteria; project contract outsourcing; speed of releasing funds; training (farmers and project staff); and information sources used to raise awareness.

Table 7.8: Perceived effectiveness of projects regarding the execution of projects

	Percentage (%)	
Selection criteria	**Poor**	**Good/very good**
NPFS Project	59.8	40.2
FADAMA III Project	62.0	38.0
Project contract outsourcing	**Very little**	**Full**
NPFS Project	23.8	76.2
FADAMA III Project	63.7	36.3
Speed of fund release	**Slow/difficult**	**Fast/easy**
NPFS Project	80.5	19.5
FADAMA III Project	91.8	8.2
Training	**Poor**	**Good/very good**
NPFS Project	3.0	97.0
FADAMA III Project	8.6	91.4

a) Selection criteria

The selection criteria for project beneficiaries involve the following:

- Beneficiaries of both projects are expected to be active members of a registered farmer group and not participating in similar projects;
- Beneficiaries must also be recommended by their respective farmer group to participate in these projects;
- NPFS project beneficiaries are expected to submit a profitable enterprise proposal while FADAMA III beneficiaries are expected to submit records of their financial status so as to reveal their capacity to balance the required project's counterpart funds.
- Beneficiaries are eventually selected after evaluation by project officials.

Respondents were asked to rate the appropriateness of the selection criteria used to select respondents on a four point Likert scale ranging from 1=Poor to 4=Very good. Table 7.8 shows that 59.8% of NPFS project beneficiaries and 62.0% of FADAMA III project beneficiaries perceived the selection criteria used not acceptable appropriate and poorly constructed for their needs. This illustrates that beneficiaries from both projects were not satisfied with the current selection criteria used, and it is recommended to investigate how such criteria should be revised in order to ensure full acceptance by the beneficiaries for future projects.

b) Project contract outsourcing

Contract outsourcing implies awarding project ventures either to local or external contractors who are approved by the beneficiaries or project officials. Again respondents were asked to indicate to what extent projects have been outsourced and what control they had with regard to decision taken. Table 7.8 shows that 76.2% of NPFS project beneficiaries perceived they have full control to the outsourcing of project ventures to contractors, while 63.7% of FADAMA III project beneficiaries felt they had very little decision power in the outsourcing of certain aspects of the projects. Within the NPFS project, beneficiaries had strong opinions regarding who are to execute their project. Certain ventures were outsourced to local contractors who are familiar to the farmers. In the case of FADAMA III, project officials rather than the beneficiaries took the lead in deciding who to outsource project ventures to. Therefore, many of FADAMA III project beneficiaries complained of this predicament and complained that this menace has led to desertion of

some facilities and equipment because most of the foreign contractors were untraceable to fix the problems they constructed. They further stressed that this could have been prevented if they were also allowed to outsource the ventures to well-known local contractors, who they could easily approach in cases of future adjustments or repairing required. Giving project beneficiaries sufficient control to decide on the contractors to use is important for the mobilization and active involvement of the participants.

c) Speed of releasing funds

Beneficiaries of both projects perceived the speed of releasing funds for members to be very slow and the process of releasing was complicated. This has resulted to situations where loans could not be recovered as some of the beneficiaries have diverted funds to alternative perhaps unproductive enterprises because of the late releasing of funds. These results illustrate the serious concern by beneficiaries to revisit funds disbursement processes for agricultural development projects and to prevent that beneficiaries fail because of poor fund releasing.

d) Training

Respondents were asked whether they received any training during the course of these projects. All beneficiaries of both projects confirmed they received training during the life span of the projects. The training was mainly offered by the project staff and both NPFS (97%) and FADAMA III (91.4%) project beneficiaries perceived the training to be effective and appropriate (Table 7.8). The training majorly focused on improving agricultural production skills and enhancing profitable business enterprises.

e) Information sources used for awareness raising

Table 7.9 shows that family members played a very important role in making beneficiaries aware of these two projects. Secondly, fellow farmers and government extension workers played an important role in raising awareness. It however appears that extension workers played a more prominent role in raising awareness regarding the FADAMA III project than in the case of NPFS project.

Table 7.9: Frequency distribution of information sources used by beneficiaries to become aware of projects

Awareness sources used	Percentage (%)	
	NPFS (N=100)	FADAMA III (N=216)
Family members and media	48.5	40.8
Fellow farmers and media	20.8	10.2
Government extension worker and media	16.8	35.9
Farmer group	9.9	8.7
Friends	3.0	3.4
Project staff and consultant	1.0	1.0

7.4 Project staff perceptions of the effectiveness of the two projects

Apart from project beneficiaries' perceptions on the effectiveness of projects, the study also collected the responses of project staff who were involved in the execution of projects. They were asked to assess how effective these two projects were in addressing the beneficiary needs, improving household income, achieving of project goals, the appropriateness of selection criteria used for selection of potential participants and speed of releasing funds.

a) Consideration of beneficiaries needs

NPFS project staff (60%) perceived in general they did not fully consider the needs of beneficiaries in the planning and designing of farmer projects, while the FADAMA III project staff (56.5%) perceived they were placing client needs as of a high priority (Table 7.10). This might be because within the FADAMA III project, a specific call for a dialogue between beneficiaries and project officials before deciding on a particular project venture is a precondition. This project also requires beneficiaries to contribute a share of the counterpart funding which also requires that the potential beneficiary should be happy with what is planned and designed for his/her specific situation. In contrast to this, the NPFS project disburses full loans to beneficiaries to start an enterprise, if it is strictly related to agriculture.

b) Addressing of household income

Project staff of both projects as illustrated in Table 7.10 perceived a fairly high impact of both projects in addressing the household income of beneficiaries. Although, this contradicts the response from FADAMA III projects beneficiaries as illustrated in Table 7.6.

c) Achieving overall objectives of projects

NPFS project staff (60%) perceived the project as not effective in achieving its overall objectives, while the majority of FADAMA III project staff (87%) perceived the project as effective and very effective (Table 7.10). A possible reason for this is the fact that NPFS project staff claimed that a huge percentage of the loans disbursed to the beneficiaries were not recovered to sustain the project. FADAMA III project staff on the other hand perceived it as a success because a number of community structures like boreholes, wells were successfully established.

d) Selection criteria

In contrast to the perception of beneficiaries, where the majority from both projects perceived the selection criteria not appropriate (Table 7.8), project staff on the other hand are of opinion these selection criteria was acceptable and appropriate for these specific projects (Table 7.10).

e) Project contract outsourcing

As been explained in the discussion of Table 7.8, beneficiaries from the NPFS project perceived the outsourcing of contracts acceptable since well-known local contractors were used for this purpose. This perception was confirmed by 60.0% of NPFS project staff. In the case of FADAMA III, outsourcing was done to outside contractors, which led to numerous challenges previously discussed. Therefore it was also encouraging to note that 57% of FADAMA III project staff are of opinion that the current contractor arrangements are not effective and should be revised (Table 7.10).

f) Speed of releasing funds

Although beneficiaries from both projects were very disappointed in the slow releasing of funds (Table 7.8) both NPFS project staff (50%) and FADAMA III project staff (60.9%) perceived the releasing of funds within the project as “fast”. This differential perceptions may be because of the fact that perhaps project staff received funds fast from the sponsors, but did not realize that the disbursement process to beneficiaries is very slow. This finding should also be further investigated (Table 7.10).

Table 7.10: Project effectiveness as perceived by the project staff (N=43)

Project Impact	Percentage (%)	
Consideration of beneficiaries needs	**Low**	**High**
NPFS Project	60.0	40.0
FADAMA III Project	43.5	56.5
Addressing household income	**Low**	**High**
NPFS Project	30.0	70.0
FADAMA III Project	30.5	69.5
Effectiveness in achieving overall objectives	**Not effective**	**Effective**
NPFS Project	60.0	40.0
FADAMA III Project	13.0	87.0
Selection criteria	**Not acceptable**	**Acceptable**
NPFS Project	35.0	65.0
FADAMA III Project	30.4	69.6
Project contract outsourcing	**Very little**	**Full**
NPFS Project	40.0	60.0
FADAMA III Project	56.5	43.5
Speed of fund release	**Slow**	**Fast**
NPFS Project	50.0	50.0
FADAMA III Project	30.4	69.6
Monitoring of loan or funds utilization	**Poor**	**Good**
NPFS Project	30.0	70.0
FADAMA III Project	17.4	82.6
Loan or Funds recovery effectiveness	**Not effective**	**Effective**
NPFS Project	85.0	15.0
FADAMA III Project	65.2	34.8

g) Monitoring of the loan or funds utilization

The majority of staff from both projects (NPFS=70%, FADAMA III=82.6%) perceived “good” monitoring of project fund utilization by beneficiaries (Table 7.10).

h) Effectiveness of loan recovery

As discussed above, project staff from both projects were of the opinion they have effectively monitored funds utilization. However, Table 7.10 shows that 85% of NPFS project staff perceived the recovery of loan from beneficiaries as “not effective”, while

65.2% of FADAMA III project staff perceived the contribution of counterpart funding from beneficiaries not effective. A possible reason for this opinion is that unproductive use of funds by many of the beneficiaries hinders them to repay the loans at the agreed time. Therefore, improved methods or strategies are required to ensure beneficiaries utilize loans more effectively so as to yield production outcomes and enable effective loan recovery.

i) Effectiveness of training and cooperation of beneficiaries

Table 7.11 shows that staff was in general happy with beneficiaries' cooperation during the training courses conducted in the various projects. The cooperation of beneficiaries was perceived to be good, and in the case of NPFS, a well-structured beneficiary group existed which contributed to the cooperation in the training conducted.

