

Agricultural Enterprise Development and Policy Assessment

Final Report

Submitted by
LTL Strategies

April 2010

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List of Acronyms

ABSC	Agricultural Business Service Centers
ACGSF	Agricultural Credit Guarantee Support Facility
ADP	Agriculture Development Program
ADRs	Alternative Dispute Resolutions
ARCN	Agricultural Research Council of Nigeria
ASCE	Abuja Securities & Commodity Exchange
BDS	Business Development Services
CAADP	Comprehensive African Agriculture Development Program
CACS	Commercial Agriculture Credit Schemes
DFID	Department for International Development
FCAs	Fadama Community Associations
FUGs	Fadama User Groups
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDA	International Development Agency
IFAD	International Fund for Agricultural Development
IFDC Nigeria	International Fertilizer Development Center Nigeria
IFPRI	International Food Policy Research Institute
IITA	International Institute for Tropical Agriculture
IRRI	International Rice Research Institute
LGAs	Local Government Authorities
MARKETS	Maximizing Agricultural Revenues & Key Enterprises in Targeted Sites
MAWR	Ministry of Agriculture & Water Resources
MOCI	Ministry of Commerce & Industry
NACRBD	Nigerian Agricultural, Cooperative & Rural Development Bank
NAFCON	National Fertilizer Company
NAIC	National Agriculture Insurance Company
NALDA	National Agriculture Land Development Agency
NARS	National Agriculture Research Systems
NEEDS	National Economic Empowerment & Development Strategy
NEPAD	New Economic Partnership for Africa Development
NFRA	National Food Reserve Agency
NFSP	National Food Security Program
PrOpCom	Promoting Pro-Poor Opportunities Through Commodity and Service Markets
SPFA	Special Program on Food Security
SME	Small & Medium Enterprise
SMEDAN	Small & Medium Enterprise Development Agency
SMEEIS	Small & Medium Enterprise Equity Investment Scheme
SVCC	Social Venture Capital Company
RBDAs	River Basin Development Authorities
RUFIN	Rural Finance Institution Building Program
RUSEP	Rural Sector Enhancement Program
TWG	Thematic Working Groups
USAID	United States Agency for International Development
WARDA	West Africa Rice Development Association
WASA	West Africa Seed Alliance

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Executive Summary

Objectives

The assessment's objective is to identify key barriers to agro-enterprise development and propose appropriate instruments for addressing at least two of the most significant policy issues that negatively impact agro-enterprises.

Methodology

Data collection and information gathering was achieved by a number of methods including: extensive literature search, review of a substantial number of documents related to agro-enterprises, the agriculture sector, on-going project documents, value chain assessments; focus group and individual interviews, and key informants. Analysis of the information and data collected was conducted by all members of the team using an assessment framework (detailed in Annex 3).

Value chains for focused analysis were selected based on a number of criteria which include GON priorities, growth impact, private sector appeal, cross cutting constraints and opportunities, potential for short and medium term interventions and gains, and USAID's interests in the sector.

Constraints Analysis:

A thorough analysis of constraints was conducted for all levels of each of the value chains selected and constraints specific to each chain and each level of the chain were identified and cross checked with other sources. Emerging out of this analysis was a set of constraints that were both systemic to various levels of individual chains and cross-cutting to all chains examined.

Possible Interventions:

The objective of the identified interventions is to catalyze a process for moving from the current situation of a disorganized and uncompetitive business environment with high transactions costs, to a vision of a structured and integrated market system and well organized business environment, low transactions costs and increased competitiveness within a period of ten years. An array of interventions is proposed for short, medium and long-term time horizons for achieving effective results to contribute to reaching the 10 year vision.

Recommendations:

The assessment concludes with detailed recommendations on three fundamental interventions:

- 1) improve effective coordination of the agricultural sector through the formation of an Agriculture Sector Coordination Unit in the government;
- 2) Improve the organization of actors throughout the value chains through both horizontal and vertical networks and groups, including farmer business groups, processors, traders, transporters, etc.; and

- 3) Address the serious problem of access to financial services through creation of a Social Venture Capital Company and strengthening of the Commodity Exchange and Warehouse Receipts System.

Lastly, the report ends with some suggestions for Next Steps after this Assessment Report that USAID might consider in order to move towards the design and implementation of specific actions. These recommendations include:

- 1) Organizing separate workshops for three groups of stakeholders to obtain their feedback on the recommendations of the assessment report. These are: (i) Nigerian government officials, (ii) Agriculture Donors Group and (iii) other stakeholders particularly private sector value chain actors, NGOs, commodity associations, farmers, etc.
- 2) Identifying gaps and needs for technical assistance to further develop the concepts agreed upon during the above consultative process.
- 3) Operationalizing the recommendations by developing a set of activities that are designed to alleviate constraints faced by Nigeria's agricultural sector.

1.0 Introduction

1.1 *Background*

This report is an outcome of a request from USAID/Nigeria to prepare a solution oriented assessment of the agro-enterprise sector in the country that can be used in consultation with the Government of Nigeria to guide the Mission in its ongoing program activities. The assessment builds on previous experience in Nigeria and elsewhere and concludes with a series of recommendations for the Nigeria Mission on how it might consider intervening in the agro-enterprise sector of Nigeria, particularly how in partnership with the Government of Nigeria, it can address the fundamental constraints facing this sector.

Rationale - Over the years, the agriculture in Nigeria has declined from a vibrant economic sector that contributed significantly to the country's security and well-being to a sector riddled with problems resulting in declining output of essential food commodities. This decline has many causes as detailed in the report, but the major underlying cause has been the negative externalities from the development of the relatively new petroleum industry. These have seriously disrupted attention and incentives in agriculture sector. The country is now a net importer of many food commodities. The fundamental result of this process has been a weakening of the sustainability of past agricultural systems and an accentuation of poverty conditions in many rural areas. Moreover, Nigerian people are increasingly recognizing that out migration is not a viable solution to economic insecurity and that opportunities for improved well-being must be found closer to home, mainly in rural areas. A myriad of development programs have failed to address the situation mainly due to lack of "ownership" by stakeholders. Frustration of people, both rural and urban, is increasingly becoming a source of discontent and social unrest.

1.2 *Assessment Objective*

The assessment's objective is to address two of the most significant policy issues that negatively impact agro-enterprises and their development and to propose ways to mitigate the problem. The analysis undertaken by the assessment team identified many constraints at all levels of the value chains examined and found two issues that are both systemic to and cross-cutting among all the sectors, namely institutional weaknesses and access to finance. Without first addressing these two issues, any attempts to deal with other constraints in the chains will not result in any significant impacts. In order to identify these two issues, the team conducted a detailed analysis of the following areas of concern:

- The Nigerian agro-enterprise sector: description, problems and potential
- Identification of effective instruments for agricultural enterprise development
- Intra-Nigerian, regional and international agricultural trade routes: problems and needs; policy problems and proposed solutions
- Current and potential role of agro-enterprise, trader and producer organizations in supply chain management: policy and organizational problems, proposed solutions

- Nigeria Commodity Exchange Commission: current role and potential role to improve agricultural product trade; policy changes needed
- Sources of capital for agricultural enterprises (current and possible, including necessary policy changes).

1.3 Assessment Strategy and Approach

During the first part of the study, the consultants undertook extensive literature search to obtain documentary evidence on the state of agro-enterprise development and policy in Nigeria. The various sources of the material obtained and used to inform this study are listed in Annex 1. During the period, primary data was collected through personal interviews, focus group discussions and key informants. The purpose of the interviews was to corroborate the information obtained through literature review. To ensure that the consultants collected information uniformly, interview protocols to suit various categories of interviewees were developed. These protocols are attached to this report as Annex 2. The consultants also developed an assessment framework that was used to derive conclusions and recommendations in this report. That assessment framework is also attached as Annex 3. The list of persons and groups interviewed is shown as Annex 4.

In the second part of the study, the consultants continued with literature review, but focused more attention to analysis of the information obtained during the first phase. In the analysis of the information collected, the consultants applied the Theory of Constraints to arrive at conclusions and recommendations presented at the end of the report. The consultants also attended the High Level Conference on Agribusiness and Agro-industries held in Abuja on March 8 – 10, 2010.

1.4 Organization and Management

The Assessment Team comprised Rene Lake – Project Manager, Wilson Kinyua - Team Leader and Agricultural Economist, Dr. Joseph Kariuki – Business Development Specialist, Professor Adebayo B Aromolaran – Sector Specialist, Jack Croucher – Value Chain Expert and Meg Brown – Technical Editor/Coordinator. The Team held consultations with USAID-Nigeria Mission on February 1 and 4, and March 23 to seek clarification and refinements on scope of work and expected deliverables. These discussions resulted in refinement of the work plan and phasing of the study from 3 to 2 phases as indicated in the work plan. A final meeting with USAID Mission was held on March 29 to present this report.

1.5 Structure of the Report

This report is organized into seven Chapters as follows:

- Chapter 1: Introduction
- Chapter 2: The Chapter presents a situation analysis of the agricultural sector and its significance and contribution to the Nigerian economy. It describes the environment under which the agro-enterprise development takes place and also looks at the regional and international trade flows of the major agricultural commodities.
- Chapter 3: This Chapter examines past and current initiatives by the Government of Nigeria and other actors to promote agricultural development in the country.

- Chapter 4: The Chapter presents the analytical framework of value chain analysis which was used to identify the key value chains in Nigeria
- Chapter 5: The Chapter analyzes the systemic and cross-cutting constraints that hinder the development of identified key value chains.
- Chapter 6: The Chapter presents a framework for analyzing solutions to the identified constraints and uses the tool to propose solutions to the key constraints.
- Chapter 7: This Chapter presents proposals for policy design and their implementation framework that are needed to overcome key constraints and get agro-enterprise development moving. It also proposes some immediate next steps for USAID to consider in order to begin moving towards implementation of recommendations.
- Chapter 8: Annexes to the Report

2.0 Situation Analysis

2.1 *Significance of the Agricultural Sector to the Nigerian Economy*

The agricultural sector is essential to Nigeria's non-oil sector development. Since 2001, this sector has generated over half the new jobs in the economy and its 7% annual growth rate since 2003 has stabilized the economy in spite of the high level of volatility in world market price of crude oil in the past decade. Agriculture remains the largest economic sector accounting for 41% of GDP (the oil sector is 22%) and 38% of economic growth. The sector has great potentials of increased contribution to the export revenue base of Nigeria even though agricultural exports are currently only 2.6% of total exports. The sector employs about two-thirds of Nigeria's total labor force and provides 88% of non-oil earnings. Crops contribute 85% of the agricultural GDP compared to 10% by livestock, 4% by fisheries, and 1% by forestry. Growth in the agricultural sector has been disappointing, however. Value added per capita in agriculture has risen by less than 1% per year for the past 20 years.

More than 90% of the agricultural output is accounted for by small-scale farmers with less than two (2) hectares under cropping. It is estimated that about 75% (68 million hectares) of the total land area has potential for agricultural activities, out of which 3.14 million hectares are irrigable. However, only about 48.5% (33million hectares) of available agricultural land and 7% (220,000 hectares) of irrigable land are currently being utilized. The country has diverse and rich vegetation capable of supporting a heavy population of livestock, some 268 billion cubic meters of surface water, 58 billion cubic meters of underground water, and an extensive coastal region that is very rich in fish and other marine products.

Nigeria currently faces serious poverty and food security challenges. According to the Nigerian Living Standard Survey of 2004, 54.4% of Nigerians live below the poverty line of \$1 per day in income. In the past two decades, food production gains have not kept pace with population growth, resulting in rising food imports. Rice imports for example increased to 130 percent in 2001 over the previous five year average. More than 70% of the nation's poor of the nation's poor reside in the rural areas.

2.2 *The Nigerian agro-enterprise sector*

In sharp contrast to the position Nigeria held 35 years ago, when the country was a significant exporter of food products, the country currently imports vast quantities of agricultural products for its population's consumption. Huge gaps exist between current levels of production and potential yields. This is a consequence of highly distorted agricultural input markets, poor on-farm production practices and insufficient high-quality processing capacity; each of these conditions is sustained by erratic and poorly implemented government agro-industrial policies that discourage private sector investment in agriculture related enterprises.

General Economic Environment

Domestic markets for food are growing steadily at between 5 and 10% per annum based on urban growth (migration plus natural population increase). Due to the strong urban growth trend and slow agricultural production increase, the per capita consumption of livestock products (meat, milk, eggs etc.) have been declining steadily (e.g.: meat from 25kg/year/head in 1980 to less than 20kg/year/head) according to FAOSTAT. Domestic demand is dominated by large numbers of urban poor with a demand for cheap food along with a small number of high

and medium income households that demand higher priced food and luxury goods. However, elasticity of demand for food is high. General price levels of food items originated in Nigeria are fairly low despite the high cost of production. Efforts to improve the quality might be deterred by these low price levels. National markets for food items are not very differentiated in terms of diversity, assortment and levels of processing.

Small-scale farmers

The vast majority of farmers produce mainly food crops using traditional extensive cultivation methods, while commercial agriculture based on modern technologies and purchased inputs remains underdeveloped. The capacity of the agricultural research system and the agricultural extension service has eroded in recent years. Consequently, improved and energy efficient technology often fail to reach farmers, even when they are available. Farmers' lack of technical knowledge is compounded by deficiencies in distribution systems for purchased inputs, which limit the timely availability of improved seed, fertilizer, crop protection chemicals, and machinery. Where inputs are available, farmers' ability to acquire them is often compromised by a lack of production credit, since rural financial institutions are in general, poorly developed. Farmers who produce marketable surpluses lack reliable access to market outlets, and the high cost of transporting produce to distant buying points over bad rural roads reduces their competitiveness. Smallholder farmers are highly atomized and unsophisticated. Individually, they lack sufficient volume to cover processors' requirements, which creates the need for consolidating the production of multiple farmers. They generally do not grade or clean their product prior to delivery which creates the need for primary processing by the intermediaries.

Seeds and fertilizers

Nigerian farmers face several constraints, including access to modern farm inputs like quality seeds and fertilizers. The use of modern inputs is estimated at less than 15% of the market potential, with current certified seed production at 5,000 metric tons per year and fertilizer use only 8 kilograms per hectare (kg/ha), according to IFDC Nigeria (2008). As a result, yields are low and soil nutrients are depleted. Farmers' widespread practice of using saved seed has severely limited demand for improved seed varieties. The critical constraints to growth in the seed sector include lack of access to credit by farmers, lack of access to equipments for seed processing by smaller seed companies, and inefficiencies of government agencies responsible for policy implementation such as: slow release of proven new varieties and weak oversight to the seed regulatory system.

Only a fraction of the fertilizer that is needed to maximize rice production in Nigeria is currently available. GON programs to subsidize and distribute fertilizers have disconnected the private suppliers from their clients. Even though private firms do the importing and transport, these firms recognize that the GON and State governments are their main clients, not the farmers. Only an estimated 30 percent of subsidized fertilizer reaches small farmers at the subsidized price. Federal government subsidy on fertilizer is about 25%, but this is supplemented by various state government subsidies that range from 0 to 50 percent. Arbitrage opportunities and incentives to mislabel the source of fertilizer abound. The amount of fertilizer farmers have access to varies widely across states.

Research, Extension and Technology Services

The extension staff in Nigeria is severely stretched, and in all states, only a small share of farmers can plausibly access their services. This situation is compounded by the advanced age of most village extension agents, because in the near future, the service will lose a substantial number of experienced workers. In the past, almost all were males and this restricted women's access to extension services because of social norms. However, in recent times, the ratio of female to male extension staff has grown rapidly. Nevertheless, more needs to be done to correct the current situation where very few female farmers and female-headed households benefit from extension services.

Mechanization services

Utilization of mechanization services remains very low due to restricted supply as well as the small and fragmented land holdings that characterize the farming sector. Supply is still largely restricted to state government agencies that provide subsidized tractor services. Some small-scale mechanized processing activities exist at the farm level. For example, there are small mills in use for rice and cassava. For the most part, manufacturing, mechanization and repair services are far from farm sites. There are occasions where mechanization services are interrupted for 1-7 days due to servicing requirements. These have implications for the supply of produce and returns to the farmers.

Land Tenure

Under the Nigerian Land Use Act of 1978, land is owned by the Government on behalf of the community. However, individuals and households under customary tenure occupy cultivated lands. In customary tenure, land is regarded as the property of the community or extended family and the head of the community acts as the primary trustee or custodian of the farm.

Generally, the size of farm holdings in Southern Nigeria is very small, ranging from less than 0.5ha to about 5ha. Individuals may control as much as 5ha in parts of Akwa Ibom state; and about 1 ha in Abia and other states. This affects input use and mechanization, especially when the holdings are fragmented. Hence one individual with 5ha may have it scattered in five or six different locations with less than 1 ha per location.

Cooperatives

A common feature in all states is the presence of cooperative organizations. While some of these cooperatives are specialized, others are multi-purpose. The specialized cooperatives seem to be more focused and have lower mortality rates than the general-purpose cooperatives. Some cooperatives are credit and thrift cooperatives and specialize in providing credit to members and sometimes non-members. In general, the performance of cooperatives has not been encouraging. Cooperatives have a reputation for politicization, poor management, and become a conduit for government services, which undermines their business potential. Given the fact that cooperatives have been around since 1935 and have yet to prove their viability, their usefulness in a strategy to commercialize agriculture is doubtful.

Regional and international agricultural trade

Structure and direction of agricultural trade

Nigeria's exports are currently dominated by oil and gas. Of the N9,495.1 billion total exports in 2008, agricultural exports accounted for N67.0 billion or less than 1% having fallen from over 70% in 1960. This decline was largely due to the phenomenal rise of oil shipments, but also reflects the fall in output of key export commodities like cocoa, palm oil, rubber and groundnuts (products for which Nigeria was once a leading world producer). For example, production of cocoa, currently Nigeria's biggest non-oil export earner has remained at around 160,000 tons per year since 1995, compared with an annual average of 400,000 tons at its peak prior to the oil boom. In the period between 1961/65 and 2006/07, all major export crops experienced declines in quantities traded. Although GON has made efforts to promote agro-enterprise development, there is little value addition in agricultural exports. As shown in Table 1 the destinations for Nigeria's main agricultural products are: Albania, France, Netherlands, Germany, Barbados, Belgium, Singapore Vietnam , India, Pakistan, Japan, Turkey , Thailand , Belize, Hong Kong , Italy, and UK.

Currently, Nigeria is a net importer of food and other agricultural products and the import bill appears to be rising steadily despite recent improvements in the performance of the agricultural sector. Food imports have risen from N298.1 billion in 2005 to N349.4 billion in 2008. The main food imports are cereals, dairy products, fish, vegetable oils and fats, beverages and tobacco. For example, rice importation in Nigeria grew from less than 500,000 metric tons (MT) in 1994 to 1 million MT in 2005 and 2 million MT in 2008. Also, the importation of live animals and animal products grew from \$470 million in 1999 to \$ 1.503b in 2006. Nigeria's major suppliers include the Netherlands, USA, Brazil, Germany, France, Spain, Thailand and India. Table 2 provides details of the main sources of food imports in 2008.

As shown in Table 3, Nigeria enjoys a healthy balance of trade surplus in the regional market mainly due to oil exports. Regional markets regularly deal in agricultural commodities produced by Nigeria. However, available information is not reliable due to poor documentation and porosity of borders. The largest grain market in West Africa, for example, is located in Darwanu, Kano, Nigeria. Trade statistics for most of the regional trade are not captured, but the volumes involved may not be very large.

Trade policy

The World Bank's 2009 Doing Business Report shows that Nigeria ranks 144 out of 180 countries worldwide in terms of ease of cross border trading. Estimates show that charges related to port handling are 50% higher in Nigerian ports than in neighboring ports (in particular, Cotonou, Benin). Although the country is moving toward a more liberal trade regime, the trade policy has been characterized by import bans as a measure of protecting Nigerian businesses. Among other measures, there is now a 35% duty in place on certain goods that used to be prohibited; tariffs have been reduced; and no quantitative restrictions or quotas apply to imports. Current import prohibitions on agricultural products include poultry, pork, beef, eggs, cassava, refined vegetable oils with some exceptions, spaghetti, noodles, cocoa butter and its other forms, and fruit juice in retail packs. Products on the August 2008 list were reduced from 46 to 27 items in total. However, packaging material in the form of corrugated paper, boxes and cartons still remain on the list, even though a general complaint among

exporters is the lack of adequate quality packaging materials. Agriculture related export prohibitions are limited to maize, raw hides, and skins.

Some of the trade policy initiatives that are helping to grow the agribusiness sector are the duty exemption for imported agricultural processing machinery and equipment parts, which was introduced in March 2006, and reduced levies on imported rice. The government removed the tariff and all levies on rice in May 2008 to relieve food shortages and when these were re-imposed in November 2008, the duty was reduced to 10% from 50% and the special levy reduced to 20% from 50%. The levy has been in place for many years and is to be dedicated to expand domestic rice production and processing.

Although high tariffs are not recognized internationally as an effective means of promoting domestic industries, Nigeria has maintained them for some time. In 2004, the average ECOWAS tariff was at 13% while Nigeria's was at 29.1%, more than twice the average. Recently, Nigeria has reduced tariff bans with the highest now at 35% in lieu of 50%. However, rates continue to be among the highest in the region. Continual changes and interruptions in policy application send the wrong signal to investors that Nigeria provides a transparent, predictable environment for business.

A big challenge in trade policy development is the lack of quality statistics needed for impact assessments. The large volume of both informal and illegal trade, which some estimate at more than 50% of Nigeria's total trade volume, is not captured statistically. As a result, policy decisions often do not have the desired impact. Cross-border trade in Nigeria faces other challenges such as poor roads and inefficient, expensive and congested port facilities and poor access to credit. The National Customs Service (NCS) has historically been perceived to be corrupt. Many within both the government and the trade community believe that the NCS has not implemented required reforms and believe that broad-based Government of Nigeria (GON) commitment and NCS leadership is required to improve trade facilitation.

Table 1: Nigerian agricultural exports 2008

Commodity	Importing country	Quantity (2008) (metric tons)	Value (Billion Naira)
Cocoa and cocoa products (cocoa butter and cocoa oil)	Albania, France and Netherlands accounted for more than 50%	22,654	8.897
Cocoa and cocoa preparations (Total)	Germany (17.36 billion); Netherlands (10.668 billion); Barbados (6.095 billion); Belgium (3.522 billion); Singapore (3.52 billion)	55,727	70.36
Cashew nuts in shell	Vietnam (ca 50% - 2.392 billion); India	55,959	4.537
Cashew nuts shelled	Germany, Singapore, Vietnam	4,589	1.275
Coconuts			
Cotton	Singapore (3.235 billion) Pakistan (1.461 billion)		11.712
Oilseeds (sesame)	Japan (6.633 billion)	785,866	17.694

	Turkey (3.561 billion) Singapore (1.332 billion)		
Sorghum (grain)			
Fish and other aquatic animals	Netherlands, Belgium, Barbados (Most of the exports are mainly frozen shrimps and prawns worth about Naira 8.2 billion)	20,174	8.567
Gum Arabic	France (5.251 billion)	62,102	7.490
Natural rubber latex	Thailand (13.825 billion) Belgium (15.097 billion) Belize (2.115 billion)	86,971	49.244
Raw hides and skins	Hong Kong (24.490 billion) Italy (8.342 billion) UK (5.124 billion)	187,574	79.634
Leather products after tanning (goat skins)	Hong Kong (25.971 billion) Italy (17.601 billion)	168,562	54.36
Cassava	UK, US		1.8 million
Wood and wood products (logs, charcoal timber, etc)			7.306
Paper and paper board			23.944

Table 2: Nigerian agricultural imports 2008

Commodity	Source country (Value in Naira)	Quantity (2008) (metric tons)	Value (Billion Naira)
Wheat	US (32.905 billion) Belize (27.563 billion) Argentina (5.374 billion)		78.497
Fish and other aquatic animals	Mostly frozen fish (62.562 billion) Major sources: EU Chile (4.5 billion) Belize (3.5 billion) Argentina (2.5 billion) Albania (3.3 billion) US (3.1 billion) China (1.5 billion) Mauritania (813 million) Morocco (119 million) Botswana (397 million) Mauritius (174 million) Algeria (768 million)		72.756
Rice (mainly milled rice 9.94 billion)	India (3.371 billion) US (2.087 billion)	348,228 t	11.221

	Brazil (1.352 billion) Thailand (1.09 billion)		
Dairy and dairy products	Europe Ireland (4.210 billion) Netherlands (4.27 billion) Tanzania (98 million)		45.463

Table 3: Value of Nigerian Regional exports and imports (N million)

Country	Exports from Nigeria	Imports to Nigeria	Balance
Benin	982.5	434.6	548
Cameroon	55,858.5	163	55,695.5
Chad	1100.1	0	1100.1
Ivory Coast	214,327.8	2639.2	211,688.6
Gabon	14191.8	1462.9	12728.9
Ghana	217742.1	5340.8	212401.3
Guinea	614.3	43.4	570.8
Guinea Bissau	6.4	7.0	-0.6
Liberia	135468.6	620.6	134,848.0
Mali	367.9	0.4	367.5
Mauritania	122.3	2706.4	-2584.1
Niger	10975.0	188.5	10786.5
Sierra Leone	872.9	56.3	816.6
Togo	1136.5	97371.1	-96234.6
Gambia	695.1	77.2	617.9

Source: NBS Trade statistics

3.0 Overview of Government Interventions in Agro-Enterprise Development

In 2008, GON launched its National Food Security Program (NFSP). The program is currently the main agricultural policy document that Nigeria has produced to ensure sustainable access, availability and affordability of quality food to all Nigerians and for Nigeria to become a significant net provider of food to the global community. The main focus is on providing a conducive environment for private sector involvement, encouraging large scale commercial farming with strategic linkages to small holder farmers, and significantly reducing post harvest losses through adequate storage, processing and appropriate market outlets. Focus is also on strategic crops, livestock, fishery and agro forestry commodities. The strategy document is currently being updated by the FMAWR in collaboration with IFPRI and the World Bank. Before and after the launching of the new policy, several interventions were undertaken by the government and development partners aimed at the development of agro enterprise in Nigeria as mentioned below.

3.1 Overview of Government Intervention Programs

The study team identified 27 major interventions by GON in the period January 1970 to March 2010 (See Annex 5 for details). The identified intervention programs and initiatives can be grouped into five major categories, namely: 1) relaxing input supply constraints; 2) relaxing primary production constraints; 3) enhancing value addition through primary and secondary processing; 4) market development (market infrastructures, market information system, market linkages, and market accessibility); and 5) building local capacity, social institutions, social infrastructure, and social capital.

3.1.1. Interventions aimed at Relaxing Input Supply Constraints

Objective	Interventions
1. Increase primary producers' access to productivity-enhancing technologies	<ul style="list-style-type: none"> ◆ Agriculture Research Institutes (1964-present) ◆ National Accelerated Food Production Project, ◆ Green Revolution, ◆ Fadama II and III, CADP, ◆ Multinational NERICA Rice Dissemination Project
2. Relax supply side constraints to production credit to increase primary producers' access to credit to purchase inputs.	<ul style="list-style-type: none"> ◆ Establishment of NACRDB (previously NACB) in 1973 and later the CBN ACGSF (1975), ◆ Rural Banking Initiative (1977), ◆ Rural Finance Institution Building Program (RUFIN), ◆ Refinancing and Rediscounting Scheme of the CBN (RRF) 2009 ◆ Commercial Agriculture Credit Scheme (CACS, April 2009). ◆ Rural Banking System, Peoples Bank Program, Community Banking Scheme
3. Relax demand side constraints to production credit to decrease cost and increase accessibility by primary producers	<ul style="list-style-type: none"> ◆ CBN interest drawback initiative (2003), ◆ Fadama III project, CADP, ◆ Cooperatives, Community Banking Scheme

Objective	Interventions
4. Increase availability of medium and long term capital for agricultural value chains	<ul style="list-style-type: none"> ◆ Small and Medium Enterprises Equity Investment Scheme (SMEEIS), 1999-2005, ◆ Fadama II, Fadama III and CADP

3.1.2. Interventions aimed at Relaxing Primary Production Constraints

Objectives	Interventions
1. Develop rural and agricultural infrastructure	<ul style="list-style-type: none"> ◆ Establishment of the Directorate of Foods and Roads and Rural Infrastructure (DFFRI) (1986 to 1993), ◆ Fadama III, CADP
2. Develop and productively use land and water resources for agriculture	<ul style="list-style-type: none"> ◆ Establishment of Agricultural Land Development Authority (NALDA) in 1991 ◆ Establishment of River Basin Development Authorities (RBDAs) in 1977 ◆ FADAMA II, Fadama III
3. Increase diffusion of environmentally friendly technology among farmers	<p>Improved advisory and extension services such as:</p> <ul style="list-style-type: none"> ◆ NAFPP ◆ ADPs ◆ Fadama III, CADP ◆ RUMEDP ◆ AfDB/FGN-CBARDP Industrial Clusters ◆ Multinational NERICA Rice Dissemination Project
4. Increase asset base of production units in erg value chains	<ul style="list-style-type: none"> ◆ Fadama III, CADP

3.1.3 Interventions Aimed at Enhancing Value Addition through Primary and Secondary Processing.

Objective	Intervention
1. Expand processing capacity for agricultural products	<ul style="list-style-type: none"> ◆ Fed Government Program - Enhancement of Rice Processing Capacity ◆ Fadama III, CADP ◆ Presidential Initiatives on Cassava (1999 to 2007)

3.1.4 Interventions aimed at Market Development (market infrastructures, market information system, market linkages, and market accessibility)

Objective	Interventions
1. Development of agricultural markets and increasing access to markets	<ul style="list-style-type: none"> ◆ Establishment of Commodity Boards (1947 to 1986) ◆ Establishment of Export Promotion Zone (EPZ) Commerce 44 program ◆ Commercial Agriculture Development Program ◆ Patronizing “Made in Nigeria” products (2009)
2. Facilitate linkage of value chain operators to service providers and markets	<ul style="list-style-type: none"> ◆ Fadama III project, CADP, ◆ NPFS, ◆ Rural Micro Enterprise Development Program (RUMEDP), ◆ IFAD-CBARDP

3.1.5 Interventions aimed at building local capacity, social institutions, social infrastructure, and social capital

Objectives	Interventions
Build capacity of value chain operators	<ul style="list-style-type: none"> ◆ Fadama II, ◆ Fadama III, ◆ NPFS, ◆ CADP
Build local capacity of institutions	<ul style="list-style-type: none"> ◆ Rural Micro Enterprise Development Program (RUMEDP), ◆ AfDB/FGN-CBARDP, IFAD-CBARDP
Build capacity of social networks, social capital, social infrastructure	<ul style="list-style-type: none"> ◆ AfDB/FGN-CBARDP, IFAD-CBARDP

Apart from interventions initiated by or implemented through GON, a number of initiatives were directly implemented or funded by development partners in Nigeria. The main ones are the USAID-MARKETS project, the IFPRI/CIDA APSF and the DFID supported PrOpCom.

The USAID-MARKETS, which began operation in November 2005 is a major intervention which contributes significantly to a better understanding of the functioning of agricultural value chains in Nigeria. It identifies and addresses priority food and cash crop/non-crop systems where productivity gains will lead to: (i) significant impacts on local economies; (ii) improvements in the livelihoods of those networked into targeted commodity value chains; and (iii) increased investment in agricultural-related enterprises to enhance value addition and general employment. Its operations have led to strengthening of linkages between producers and large processors of rice (such as Olam, Veetee Rice, Stallion Group 2000), cassava and sorghum. Another key area of intervention by MARKETS is that of seed development. MARKETS

is currently supporting a sorghum hybrid development program in collaboration with IAR and ICRISAT, which is expected to create well adapted sorghum hybrids that will increase yields from 2 to 4 MT/ha and incomes from less than N20,000/ha to over N50,000/ha. MARKETS also provides technical support to farmers on appropriate crop management practices to minimize production costs and maximize on-farm margins.