Table 7.11: Effectiveness of training as perceived by the project staff (N=43)

Project Impact	**Percentage (%)**	
Beneficiaries' cooperation	**Poor**	**Good**
NPFS Project	30.0	70.0
FADAMA III Project	43.5	56.5
Training offered to beneficiaries		
NPFS Project	73.7	26.3
FADAMA III Project	65.2	34.8
Training received by project staff		
NPFS Project	0.0	100.0
FADAMA III Project	0.0	100.0
Results of training with respect to project outcomes		
NPFS Project	10.5	89.5
FADAMA III Project	57.0	43.0

With the FADAMA III project, beneficiaries were organized into two groups: Farmers' Community Associations and Farmers' Users Group. In some instances, a need may exists to execute a FADAMA community projects which requires tedious inclusive agreement from all parties which can become challenging and time consuming before decisions can be taken. When project staff were asked about the impact of effectiveness of training regarding achieving project outcomes, 57% of FADAMA III project staff perceived the training did not

result in improved project outcomes, while NPFS project staff was in general satisfied with the results of training conducted.

The entire project staff reflected they facilitated one or more of the training sessions with project beneficiaries, which was also confirmed during the interviews with beneficiaries. Table 7.11 however shows that majority of the project staff of both projects were not satisfied with the training offered to beneficiaries. The reason for this opinion was that project officials claimed they managed to receive limited funds (part payment) to facilitate training for beneficiaries.

7.5 Conclusion

This chapter discussed the perceived relevance and effectiveness of NPFS and FADAMA III projects in terms of farmers' livelihood, household food security, agricultural development, institutional development and the extent at which these projects achieved their objectives. Table 7.12 provides a summary of notable findings regarding the two projects.

Table 7.12: Effectiveness of NPFS and FADAMA III projects as perceived by beneficiaries

Criteria	NPFS project	FADAMA III project
Household feeding	Effective	Effective
Transportation	Effective	Effective
Job opportunity	Effective	Not effective
Electricity supply	Not effective	Not effective
Water supply	Effective	Effective
Food security	Effective	___
Agricultural production	Effective	Effective
Access to agricultural inputs	___	Not effective
Household income	Effective	Not effective
Rural infrastructure	Not effective	Effective
Natural resource management	___	Effective
Extension delivery system	Effective	Effective
Financial assistance	___	Not effective
Farmer group promotion	Effective	Effective
Production skills development	Effective	Effective
Marketing skills development	Not effective	Not effective
Beneficiaries' selection criteria	Not effective	Not effective
Control to outsource project	Effective	Not effective
Speed of fund release	Not effective	Not effective
Loan/counterpart fund recovery	Not effective	Not effective
Training success	Effective	Effective
Extension workers' involvement and performance	Effective	Effective
Achieving overall objective	Not effective	Effective

CHAPTER 8
THE INTERVENING PROCESSES AND SUSTAINABILITY OF NPFS AND FADAMA III PROJECTS

8.1 Introduction

This chapter reflects on the intervening processes (Objective 4) followed and sustainability (Objective 3) of both projects as perceived by both project beneficiaries and staff. The first part of the discussion focuses on the intervening processes implemented in the projects, which include the level of participation and training of project beneficiaries, staff and other stakeholders.

The second part of the chapter focuses on the sustainability of the projects as manifested in the following attributes: relevance; duration; current benefitting and participation of beneficiaries; acceptability of project in addressing beneficiaries' needs; loan/funds management; project challenges and other prevailing constraints as perceived by the beneficiaries and staff.

8.2 The intervening processes regarding stakeholders' involvement

This section describes the level and quality of different stakeholders' involvement in the two selected projects. The identified stakeholders are: Federal government; State government; Local government; project beneficiaries; NGOs and the World Bank. The participation of all stakeholders is important for the successful executions of development programmes like these and without proper participation, there would be no programme and no development (Nxumalo and Oladele, 2013).

8.2.1 Involvement of projects' beneficiaries as perceived by the beneficiaries

Table 8.1 shows that NPFS project beneficiaries were satisfied with their involvement at all four stages of the project cycle namely project planning (93%); group formation (82%); project implementation (95%) and project evaluation (76%) respectively.

The FADAMA III project beneficiaries were however little bit less satisfied with their participation during the four stages of the project namely project planning (80%); group formation (80%); project implementation (80%) and project evaluation (61%). These beneficiaries were especially less satisfied with their involvement during the evaluation stage of the project since project staff are mainly responsible for the evaluation of

agricultural development projects, which happened most of the time without full participation of beneficiaries.

Table 8.1: Beneficiaries' satisfaction with their involvement in the project

Project level	Percentage (%)	
	Unsatisfied	Satisfied
NPFS Project (N=100)		
Project planning	6.9	93.1
Group formation	17.9	82.1
Project implementation	5.0	95.0
Project evaluation	24.2	75.8
FADAMA III Project (N=216)		
Project planning	20.2	79.8
Group formation	20.2	79.8
Project implementation	19.5	80.5
Project evaluation	38.7	61.3

Table 8.2 shows that majority of both project beneficiaries perceived their active involvement in the projects contributed to achieving better project outcomes. Positive significant relationships were found between NPFS beneficiaries' level of involvement and agricultural productivity (r=0.301; p=0.004) as well as involvement of FADAMA III project beneficiaries and farm productivity (r=0.206; p=0.001) and also improvement of household income (r=0.225; p=0.001).

Table 8.2: Beneficiaries' perceived effect of involvement in achieving project outcomes

Effect of your involvement in	Percentage (%)	
	Poor	Good
NPFS project	16.8	83.2
FADAMA III project	6.0	94.0

8.2.2 Involvement of project staff during project cycle

Table 8.3 reveals that the majority of project staff claimed they were strongly involved during all the stages of the project cycle of the two projects.

Table 8.3: Project staff perceived involvement at each stage of the project cycle

Project level	**Percentage (%)**	
NPFS Project (N=20)	**Weak**	**Strong**
Project Planning	15.0	85.0
Group formation	7.5	92.5
Project implementation	7.5	92.5
Project evaluation	17.5	82.5
FADAMA III Project (N=23)		
Project Planning	19.6	80.4
Group formation	8.7	91.3
Project implementation	15.2	84.8
Project evaluation	26.1	73.9

8.2.3 Involvement of project beneficiaries as perceived by project staff

The project staff is the personnel who are charged with the responsibilities of executing NPFS and FADAMA III projects. NPFS project staff involved and selected for the project was different from the FADAMA III staff selected. Project staff for NPFS include: extension workers, project facilitators and some Ministry of Agriculture employees and administrators. Their roles include technical support, organizational support, group mobilization and facilitation, mentorship and offering of training. FADAMA III project staff consists of the government officials and local government facilitators. The government officials were responsible for overseeing the affairs of the project and therefore more involved in project reporting and documentation. The local government officers on the other hand were responsible for project field operation and monitoring.

Table 8.4 reveals that both NPFS and FADAMA III project staff was satisfied with beneficiaries' involvement during all four stages of the projects. Concerns were raised by NPFS staff about the involvement of beneficiaries during the planning and evaluation stages of project. The FADAMA III project staff raised more serious concerns regarding the level of participation of project beneficiaries during the planning and evaluation stages of the project. The perceived dissatisfactory levels of beneficiaries' involvement during the

evaluation stage of project correlates with the perception of beneficiaries of both projects (Table 8.1 and Table 8.4).

Table 8.4: Perception of beneficiaries' involvement at different stages of the project

Project level	Percentage (%)	
	Unsatisfied	Satisfied
NPFS Project (N=20)		
Project Planning	32.5	67.5
Group formation	12.5	87.5
Project implementation	15.0	85.0
Project evaluation	35.0	65.0
FADAMA III Project (N=23)		
Project Planning	41.3	58.7
Group formation	4.5	95.5
Project implementation	21.8	78.2
Project evaluation	41.3	58.7

8.2.4 Linkages with other stakeholders

The tiers of government in the country are federal, state and local government. Khemani (2001) elaborated more on the functions of these three tiers of governance. The federal government of Nigeria is composed of 36 state governments and 774 local governments areas (USAID, 2004). Local government in Nigeria was legally established as a representative council to support the activities of the state and federal governments in their areas (Nwalieji and Igbokwe, 2011). Most often, the three tiers of government proportionally pull resources together in executing development projects in the country. In addition, other non-governmental and international agencies such as: the World Bank, USAID (US Agency for International Development), ADB (African Development Bank), Food and Agricultural Organization of the United Nations (FAO), UNICEF (United Nations International Children's Emergency Fund), etc. support these tiers of government for effective and sustainable execution of development projects.

Table 8.5 shows that project staff of both projects indicated to have strong linkages with the federal and state government. NPFS project staff however perceived weak linkages with local governments and NGOs. The reason for these weak linkages might be that the NPFS project is conducted by the Federal Government and jointly implemented by the Federal Ministry of Agriculture and Water Resources (FMAWR) and Food and Agricultural Organization of the United Nations (FAO). Therefore, the linkages with NGOs only stretched as far as partially funding the project. Since federal and state government were mainly responsible for the implementation and monitoring of the project, local government was only partially involved in monitoring of the project.

In the case of the FADAMA III project, some project staff also identified weak linkages existing with local government (4.3%) and NGOs (25%). The World Bank acted as the main donor for this project by contributing a large share of the project fund. Local government was the main role player in capacity building of beneficiaries during the project, although federal and state government also played an important role. Strong involvement of all tiers of government in all agricultural development projects is required to ensure the needs of beneficiaries at grassroots level are sufficiently addressed.