IFPRI-Agricultural Policy Support Facility (IFPRI -APSF), funded by the Canadian International Development Agency (CIDA) is an initiative aimed at strengthening evidence-based policymaking in the areas of rural and agricultural development through:

- ◆ Enhanced knowledge, information, data, and tools for the analysis, design, and implementation of pro-poor, gender-sensitive, and environmentally sustainable agricultural and rural development policies and strategies in Nigeria;
- ◆ Strengthened capacity for government agencies, research institutions, and other stakeholders to carry out and use applied research that directly informs agricultural and rural policies and strategies; and
- ◆ Improved communication linkages and consultations between policymakers, policy analysts, and policy beneficiaries on agricultural and rural development policy issues.

IFPRI has undertaken several policy-related studies in the agricultural sector and is currently assisting the GON in the review of the NFPS as well as participation in the implementation of CAADP. The latter point is significant given the major expectations placed on CAADP implementation by GON and by USAID. A major accomplishment of this project is the establishment of the Nigeria Agricultural Policy Research Network (NAPRNet), an institution that will be responsible for sustaining the gains from the project.

Promoting Pro-poor Opportunities through Commodities and Service Markets (PrOpCom) was initiated by DFID. The project initially focused on rice, soy, cashew, cassava, and livestock (animal feed) and agricultural inputs. PrOpCom is also part of the multi-donor effort to support GON's NEEDS and SEEDS strategies through the mobilization of stakeholders in market-led development that encourages increased private-sector participation and investment in critical infrastructure and social development. PrOpCom seeks to implement the strategy known as "Making Markets Work for the Poor" or M4P. The project identified two rice value chains in which it is currently intervening, namely: the Ofada rice value chain and the Kura-Kano rice value chain. The goal is to assist growers to increase their production and marketed volumes, support small-scale processors to achieve increased functionality and reduce transaction costs along the value chain.

3.2 Analysis of Government Intervention Programs and Projects

An examination of past and current government intervention programs in Nigeria since the mid-1930s leads to two main observations: First, it appears little thought has been given on how to facilitate the private sector to provide some of the necessary services to get the agricultural sector moving in a sustainable manner. The government has taken on many tasks that are inherently private sector, yet neglected key public investments such as power, roads communications, and research, which are vital for the development and competitiveness of agro enterprise. In the process, many agencies and institutions were created (see annex 6), some of which subsequently had to be terminated or abandoned due to market failures, inadequate funding and policy inconsistencies. This is one of the key reasons that underpin USAID support for the sector.

The second observation is that until very recently, most government intervention program/projects in the agricultural sector have focused mainly on the development of the upstream section of the agricultural value chain and have largely neglected the downstream sector. Annex 5 shows that most of the interventions between 1935 and 1999 were focused on relaxing input supply and primary production constraints. Many of these interventions have had to be terminated or abandoned due to certain observed weaknesses.

- ◆ The inability of marketing boards to afford to pay the prices fixed by the government resulted in the failure of the program.
- ◆ Inadequate funding of the numerous research institutes and constant change in policy direction made most of the institutes ineffective.
- ◆ The cassava initiative failed when the government withdrew political support and lifted the ban on wheat, a clear evidence of policy inconsistency.

The NACRDB remains ineffective in resource mobilization and credit delivery to resource poor farmers because of its continued dependence on government for funding and its inability to maintain the single digit interest rate for which it was originally established. Agricultural Development Projects started well, but the economic crisis of 1982 triggered a decline in counterpart funding. Lack of adequate funding and high farmer/extension staff ratio have created a major setback in the ADPs' ability to deliver advisory and extension services to farmers.

The failure of the RBDAs was due to unnecessary political interference and managerial problems resulting from socioeconomic cleavages which permeated the nation's socio-political, economic and cultural institutions. There is also the lack of qualified manpower to provide effective leadership at departmental levels. The lack of continuity and shift in approach by successive governments were the reasons for the failure of the green revolution. A major reason for the failure of DIFRRI was the lack of funds and commitment, which limited the extent of infrastructural provisions in rural areas. The government programs for rural infrastructure were embarked upon without an effective program of action and appropriate institutional arrangements for their execution. The major weakness of the NALDA intervention was that the approach increased rather than reduced the direct public provision of goods and services that could have been provided by the private sector instead. Also, many of NALDA's services were duplications of services already being provided by the ADPs. The SMEEIS failed as a result of a sluggish pace of implementation, while interventions like the ACGSF, CACS and the IDP have not had the desired impact mainly because MSMEs have not been able to access available funds due to obstacles placed by the commercial banks operating the programs. There are serious complaints of high transaction costs and unusually long loan processing times by farmers. While Rural Banks may have failed to meet the credit needs of people, they did provide a safe and accessible savings service.

The major weaknesses observed in past intervention programs can therefore be summarized as: policy inconsistency, policy instability, poor funding, lack of adequate institutional arrangements for implementation, administrative dislocations, dependence on government for sustainability, lack of political will and commitment, lack of continuity, bureaucratic bottlenecks and excessive political interference. In addition, many of the interventions did not do as well as

expected because they were supply driven with unclear roles for public and private sector. There has been little attention paid to experiences in other countries. For example, it is well known that single digit interest rates for rural credit, while desirable, cannot cover the costs of the service and risk – and are therefore not sustainable.

Even though most of the earlier intervention programs have focused on the upstream sector, experiences from all over the world have shown that increased investment in the downstream sector is likely to result in substantial expansion of markets for primary agricultural products, increase in farmer's income, increased production and greater food security. Consequently, recent intervention programs and projects have increased focus on and addressed issues relating to the development of downstream activities in the agricultural value chain, such as the expansion of processing capacity, expansion of markets for agricultural products through the encouragement of value addition, linkage of primary producers with service providers and end user markets. For example, in 2005, GON encouraged the investment of large multinational rice companies (e.g Olam, Veetee, and Stallion Group) into rice processing by granting them licenses to import brown rice at a preferential tariff rate of 50 percent. License holders were expected to invest in rice processing and cultivation schemes in return for the exclusive license to import brown rice for polishing. Olam invested in the cultivation of domestic paddy via contract farmers, while both Olam and Veetee set up full rice mills.

Another major feature of more recent government intervention programs/projects in Nigeria is the emphasis on individual or group capacity building on how to take advantage of market opportunities and overcome constraints. These interventions have focused more attention on the building of economic and social institutions that would help reduce the incidence of market failure.

In general, given the massive amount of resources invested in the agriculture sector, there seems to be a glaring lack of information describing the performance and sustainability of many of the interventions noted above. Additionally, there is a serious absence of coordination among organizations responsible for various interventions leading to duplication of efforts. Finally, there is a concern that government control over certain inputs serves as a disincentive to private sector development.

4.0 Value Chain Analysis Approach

4.1 *The Power of Value Chain Analysis*

The analysis of data followed the value chain approach. Value chain analysis approach was adopted because it is a useful tool when considering the development of an economic sector like agriculture or agri-business, in that it looks at the entire industry, including primary producers, and identifies constraints and opportunities that are relevant to the overall competitiveness of the industry taken as a whole. It perceives competitiveness as coming between similar industries and not generating from within the industry. Rather, it promotes cooperation among the many players within the industry as essential to the overall competitiveness of the industry. Three important components of value chains transform them from a heuristic device into an analytical tool:

- a) Value chains are repositories for rent, and these rents are dynamic;
- b) Effectively functioning value chains involve some degree of “governance”;
- c) Effective value chains arise from systemic as opposed to point-efficiency.

4.2 *Criteria for Selection of Value Chains in this Report*

The selection of value chains was based on objective criteria indicated below.

- (a) High GON priority
- (b) High growth impact sectors
 - Potential to impact growth at all levels of the chain; with high impacts on rural incomes and employment of primary producers and processors
 - End markets environment: *market penetration*, *market development*, *product development* (refers to the offer of new or modified products to current market segments); and *diversification* -the production of new products for new markets
 - Competitive advantage: the ability of actors within the sector to anticipate and meet buyers’ demands; identify and take advantage of end-market opportunities; and respond to changes in market demand or the competitive landscape
- (c) Private sector appeal: ability to attract private sector investment and cooperation
- (d) Cross cutting constraints and opportunities
- (e) Potential for short to medium term interventions and gains

Table 4 shows the list of commodities that various actors in the agricultural sector have selected for interventions and development. Table 5 shows the relative importance and ranking of various commodity chains by IFPRI based on contribution of the commodities to agricultural GDP, income growth multiplier, and price reduction effect. Based on these studies and considerations indicated above, the team selected cassava, rice, sorghum, aquaculture, poultry, and cowpeas for detailed analysis of constraints and opportunities in agro enterprise development.

Table 4: Prioritization of Commodity Chains by Actors in Agricultural Sector

GOVERNMENT OF NIGERIA	IFPRI	USAID MARKETS	WORLD BANK	PROPCOM	TEAM SELECTION
Cassava	Cassava (3)	Cassava			1
Rice	Rice (4)	Rice	Rice	Rice	2
Millet/Sorghum	Millet/Sorghum (5)	Sorghum			3
Wheat	Wheat (13)				
Maize	Maize (7)		Maize		
Sugar	-				
Cowpeas	Pulses (6)	Cowpeas			6
Soya bean		(Sesame)		Soya	
Tomato					
Cotton	Export Oriented (9) Commodities				
Cocoa			Cocoa		
Oil Palm			Oil Palm		
Rubber					
Fisheries	Fisheries (10)	Aquaculture	Aquaculture		4
	Livestock (8)				
Poultry	12		Poultry		5
Goat					
Sheep					
Cattle			Dairy		
Pigs					
-	Forestry (11)		(fruit trees)		

The figures in brackets are the ranking by IFPRI by ascending order of importance.

Table 5: Subsectors Contribution to Agricultural Growth

	Share in Ag GDP (%) 2008	Base Growth rate Required (%) 2009-17	Additional Growth Required (%) 2009-17	Contribution to Ag GDP growth (%) 2009-17
Cereals	25.9	5.4	4.1	30.9
Root Crops	31.6	6.0	2.9	29.1
Other Food Crops	25.7	5.7	2.4	18.4
High-Value Crops	4.9	5.6	2.4	18.4
Other Export Crops	0.1	8.5	4.4	0.1
Livestock	6.5	5.4	1.4	2.8
Other agriculture (fisheries & Forestry)	5.3	5.8	5.1	7.9

Sources: Nigeria SAM and DCGE model results. Notes: Share in the first column of the table is calculated from the new Nigerian SAM.

5.0 Analysis of Constraints for the Selected Value Chains

5.1 Profiles of Selected Value Chains

5.1.1 Cassava

Nigeria is the world's largest producer of cassava. National production was 45 million MT in 2007 on more than 4 million hectares of farmland, giving a national average yield of about 10MT/Ha compared to more than 40MT/Ha in some countries. Cassava is harvested by uprooting the plant and is highly perishable if left unprocessed.

Characteristics and quality desired by end users: There are four broad categories of industrial usage: starch, flour, animal feed and ethanol. Starch is used in textile, pharmaceuticals, food, wood products, and chemical industries. Cassava flour can replace a portion of wheat flour for bread and almost completely in pasta without a noticeable change in taste. Both domestic and international markets could be supplied with cassava chips for animal feed. Cassava peels are now commonly fed to pigs. Cassava is particularly suitable for ethanol due to its high sugar and starch content. Traditional cassava products include *gari* and *fufu*.

Major firms that make cassava starch include Nigerian Starch Mills, Ihiala, Ekha Agro and Matna Foods. They require a starch content of minimum 17 – 20 % and want the cassava delivered to the processing plant not later than 48 hours after harvest. However, they do not express a preference for any variety of cassava. These companies have difficulty meeting the needs for cassava raw materials. Nigeria Starch Mills sources cassava from as far away as Kwara State. To meet its 400 MT/day installed capacity, Ekha Agro sources cassava as far away as 200 km. The company has organized its own out-growers for greater control of supply.

Cassava processors ranked the key barriers they face in the following order of importance:

1. Finance: working capital for operations and money for expansion.
2. Lack of farming implements: Respondents suggested the purchase of equipment for common usage for a particular zone.
3. Inputs: Need for good quality stems adapted for the environment and appropriate (specially formulated) fertilizers and other chemicals to increase productivity.
4. Transportation: lack of adequate transportation facilities coupled with poor road conditions and distribution.
5. Output markets (buyers for products): Demand for cassava suffered a decline after the government policy to include cassava flour in bakery products ended. This may mean that cassava is not competitive with other ingredients. There is also a lack of market knowledge on demand for cassava and cassava products.

Producer needs and challenges: Cassava producers want varieties that are high yielding (at least 20MT/Ha), that root early and have long shelf life. They also want guaranteed markets at reasonable prices. In view of poor state of access roads, producers face the challenge of transporting their cassava to collection points where processors pick up the tubers.

Breeder response: IITA breeders in cassava have been very successful producing popular improved varieties such as TMS 30572, TMS 30555, etc. They have developed new high yielding

varieties capable of yielding 20MT/Ha in 10 months and that are resistant to most pests and diseases. They now have at least 12 new varieties – like 98/0581, 96/1632, 98/0505, etc. Adoption rates among farmers are low and hence, closer communication between IITA and farmers is needed to identify the reasons for this.

Post harvest issues: The high water content of cassava tubers (70%) contributes to rapid deterioration of tubers, a challenge given the long distances end users have to travel to source cassava. Reduced rate of post harvest deterioration is important both to the end users and the producers. Peeling, grinding, fermenting, and grating are time-consuming processes. There are a number of processing clusters in different parts of the country, which operate with motorized equipment. Their scale of operation and process efficiencies are usually better than the household processors. Some of the key challenges faced by this category of operators include reliable supply of tubers, operating and investment capital.

5.1.2 Rice

Nigeria is one of the largest producers of rice in Africa and the continent's leading consumer of rice, and at the same time, one of the largest rice importers in the world. Rice is consumed regularly in urban and rural areas and is an important food security crop. It is, however, primarily a cash crop for those farmers who produce it (selling nearly 80% of total production and directly consuming only 20%), and it generates more income for Nigerian farmers than any other cash crop in the country. Overall, the total industry, between imports and domestic production, is valued at about \$5 billion, with nearly \$4 billion accruing inside Nigeria.

In 2008, Nigeria produced approximately 2 million MT of milled rice and imported roughly 3 million MT, including an estimated 800,000 MT that is suspected to enter the country illegally on an annual basis. Even though Nigeria's rice trade policy has been and continues to be protectionist, ranging from outright import bans in the 1980s to the 32.5 % tariff/levy combination that is applied to rice imports currently, it has had little effect in stimulating local production to a level of significant import substitution. A key objective of the GON is to increase local production to substitute imports for greater food security and improved balance of trade.

Since rice is produced in at least 35 of the 37 States, covering three major ecological zones (rain-fed upland, rain-fed lowland and irrigated) it is apparent that there may be more than just one rice value chain which requires detailed study. Production in the rain-fed upland system is largely subsistence-based while production in the rain-fed lowland and irrigated systems is commercially oriented. In 2007, the paddy production of 6 states constituted more than 60% of total domestic output: Niger (452,000 MT), Kaduna (347,000 MT), Benue (296,000 MT), Taraba (282,000 MT), Ebonyi (256,000 MT), and Kwara (234,000 MT).

The growing, processing and marketing of rice provide a source of income for between 1 and 2 million Nigerians. Rice production in Nigeria is very labor intensive with 214 days per hectare for upland rice, 156 for lowland rice, and 225 for semi-irrigated rice, with an average of 177 labor days per hectare, compared with 43 in Cambodia and 47 in Thailand. Labor use is high due to the lack of use of mechanized equipment in land preparation, the inability to purchase inputs to control weeds and the failure to adopt low cost methods of bird scaring. Labor has become more scarce and expensive in rural areas due to migration to urban areas. The price of

agricultural labor in Nigeria is roughly comparable to Thailand at US\$ 3-5/day. A combination of low yields and high labor costs results in a price of paddy of around US\$ 300/MT compared with \$130-140 in Thailand.

Characteristics and quality desired by end users: Urban Nigerians prefer well packaged and long grained rice. Consequently, rice processors look for long grain varieties with good taste, high parboiling and milling qualities, and resistant to mechanical breakages during processing. Rice can be stored for long periods, but it is critical to provide good aeration and to keep moisture content below 13-14%. Thousands of rice millers operate in the country ranging from very small units at the community level to highly sophisticated industrial operations like Olam in Benue state. In addition to regular cooking, a number of industrial and traditional value added products are produced from rice. These include quick-cooking rice, breakfast cereals, baby foods, *tuwo*, *brabusko* and *garabiya*. There are opportunities to achieve substantial economies by encouraging the mechanization of the harvesting, threshing, winnowing and drying processes. There is an opportunity to increase incomes by optimizing the utilization of rice products and by-products, such as the use of rice husks as fuel and straw as animal feed.

Producer needs and challenges: Industrial end users cannot produce on their own all the rice they need to feed their rice mills but have to rely on numerous small-scale producers to meet their needs. However, these producers have their own challenges. They want high yielding, disease and pest resistant varieties, varieties that are resistant to lodging and mature early. For upland varieties, they need varieties that have weed competitiveness, and that tolerate drought, soil acidity and iron deficiency. For lowland varieties, flooding helps to suppress weeds but they need varieties that are resistant to iron toxicity, flooding, stem borer, blast and gall midge. Estimates indicate that over 90 % of domestic rice production comes from resource-poor and weakly organized smallholders, a key fact when considering the wide-ranging constraints that continue to impede significant progress in Nigeria's farm-level productivity and international competitiveness in rice.

Breeder response: According to the NARS breeders, FARO 44, 52, and 57 are available for lowland cultivation, while for upland FARO 55, 56 and 46 were released. Experimental varieties include L-19, L-49, L -36 L -48 for lowland cultivation and NERICA 7, 8, and 14 for upland cultivation. Adoption rates are low due to cost and poor network of seeds distribution. Hybrid rice varieties and long grain rice varieties are under development but will take several more years before release. For seed companies, difficulty in sourcing for foundation seed and lack of hybrid varieties are problems. The Seeds Project proposes to develop a strategy with MARKETS, their platform of end users and Nigerian seed companies for rapid multiplication of foundation seed and capacity building at NARS for variety maintenance and breeder seed production.

Post harvest issues: Rice is harvested manually with sickles and left in the fields to dry. Most farmers still use manual methods or simple hand-cranked machines for threshing and winnowing. However, larger mechanized operations are increasingly being employed. Contamination with sand, especially during threshing and sun drying after parboiling is a major problem for small scale producers. Substantial quality problems arise from local drying techniques such as spreading on roads.

Cleaning services: Manual, mechanized or both manual and mechanical cleaning services are offered by a number of service providers in and around Dawanau Market. The crops covered include sesame, rice, sorghum, millet, maize and soybeans. Manual cleaning frequently involves women sifting out in the sunlight. Machines clean higher volumes more rapidly and with less contamination, but are more capital intensive.

5.1.3 Sorghum

Nigeria is the world's second producer of sorghum behind the USA, with 2007 production of 9.1 million MT valued at \$921 million. Traditional Nigerian foods made from sorghum include boiled whole sorghum, *tuwo*, *fura*, *kunu*, *ogi* or *kamu*, *ndaleyi* and *masa*. Over 2.5 million MT per annum of sorghum are custom-milled into whole flour. State-of-the-art sorghum flour mills have been installed in Yobe and Jigawa states. Sorghum malting is a success story in Nigeria. During the 1980s and 1990s the Government of Nigeria banned the importation of barley, forcing the brewing industry and several other industries to become wholly dependent on malted Nigerian sorghum. When the ban was lifted in 1998 it was not economical for these industries to revert to barley malt. Sorghum malting industries in Nigeria include the \$67 million Aba Malting Plant and Derivatives Industrial Limited. Malted sorghum is used to produce virtually all beer in Nigeria, as well as non-alcoholic malt beverages and a variety of food products. Most Nigerian sorghum is consumed locally rather than exported, with 30% consumed in households and 70% utilized as input for value-added products.

Characteristics and quality desired by end users: The end users (breweries and malters) need an adequate supply of sorghum, good malting quality, glumens that are easily removed, good storability (10 – 11 months), high extract yield, good milling ability (not too hard/not too soft) and good temperature sorghum gels. Harvested grains need to have a diameter greater than 2 mm. In addition, most processors are far from the main sorghum growing areas in the north and are thus presented with transportation challenges.

Producer needs and challenges: In the north, where much of the sorghum variety used for the Aba malting plant is produced, rainfall can be very erratic, and in some areas brief; producers therefore want varieties that are early maturing, and resistant to drought and salinity. Apart from these, the crop must have resistance to covered smut, loose smut, ergot, head smut and striga, and in late planting, resistance to stem borer. Where resistance is not available, producers must buy chemicals for seed treatment and crop spray. Producers also need good quality and pure seeds. Finally, producers want guaranteed markets and profitable prices.

Breeder response: NARS breeders recently released the following varieties: SK 59129, SAMSORG 40- 41 and CSR 2(2006). In addition, introduction of hybrid varieties has reached an advanced stage with on- farm trials.

Post harvest issues: Sorghum is harvested with reapers and dried for 2-3 weeks until the moisture content in the heads is less than 10%. Both manual and mechanical methods are used for threshing. Harvested produce must be prevented from becoming moldy and threshed on tarpaulin or on concrete slab to prevent contamination from sand. Storage and drying is mainly on-farm. Produce must also be treated against storage pests since it may be stored over a long period of time.

5.1.4 Aquaculture

Most of the \$1billion worth of fish consumed in Nigeria each year is imported from Europe. Demand for fish is anticipated to rise with a growing affluent and more health conscious population, particularly residing in urban areas. Stagnation and declining productivity, high costs of industrial fishing principally due to high prices of fossil fuel and neglect of small water bodies are major causes of low domestic fish production. Domestic fresh water and marine fisheries, already over exploited, have been unable to cope with the increased demand. Supply has responded in two ways: i) imports of frozen fish have increased as there are no quantitative restrictions and tariffs are not high; and ii) a small but rapidly growing aquaculture industry has emerged that has been able to meet growing demand in some parts of Nigeria.

Overall, the fisheries sub-sector increased output by 5.7% p.a. over the 2002-2006 period, but aquaculture grew by 7.6% p.a., though from a low base. Present fish production from aquaculture is estimated at 25,000 tons, while fish production from largely unmanaged inland waters amounts to 150,000 tons. The potential for increased production in both areas is great as Nigeria is blessed with more than 12 million ha of inland waters and suitable soils for aquaculture development. In recent years, more investors have entered catfish farming. There exists a large unmet demand for catfish and market prices are more than double those of other species. Consumers pay N300 or more per kilogram while Tilapia and other species sell for only one third to one half this amount. Additionally, a number of highly intensive recirculation closed aquaculture systems have been developed in the country. These catfish farms and other large catfish farmers are importing some 4,000 tons of high quality fish feed from Europe per year.

There is also a synergy between aquaculture and rice farming that improves the profitability of rice cultivation. At present, rice-fish farming is primarily “captural” in practice whereby wild fish that enter the flooded rice fields from irrigation canals and streams are trapped in the fields, and allowed to grow along with the rice. When the rice is harvested, fish are captured for consumption or sales. Some rice farmers in Adim, in Cross River State were able to harvest more than 90 kg of fish per ha of rice valued at N25,000 or more. Most fish harvested in such conditions are catfish (*Clarias* or *Heterobranchus* species).

The Lagos State Catfish Association is an association of fish farmers, processors and marketers. Its members represent no more than 10% of the total population of cat fish farmers in Lagos state. Consequently, it is very difficult for the association to enforce the N500/kg fish price set by the association. Catfish enterprises are of various sizes. The minimum cost of producing 1 kg of fish is N340, and consequently the association is pleading with processors to buy at N500/kg. Processors, however, insist that marketers will not buy at such price from farmers since this will leave them with a very small margin. They reported that 5kg of fresh fish gives 1.05kg of dried fish and this sells for N3000. If the 5kg of fresh fish is bought for N500/kg then the cost of fresh fish alone will cost N2500; hence all other costs and profit would have to be covered from the margin of N500. They have argued for a fresh fish price of N400/kg.

Producer needs and challenges: Nigeria needs to increase domestic fish supply by at least 700,000 metric tons per year to eliminate dependence on fish importation. Challenges include:

inadequate technical and commercial knowledge, poor supply and high cost of fish production inputs, inadequate knowledge of the market for aquaculture products, and weak investment capital base. Lack of legal title to water bodies is a disincentive to investment in the sector by both fishermen and financial institutions. A major problem faced by fish farmers in Lagos State is that they are confronted with a very strong and powerful fish marketers association who are mainly women. This group sets and strictly enforces prices for fresh fish bought by members from farmers. They do not only reduce farmers' margin by such anticompetitive practices, but also sell at very high prices to consumers thus capturing very huge margins. Part of their manipulation of the market involves buying from farmers by weight but selling to consumers individual fishes. In this way, they ensure that their selling prices are higher than they would be if they sold by weight.

Post Harvest Issues: Inadequate power and processing/storage facilities are major constraints.

5.1.5 Poultry

Poultry outnumber all other forms of livestock in Nigeria, and are found throughout the country. It is estimated that in 2005 there were 82,400,000 chicken and 31,900,000 other poultry that included pigeons, ducks, guinea fowl and turkeys. Findings from a survey on egg consumption in Abuja, Lagos and Port Harcourt, noted that concern for cholesterol seemed to be the major issue in consumers' decision on egg consumption.

Input suppliers of animal feed, primarily for poultry, veterinary medications and day-old chicks included Animal Care Ltd., Garko Farms, Phed Nigeria Ltd, Obasanjo Farms, Chi-Ajanla Farms, Zartech Limited and S and D Farms. Erratic or non-existent power supply affects supply and quality of feeds as manually mixed feeds cannot achieve the same level of uniformity of mix as power mixing. Another challenge is the high cost of finished feed/feed ingredients.

Most of the poultry farmers have no formal training on poultry management. Though some of them are graduates and retired civil servants who are motivated by their interest in the enterprise, there is still the need for organized training on poultry management. Expertise for poultry feed milling with such raw materials as maize and soy beans are still not optimally available. Hence, the feed millers are under-utilized.

Highly pathogenic H5N1 was first reported in Nigeria at a large commercial poultry farm in February 2006. The country is at particular risk because chickens are imported from all over the world without rigorous biosafety standards. The country is at increased risk because it has many bird sanctuaries along two flight paths that connect with southern Russia and Europe and with western Asia. Disease transmission risk is strongly related to commercial practices and trade in poultry and poultry products. Consumer influences are insufficient to change governance and commercial practice. Chain actors face economic incentives to conceal information that is essential for effective HPAI control. Sustainable HPAI control will require improved private sector-driven coordination mechanisms that target deficient biosecurity practices in the value chain.

5.1.6 Cowpea

Nigeria is the world's largest producer of this legume with 1.2 million MT produced in 2007 valued at \$196 million. Depending on the variety of cowpea, the pods can be picked from the cowpea plants up to three times per year. Cowpea is highly prone to extremely destructive infestations by cowpea weevils. The risk of infestation can be mitigated by storing the cowpea in hermetic containers and through the use of post-harvest pesticides. However, the toxicity of the pesticides must be managed with great care. Farmers tend to sell their cowpea harvest quickly to avoid insect problems and raise cash. Cowpea can be consumed and cooked in a variety of ways, or it can be processed into products such as bean cake, cowpea flour or steamed pudding. There is an opportunity to provide assistance in research and extension of economically viable pest-resistant cowpea storage solutions for smallholder farmers. It is also necessary to provide training to farmers and traders on the safe use of chemical pesticides¹.

Characteristics and Quality Desired by End user: One of the end users, Convenient Foods and Beverages Ltd in Kano, makes a local delicacy, Garin Dauwake, based on cowpea flour. They have no organized farmers supplying them with cowpea, but go to the open market to buy their cowpea. They have not expressed preferences with regard to seed coat color and other characteristics.

Producer needs and challenges: Cowpea producers face challenges such as high pest and disease pressure of the crop and the low storability value of the crop due to cowpea weevils. They need early maturing and high yielding varieties, and varieties that are resistant to striga, aphids, drought, fusarium, bacterial blight, rust and anthracnose. They also want a profitable guaranteed market that can only come from big industrial end users, as is the case for rice, cassava and sesame. That has not happened yet and this is reflected by the low number of seed companies producing cowpea seeds (only Seed Project and Manoma).

Breeder response: NARS breeders, in collaboration with IITA, have released early maturing varieties (60 – 65 day e.g IT 93K 452-2), also IT 90K 277 -2 used for making bean cakes, and the white SAMPEA 48. They have also bred multi-race striga resistant varieties, aphid and nematode resistant varieties and heat and drought tolerant varieties.

Post Harvest Issues: Storability is a big issue with cowpea because it is readily attacked by cowpea weevils. Weevil infestation starts usually in the field before harvesting. Farmers (mainly women) know this and tend to sell the crop soon after harvest as further infestation during storage lowers the selling price dramatically. The use of triple bags developed by IITA and Purdue University and the use of storage chemicals such as actellic or fumigation are becoming more common.

¹ R.L. Tinsley Carlos A. Woolgar Dan Oyoboh (2010): Post Harvest Handling in Selected Agricultural Value Chains in Nigeria CNFA, Inc. – ICRISAT January 2010.

5.2 Analysis of the Key Constraints Across Value Chains

The following part of the report analyzes the key constraints that cut across value chains as a prelude to the proposals for solutions to the priority constraints.

5.2.1 Infrastructure

Although power and road infrastructure is the most binding constraint to agro-enterprise development, it will take many years to bring the Nigerian power supply and road network to satisfactory levels due to the heavy costs involved and the long time it takes to complete construction projects. In the meantime, productive activities must not only continue but must be accelerated to meet the needs of the rising population and reduce poverty. What is therefore needed is affordable quick win solutions that can be undertaken by the enterprises themselves or within a framework of community self-help or in partnership with government as indicated below:

Transport: The important role of the road network is to facilitate movement of goods and people all year round in a cost effective way. The dilapidated nature of roads in Nigeria exacts a heavy cost on the economy estimated at about 3% of GDP. It increases the time required to market produce and is responsible for as much as 15-20% of agricultural produce failing to reach markets. In the case of cassava, for example, the tubers must be delivered to the processing plants within 48 hours after harvesting otherwise the tubers will be unacceptable to the processors. It is therefore important to ensure that roads are passable throughout the year by focusing attention on the difficult sections of the road, minor bridges and the like.

In addition to the poor state of roads, the transport problem is exacerbated by barriers to the movement of goods within and across states. Police road blocks are many and serve mainly as points for police to extort bribes from transporters instead of checks for ensuring road safety and security. Interstate taxes are another sore issue for transporters, which climaxed in March 2010 in the strike by transporters from the North to the South of the country. These barriers undermine returns and competitiveness of agro-enterprises, and particularly market development as these costs have to be passed on to consumers.

Power: Poor quality and unstable power, characteristic of Nigerian economy, does not only disrupt production but also damages equipment. Consequently, nearly all business enterprises have diverted substantial resources from productive activities to self power generation. Power generation is estimated to cost Nigerian businesses about 20% of new investments. This heavy cost contributes to making Nigerian businesses uncompetitive externally. Another major disadvantage is that existing businesses enjoy high monopoly profits since the heavy sunk infrastructure costs acts as a barrier against new entrants into business.

Water: Dependence on rainfall for most of the agricultural production is a key constraint to higher productivity. Despite the abundance of water resources, irrigation is not adequately developed. The country has 1.3 million hectares of water bodies. Irrigable land is estimated to be 3.14 million hectares (of which Fadama land is 2 million hectares) but only 7% is utilized (about 220,000 hectares)². Not all farmers are close to water bodies and not all can irrigate. Rainfall is also not uniformly distributed in all agro-ecological zones. Beyond farmers, some

² Isaac O. Akinyele (2009): Ensuring food and nutrition security in rural Nigeria: an assessment of the challenges, information needs and analytical capacity. IFPRI. Nigeria Strategy Support Program (NSSP) Background Paper No. NSSP 007, November 2009.

processors also lack adequate water for their enterprises. Large factories typically require very large amounts of water. Supplies cannot always be guaranteed due to occasional prolonged droughts which also impact negatively power generation.

5.2.2 Access to Finance

General – Financing agriculture and agribusiness is recognized as problematic the world over. In the recently held High Level Conference on Agribusiness and Agro Enterprise Development in Africa at Abuja, this issue was a main theme. A proposal for setting up an Africa-wide fund for financing the sector was floated by ADB and FAO. However, it was apparent that sources of funding and modalities for its operation were still in conceptualization stages. But even after those conceptual issues are resolved, it will take many years before the Fund can become operational because of the many administrative and legislative issues to be overcome in each of the participating African States.