Table 8.5: Project staff perceptions on linkages with government's tiers and NGO's in the projects

Stakeholders	NPFS project			FADAMA III project		
	Percentage (%)			Percentage (%)		
	Weak	Strong	Very strong	Weak	Strong	Very strong
Federal government	0.0	50.0	50.0	0.0	13.0	87.0
State government	15.0	75.0	10.0	0.0	73.9	26.1
Local government	50.0	45.0	5.0	4.3	82.6	13.0
NGO	50.0	50.0	0.0	25.0	50.0	25.0

8.3 Training of stakeholders

Training forms an important pillar of any agricultural project and apart from beneficiaries, project personnel or extension staff also requires basic skills training regarding the operations; implementation of projects. Often the training required is mainly to brush-up project officials before they become involved in a project. This section highlights the content

of training courses offered and the perceived effectiveness of these training courses offered.

8.3.1 Content of courses offered to project staff

All project staff of both projects claimed they received training before the projects commenced. In general, they perceived the training to be good and appropriate. Table 8.6 highlights the contents of the courses offered.

Table 8.6: Content of training courses offered to project staff

NPFS Project	FADAMA III Project
1. Farm operation practices	1. Local Development Plan (LDP)
2. Disbursement of funds and budget implementation	2. Proposal writing
3. Coordination of beneficiaries	3. Group cohesiveness and communication skills
4. Communication skills	4. Project management, procurement workshop and enterprise management
5. Community-based procurement and financial management	5. Farm operation
	6. Fadama User Equity Fund (FUEF)

a. NPFS training courses

- *Farm operation practices:* This include training on farm production skills for livestock and agronomic practices. It also entails training in Integrated Plant Production Management *(IPPM)*, which focuses on: fertilizer application; chemical application for effective weed control and pest control on farm; planting spacing as well as pre- and post-planting management of crops.
- *Disbursement of funds and budget implementation:* This involves training on how to ensure accurate releasing of funds to verified beneficiaries. It also equips staff to effectively make use of the project budget to assist beneficiaries.
- *Coordination of beneficiaries:* This training involves how to effectively organize beneficiaries into accessible groups for coordinated relationship.
- *Communication skills:* It involves invigorating the communication skills of project staff to approach and interact with the beneficiaries.

- *Community-based procurement and financial management:* This training enlightened project staff to assist the beneficiaries in purchasing and making use of local resources for their farm production and to judiciously utilize the funds they received.

b. FADAMA III project training courses
   - *Local Development Plan (LDP):* This training involves holistic development project planning for individual communities taking into consideration proposed budgets. It capacitates participants how to involve Farmer Community Associations (FCA) in order to arrive at important project objectives.
   - *Proposal writing:* Training of staff on how to structure their activities or plans for their assigned community as well as to guide beneficiaries groups to construct profitable project proposals that align with the project budget.
   - *Group cohesiveness and communication skills:* To intensify the communication skills of project staff in their mutual relationship with the beneficiaries. This training was also focused on the building of strong cohesive groups required to facilitate successful community development.
   - *Project management, procurement and enterprise management:* This include training on all aspects of project management and relevant skills for successful project and enterprise execution.
   - *Fadama User Equity Fund (FUEF):* This training shows project staff the percentage of counterpart fund allocated to concerned stakeholders and how to obtain these funds.
   - *Farm operation:* This training focuses on sustainable farm production practices which include ecological-friendly farming methods, training in livestock rearing, packaging and storing of farm produce.

8.3.2 Content and facilitators used for training of beneficiaries

87.7% of NPFS project beneficiaries were trained by extension workers, while the rest received training from project site managers and project enumerators. FADAMA III beneficiaries were trained by extension workers (35.5%); service providers (32.5%); project or state coordinators (24.9%); and Osun FADAMA III workers (7.1%).

The content of the training received by NPFS and FADAMA III project beneficiaries are illustrated in a descending order of frequency in Table 8.7. NPFS project beneficiaries received training on planting of crops (29.7%), fertilizer application (25.9%), farmer field schools (17.2%) and broiler rearing (12%). The training on farmer field schools involves a practical training of farmers on basic and technical farm operations.

FADAMA III project beneficiaries mainly received training on procurement (18%), planting techniques (18%), development and implementation of farm budget (14.1%), harvesting, storage and marketing of crops (13.3%) and group formation (8.3%).

Table 8.7: Content of training offered to project beneficiaries

NPFS Project	Percentage (%)	FADAMA III Project	Percentage (%)
Planting techniques	29.7	Procurement of farm inputs	18.0
Fertilizer application	25.9	Planting techniques	18.0
Farmers Field School training and sensitization	17.2	Development and implementation of farm budget	14.1
Broiler rearing (Livestock)	12.0	Harvesting, storage and marketing of crops	13.3
Plant protection	7.0	Group formation and mobilisation	8.3
Fire tracing	6.3	Fertilizer application	5.8
Budget implementation	1.9	Income sustainability	5.0
		Fire tracing	4.7
		FADAMA User Equity Fund (FUEF)	3.6
		Computer training	3.6
		Livestock rearing	3.3
		Project related training (planning, implementation, evaluation, maintenance, monitoring, record keeping, sustainability, etc.)	2.5

The training on income sustainability for FADAMA III beneficiaries involves enlightening them on how to spend their income judiciously. Beneficiaries were also trained on how to contribute to their FADAMA User Equity Fund (FUEF) and the importance of doing so. Project related training includes the activities and roles of beneficiaries during different phases of the project so as to foster their contribution in the project. The majority of NPFS

beneficiaries (97%) and FADAMA III beneficiaries (91.5%) perceived the training received as effective and appropriate, which is very encouraging.

8.4 Sustainability of NPFS and FADAMA III

Sustainability in the context of these two projects relates to: relevance of the project to address the needs of the beneficiaries; the acceptability of project interventions; the willingness of beneficiaries to participate in the project even though not directly benefitting.

8.4.1 Project relevance to address the needs of beneficiaries

As highlighted under Section 7.2 of Chapter 7, beneficiaries perceived FADAMA III project to be relatively more relevant in addressing their needs than the NPFS project. A possible reason for this could be because of the all-encompassing scope of FADAMA III project, which covers both agricultural production and rural development, unlike the NPFS project that solely focuses on improved agricultural production. For this reason, it appears that beneficiaries rather welcome FADAMA III type of projects, where a more holistic approach is followed in addressing of rural development needs.

8.4.2 Participation of beneficiaries in the projects

The relevance of projects was also measured through the identification of how long participants are willing to participate in a specific project, even after the official lifespan ended. The NPFS project started in 2007 and 83.2% of the project beneficiaries have been participating in the project for more than seven years. In the cases of the FADAMA III project, it started in 2008, and 79.8% of project beneficiaries are still participating since its implementation. These figures indicate that both projects are perceived to be relevant to address the needs of beneficiaries.

8.4.3 Ranking of beneficiaries' needs

Respondents were asked to identify and rank the needs they expected to be addressed by both of these projects. Eight categories of needs were identified, which are summarised and ranked in Table 8.8 in descending order of importance. These are: household needs, financial assistance, business expansion, improved standard of living, farm inputs supply, training and techniques, market opportunities and infrastructural development. The main needs expressed by beneficiaries to be addressed by the projects are household needs (33.6%), which include food security and children education. Increase in household income and financial assistance featured also high (21.3%) on the lists of beneficiaries, while

improvement of farm production and business expansion ranked thirdly. The economic situation in Nigeria over the last two decades is characterized by increased unemployment, retrenchment of workers and reduction in family income, which has adversely affected households' standards of living in the study area. Amao et al. (2013) also analysed the poverty level of farming households in Osun State and concluded that 99.0% of farmers in this area live below the poverty line. Hence, the strong desire of project beneficiaries for the projects to meet their household needs. Some beneficiaries are also exploring alternative sources of livelihood aside farming like hunting, artisan, trading and civil service as reported in Chapter 6.

Table 8.8: Frequency distribution of beneficiaries' identified needs

Needs of beneficiaries		**Responses**	
		n	**Percentage (%)**
1	Household needs which include; (feeding and general food security as well as good quality sponsoring for children education)	385	33.6
2	Financial assistance, increase in household income, FUEF account opening and debt payment	245	21.3
3	Increase in farm production, business expansion, exportation and becoming an employer of labour	226	19.7
4	Improved standard of living and assets which also include; job opportunities, accommodation and good living housing facilities	171	14.9
5	Farm input supply: fertilizers, seeds, planting materials, machineries/tractors; livestock feed, raw materials, etc	69	6.0
6	Training in production techniques, technical support from qualified personnel and enough farming experience	29	2.5
7	Market opportunities to purchase inputs and sell produce, coupled with agricultural diversification	20	1.7
8	Infrastructures (good road construction, water supply and stable electricity provision. etc)	3	0.3

8.4.4 Perceptions of project addressing beneficiaries needs

Figure 8.1 shows that the majority of NPFS (79.2%) and FADAMA III (59.3%) project beneficiaries agreed that the projects addressed their needs. Comparatively as been discussed in Chapter 7, 60.0% of NPFS project staff are of opinion that the project did not fully address all the needs of beneficiaries, while 56.5% of FADAMA III project staff were of opinion that the project indeed addressed all beneficiaries' needs. The differential perception between NPFS project staff and beneficiaries is because of the fact that the beneficiaries are generally satisfied with the funds releasing, while project staff expect the project to address more of infrastructural development challenges. The infrastructural development is assumed to yield a long-term effect than the release of funds.