Working capital constraints: Nigerian farmers/producers, processors and marketers alike suffer from low levels of credit availability, high cost of such credit if/when available (upwards of 21%) and absence/lack of effective credit delivery mechanisms, especially in rural areas and involving small-scale operators in the commodity chain. This shortage of credit exists in spite of the various intervention schemes by CBN and GON such as the ACGSF, ACSS, special discount window by the Central Bank of Nigeria (CBN) for re-financing commercial banks that lend to agribusinesses under NFSP, SMEEIS, Trust Fund Model (TFM), Rice Fund and more recently the N200 billion facility. In addition, CBN has also set up agreements with six selected commercial banks, providing them with discounted funds in return for their lending at 8-9% to farmers/producers mobilized into groups and cooperative associations. The Nigerian Agricultural Cooperative and Rural Development Bank, whose core mandate is to serve farming communities, operates under a pre-financed interest ceiling of 8%, has no legal status of a universal bank, especially for intermediation in savings and is poorly supported by Government as its sole owner.

Embedded finance: Some processors in the rice, sorghum and aquaculture value chains have been providing some out-grower farmers with credit in kind in the form of inputs and extension services against expected delivery. Some of the problems associated with this mode of financing are that it stretches the working capital requirements of the processor, creates difficulties in enforcement of contracts and does not allow a transparent method for price discovery. Primary producers may therefore never get optimum prices for their produce.

Off-shore credit: This option is available only to the large enterprises particularly the multinational enterprises aided by the recent good credit rating for Nigeria.

Agricultural Insurance: GON established the National Agricultural Insurance Company (NAIC) in 1987 to provide risk cover to Nigerian farmers. The primary mandate of NAIC is to operate the Nigerian Agricultural Insurance Scheme (NAIS), a mechanism put in place to shield farmers from the effect of natural hazards. NAIC also conducts other types of general insurance. The operation of NAIC has however not met with much success. Currently, the activities of NAIC have been reduced to mere insuring of loans to farmers by NACRDB and other financial institutions GON. Most of the other insurance functions now performed by NAIC are directed at non-farming enterprises. There is also the issue of poor funding of NAIC. Since there is very

little credit going into agriculture, very little is covered by insurance and the majority of farmers are not covered. Farmers in general know very little of NAIC's existence. The conditions for cover are onerous for an agricultural setting, particularly for small-scale farmers.

5.2.3 Policy Inconsistencies

Inconsistencies in policy formulation and implementation have discouraged potential investors in agribusiness. Banks in particular see policy inconsistencies as reasons to keep away from agricultural lending. In order to encourage investments in agribusiness, the policy environment must be transparent and predictable to all stakeholders. One reason for policy failure in Nigeria was noted to be failure of policy implementation. For example, while the GON may have had good intentions when it established subsidized fertilizer as a measure of support to farmers, one outcome was that the beneficiaries are corrupt officials rather than poor farmers. Policy inconsistencies are a symptom and also a cause of weak institutions. This calls for stakeholder participation in policy formulation and implementation for wide ownership. The top-down planning approach of the past needs to be blended with bottom-up and horizontal approaches. In addition, policy formulation needs to be anchored to long-term national and sector strategies. While there is a long-term national vision (Vision 2020), there does not appear to be a sector wide strategy for its implementation.

In addition to policy inconsistencies, it was noted that GON Departments operated like silos with little coordination and consultation among them. This led to duplication of efforts, non-optimal use of resources and lack of synergy through the creation of parallel or competing institutions. It was noted for example that MOAWR intends to establish a commodity exchange while there is an existing one funded by MCI. Similarly, the functions of the Arable Crops Development and Marketing Company duplicate activities that ASCE and NFRA perform.

5.2.4 Weak advocacy

One of the reasons for continued inconsistencies in policy is the absence of strong advocacy and lobby institutions to engage government in evidence based policy discussions. The only conspicuous institution was Nigeria Economic Summit Group (NESG) which is a private sector institution. NESG has managed to bring together stakeholders in its regular series called the Agriculture Summit forum. However, the institution faces severe capacity constraints and limited acceptance of its recommendations by the government.

5.2.5 Poor articulation of demand

MARKETS has created opportunities for different stakeholders along value chains to interact and address their common problems. With the exception of OLAM, which is part of a multinational agro industry and the breweries, almost all end users find it difficult to articulate clearly particular end user needs and translate this in terms of varietal development. It will be important for MARKETS and other stakeholders such as breeders, seed companies and regulators to create a platform where actual issues and most importantly future trends in the global agro industry will be discussed and where actual demands and future trends can be integrated in breeding objectives for NARS and CGIAR institutions. Agronomic constraints and market uncertainties are probably more important issues that need addressing than purely end user requirements.

5.2.6 Weaknesses in agricultural research, extension services and processing technology development

The Agricultural Research Council of Nigeria (ARCN) was established in 2007 as a catalyzing agent for the management of much needed changes in Nigeria's national agricultural research system. ARCN has the responsibility of coordinating, supervising, and regulating agricultural research and extension in Nigeria. The council is still young and it is very difficult to assess its effectiveness at this stage. However, there has been a major problem of slow rate of diffusion of agricultural innovation, which is attributable in large part to the ineffectiveness of government agencies in discharging their responsibilities effectively.

With the exception of cowpea and to some extent cassava, end users are very specific in their requirements and needs for specific varieties. From the breeding side, varieties seem to be available to address some of the constraints in the value chain. However, as is the case in all West African countries, varieties do not get disseminated. There seems to be a lack of interaction between industrial users and breeders in the NARS. End-users are not aware of the product pipeline at the NARS and the NARS are not aware of end user requirements. Some of the varieties available from breeders have not been tested to determine if they correspond to end user demand. This is principally because the varieties are not available as foundation or certified seed.

Processing technology has been given significant attention in the case of cassava through IITA and related projects. However, the same cannot be said about other value chains for which the availability of appropriate technology remains an important challenge. This is especially the case for small and medium-scale processors. FIIRO does not appear to have made significant inroads in making more environmentally friendly technology available. Adaptive processing technology is quite appropriate for small scale processing. For example, rice husks can be a good source of energy for small-scale rice mills, thus reducing their dependence on unreliable electricity supply.

5.2.7 Weak community organizations

Organizational weaknesses at all levels of value chains have hindered the development of agribusiness. All sub-sectors are characterized by fragmented (as opposed to integrated) value chains. All are constrained by productivity problems at the primary level; processors cannot obtain enough supplies of raw material of sufficient quality that allows them to operate profitably.

5.2.8 Inadequate supply of raw materials to processors

Common in all value chains is the problem of end users to get a steady and sufficient supply of raw materials. Major end users contract out-growers but this seems not to be sufficient. There is little information on default rates and it might be worthwhile for MARKETS to do an in-depth study and develop recommendations on outgrowing contracts with their end users to see how the supply side can be improved.

6.0 Analysis of Proposed Solutions to the Constraints

6.1 Analytical Framework

Based on the constraints analysis (Chapter 5), two major conclusions are apparent. First, that there are significant constraints throughout all levels of each of the chains examined and that these can be classified as Systemic Constraints. The key systemic constraints are: information, finance, management and business skills, transparency and trust. Second, many of these significant constraints are common to all of the chains studied, and can be classified as Cross-Cutting Constraints. These cross-cutting constraints include: infrastructure, institutional weaknesses, business environment, finance, and lending environment. This situation coupled with the overall low-level of competitiveness of agricultural sub-sectors calls for identifying effective solutions through the creation of a process that can address cross-cutting constraints rather than trying to address discrete “point” constraints within each of the chains. The process entails identifying short, medium and long-term solutions that facilitate moving from the current situation characterized by disorganized markets with high transaction costs and uncompetitive to the 10 year vision where trade is structured with low transaction costs and competitive locally and internationally.

6.1.1 Strategy for Addressing Constraints

The strategy (process) for addressing both systemic and cross-cutting constraints can be summarized thus:

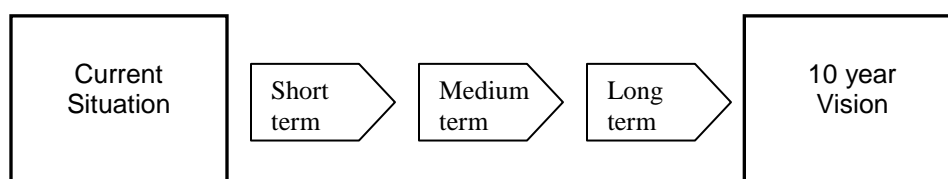
Step 1: Value Chain Selection – evidence based (see criteria described under Chapter 4.0)

Step 2: Description of Current Situation: (a) End market opportunities by value chain; (b) Systemic constraints to opportunities (see Annex 7)

Step 3: Vision by value chain.

Figure 1 illustrates the fact that to move from the current situation to the vision requires short, medium and long-term interventions.

Figure 1: Strategies for moving from current situation to vision



The current situation includes an analysis of end-market opportunities and systemic constraints to taking advantage of those opportunities. The framework for analyzing the current situation includes:

6.1.2 Structural Factors affecting Value Chains

Improving value chain competitiveness will require addressing the following structural factors:

1. End Markets: What to sell (what level of processed products); where to sell: local, regional, national, international markets; opportunities (along with costs and benefits) that can drive change down the value chain; how to compete in end markets:

- a) Efficiency: competition based on price
- b) Differentiation: competition based on differentiation
- c) Market Focus: niche markets, fair trade, organic

2. Enabling Environment: National and International (SWOT Analysis can help to further define these)

- a) General Environment: demographic; socio/cultural; political/legal; technological; economic; global. (Characteristics: little ability to predict them; even less ability to control them; can vary across sub-sectors).
- b) Competitive Environment (sometimes called the Industry Environment) can be analyzed by Porter's Five Forces Model of Industry Competition, which are: Barriers to Entry; Supplier Power; Buyer Power; Substitute Availability; Competitive Rivalry.

3. Vertical & Horizontal Inter-firm Linkages:

- a) Vertical linkages: These linkages point to the importance of working with the Lead Firm(s). Strong vertical linkages are a conduit for: products, payments, information, product specifications, quality standards and embedded services. There is frequently a gap between what primary producers produce and what end markets want. Effective vertical integration and linkages transmit information and incentives from end markets to producers.
- b) Horizontal linkages: These are necessary for generating economies of scale for inputs and business service delivery, increasing bargaining power of primary producers and enterprises, reducing production costs.

4. Supporting Markets: Supporting markets are those that are not inherently part of the value chain but play a critical role in the chain's competitiveness. These include: input supply markets, financial markets, equipment and technology markets, training, R&D, etc.

- a) Sector Specific Service Providers: Are explicitly set up to provide services to the chain (e.g. veterinary services to the dairy sub sector)
- b) Cross-Cutting Providers: Provide services to several sub sectors (e.g. transportation and storage, extension services)
- c) Financial Services Provider: (also cross-cutting): Deal with what are the financial services required and who provides financial services; embedded services built into costs.

5. Upgrading Opportunities: understanding the incentives for upgrading resulting from policies, price paid by buyers, price differentiation for quality, power asymmetries, etc; and the capacity to upgrade based on human capital and access to finance and other supporting markets.

Value Chain Typology: It is possible to identify four trajectories that firms can adopt in pursuing the objective of upgrading, namely:

- a) Process upgrading: increasing the efficiency of internal processes such that these are significantly better than those of rivals, both within individual links in the chain (for example, increased inventory turnover, lower wastage), and between the links in the chain (for example, more frequent, smaller and on-time deliveries);
 - b) Product upgrading: introducing new products or improving old products faster than rivals. This involves changing new product development processes both within individual links in the value chain and in the relationship between different chain links;
 - c) Functional upgrading: increasing value added by changing the mix of activities conducted within the enterprise (for example, taking responsibility for, or outsourcing accounting, logistics and quality functions) or moving the locus of activities to different links in the value chain (for example from mid-level processing to community level). Shedding repetitive activities and concentrating on knowledge-intensive activities is seen as a sign of functional upgrading;
 - d) Chain upgrading: moving to a new value chain (for example, Taiwanese firms moved from the manufacture of transistor radios to calculators, to TVs, to computer monitors, to laptops and now to WAP phones). Many local firms acquired design capabilities but few established their own brands. Those firms that succeeded in marketing their own design and brand achieved this by maintaining the contract manufacturing for the main buyers and simultaneously experimenting with their own design and brands in other smaller markets. Such leveraging of competences across chains has been central to the functional upgrading achieved by some of the Taiwanese computer producers.
- The clusters in developed countries are often global leaders and they play a decisive role in innovation and product design. In contrast, developing country clusters tend to work to specifications that come from outside. A similar divide arises with respect to global standards: developing country clusters tend to be 'standard takers' and not 'standard makers'. The observation of such differences leads to the need to find out in more detail: who defines and monitors the parameters for local producers? How do these producers respond? How do power relationships change over time? What is the connection between upgrading and different global-local power configurations?

Types of value chains governance: Four types of value chains governance have been identified and distinguished:

- a) Arm's length market relations or market based chains. Buyer and supplier do not need to develop close relationships because the product is standard or easily customized. A range of suppliers (in our case farmers) can meet the buyer's requirements and the switching costs are low. Many, if not all, of the commodity chains we examined seem to fall into this type of governance. This would call for a close look at policies and interventions for facilitating the last type of upgrading, chain upgrading, that would promote shifting from market-based governance to a more cooperative type of chain governance found in Networks and Quasi-hierarchy.

- b) Networks. Firms develop information-intensive relationships, frequently dividing essential competences between them. The interaction is coordinated and the relationship is characterized by reciprocal dependence. The buyer may specify certain product performance standards or process standards to be attained, but would be confident that the supplier can meet them.
- c) Quasi hierarchy. One firm exercises a high degree of control over other firms in the chain, frequently specifying the characteristics of the product to be produced, and sometimes specifying the processes to be followed and the control mechanisms to be enforced. This level of control can arise not only from the lead firm's role in defining the product, but also from the buyer's perceived risk of losses from the suppliers' performance failures. In other words, there are some doubts about the competence of the supply chain. The role of Olam in the rice value chain might fit this type of arrangement. Many contract farming arrangements fall into this type of chain governance.
- d) Hierarchy. The lead firm takes direct ownership of some operations in the chain. The case of the intra-firm trade between a transnational company and its subsidiaries falls into this category. The example often given is the cut flower industry found in Eastern Africa that is almost completely controlled by European firms. Alcoa's arrangement in extracting raw material in Ghana for its aluminum smelters in the US is another example.

With these distinctions, one can then determine whether some types of chains offer primary producers better upgrading prospects than others. Such questioning can be further refined if one distinguishes between different types of upgrading. Since a major concern that has evolved from this study is to understand how primary producers can collectively improve their economic well being through integration into select value chains, it should not come as a surprise that the first type of chain – Market Based – and perhaps the last type – Hierarchy- have very little to offer primary producers who want to grow beyond simply supplying raw materials. Market Based chains are characterized by a large number of suppliers who have little to do with actors higher up the chain. Buyers can easily switch to other suppliers if it suits their interests. With Hierarchy type chains, there may be some possibility for organized primary producers to upgrade their products, but this is by nature of the chain entirely at the discretion of the lead firm, which may or may not appreciate the importance to the chain of a well-organized base of primary producers. Public investment in chains where primary producers are unlikely to be competitive will not generate sustainable growth or economic security.

Thus, the greatest potential for organized producer groups to integrate into value chains and improve their economic security is found within Network and Quasi-Hierarchical type chains. To maintain competitiveness over time, interventions need to be framed and monitored within the context of achieving win-win relationships, on-going learning and innovation, and increased breadth and depth of benefits to assure industries can compete in markets that are dynamic and increasingly more open to global competition. These characteristics are more likely to be found in Network and Quasi-Hierarchical Chains. There are now several solid cases in India where contract farming has been established in such a manner that both the farmers and the contractor firm believe that it is a win-win relationship. ITC's contract with vegetables farmers in Andhra Pradesh, Pepsico's contract with potato cultivators outside of Pune, and Khet Se's

contract with vegetable farmers in Punjab are good examples of successful contract farming in Quasi-hierarchy type chains.

The vision is an articulation of the potential of the sector with a ten-year time horizon. The strategies include interventions to address systemic constraints as well as the strategic sequencing of investments needed to realistically move the value chain toward the vision. Such sequencing, especially for smallholders and medium-scale enterprises could involve small “riskable” steps to upgrading that include a realistic pathway to improve productivity, meet increasingly demanding markets, and increase economic security. These steps are “riskable” in that the pathway incorporates risk management strategies, is tailored to the asset realities of small and medium-scale actors and their willingness to undertake risk.

At the small producer level, there would be a shift (gradual but steady and determined) away from traditional subsistence agricultural activities, both land based and animal based, toward income generating activities that share the following characteristics:

- ◆ Provide for increases in household cash incomes
- ◆ Reduce labor and drudgery especially for women
- ◆ Increase productivity
- ◆ Strengthen both horizontal and vertical linkages in the value chain
- ◆ Are within the resource base of the stakeholders
- ◆ Are environmentally sustainable and suitable
- ◆ Respect the local cultural values and development specificities of the region and its people.

At the medium-scale processor level, there would be a movement away from their current notion that they are in competition with small-scale producers toward one of understanding the need to cooperate and collaborate both horizontally and vertically with other actors in the chain.

The strategy needs to address institutional issues of both systemic and cross-cutting constraints if it is to move forward. The general absence of effective institutions or the weakness of existing institutions is the overarching constraint that needs serious attention before any other interventions can be effective. As such, the strategy would first need to develop effective horizontal networking of actors throughout the chain – from primary producers to mid-level processors, to those responsible for marketing and distribution.

The second issue that the strategy needs to address along with networking is an effective institution to promote greater access to finance all along the chain, from primary producers to end market actors. One possible approach is a Social Venture Capital Company, which is working successfully in India and is detailed in Annex 8.

Adopting these value chain strategies will inform areas for future investment, including analytics needed to ensure evidence-based programming and procurements needed to address other key systemic and cross-cutting constraints.

6.2 Proposed Solutions

The objective of the proposed interventions is to catalyze a process for moving from the current situation of a disorganized and uncompetitive business environment with high transactions costs, to a vision of a structured and integrated market system and well organized business environment, low transactions costs and increased competitiveness within a period of ten years. An array of interventions is proposed for short, medium and long-term time horizons for achieving effective results to contribute to reaching the 10 year vision. These interventions are:

6.2.1 Strengthening Producer Organizations

As noted in Chapter 5, the organizational weaknesses at all levels of value chains analyzed have hindered the development of agribusiness. While there is a great deal of activity, particularly in areas such as research, problem and constraint identification, and proposed solutions, very little of it seems to reach the persons most in need – beginning with primary producers. Most significantly, there is little or no organization of primary producers that would allow them to achieve economies of scale, facilitate transfer of technologies, improve methods, obtain financial assistance and communicate needed information for informed decisions. Sometimes, processors may view organized primary producers as an obstacle due to their stronger bargaining power, but with a positive perspective, they could be viewed as opportunities for strengthening the competitiveness of the industry. Similarly, both horizontal and vertical networking is needed among traders, processors, and marketing and distribution organizations and individuals.

6.2.2 Strengthening Capacity of Government Departments

To harmonize policy formulation and synergize at implementation level, there is a need to strengthen the analytical and organizational capacity of government departments involved in agro-enterprise development. Such internal capacity within government promotes greater trust of policy prescriptions and government's willingness to implement. External advice, while appreciated, is sometimes misunderstood or viewed with suspicion. When not understood, such advice is often viewed as academic or too theoretical. Lack of organizational capacity also limits the amount of consultation between government and stakeholders involved in agro-enterprise development. There is therefore a strong case for building both analytical and organizational capacity in government departments involved in agro-enterprise development. This capacity will be more effectively built if GON establishes an agricultural sector-wide Coordination Unit to ensure adequate horizontal coordination and consultation takes place between government departments and provide for policy inputs from producers below. The top-down approach that has been characteristic of the past needs to embrace bottom-up and horizontal approaches for wide ownership. The Unit will also provide an institutionalized mechanism for government ministries involved in agro-enterprise development, development partners, and representatives of the private sector to coordinate policy formulation and implementation and test new ideas before they are pronounced into policy.

6.2.3 Strengthening Advocacy Institutions

Good policy debate requires not just a strengthened input from the government side but also a strengthened input from advocacy institutions. Thus it is imperative that policy advocacy institutions such as NESG get the support they require to improve their performance. The main form of support is in funding of specific policy studies with major implications and the wide dissemination of the results. An example could be a study of the efficiency and effectiveness of the utilization of budgetary allocations in agriculture and the dissemination of the findings so as to inform the general public. Strengthening of analytical capacity is also needed.

6.2.4 Establishing a Social Venture Capital Fund

Nigeria established SMEEIS as a vehicle for easing equity and loan capital requirements for SMEs. Although this facility had disbursed N28.20 out of its N 42.02 billion accumulated funds by 2008, it has had limited success in agricultural and allied sectors, with only 8% of total disbursements going to those sectors and no success in outreach with 0% reaching microentrepreneurs. Furthermore, most of the disbursements do not reach the lowest echelons of commodity chains. A social venture capital company is therefore proposed to target the agriculture sector at all levels, with a focus on primary producers.

6.2.5 Constituency Development Funds

To minimize the losses that poor infrastructure imposes on agro-enterprise development and other aspects of Nigerian social and economic development, it is proposed that GON consider establishing Constituency Development Funds. The GON would allocate financial resources from the budget each year to each constituency in the nation based on objective criteria. The funds would be managed and applied by elected community leaders on priority infrastructure projects identified by communities. Constituency Developments Funds have successfully been applied in Kenya to improve and initiate social infrastructure such as access roads, water extraction and distribution, water pans and mini dams, mini-hydro power generation, schools, health facilities in areas previously ignored by government. Only priority projects identified by the people are financed, funds are audited annually and any malfeasance is punished. If established, these funds could be applied to make Nigerian roads passable throughout the year and bring power or generate power in areas that are currently not covered by the national grid. While the Fadama project is also geared at supporting communities, the sustainability of a CDF is assured because it becomes a permanent feature funded from domestic resources rather than a project funded substantially from external resources.

6.2.6 Improving the Lending Environment

Increasing the flow of credit to agro-enterprises will primarily be the responsibility of private sector financial institutions. However, the GON has a major role in formulating supportive policies, providing adequate incentives, building financial sector infrastructure and providing an enabling lending environment. This includes facilitating the development of a robust creditor rights and insolvency systems to foster greater confidence in commercial contracts and facilitating the management and resolution of default risk. Undoubtedly, significant financial reforms such as strengthening the capital base and the regulatory framework of institutions

and formulation of financial sector strategy are underway and should in due course improve the lending environment.

Actions required from the Government

- a) Establish commercial courts and encourage use of Alternative Dispute Resolution mechanisms for speedier resolution of financially related disputes such as enforcement of contracts. This is because financial institutions rely on effective creditor rights to reduce deterioration of asset values and promote access to credit.
- b) Another action to improve the lending environment is streamlining of land and property registries to facilitate banks to offer secured lending products and mortgage finance. The current system of seeking consent to charge property or conducting a search in land registries from regional and local authorities is laborious, lengthy and full of opportunities for graft. The Bank of Industry for example has had to cancel N9.0 billion of approved loans in 2008 because of the refusal by Governors to grant consent to charge property.

Actions by Financial Institutions

Private financial institutions also need to be more innovative in dealing with the agricultural sector. Some of the actions needed include:

- a) Adopting risk based lending which entails relying more on cash flow of projects than on the comfort of collateral security.
- b) Active engagement of NAIC in agro-enterprises will help to reduce risks seen by banks and hence assist in unlocking bank credit to the sector.
- b) Group lending – Cooperatives and Associations.
- c) Use technology such as mobile phones and internet to reduce cost of transactions and expand outreach in services such as deposit mobilization and payments. For example, it is noted that cash is the main mode of payment in Nigeria which imposes certain restrictions on business development in terms of security, timing, and cost of service. Networks in Nigeria should therefore be encouraged to embrace non-cash payment transfers through cell phones, which will be a great relief to producers in areas where banks are not represented.
- d) Since branch expansion is an expensive undertaking, to expand outreach and at the same time mitigate this constraint, banks may consider developing agency relationships with MFB, Coops and Merchants in areas where they are not represented. This will be enhanced if enforcement of contracts can be strengthened.
- e) Improving their understanding of the sector dynamics by training their officers in agricultural lending and agricultural economics.

Commodity Exchange and Warehousing Receipts System

By promoting the use of ASCE trading and warehousing receipt system, the GON will improve flow of resources into the agricultural sector by: i) enabling producers to use their produce as collateral for crop advance to ease short term liquidity problems; ii) provide an efficient system for price discovery; and iii) ease working capital requirements of processors and traders and exporters of commodities.

7.0 Design of Policy Solutions and Implementation Modalities for Selected Problem Issues

In this concluding chapter of the report, two proposed interventions are discussed in some detail. As mentioned in Chapter 6 above, these two areas have been identified by the team to be most critical in getting the agro-enterprise development moving, namely (i) institutional development; and (ii) access to finance. Below, we first review what we appreciate by successful policy intervention.

Successful policy intervention has the following features:

- ◆ It is not always about changing laws.
- ◆ It is about changing implementation of laws
- ◆ It is about changing regulatory burdens
- ◆ It is about changing business relationships
- ◆ It is about changing the incentives that determine business decisions
- ◆ It is about identifying complementary activities that support reform.

Further, we assume that the success of the industry depends on resolving certain policy constraints; that successful reform is feasible within the value chain time frame; and that the government, private sector and/or development partners have the resources/ influence to resolve the constraint. In other words, the recommended policy interventions are achievable given commitment and goodwill on the part of GON and other stakeholders in the agro-enterprise sector.

7.1 *Institutional Development*

7.1.1 Rationale for selecting Institutional Development as a primary intervention

All agriculture subsectors that have been analyzed are characterized by fragmented (as opposed to integrated) value chains. While this may not be surprising, the degree of fragmentation is extensive and the absence of useful primary data on costs, revenues and margins at all levels of the chains assessed make the identification, scaling and sequencing of interventions more of a shot in the dark than a well-reasoned strategy. All are constrained by productivity problems at the primary level; processors cannot obtain enough supplies of raw material of sufficient quality that allows them to operate profitably. While there is a great deal of activity particularly in terms of research, problem and constraint identification, proposed solutions, very little of it seems to reach the persons most in need – beginning with primary producers. Most significantly there is little or no organization of primary producers that would allow them to achieve economies of scale, facilitate transfer of technologies, improve methods, obtain financial assistance and communicate needed information for informed decisions. To effectively address these key constraints, a two pronged approach is recommended: i) Creating an Agricultural Sector Coordination Unit, and ii) Strengthening grass-root producer organizations

There are three critical levels (or layers) where stakeholders are found to operate: macro, meso and micro levels.

The macro level: This is the national level at which policies, strategies, programs and projects are developed and at least partly implemented. Agreement at this level between government ministries, donors, key private sector players and farmers' apex organizations is critical for effective implementation. Such agreement sends the right signals to the lower levels. A national stakeholders' forum would be an important institution at this level.

The meso level: Decisions made at the national level are also implemented at the state and lower levels. The meso level is considered to be the state level and the districts within a state. Stakeholders at the meso level include agricultural development programs (ADPs) and other service providers operating at that level. At the state level, there will be a stakeholders' forum in which the state governor plays the key role of mobilizing stakeholders.

The micro level: This is the farmer or enterprise level within districts. There is considerable diversity in the resource levels of farmers and their enterprises, as well as the degree of integration between crop/livestock production and any downstream activities (e.g. value addition). The key constraints at this level include (i) inadequate access to inputs; (ii) lack of skills; (iii) poor organization; (iv) inadequate access to markets; (v) poor roads; (vi) inadequate financial services. Collective action is a powerful tool for addressing some of these shortcomings. At the farmer level, there is need for institutional development to bring farmers into viable enterprise collective action groups/associations/ for economies of scale in access to services, markets, advocacy, etc.

Consultation and coordination are required at all three levels. Moreover, both consultation and coordination must take place both horizontally and vertically.

7.1.2 Agricultural Sector Coordination Unit (ASCU)

Role and function - The role of the ASCU will be to promote policy dialogue, coordination and consultation among stakeholders in the agricultural sector. In performance of this role, ASCU will coordinate the identification, prioritization, programming and implementation of a sectoral strategy and coordinate activities in the ministries that must be addressed at the sectoral level. This requires deliberate investment in improved information flows. The investment will improve decision-making and lead to better coordination of actions by different stakeholders, which should reduce duplication of efforts, enhance accountability and promote synergy of actions along the various value chains. Such an investment has to be long-term in nature and involve appropriate capacity building of officers in government to undertake their roles effectively. In order to carve out an appropriate niche for itself and prove its worth, the unit must spearhead policy level technical studies in the sector and work very closely with established agencies such as the NESG.

One of the important roles that ASCU should perform is to develop a sector-wide M&E framework. In this connection, a memorandum of understanding will be required between the sector ministries on the detailed modalities of implementation. Currently, IFPRI is coordinating the CAADP activities in Nigeria. Once established, it is our recommendation that ASCU be mandated to coordinate the CAADP activities in Nigeria.

The need for coordination in the agricultural sector has been recognized for some time in Nigeria. Before the restructuring of the FMAWR in 2007, there was a Project Coordinating Unit which had been formed by a merger of the Federal Agricultural Coordinating Unit and the Agricultural Project Monitoring and Evaluation Unit in April 2000. The roles and functions of these units have since been incorporated into the recently formed NFRA whose principle mandate is food security. The proposed ASCU differs from those initial efforts in that it will focus on policy formulation and coordination; its approach will be holistic and consultative, bringing together all government departments and private sector actors involved in agro-enterprise development.

The ASCU model has been successfully implemented, although with some initial teething problems, in Kenya, Uganda, Tanzania and Mozambique. The period required to establish an effective unit can vary from one year to several years, depending on the political will.

The Secretariat – ASCU should be a relatively small unit with staff recruited competitively from the ministries and private sector. This is to ensure that ASCU is run by competent staff and not those that ministries would like to get rid of.

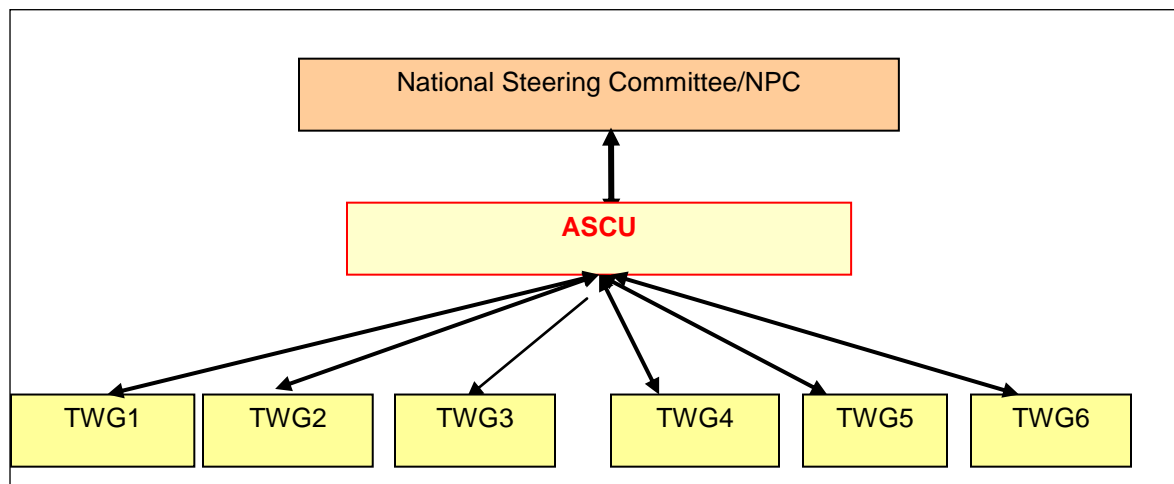
Location – Because of its need to coordinate sector activities, ASCU should be centrally located with adequate authority to bring together sector ministries. While there is no preferred host for the Unit, the National Planning Commission (NPC) which is already performing a coordination role at the national level would be a suitable host for ASCU. Wherever ASCU is hosted, the overriding consideration should be effectiveness in delivering its mandate.