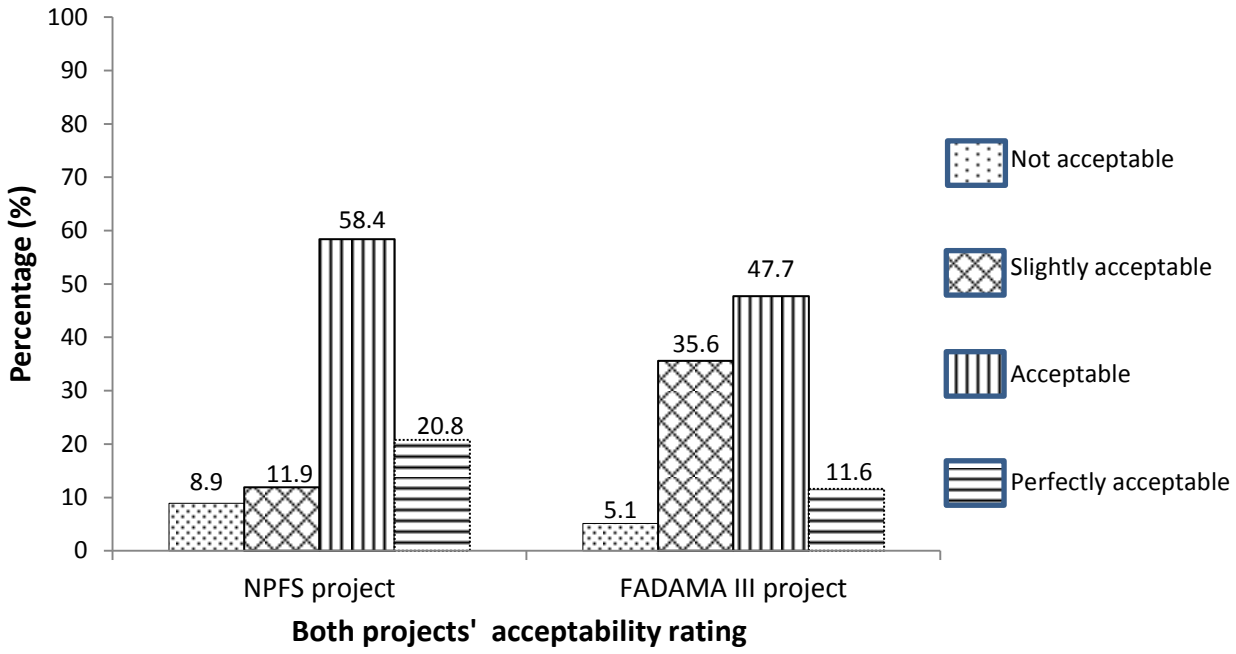

Figure 8.1: Perceived acceptability of projects addressing the needs of beneficiaries

8.4.5 Obtaining and utilization of loans or credit from projects

Beneficiaries in general felt that although they have benefitted from improving their production skills as well as skills to form and manage groups, they would have appreciated more focus on improving of marketing skills. Marketing skills is important to increase their sales of farm produce and also improve their innovative proficiencies to invent new products from farm produce.

Sustaining projects like NPFS and FADAMA III project requires quick disbursement as well as availability of funds to all beneficiaries. 61.4% of NPFS project beneficiaries and 60.6%

of FADAMA III project beneficiaries did not benefit financially from obtaining project loans and funds. This means that these two projects failed to disburse funds equally to all the beneficiaries. A possible reason for this is because of the inability of some beneficiaries to meet the required selection criteria for participating in the projects. However, as been indicated above, beneficiaries of the two projects are satisfied with the projects addressing their needs, which imply that some beneficiaries might have benefited other aspects of the projects aside fundings. For instance, participants in the FADAMA III project also benefitted from the provision of development structures and infrastructures to certain communities. Nevertheless, there is a need to maintain a balance between benefits from credit and other amenities.

A positive correlation (r=0.316; p<0.001) exists between the accessibility of credit to FADAMA III beneficiaries and their current participation in the project (Table 8.9) (Objective 4). This concurs with Etwire et al. (2013b) findings that farmers who benefit from production credit through projects are more likely to sustain participating in it in order to take advantage of these credit facilities. On the other hand, the negative correlation (r=-0.815; p<0.001) that exist with the accessibility of credit to NPFS participants negatively influenced their current willingness to participate in the project.

Table 8.9: Relationship between accessibility to financial credit or loan and willingness of beneficiaries to participate in projects

	Project impacts	**Pearson's Correlation**	**Sig. (2-tailed)**
NPFS project beneficiaries **(N= 100)**	Current project participation or practice	-.815**	.000
	Current financial benefit from NPFS	-.086	.392
FADAMA III project beneficiaries **(N= 216)**	Current project participation or practice	.316**	.000
	Current financial benefit from FADAMA III	.175*	.010

***. Correlation is significant at the 0.01 level (2-tailed)*

**. Correlation is significant at the 0.05 level (2-tailed).*

8.4.5.1 Utilization of obtained loans

92.3% of NPFS and 83.3% of FADAMA III beneficiaries indicated their motive behind applying for credit was for the improvement of farm production. Other reasons stated are self-development through training opportunities offered (7.7%) and financial support to

address household needs (16.7%). Some of the respondents however refused to disclose the motive behind application for loans or credit, which brings an assumption that some of these respondents did not use the loans/credit for production or objectives envisaged for the projects.

8.4.5.2 The speed of loan or credit disbursement

The speed of loan/credit disbursement to beneficiaries affected prudent utilization of the funds for productive use. Section 7.3.4 in Chapter 7 refers to how both projects' beneficiaries and staff perceived the speed of credit disbursement. A significant relationship exists between the speed of disbursing FADAMA III loans and beneficiaries application of credit for proposed enterprise development (X^2=10.764, df=2, p=0.05). Therefore, the speed of releasing project funds has a significant influence on the establishment of new proposed ventures within the project.

Table 8.10 shows that positive correlations exist between the speed of disbursing loans or credit to both projects beneficiaries and their willingness to participate in the selected projects. This supports the findings of Mutegi (2015) that scheduled release of funds rightfully by project sponsor aids timely project implementation.

Table 8.10: Relationship between the speed of releasing credit or loan and willingness for participation in projects

	Project impacts	**Pearson's correlation**	**Sig. (2-tailed)**
NPFS project beneficiaries **N= 100**	Current project participation or practice	.760**	.000
FADAMA III project beneficiaries **N= 216**	Current project participation or practice	.362**	.000

***. Correlation is significant at the 0.01 level (2-tailed)*

8.4.5.3 Ability to recover loans or counterpart funding from project beneficiaries

The sustainment of projects also depends on beneficiaries' ability to refund loans they received and to contribute the counterpart portion of the project funds in the case of NPFS and FADAMA III projects respectively. In Table 7.13 (Chapter 7), project staff of both projects perceived the effectiveness in recovering loans and counterpart funding from beneficiaries as not effective.

A positive significant correlation was found between the speed of releasing NPFS loans and the effectiveness of recovery from beneficiaries ($r=0.558$; $p<0.05$). This implies the faster the release of loans to the beneficiaries, the more effective the recovery of loans in the case of NPFS project. In the case of the FADAMA III project, beneficiaries are required to contribute some percentage of the funds as counterpart before they could access funds from donors. Although donors do not expect the beneficiaries to refund these donated funds, many beneficiaries disclosed their inability to provide their counterpart funding due to financial predicaments.

Table 8.11 shows challenges listed by NPFS project beneficiaries that hindered them from timely addressing the loans. 30.4% of the beneficiaries were faced with challenges like untimely availability of funds, which hindered them to utilize the fund appropriately and productively. In some cases, beneficiaries had the experience of one or more of a group member passed on (6.5%), which made it impossible to recollect loans from the deceased members. The effect of poor weather condition on crops also caused poor yields and profits from production, which hinders beneficiaries (19.6%) to refund the loan. Fifteen percent of beneficiaries indicated that group leaders are unfaithful and this also serves as hindrance to refund the loan. Some of the group leaders were reported to be biased in dealing with preferred beneficiaries, which weakens their authority to enforce members to refund the loan.

Table 8.11: Challenges to refund NPFS project loans

Challenges to refund NPFS loan	**Percentage (%)**
Untimely availability of funds when needed	30.4
Poor weather conditions effect on crops	19.6
Price variation and low income returns	19.6
Group leaders' unfaithfulness	15.3
Death of group members	6.5
Disease outbreak	4.3
Poor market for farm produce	4.3

8.4.6 Possible suggestion for recovery of loans

In Table 8.12, different ways were suggested by both project beneficiaries and staff in order of priority to ensure how to refund obtained loans.

Beneficiaries require some technical assistance such as tractors and machineries to boost production and ensure high-income returns. Strict emphasis should be placed on collaterals and official requirements as prerequisites before approving loans to beneficiaries. These collaterals, guarantors and other requirements will be used to enforce loan recovery from defaulters.