National Steering Committee – ASCU activities will be guided by a National Steering Committee (NSC) made up of the Permanent Secretaries of the sector ministries. The NSC membership should also include representatives of the private sector, financial sector, development partners and the civil society. The role of NSC would be to approve the work program of ASCU and policy proposals that need to be escalated to higher levels of government for adoption and implementation. The NSC should meet at least quarterly to reduce risk of backlog of issues. ASCU Secretariat will report directly to the Chairperson of the Steering Committee, but oversight responsibilities such as financial management and accommodation would be vested in the host institution, ie NPC. Figure 2 shows the organization structure of ASCU.

Thematic Working Groups – ASCU may set up thematic working groups (TWGs) to address significant priority issues of policy concern. These professional groups do not need to be permanent but can be formed and retired on a need basis. By facilitating the working together of senior professionals in both public and private sector, these groups will foster a sectoral (sector-wide) approach to the management of the agricultural sector. The chairmanship of the TWGs should always come from the Private Sector.

Funding of ASCU – This will be the responsibility of the National Planning Commission with support from interested development partners. Budgets for the ASCU will need to include funds for supporting strategic studies and dissemination of information.

Figure 2: Organization Structure for ASCU



7.1.3 Strengthening Grassroot Organizations

Rationale - The rationale for strengthening grassroot organizations is that currently, Producer Organizations and their linkages are very weak. While there are several producer group models being implemented by various projects, there are no models in operation in the country that take a focused business development and private sector approach. The recommended approach here is strictly along business lines.

Producer Groups Formation – Producer Groups are affinity groups (the membership is self selected) of primary producers formed along commodity lines of the major crop they are cultivating – cassava, rice, maize, etc. Each group would have between 10-20 members. They would have a strictly business orientation, with the objective of facilitating the upgrading of their members from subsistence to commercial agricultural operations.

Agricultural Business Service Centers (ABSC) are an innovative institutional concept used to facilitate the formation, capacity building, and continued technical support of Producer Groups. One ABSC would be responsible for a sufficient number Producer Groups in order to generate adequate economic support over time to enable the ABSC to become self sufficient and to avoid capture of the Center by any one group of Producers. ABSC will be staffed by a Center Coordinator, Convergence Facilitator, Accountant and a number of Business Facilitators (BF). Some of the core features of an ABSC are: (i) only primary membership institutions (e.g. Producer Groups) are eligible for membership; and (ii) membership depends on the quality of the group since this, in turn, affects the quality of the ABSCs. Each member group pays an initial admission fee, monthly service charge, and annual membership renewal fee. The monthly service charge entitles each member group to a core set of services; all other services are paid for separately, as per rates set by the Management Committees. The ABSC Management Committee is selected by member groups and on rotation basis every two years. Each ABSC has a Manager who must be a person who is trusted by the people. He/she reports to the ABSC Management Committee. Lending money is not a function of ABSCs, however the facilitation of Producer Group linkages with banks, credit unions, federations would be one of their major

services. The functions of each ABSC are determined by the demands coming from its members. They can be modified, added to, and refined from time to time.

Strategy – The Primary objective of this component is to enable primary producers to build their capabilities in ways that can provide them with opportunities and confidence to make informed choices to plan and manage their own farms, with the objective of raising productivity of their crop(s) and increasing incomes of their household. The core elements of strategy include:

- Organizing members of producer organizations to a *business orientation*.
- Creating enabling conditions through which primary producers (both men and women) secure spaces where they can speak and be heard, develop peer support systems, gain access to business resources and enterprise skills, and develop their capabilities to make informed business choices to plan and manage their own farms in a commercially productive and remunerative way.
- Facilitate the creation of support markets – at both primary and secondary levels – that can provide Group members with needed inputs, financial services, improved technologies, enable networking with other institutions, and sustain these market linkages after the project period is ended.
- Sensitizing local level governance systems to understand and to extend their support to the above processes.
- Develop capacity of members to access available technical services from public organizations through facilitating convergence with other available services.

Program Description – The first step of Producer Group mobilization would be to establish ABSCs to cover about X Producer Groups. Each ABSC would have an ABSC Coordinator, a Convergence Facilitator, an Accountant and about a suitable number of Business Facilitators (BF). Each BF would be responsible for about X Producer Groups. The ABSCs will carry out four key roles and functions. They are: (i) facilitation of initial group organization adhering to the principles of self-selection and manageable size; (ii) group maintenance and capacity building functions – training in collective functioning, enterprise development, preparing farm budgets and business planning, conflict resolution, sharing good practices, and monitoring group performance; (iii) facilitate access to financial services – linking the groups to banks, credit unions, and through the relevant commodity Federation to the SVCC and other financial institutions; and (iv) facilitate agriculture support markets and services – linking the groups and members to various support services and markets available through government programs and other sources. The Center would act as a facilitator and not a provider of services.

Role – Thus the overall role of ABSC is that of a facilitator. It will also act as a catalyst in disseminating information and facilitating access of technical services of government and donor sponsored programs. The basic orientation of the ABSC is to increase the productivity of the members' farms and the income of the group and individual members by effective and efficient use of resources. The ABSC, including staff costs, would be initially funded by the program. The contribution from the members would start from the second year. It is anticipated that most of the ABSCs would emerge as institutions owned and fully funded by the members by PY 7.

Legal framework and ownership of the ABSC: The ABSC would initially function as the program implementation and facilitation unit at the grass roots level with a clear understanding that the unit will receive support from program funding only on a tapering basis and will need to be self sustaining over a period of 6 years. The ABSCs would be registered as a society /trust (open for discussion is whether to place these ABSCs in the Commodity Federations or the SVCC). The Board of Directors would consist of representatives selected by the Producer Group members. The ABSC Coordinator will be the member secretary.

Though it is difficult to predict how the Agricultural Business Service Centers will evolve over a period of time, the goal should be make these institutions community funded and managed. Unless the Producer Group ownership concept with contribution towards operational costs of ABSCs is built into the design from the very beginning, it will be difficult to introduce it at a later date. ABSCs would most likely emerge as institutions fully funded by the members. In the event some of the ABSCs do not respond to the needs of the community, it is most likely that the members would stop contribution towards payment of costs for the ABSC leading to termination of the services of staff. This provides valuable incentive to the ABSCs staff to deliver to their members.

Role and Responsibilities of Agricultural Business Service Centers: The ABSC Coordinator would be the focal point for delivering services for the development of Producer Groups. This person would: (i) facilitate recruitment and training of BFs; (ii) supervise Producer Group mobilization including quality checks, (iii) supervise savings facilities of the Groups; (iv) coordinate to provide an initial loan to the group to create credit history and linking with local banks for bank linkage and assist in arranging for loans to Producer Groups; (v) facilitate the ABSC's transformation from program funded set up into a member owned organization and achieve full cost coverage within five to six years; (vi) coordinate agriculture productivity enhancement services to increase the incomes of members; and (vii) facilitate activities related to women's empowerment. The Community Accountant would be responsible for: (i) financial management at the ABSC level; (ii) assisting Producer Groups in managing Group based loans or equity investments; computerization of Producer Group accounts; and (iii) regular reconciliation and audit of Producer Group accounts. The Convergence Facilitator would be responsible for identifying and linking Producers to available technical services available through various other programs, both government and donor supported, as well as to support markets.

BFs would be the key link between the ABSC and Producer Groups. These persons would be responsible for: (i) mobilizing quality groups based on emerging best practices including introducing the concept for supporting the Agricultural Business Service Center with contribution from members for covering costs of the ABSC; (ii) training the members on various skills required for building Producer groups as effective grassroots institutions that undertake agricultural and economic development of members; (iii) helping the Groups in maintaining books and accounts; (iv) introduce new savings, loan and insurance products to members; arranging for demonstrations of new technologies and improved methods of cultivation.

Financial viability of the ABSCs: The costs of the ABSC would be initially met by the program. But, the concept of paying for the services would be introduced as early as possible, but not

later than second year. Simple modeling of costs and contributions would need to be done to determine the optimal number of Producer Groups needed to cover costs at a contribution determined by the group. The projections need to be made for a typical Group to determine when a Group will be capable to contribute. Thus the groups with good financial vibrancy are able to pay for the services. However, the willingness to pay will depend on the quality and need based services provided and the communication to the groups from the beginning that the ABSC is people's organization to be managed by them in the long run.

The monthly service charge payable by the Producer Group would be in the form of a flat rate that entitles each member of the group. The rates would be set by the Management Committee of the ABSC. This would start with a contribution determined by the group in the second year to increase by the fifth year. However, the willingness of the groups to pay for the services will depend on the quality and the nature of services the ABSC can offer to the groups. Apart from the service charges from the groups, the ABSC also would be able to earn income from facilitation it provides other organizations and businesses. The projected capital costs and operational costs and the projected contribution from Producer Groups to make the ABSC a sustainable Group owned and managed institution need to be worked out.

7.2 *Improving access to finance*

7.2.1 Establishment of a Social Venture Capital Company

Objectives – The objective of the Social Venture Company is to address the need for an integrated approach to agri-business enterprise development that would enhance the competitiveness of major agricultural value chains in Nigeria. The SVCC model would emphasize four important themes:

- (1) Shared financial risk by means of joint ownership and equity financing, with the aim of benefiting all stakeholders in selected value chains. Financial risk is shared by means of equity financing and joint ownership and other risk is minimized through the provision or facilitation of a variety of business development services.
- (2) An active search to identify investment opportunities. This includes both identifying potential joint venture partners (organizations and/or individuals) and searching for commercially viable business opportunities that employ technologies that are appropriate to the resource endowment of the local population and promise high pay-off in terms of profit, forward and backward linkages and employment creation.
- (3) An active role in forming joint ventures to take advantage of the identified opportunities. This involves mobilizing resources, assisting in the establishment or expansion of enterprises and supporting these with managerial and technical assistance.
- (4) The means to move innovative technologies into the market place.

Business model – The approach to social venture capital shares much in common with the conventional use of the concept. It incorporates the central tenets of equity investment, active partnerships with management, shared risk and reward and the active search for innovative investment opportunities. The term "venture capital" has no commonly accepted definition, but conventional usage implies investments, usually in the form of equity finance, in new or expanding enterprises characterized by high risks and the prospects of high gains. In essence, venture capital is a deliberate search for investment opportunities capable of generating

considerable economic value addition and substantial returns for investors. The objective of the venture capitalist is generally capital appreciation. The investor hopes that the business grows and prospers so that the increased value of his or her equity position can be converted into cash or other liquid assets.

Inherent in the venture capital concept are the twin elements of risk and reward. It is generally accepted that the greater the risks, the larger the expected gain. A venture capitalist looks to gain three to five times the value of the investment in five to seven years. Venture capital financing, then, is determined by risk analysis rather than collateral. As such, it addresses some of the issues of risk reviewed above.

Venture capital (equity financing) is usually associated with non-traditional financing. Whereas banks provide loans and become creditors, venture capitalists generally become share-holders in their investments by taking an equity position. Venture capitalists tend to be very active investors who exert considerable influence over the management of their investments. Oftentimes, venture capitalists establish partnership-like relationships with their joint venture partners in order to help build up the value of the company.

This strong link with management, the active partnership with the entrepreneur in which risks are eliminated, minimized or shared, and the proactive search for investment opportunities distinguish venture capital investment from more conventional financing practices. In the latter, bankers take a more passive role using loans secured by collateral or securities and management linkages are minimal.

The model proposed here differs from conventional venture capital companies in one important aspect. Whereas the conventional venture capital company has one primary objective -- profits -- the proposed SVCC makes investments to achieve three objectives: (1) direct economic benefits for entrepreneurs in the form of ownership of capital resources, increased economic opportunities, increased incomes and the creation of forward and backward linkages; (2) the commercialization of innovations; and (3) profits through the setting up of commercially viable enterprises. While the SVCC is intended to achieve a degree of sustainability through the promotion of commercially viable co-ventures, it also has aims to achieve a broader set of development objectives than is normally pursued by a purely private sector firm.

Role – The SVCC will identify opportunities for investments in rural agro-industries that would meet the above mentioned objectives. This includes not only finding technologies and business opportunities, but also locating willing joint venture partners. Once a "deal" is negotiated, a new enterprise is established or an existing one is expanded according to the shareholders agreement. The SVCC provides equity financing and essential services for the enterprise. These include marketing, business, technical assistance, as well as extension services.

The SVCCs often have to put up between 20 and 50 percent of the equity for the new enterprise and the total capital requirement is frequently met entirely out of equity financing, due to the reluctance of financial institutions to participate in financing agri-businesses. However, the SVCC will make it a major objective to help agri-businesses obtain conventional financing, thus reducing the equity share in total capital invested. The SVCC assumes an active

role in directing the enterprise through its shareholder position. This approach responds to the inaccessibility of investment funds in rural areas, the need to reduce the debt burden of a new enterprise, the need to minimize and share risks and to maintain better control over a venture in its vulnerable start up and early growth period. Income for the VCC is derived from management and technical fees, dividends and eventually through sale of the shares.

Equity capital programs already exist in Nigeria in the Small and Medium Enterprise Equity Investment Scheme (SMEEIS). There are some significant differences with the institution proposed here. For one, the SVCC is a private sector company that, while it has social goals and objectives, must run along acceptable business practices. Secondly, it is focused exclusively on the agriculture sector. SMEEIS investments in agriculture and allied sectors amount to only 8.2% of its total investment to date. Another important difference is that the SVCC not only invests equity and takes an interest in the management of its investments; it also actively seeks out investments, assists them in identifying their capital requirements, and facilitates access to technologies, improved methods, and best practices that will aid in the long-term growth and stability of the enterprise. These details are provided in Annex 8.

Organizational Structure – The SVCC could be established as a private, non profit company, according to Nigerian Company Law, with a Board of Directors to set policy and a staff to run its operations. It is essential that it be private sector driven although the GON would be welcome and encouraged to contribute to its financing and participate on the Board.

The program would provide for a capital and operating budget. The capitalization could take the form of an endowment fund, a contribution to equity capital, and/or a long-term interest free loan and could come from contributions from the GON, banks' legislative requirement to provide 10% of quantum lending to SMEs, private sector contributions, and donor contributions. There would be just one equity fund in order to keep transaction costs down.

The Business Services and Management functions of the company could be financed through grants on a declining basis over 8 years during which time the company would need to generate its own revenues from returns on its investments and selling its BDS services. Technical assistance would be required to help set up the company, select and train staff and launch its operations.

The Company will attempt to overcome the barriers to agro-enterprise development caused by the lack of knowledge and information about improved practices and technologies, the inaccessibility of financial resources and the lack of entrepreneurial, managerial, and technical skills. Within the context of the national and regional economy, the company will improve the standard of living of the rural poor by building equity, generating income and employment opportunities directly through its joint ventures and indirectly through multiplier effects and forward and backward linkages in the regional economy.

Administration – The Company would consist of administrative headquarters and could have state-level branches for its BDS functional groups in target states of the country. It is recommended that the Company initiate operation in two states and expand operations to other areas over time as it gains experience. Criteria for selecting the locations of the two branches include: states where success is most likely to occur and the density of agro-

enterprises that would become likely clients of the company. The suggested locations are: Lagos State and Kano State. Additional branches could be added over time once the Company gains operational experience.

The staff would be organized around functional groups, including the Technology Support Group (TSG), the Business Support Group (BSG) and the Extension Services Group (ESG). These functional groups would be located at each branch location. The Managing Director will be the chief executive officer. Each branch would have a Branch Manager.

Financial Services – The primary form of financing will be equity capital provided through equity participation in a joint venture. The SVCC is prepared to provide up to 50% of capital requirements (fixed and working) in the form of equity financing. SVCC will also actively assist in arranging for capital in the form of conventional financing from public and commercial banks. It is anticipated that in the early investments, much of the capital will be provided in the form of equity financing. Once the first few investments have developed a proven track record, future investments will make greater and greater use of conventional loans, and equity capital will be employed strategically as leverage. The SVCC will need to develop a close working relationship with the Bank of Industry Limited.