The following are the different suggestions by NPFS project beneficiaries and staff to ease loan recovery:

a. **Government technical support:** The beneficiaries suggested availability of subsidized farm inputs and machines will assist farmers to cultivate larger farm size and boost production.
b. **Longer period of time to refund loan:** The beneficiaries proposed longer period of time so as to enable them utilize the funds to generate maximum profit.
c. **Good market opportunities:** The beneficiaries proposed good market opportunities which involve linking farmers with both local and international market to ensure maximum and profitable marketing of farm produce.
d. **Improve agricultural diversification:** NPFS project beneficiaries proposed that farmers should be exposed to improved crop and livestock varieties other than their mono-cropping method. This will also serve as multiple sources of household income for the farmers.
e. **Effective monitoring of loan:** The project staff suggested that effective monitoring structure should be established to follow up the disbursing and usage of the loans to beneficiaries. This would prevent misuse and encourage timely refund of loans.
f. **Creating an enabling environment:** The project staff proposed the provision of basic amenities to aid smooth farm operations. This would enable farmers to realize maximum income and encourage timely refund of loan.
g. **Involvement of all stakeholders:** Project staff suggested active involvement of all stakeholders throughout the phases of the project. This would ensure proper accountability and responsive stakeholders.

Table 8.12: Proposed ways of ensuring easiness of loan recovery

NPFS Project beneficiaries	NPFS Project staff
a. Government technical support in form of farm inputs, tractors etc.	a. Security of worthy collaterals and assets before granting loans
b. Proper monitoring process for refunding	b. Effective monitoring of loan disbursement and usage
c. Timely availability of loan disbursement	c. Timely availability of adequate loans for effective use by farmers
d. Longer period of time to refund the loan	d. Creating an enabling environment like inputs, marketing, good health and social facilities to facilitate improved production
e. Good market opportunities for marketing of farm produce	e. Involvement of all stakeholders throughout the phases of projects
f. Improve agricultural diversification through improved varieties and incorporation of mixed farming	f. Enforcement to refund loan immediately after harvesting or marketing of their products
g. Strict emphasis on collaterals and requirements before issuing loan	g. Use of influential community leaders or guarantor to collect the loan

8.4.7 Constraints encountered by NPFS and FADAMA III project beneficiaries and staff

This section highlights the constraints faced by the beneficiaries and staff of both projects. Figure 8.2 illustrates that 24.6% of the constraints faced by project beneficiaries of the two projects revolve around the challenges to obtain and refund loans. Others include: unfair selection criteria used for beneficiaries (23.7%); poor road network (21.2%); political attitudes and interference (11.6%); unstable government tenure and policies (10%); incompetent and dishonest project officials (8.9%).

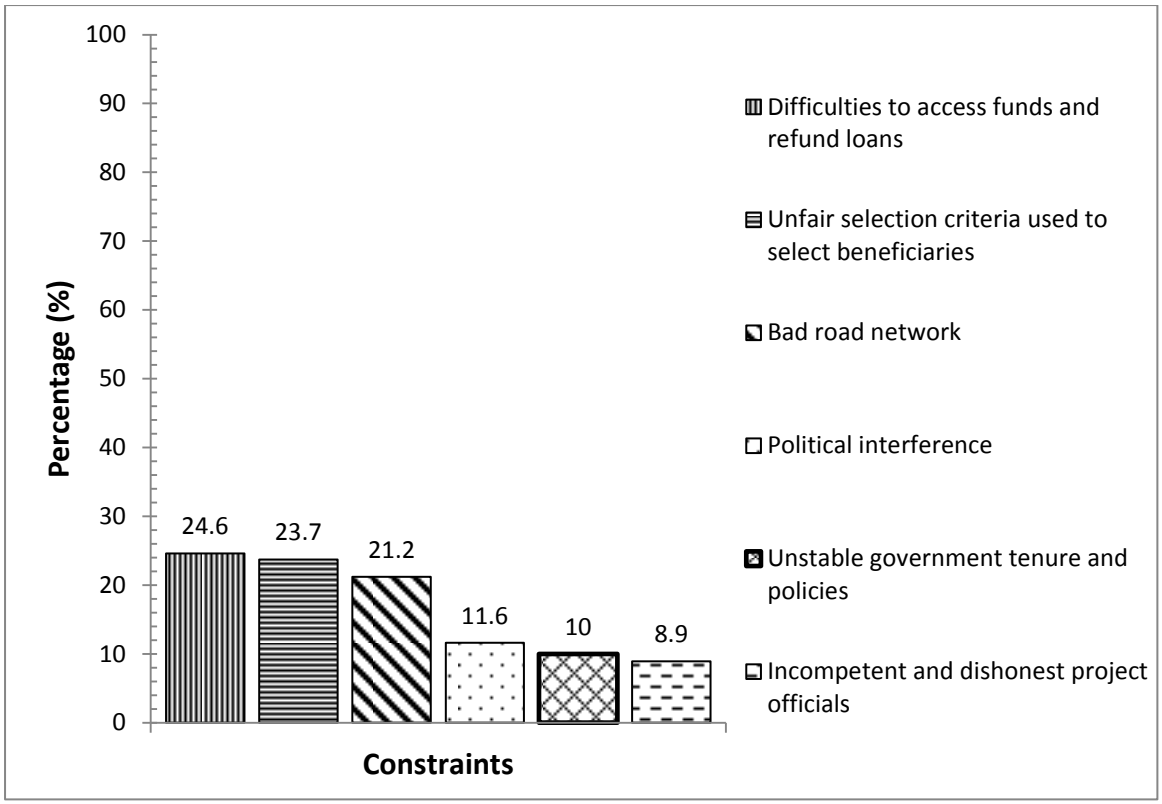

Figure 8.2: Major constraints experienced by NPFS and FADAMA project beneficiaries

Table 8.13 reveals the major obstacles encountered by the project staff of both project, which influenced sustainability of projects:

a. **Poor weather conditions:** Both project staff indicated unstable weather condition as one of the major challenges encountered to ensure successful projects.
b. **Poor communication network:** This was identified as another constraint that affected clear and detailed interactions between the project officials and beneficiaries during the implementation of project.
c. **Poor road networks:** The poor condition of rural road was reported by both project beneficiaries and staff. It negatively affected the mobility during the implementation of the projects.
d. **Poor participation and cooperation of beneficiaries:** The project staff reported a decline in participation and cooperation of project beneficiaries especially during the latter phases of both projects.
e. **Political attitudes and interference:** Both project staff identified the involvement of politicians and some political ideologies during the implementation of the

project as a hindering factor. Some of this political interference manifested in the selection criteria and disbursement of funds to beneficiaries. These activities have resulted to unfairness and dishonesty in some project activities and decisions.

f. **Unstable government tenure and policies:** It was reported that the two different succeeded governments administrations failed to formulate policies that build on the existing project structures. This affected the sustainability of both projects.
g. **Incompetent and dishonest project officials:** Both project staff identified possible unfair and unprofessional characteristics by some of their fellow colleagues, which manifested in the applying of selection criteria and disbursement of funds.

These constraints could negatively affect the success and sustainability of the projects and it is important that policy makers and stakeholders responsible for the planning and execution of future projects should take cognizance of these challenges and hindrances.

Table 8.13: Major constraints experienced by NPFS and FADAMA project staff

NPFS Project	Percentage (%)	FADAMA III Project	Percentage (%)
1. Untimely release of funds and delayed counterpart funds from stakeholders	15.5	1. Beneficiaries non-commitment and delayed or inadequate counterpart funding	17.0
2. Project funds diverted for other uses	13.3	2. Poor communication network	16.1
3. Poor weather conditions	12.6	3. Poor weather condition	12.7
4. Poor existing road network for efficient project monitoring	11.9	4. Poor road network	8.3
5. Deficient government policies	9.5	5. Farmers neglect of registration process especially with the Corporate Affairs Commission	8.0
6. Poor communication network	7.6	6. Poor participation in project and unfaithfulness towards project mission	7.9
7. Lack of cooperation among beneficiaries	6.1	7. Political attitudes and interference	7.6
8. Illiteracy of farmers	5.8	8. Lack of trust worthy service providers	7.6
9. Beneficiaries mainly focus on access to funds and lack interest in training opportunities provided	4.7	9. Unstable government policies	7.5
10. Poor farmers' mobilization and their attendance during project meetings	4.6	10. Incompetent project facilitators	7.3
11. Suspicion of programme's genuineness	4.4		
12. Political interference	4.0		

8.5 Conclusion

This chapter highlighted the intervening processes and sustainability of NPFS and FADAMA III projects that manifest in stakeholders' involvement, participation and training at different stages of the projects. NPFS and FADAMA III project beneficiaries were satisfied with their involvement at all the stages of the project cycle. Staff of both projects perceived less satisfaction of beneficiaries' involvement at the planning and evaluation stages. The participation of beneficiaries at all levels of the project strongly influences their agricultural productivity and eventually the household income. Both projects had strong linkages with the federal and state governments but in general weaker linkages with local governments and NGOs. The World Bank was identified a strong external donor for FADAMA III project. Both project beneficiaries and staff received training during the project cycle, with staff (extension workers and project staff) receiving training before the project started.

Regarding the sustainability of the two projects, project beneficiaries preferred the scope of FADAMA III project to be more relevant than the scope of NPFS project in addressing their needs. 83.2% of NPFS project beneficiaries and 79.8% of FADAMA III projects' beneficiaries have been participating in the projects for an average of 8 years. 68.3% of NPFS project beneficiaries are still participating in the project, with only 38.6% directly benefitting from the project. In the FADAMA III project, 84.7% beneficiaries are still participating in the project, with only 22.7% directly benefitting from the project. A positive significant correlation exists ($r=0.643$; $p<0.0001$) between participation years of NPFS project beneficiaries and their current willingness to participate in the project.

Beneficiaries of NPFS project perceived that the project addressed more of their needs than beneficiaries of FADAMA III project. Both projects failed to disburse funds equally to all their beneficiaries, which imply lack of equity in the participation of beneficiaries. The speed of releasing project funds to beneficiaries has an influence on beneficiaries' usage of funds, their participation as well as, the effectiveness of project in achieving overall objectives. Poor weather conditions, poor communication network, poor road network, poor participation and cooperation of beneficiaries, political attitudes and interference, unstable government tenure and policies, incompetent and dishonest project officials were extracted as common challenges of the two projects.

CHAPTER 9

CONCLUSION AND RECCOMENDATION

9.1 Introduction

The main aim of the study was to assess the impact and sustainment of NPFS (ADP) and FADAMA III projects for rural farmers in Osun state, Nigeria. The specific objectives for the study were:

1) To profile the characteristics of farmers and farms in the chosen study areas of Osun State.
2) To determine the perceived effectiveness of NPFS and FADAMA III on addressing food security, agricultural development and institutional improvement in Osun State.
3) To assess the sustainability of NPFS and FADAMA III projects in the study area.
4) To identify the effect of intervening processes on the outcome of NPFS and FADAMA III projects.

9.2 Respondents' socio-economic characteristics (Objective 1)

The majority of the 316 respondents is male (88%), heads of households (83.2%) and married (91.8%). The average household size is six members with an average of three dependants. The formal education level of farmers is relatively high, with 96.8% respondents who obtained formal education. The average farming experience is 21 years, with the majority of farmers practicing crop farming (75.9%) on relative small farm sizes (<6ha). A very small percentage of farmers are practicing mono-cropping (16.4%) by planting only vegetables, maize or cocoa, while the majority (77.9%) are following mix cropping systems following a rotational system. A concern however is the high percentage crop farmers with low crop productivity, which perhaps also explain why 89.1% farmers are involved in off-farm ventures like trading of agricultural inputs, hunting, artisans and government jobs.

Older farmers have in general lower educational qualifications and are more proficient in crop production than livestock farming. A negative correlation exists between the educational level of farmers and farming experience ($r= -0.324$; $p<0.001$) which implies that farmers with higher educational qualification are relative younger farmers with lower farming experience.

Farmers that are involved in off farm income generating activities and those operating on relative bigger scale of farming operations, are in general more informed and aware of the NPFS and FADAMA III projects.

9.3 Perceived effectiveness of projects in addressing food security, agricultural development and institutional improvement (Objective 2)

The respondents perceived that the scope of FADAMA III project is overall more relevant in addressing food security and agricultural development needs than the scope of NPFS project (Table 9.1).

Beneficiaries perceived both NPFS and FADAMA III projects to have relatively high impact on their household feeding status, means and easiness of transport, and household water supply. However, the impact of the two projects on electricity supply to households was generally perceived to be low. The two projects are also successful in promoting group formation and participation of farmers, improving production skills, but fail to improve the marketing skills on projects beneficiaries.

Beneficiaries from both projects show dissatisfaction with the selection criteria used to select participants for these projects, while the project staff on the other hand perceives it to be acceptable. The speed of releasing funds to beneficiaries is perceived to be very slow by beneficiaries of both projects.

NPFS project beneficiaries have more control in the outsourcing of project ventures either to local or well-known external contractors, while FADAMA III project beneficiaries perceive they have “very little” control in terms of outsourcing to contractors, since they were not familiar with these contractors. This approach followed by FADAMA III project staff led to challenges experienced with regard to untraceable foreign contractors when problems occur with construction and repairs.

Table 9.1: Perceived effectiveness of NPFS and FADAMA III projects by beneficiaries

Criteria	NPFS project	FADAMA III project
Household feeding	High	High
Transportation	High	High
Job opportunities	High	Low
Electricity	Low	Low
Water supply	High	High
Food security	High	___
Farm productivity	High	High
Access to agricultural inputs	___	Low
Household income	High	Low
Rural infrastructure	Low	High
Natural resource management	___	High
Extension delivery system	High	High
Financial assistance	___	Low
Farmers' group promotion	High	High
Production skills	High	High
Marketing skills	Low	Low
Beneficiaries' selection criteria	Low	Low
Control to outsource project	High	Low
Speed of fund release	Low	Low
Training	High	High

Staff from both projects perceive the utilization of funds by the beneficiaries well monitored, while the recovery of loans and counterpart funding are not effective. Unlike FADAMA III project staff, NPFS project staff are satisfied with the impact that NPFS project have on the improvement of household income. NPFS project staff feel they were not very effective in addressing the needs of beneficiaries with the project, while the FADAMA staff are satisfied in this regard and therefore also satisfied they have achieved the overall objectives of the project successfully.

9.4 Intervening processes and sustainability of projects (Objectives 3 and 4)

This study revealed that NPFS project beneficiaries are a bit more satisfied with their involvement and participation during all the stages of the project cycle than FADAMA III project beneficiaries. Beneficiaries from both projects perceive their involvement at the different stages of the project as significant for achieving the expected outcomes of the project, especially in terms of agricultural productivity and household income. Project staff of both projects are less satisfied with the involvement of beneficiaries during the evaluation stages of projects.

Both projects experience strong linkages with federal and state governments but weaker linkages with local governments and NGOs. The reason for this perception by project staff is that the federal and state governments were responsible for the implementation and monitoring of projects, while it was not the prime responsibility of local government or the NGO's. The World Bank was identified as a strong external donor for FADAMA III project.

Project beneficiaries receive training during the project by extension workers, project facilitators and service providers. Project staff and extension workers also received training before the projects started. Majority of NPFS beneficiaries (97%) and FADAMA III beneficiaries (91.5%) perceive the training received as appropriate and good with regard to fulfilling their needs.

Concerning the sustainability of the two projects, 68.3% of NPFS and 84.7% of FADAMA III project beneficiaries are still participating in the project since its inception. Currently, only 38.6% of NPFS project beneficiaries are directly benefitting from the project. Very few of FADAMA III beneficiaries had made the counterpart fund payments, and although "participating" in the FADAMA project, they are associated with the project through their membership of the FADAMA User Group (FUG).

The NPFS project addressed more of beneficiaries' needs than FADAMA III project. The speed of releasing project funds to beneficiaries had an influence on their ability to use funds appropriately for agricultural production, and influenced their participation in the projects as well as the perceived effectiveness in achieving overall objectives.

9.5 Challenges encountered by NPFS and FADAMA III projects in the study area

Both NPFS and FADAMA III projects encounter some setbacks which slow down the operations and also hinder the expected outcome of the projects. The following challenges were highlighted by beneficiaries as hindrances to the refunding of loans as expected:

- Delay in releasing of funds (30.4%) which impacted on the effectiveness of possible farm business,
- Poor weather patterns which effect crop production (19.6%),
- Price variation and low income returns (19.6%),
- Group leader's unfaithfulness (15.2%),
- Death of group members (6.5%),
- Disease outbreaks (4.3%) and
- Poor produce market (4.3%).

The following recommendations were made by NPFS beneficiaries and staff to address the challenges regarding easing of the process of loan recovery:

a. Recommended solutions for ease loan recovery

For effective loan recovery, the project beneficiaries and staff commonly suggested the following ways: effective monitoring; technical support; timely availability of loans; and use of collaterals and guarantors. Other suggestions include: longer years to refund the loan; creating enabling environment (such as: inputs, marketing, good health and social facilities) to facilitate good production; good market availability for farm produce; involvement of all stakeholders throughout the process; agricultural diversification into improved varieties and mixed farming; enforcing beneficiaries to refund loan immediately after harvesting or marketing their products; and the use of influential community leaders or guarantor to persuade beneficiaries to refund the loan.

b. Suggestions on what to be done to loan defaulters

The project staff suggested the following actions to be taken against loan defaulters:

- Confiscation or conversion of defaulters' properties to the equivalent money or compelling them by force to repay the loan.
- Proper evaluation of their reasons for defaulting and thereafter give regular encouragement or advice to repay.
- Subsequent programmes should exclude defaulting beneficiaries.

9.6. Recommendations for future projects

Each of the project beneficiaries and staff gave some recommendations for related projects to perform better in the future and improve sustainability. These are briefly summarized below:

NPFS project beneficiaries recommended the following:

Funds and Resources: Adequate funding coupled with timely support of production input is required for successful agricultural production.

Discouragement of politics: Political ideologies and interference should be disallowed in the farmers group and during project activities.

Proper monitoring: Standard and effective monitoring methods should be always practiced strategically.

Project revitalization: Government should revive the programme afresh with updated ideas, strategies and resources.

Provision of produce market: A prepared market should be arranged ahead for farm produce so as to prevent glut and loss. This would enable the farmers to timely realize profit and reimburse obtained loans.

Quality extension service: Continuation and sustainability of project should be aided with quality extension services in order to mentor and give updated relevant advice to farmers and also link them with significant stakeholders for profitability.

FADAMA III project beneficiaries recommended the following:

Timely necessary support: FADAMA III project could be more attractive through timely release relevant and necessary support to the beneficiaries. These supports include the federal and state government pledged sustaining roles in terms of proper sponsoring (counterpart funds) and infrastructural development (road, electricity, ICT, etc.).

Extension and continuity of project: FADAMA III project should not be such that is executed for a specific period of time but should be made a continuous exercise. Opportunity should be given to accommodate more beneficiaries in the project.

Effective administrative roles: Project sponsors and administrators should ensure proper planning, careful implementation, adequate supervision, monitoring and efficient management use of funds.

Youth participation: This study reported that FADAMA III project benefitted few youth. Motivation of more youth participation in agricultural projects will guarantee sustainment and continuity.

Zero-politics: FADAMA III project needs fairness in the distribution of funds to all beneficiaries and discouragement of political involvement to restore and maintain integrity. Agricultural development projects' activities should be totally decentralized to the grassroots.

Community sensitization: Grassroots awareness of agricultural development projects is required. Agricultural development projects should utilize effective media and publicity methods that would timely reach the farmers (beneficiaries) in their rural dwellings.

Market provision: Government should provide reliable and profitable market for farmers' produce to prevent glut. This would encourage the farmers to produce more and continue with production.

Subsidized capital and farm inputs: Grants and agricultural inputs (such as: fertilizers, seeds, chemicals and other machineries) should be given to beneficiaries at subsidized rate.

Government's familiarization with farmers: Government should get closer to farmers and beneficiaries; involve and inform them with information of operation guidelines to ensure project relevance and acceptability. Government should also facilitate constant introduction of new crop and livestock varieties for maximum agricultural production.

NPFS project staff recommended the following:

Constant training: All involved stakeholders should be effectively trained ahead of the project. Regular training and workshop should also be organized after the project.

Funds: A sustainable agricultural development projects should ensure timely availability of enough funds and counterpart funds.

Effective strategy of loan disbursement: Future related projects should make use of better methods of disbursing loans to beneficiaries. It should also prevent difficulties in loan recovery.

Stakeholders' involvement: All stakeholders should be involved in decision making process at all levels in the project.

Avoid political involvement: Politics should be totally discouraged in order to select genuine beneficiaries and rational allocation of resources.

Proper and effective monitoring: Each level and progress in agricultural development projects should be sufficiently filled with sound monitoring and supervision process. This would allow flexible policy formulation and implementation to suit contemporary situations.

Project site location: The central sites of project should be located at the local government council area centre rather than the extreme locations that are often inaccessible.

Government roles: The government has lots to do in order to sustain project and increase effectiveness. Some of such roles include: consistent government policies, creation of enabling environment, effective operation of marketing boards, price stability, infrastructural development, and provision of subsidized inputs and development of local comparative agricultural crops production

NGOs participation: More NGOs and private organisations should be encouraged to join the programme funding and operations. This would lessen the bulk of responsibilities on the federal, state and local government.

Effective publicity and communication channel: Improved sensitization methods and effective two-way communication of project information to beneficiaries should be augmented.

FADAMA III project staff recommended the following:

Involvement of elites and influential stakeholders: The presence and involvement of elites, influential and opinion leaders in agricultural development projects would establish orderliness and motivates the beneficiaries.

Disbursement of funds: Early and timely release of funds would enable timely achievement of objectives as planned. It would also establish trust in the project.

Effective project communication: Quality sensitization process would increase strong awareness and active involvement of benefitting communities. Two-way communication should also be established between the project and its beneficiaries. Full integration of beneficiaries into the whole project cycle would institute synergy and ownership into the beneficiaries.

Collection of beneficiary's funds from farmers: Project should not require funds from farmers as most of them are poor and also need financial assistance themselves.

Discouragement of political farmers: Some farmers have imbibed political attributes and therefore introduce such into project dealings. Some of their political attributes include: formation of cliques and factions, skipping project meetings, luring and enforcing other farmers to follow their monopolistic norms in the group which antagonize project policies, etc. These should be totally disallowed in the project.

Stakeholders' effective performance: Some of the stakeholders (most especially the project staff) lack adequate knowledge about their purpose, participation and key responsibilities in the project. All project stakeholders should therefore be encouraged, engaged and trained for effective performance. They should also be monitored and supervised for continuous efficient functioning.

Infrastructural development: More emphasis should be placed on developing basic amenities and provision of enabling environment for development projects in the country, in order to enhance and sustain both agricultural and unified community projects.

Subsidized agricultural inputs: Farmers should be given agricultural inputs as grants or at subsidized rates so as to encourage more production and increase farmers' revenue. Agricultural inputs and produce price stability should be obligated in order to prevent target deviation and loss.

Project staff reward: Development projects should boost project staff allowance and possibly retaining them as permanent staff. Better remuneration would serve as motivation for staff, while their retaining would have positive impact on future projects due to the staff's accumulated experience and cognitive resources which should be exploited for subsequent development projects.

9.7 Derived observation, conclusion and recommendation

For active participation and maximum impact of agricultural projects, Etwire *et al.* (2013a) suggests that the major targets should be full time farmers and people with farming as their primary occupation. Thorough screening process should be done not only by the project officials but also by farming communities to identify genuine farmers amidst them.

Agricultural development projects require active involvement and cooperation of various stakeholders, in which its impact could be assessed from different aspects of individual's livelihood and community development. Agricultural development projects should make use of the innovation system approach in order to assemble all relevant stakeholders who are directly or indirectly linked to the project. This would make it easy to identify beneficiaries' felt needs and therefore design an effective project that would bring impact on different facets of beneficiaries' livelihood and the society at large.

Agricultural development projects should be designed and implemented around beneficiaries' felt needs. Also, enough resources and logistics should be made available for agricultural development projects for sustenance and continuity.

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APPENDIX 1

QUESTIONNAIRE FOR THE PROJECT BENEFICIARIES

A. IDENTIFICATION SECTION

A1	ADP Senatorial Zone	
A2	Local Government	
A3	Ward	
A4	Farm Block	
A5	Farm Cell	

A6: Indicate one or more of the projects you have benefitted from.

S/N	**Projects**	**Please tick**
1	NPFS (ADP)	
2	FADAMA III	
3	Others a.	
	b.	

B. PERSONAL AND SOCIO-ECONOMIC INFORMATION

B1: Name of Respondent: _____

B2: Are you your household head?

Yes	
No	

B3: If No from above, what is your position in the household?

S/N	**Relationship**	**Please tick**
1	Husband	
2	Wife	
3	Child	
4	Brother	
5	Sister	
6	Other relative (uncle, aunty, cousin, etc)	

B4: Age: [ ]

B5: Gender:

Male	
Female	

B6: What is your marital status?

1. Never Married	2. Married	3. Divorced/Separated	4. Widowed

B7: Household Size: ☐

B8: Number of dependents: ☐

B9: What is your highest educational level?

S/N	Education Level	Tick
1	No Education	
2	Vocational Training	
3	Primary Education	
4	Junior Secondary Education	
5	Senior Secondary Education	
6	Tertiary Education	

C. INFORMATION ABOUT FARM OPERATION

C1: Years of farming experience: ☐

C2: Type and size of farming

S/N	Type of farming?	Total Size (Ha)?
1	Livestock	
2	Crop	
3	Mixed	
4	Non-farming area	

C3: Please indicate your scale of production

S/N	Scale of production	Please tick
1	Commercial	
2	Small scale	
3	Subsistence (consumption only)	

C4: Types of livestock

Livestock	Cattle	Sheep	Goat	Piggery	Poultry	Fishery	Rabbit	Snail
Size (in numbers)								

C5: Types of Crop

Crops	Cocoa	Cassava	Yam	Cocoyam	Kolanut	Oil palm	Cashew	Plantain	Banana	Orange	Maize	Rice	Groundnut	Vegetables
Size (ha)														
Average yield (tonnes or bags per Ha)														

C6: Other occupations aside farming (Off-farm work)

Occupation	Trading	Hunting	Artisan	Farm Labourer	Civil Service	None	Others (specify) **a.**	**b.**
Tick								

C7: What is the share of farming as contributor to your household income?

Share of farming (in percentage)	Tick
Below 30%	
Between 30% and 50%	
51% and 70%	
Above 70%	

D. <u>INVOLVEMENT IN THE DEVELOPMENT PROJECT</u>

D1: Who introduced you to the agricultural project?

Source		Government Extension worker	Project consultant/staff	Private/NGOs	Farmer's group	Fellow farmer	Family member	Friends	Television or Radio	Newspaper	Others a.	Others b.
Please tick	NPFS (ADP)											
	FADAMA III											

D2: Indicate your satisfaction with involvement/participation at the various stages of the project. **(1= Not satisfied; 3= Fully satisfied)**

S/N	**Project Stage**	**Quality of involvement**					
		NPFS (ADP)			**FADAMA III**		
		1	**2**	**3**	**1**	**2**	**3**
1	Project planning						
2	Group formation						
3	Project implementation						
4	Project evaluation						

D3: Rate the effect of your involvement/participation on the project outcome.

Project	Very Poor	Poor	Good	Very Good
NPFS (ADP)				
FADAMA III				

D4: Have you received training during the project?

Projects	Yes	No
NPFS (ADP)		
FADAMA III		

D5: If Yes, What type of training? And by whom?

S/N	Which Project? (NPFS (ADP) or Fadama III)	Type of training	By whom
1			
2			
3			
4			
5			

D6: How would you rate the training?

Project	Very poor	Poor	Good	Very good
NPFS (ADP)				
FADAMA III				

D7: Were extension workers involved in the project?

Yes	No

D8: If Yes, rate the performance of the extensionists in terms of the following roles?

Extension roles	Very poor	Poor	Good	Very good
1. Technical support (Farming skills)				
2. Organizational support (Linkages)				
3. Group Facilitation and mobilising				
4. Mentorship				
5. Training				
6. Others(Specify) a.				
b.				
c.				

E: LOAN/CREDIT MANAGEMENT

E1: Did you obtain a loan/credit from the project?

Projects	Yes	No
NPFS (ADP)		
FADAMA III		

E2: What was your main reason(s) for obtaining the loan/credit?

Projects	Reason(s)
NPFS (ADP)	
FADAMA III	

E3: How acceptable were the selection criteria to qualify for the loan/credit?

Projects	Not acceptable	Slightly acceptable	Acceptable	Perfectly acceptable
NPFS (ADP)				
FADAMA III				

E4: How speedy were funds released for your intended projects?

Projects	Very slow	Slow	Fast	Very fast
NPFS (ADP)				
FADAMA III				

E5: Did you use the loan/credit for your proposed enterprise?

Project	Yes	No
NPFS (ADP)		
FADAMA III		

E6: What were your main challenges to refund the loan?

NPFS(ADP) _____

_____

_____

_____

_____

E7: What can be improved to make it easier for applicants to refund the loan?
NPFS(ADP) _____

_____

_____

_____

_____

F: SUSTAINMENT OF THE PROJECT

F1: When did you start participating or benefitting from the project?(Date)

NPFS (ADP)_____

FADAMA III_____

F2: Are you still participating in the project?

Project	Yes	No
NPFS (ADP)		
FADAMA III		

F3: If "No" from the above, are you still benefitting from the project?

Project	Yes	No
NPFS (ADP)		
FADAMA III		

F4: How acceptable were your needs addressed by the project?

(1=not acceptable; 2=slightly acceptable; 3=Acceptable; 4=Perfectly acceptable)

Projects	Needs Acceptability			
	1	2	3	4
NPFS (ADP)				
Fadama III				

F5: What are your **FIVE (5)** most expected need(s) from the project in order of importance?

1. _____
2. _____
3. _____
4. _____
5. _____

F6: Select one of the two projects (**NPFS (ADP)** or **FADAMA III)** that is more appropriate and relevant to you.

Projects	Choose (Tick) the project that is more important or relevant to you
NPFS (ADP)	
FADAMA III	

G. IMPACT OF THE PROJECT ON BENEFICIARIES

G1a. Indicate the changes noticed as a result of the project

Projects	Aspect of change	Level of change impact			
		Very Low	Low	High	Very High
1. NPFS (ADP)	(a) Agricultural production				
	(b) Household income				
	(c) Food security				
	(d) Infrastructural development impact				
	(e) Agricultural extension delivery system and support services				

G1b. Indicate the changes noticed as a result of the project

	Aspect of change	Very Low	Low	High	Very High
2. FADAMA III	a. Farm productivity				
	b. Income increase				
	c. Access to agricultural inputs				
	d. Financial assistance (loans)				
	e. Employment				
	f. Natural resource management (soil and water irrigation)				
	g. Access to rural infrastructure				
	h. Access to advisory services				

G1c. I have benefitted as a result of the project with regard to;

3. Other impacts	Aspect of change	Not at all	Slightly	Mostly
	a. Farmers' group promotion			
	b. Production skills			
	c. Financial skills			
	d. Marketing skills			
	e. Others (Specify) 1.			
	2.			

G2: **Empowerment and/or project contract execution**

Rate **your level of control** to outsource the project contract to familiar or neighboring contractors

Projects	Tick your level of control to outsource the project contract			
	Very Low	**Low**	**High**	**Very high**
1. NPFS (ADP)				
2. FADAMA III				

G3: **Impact on other Livelihood**

From the list below, indicate the level of change brought by the project

S/N	Livelihood	NPFS (ADP)				FADAMA III			
		Very Low	**Low**	**High**	**Very High**	**Very Low**	**Low**	**High**	**Very High**
1	Feeding								
2	Transportation								
3	Education for children								
4	Job opportunities								
5	Electricity								
6	Water supply								
7	Health Care								
8	Others a.								
	b.								

H: What is/are your general suggestion(s) and recommendation(s) for the project to increase impact and sustainment of projects like this in future?

NPFS(ADP)_____

_____

_____

_____

_____

FADAMAIII_____

_____

_____

_____

_____

_____

_____

APPENDIX 2

QUESTIONNAIRE FOR THE EXTENSION/PROJECT STAFF/CONSULTANTS

A. IDENTIFICATION SECTION

A1	Senatorial Zone	
A2	Local Government	
A3	Ward	
A4	Project period (years)	

A5 Indicate your level of involvement in one or more of the projects you have participated.

S/N	Projects	How will you rate your level of involvement or participation in the project as project staff?			
		Very Low	Low	High	Very High
1	NPFS (ADP)				
2	FADAMA III				
3	Others (specify) a.				
	b.				

B. JOB INFORMATION

B1: Position/Rank in office_____

B2: Position/role during the project_____

B3: Years of working experience [ ]

B4: Highest level of qualification

Qualification	Please tick
PhD	
Masters	
Bachelor	
HND	
OND	
Secondary School Certificate	

C. INFORMATION RELATED TO THE PROJECT

C1: Indicate the policy makers or stakeholders that were linked to the project and the strength of their linkages?

Projects	Policy makers	Tick	Strength of linkage? (1=very weak; 2=weak; 3=strong; 4= very strong)			
			1	2	3	4
1. NPFS (ADP)	a. Federal Government					
	b. State government					
	c. Local government					
	d. Private organizations					
	e. NGOs					
	f. Others (specify) i					
	Ii					
	iii					
2 FADAMA III	a. Federal Government					
	b. State government					
	c. Local government					
	d. Private organizations					
	e. NGOs					
	f. Others (specify) i					
	Ii					
	iii					

C2 ROLES OF PROJECT WORKERS

a. Rate your performance under the following roles?

Project staff roles	Very poor	Poor	Good	Very good
1. Technical support (Farming skills)				
2. Organizational support (Linkages)				
3. Group Facilitation and mobilization				
4. Mentorship and advisory services				
5. Training or capacity building				
6. Others(Specify) a.				
b.				
c.				

b. Did you receive specific training before the implementation of the project?

Projects	Yes	No
NPFS (ADP)		
FADAMA III		

c. If Yes, how would you rate the training you received?

Projects	Very poor	Poor	Good	Very good
NPFS (ADP)				
FADAMA III				

d. Did you facilitate any group training for beneficiaries or stakeholders?

Projects	Yes	No
NPFS (ADP)		
FADAMA III		

e. If Yes, briefly describe the type of the training?

Projects	Training type?
1. NPFS (ADP)	
2. Fadama III	

f. How would you rate the training you facilitated?

Projects	Training outcome			
	Very Poor	Poor	Good	Very Good
NPFS (ADP)				
FADAMA III				

g. How would you rate the correlation of your facilitated training to the project outcome?

Projects	Correlation			
	Very Low	Low	High	Very high
NPFS (ADP)				
FADAMA III				

C3. PERCEPTIONS ON THE PROJECTS' INTERVENING PROCESS

a. How acceptable were the selection criteria used for selecting project beneficiaries?

Projects	Not acceptable	Slightly acceptable	Acceptable	Perfectly acceptable
NPFS (ADP)				
FADAMA III				

b. Rate beneficiaries' control to outsource the project contract to familiar or neighboring contractors?

Projects	Control of beneficiaries to outsource			
	Very Low	Low	High	Very high
NPFS (ADP)				
FADAMA III				

c. How speedy were funds/resources for the project released by donors or management?

Projects	Very slow	Slow	Fast	Very fast
NPFS (ADP)				
FADAMA III				

d. Rate your involvement in each stage of the project? **(1= Poor; 2= Neutral; 3= Strongly)**

S/N	Project Stage	Quality of involvement (tick)					
		NPFS (ADP)			FADAMA III		
		1	2	3	1	2	3
1	Project planning						
2	Group formation						
3	Project implementation						
4	Project evaluation						

e. Rate your satisfaction with the involvement of project beneficiaries in each stage of the project? **(1= Not satisfied; 3= Fully satisfied)**

S/N	Project Stage	Quality of involvement					
		NPFS (ADP)			FADAMA III		
		1	2	3	1	2	3
1	Project planning						
2	Group formation						
3	Project implementation						
4	Project evaluation						

f. How will you rate the cooperation of the beneficiaries during their participation in the project? (tick)

Projects	Very Poor	Poor	Good	Very good
NPFS (ADP)				
FADAMA III				

C4. PROJECTS' EFFECTIVENESS AND SUSTAINMENT

a. Rate the level at which beneficiaries needs were considered for the project. (please tick)

Projects	Very Low	Low	High	Very High
NPFS (ADP)				
FADAMA III				

b. Rate your monitoring/following up of the loan/funds utilization by the beneficiaries. (please tick)

Projects	Very poor	Poor	Good	Very good
NPFS (ADP)				
FADAMA III				

c. How effective were the loans recovered from the beneficiaries? (please tick)

Projects	Not effective	Slightly effective	Effective	Absolutely effective
NPFS (ADP)				
FADAMA III				

d. What should be done to beneficiaries who fail to refund the loan?

NPFS(ADP) _____

e. What do you suggest to be done for effective loan recovery?

NPFS(ADP) _____

f. Rate the impact of the project in addressing the beneficiaries' household income. (please tick)

Projects	Very Low	Low	High	Very High
NPFS (ADP)				
FADAMA III				

g. Rate the effectiveness of the project in achieving its overall objectives. (please tick)

Projects	Not effective	Slightly effective	Effective	Absolutely effective
NPFS (ADP)				
FADAMA III				

h. Briefly describe the major obstacles or constraints you faced during the project.

Projects	Major Constraints
1. NPFS (ADP)	
2. Fadama III	

i. What will you change in future projects that will improve sustainability?

Projects	Future recommendations
1. NPFS (ADP)	
2. Fadama III	