7.2.2 The Commodity Exchange and Warehousing Receipts System

Commodity Exchange: The Abuja Securities and Commodity Exchange (ASCE) was established in 1994 as a private company. In 2001, the GON and CBN took over the company and placed it under Ministry of Commerce and Industry as a parastatal. At present, the company is engaged in spot trading and plans to move to futures trading and issuance of warehousing receipts. It provides market information on commodities through a network of agents at various commodity markets. It also certifies warehouses, and grades commodities before they are stored in certified warehouses. The company has great potential to assist agro-enterprise development by linking producers with buyers of commodities and providing a platform for price discovery. By making warehousing receipts tradable, ASCE will attract banking finance into the sector and thereby ease liquidity problems of producers. Processors, traders and exporters of commodities will also find ASCE a useful source of raw quality produce and a means of smoothing their working capital requirements.

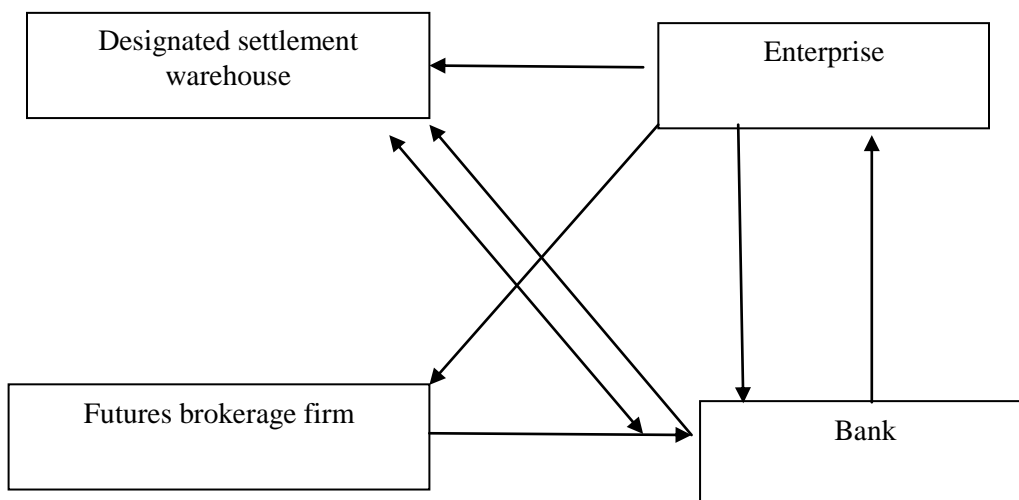
Despite the great potential that exists, ASCE has not performed to expectation. Like other parastatals, the company is severely under-capitalized. Since commencement of spot trading in 2006, the total value of deals concluded through the exchange up to December 2009 amounted to N55.06 million, against bids amounting to N1,518.44 million. Another challenge is the lack/absence of any strict commodity standards. Furthermore, public knowledge of its operations and potential benefits is lacking and thus, for example, the operations of the Kano spot market are not widely known, even in Dawanau; and traders familiar with the spot market generally view its operations with suspicion. The company does not make money and is dependent on the Exchequer for its operational needs. The ASCE faces resistance from commodity traders that do not want transparent transactions. There are indications that the Federal Ministry of Agriculture and Water Resources was planning to establish a parallel commodity exchange instead of strengthening ASCE.

Warehousing Receipts System: The warehouse receipt system is not developed in Nigeria. The ASCE is experimenting with the warehouse receipt system in Kwara State. If successful, the system will bring in a number of benefits to the sector. Producers benefit from the tool by being able to access part of the value of their commodity that is warehoused by collateralizing it and borrowing against it. In this way, they avoid having to sell their commodity at the low prices that typically operate at the period immediately after harvest. Dealing with commodities on a physical basis typically has numerous associated risks and these risks can sometimes increase dramatically, leading to uncertainty on the part of the actors in a commodity chain. Storage and distribution are crucial elements in commodity chains, and this is where collateralized warehouse receipt financing comes handy. The tool can be used in numerous forms and at various stages of the commodity chain during the natural flow of goods from producers to consumers. These forms include commodity trade and financing of local distribution channels, processing of raw commodities, and pre-export financing, etc. Before this system can take hold, the following constraints need to be addressed: enforceable and understandable standards, contracting and arbitration mechanisms, banks, a proper legislative framework to allow for proper functioning; the need for commercial large-scale farmers to provide volumes and well organized small-scale farmers to provide economies of scale in supplying volumes.

The warehousing receipt system is an emerging tool of risk management as well as financing. In order to have a competitive advantage, traders progressively extend their services to their clients. Among their traditional functions, they provide for example pre-export financing to their sellers or provide credit to their buyers at the country of destination. Therefore, traders become part of the industrial chain, hence the requirement for external financing. The respective document, the warehouse receipt, should give the necessary control to financiers and traders. The underlying goods are often physically secured by a collateral manager which often facilitates access to trade finance in general.

Of course, the warehousing receipt system can be applied to the commodity exchange. The Abuja Securities and Commodity Exchange could be encouraged to combine its activities with those of commodity warehousing receipts. However, the document alone will not necessarily decide its success. Enforcement of contracts is very critical and thus the need for a local, sophisticated banking structure along with an efficient, legal and court system.

Figure 3: Design of a Functional Commodity Exchange and Warehouse Receipt System



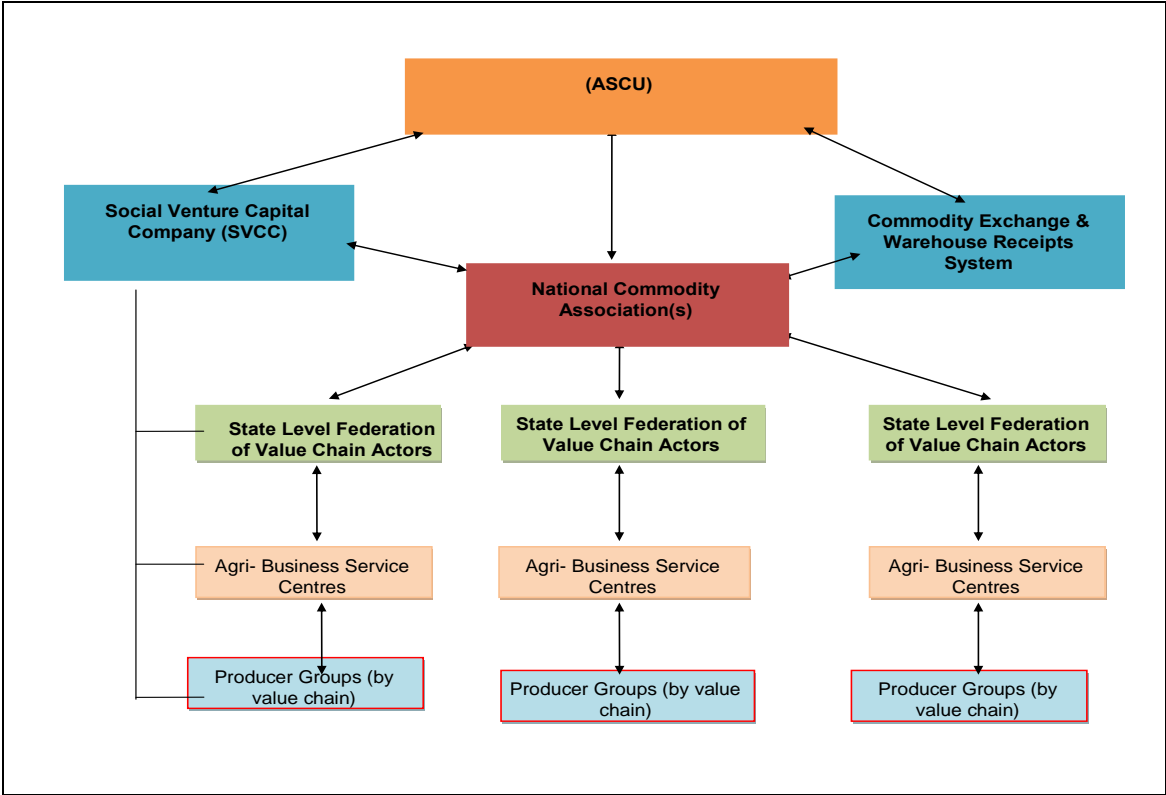
There are organizations that can be called upon to help promote warehouse receipt financing as a means to develop agriculture or other resources. The United Nations Conference on Trade and Development (UNCTAD) provides useful information to companies, especially those located in developing countries and are also actively involved in various projects in order to promote warehouse receipt financing and free trade in general. In the past, the European Bank for Reconstruction and Development (EBRD) has also supported similar projects. The Natural Resource Institute, a UK based research and consultancy organization, also aims to promote the marketing of primary commodities through improved warehousing and financing structures. The Paris office of Denton Wilde Sapte, an international law firm specialized in structured trade and commodity finance, can further assist on the legal side.

Warehouse Receipt as Collateral for Financing refers to a kind of short-term financing business in which an enterprise uses a self-owned standard warehouse receipt as collateral and a bank launches credit funds to the enterprise based on a certain pledge rate, in order to meet the enterprise’s short-term funding need or the funding need for standard warehouse receipt settlement. The accepted standard warehouse receipts may be obtained through issuance by the designated settlement warehouse after the enterprise has warehoused the goods as per provisions or obtained from exchange house settlement.

7.3 The Integrated Institutional structure

The Figure 4 below shows the linkages between the integrated structure of the recommended reforms.

Figure 4: Vertical Organization of Commodity Actors



7.4 Recommended Next Steps

This Assessment Report has recommended several interventions that will require further discussion, input and development involving a range of stakeholders in Nigeria before they can be rolled out. At least three basic actions are recommended to move the process forward immediately after finalizing this Assessment Report:

1. Organize workshops for Nigerian government officials, the Agriculture Donors Group and other stakeholders that would include private sector value chain actors, NGOs, associations, farmers, etc. These workshops would serve to elicit feedback on the proposed interventions, and would be the beginning of a consultative and advocacy process that will be necessary to build support for these interventions.
2. Identify gaps and needs for technical assistance to further develop the concepts agreed upon during the above consultative process. Several of the proposed interventions are new concepts in Nigeria, such as the Social Venture Capital Company and the Agricultural Sector Coordination Unit, and will need more in depth work and technical assistance to develop the details. Another critical information gap that will need attention is primary data collection on the key value chains in order to determine the actual margins at each major transaction level. This will provide USAID with a clear picture of where profitable investments are possible and where there are clear inefficiencies along the chains.
3. Develop a set of policy reform activities and implementation plan. As more details of the interventions become available, USAID will have a better understanding of the nature and level of its assistance to support selected interventions. As Nigeria's CAADP process evolves, USAID will also be able to ensure that its programs support the priorities identified in Nigeria's Compact.

8.0 Annexes

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Annex 2: Interview Protocols

A. QUESTIONS FOR GOVERNMENT MINISTRIES AND DEPARTMENTS

FEDERAL LEVEL

1. What policies and strategies does the ministry have for agro enterprise development in Nigeria?
2. Which of these policies/strategies are currently being implemented?
3. Which of these policies/strategies are not being implemented and why?
4. What additional policies/strategies are needed to promote agro-enterprise development?
5. What mechanisms exist for dialogue between the ministry and value chain stakeholders?
6. What are the roles of the federal ministry at the federal level; at the state level; and at the local level?
7. Are there conflicts or duplications in the implementation of these roles between the federal ministry and the state and local equivalents?
8. At what levels are agricultural services (research, extension, mechanization services, finance, inputs, etc) for farmers and other value chain operators provided at federal, state or local levels?
9. What programs and projects are implemented by the ministry in support of the value chain operators?
10. What agencies operate under the ministry in the promotion of agro-enterprise development?
11. Who are your main collaborators in agro-enterprise development?
12. Are there mechanisms for coordinating support to agro-enterprise development?
13. What are your priority commodities and what was the basis for the selection?
14. Has the ministry undertaken any value chain analysis on any of these commodities?
15. What constraints does the ministry face in implementing its programs and projects (promoting agro-enterprise development)?
16. What constraints do value chain operators in specific commodities face in agro-enterprise development?
17. What opportunities exist for your priority commodities?
18. Does the ministry have a department or division that promotes agribusiness?
19. Is there a framework through which investors can approach the ministry?

STATE LEVEL

1. What policies and strategies does the ministry have for agro enterprise development in the state?
2. Which of these policies/strategies are currently being implemented?
3. Which of these policies/strategies are not being implemented and why?
4. What additional policies/strategies are needed to promote agro-enterprise development?
5. What mechanisms exist for dialogue between the ministry and value chain stakeholders?
6. What are the roles of the federal ministry at the state level?
7. Are there conflicts or duplications in the implementation of these roles between the federal ministry and the state and local equivalents?
8. At what levels are agricultural services (research, extension, mechanization services, finance, inputs, etc) for farmers and other value chain operators provided at federal, state or local levels?
9. What programs and projects are implemented by the ministry in support of the value chain operators?
10. What agencies operate under the ministry in the promotion of agro-enterprise development?
11. Who are your main collaborators in agro-enterprise development?
12. Are there mechanisms for coordinating support to agro-enterprise development?
13. What are your priority commodities and what was the basis for the selection?
14. What constraints does the ministry face in implementing its programs and projects (promoting agro-enterprise development)?
15. What constraints do the value chain operators in specific commodities face in agro-enterprise development?
16. What opportunities exist for your priority commodities?
17. Does the ministry have a department or division that promotes agribusiness?
18. Is there a framework through which investors can approach the ministry?
19. Do local authorities have any delegation functions with regard to agro-enterprise development and if so which ones?

B. QUESTIONS FOR NIPC/SMEDAN/ EXPORT PROMOTION COUNCIL

1. What is the mandate of the organization?
2. How relevant is the mandate to agro-enterprise development?
3. What are the organization's achievements in the area of agro-enterprise development in Nigeria?
4. What are the constraints/problems experienced in promoting investments in agro-enterprise development.
5. What problems do you think constrain your target clients from investing in agro-enterprises?
6. What are the agro-enterprise development programs and project that you are implementing?
7. Which organization supports/funds these programs?
8. Does the government or donors channel any funds through your organization for the promotion of investment in agro-enterprise?
9. Why are agricultural sector operators not taking advantage of government initiatives and funds to promote investment in agro-enterprise?
10. Are your clients organized in any form or do you deal with individual investors?

C. QUESTIONS FOR NBS/NATIONAL PLANNING COMMISSION

1. How does agricultural sector planning fit within overall national planning?
2. Who determines the allocation of resources to various sectors? How is it done?
3. Information requested
 - a. Statistics on agro-enterprises
 - b. Statistics on imports and exports of agricultural commodities over the last 5-10 years
 - c. Statistics on budgetary allocation to agriculture over the last 5-10 years
 - d. Statistics on farm sizes and production
 - e. Statistics on mechanization
 - f. Copy of Vision 2020,
 - g. Medium Term Plan
 - h. Presidential Agenda

D. QUESTIONS FOR DEVELOPMENT PARTNERS

1. What preferred sector or commodities do you support? What was the basis for the selection of these sectors or commodities?
2. What programs and project do you have in support of agro-enterprise development?
3. What difficulties do you encounter in the implementation of these programs and projects?
4. What opportunities do you see that could enhance the implementation of your own initiatives?
5. What do you see as the main obstacles in agro-enterprise development?
6. Do you or are you willing to support mechanisms for dialogue between government and value chain (private sector) players?
7. What kind of advocacy would you like to see in the formulation and implementation of policy?

E. QUESTIONS FOR INPUT SUPPLIERS (SEEDS, FERTILIZERS, PESTICIDES, VETERINARY DRUGS, LIVESTOCK FEEDS, ETC)

1. What agricultural inputs do you deal with?
2. How do you finance your business?
3. Do you obtain any support from the government? If so in what form?
4. Does the government use you in the provision of inputs? If so, how?
5. How do government interventions in the agricultural sector affect your business? (E.g. capacity building; licensing; subsidized inputs; credit)
6. What constraints do you face in your business?
7. What opportunities do you see in your business and under what under conditions can you exploit these opportunities to benefit your business?
8. What government policies do you see as facilitating or promoting growth of your business and which ones hinder the growth of your business?
9. In what way(s) do these policies promote the business? In what way(s) do the policies hinder the business?
10. What policy changes would you suggest to improve the business environment for agro-dealers?
11. What mechanisms exist for dialogue between input suppliers and the ministries of government? (E.g. WASA)

F. QUESTIONS FOR FARMERS

1. What crops/livestock enterprises do you have?
2. What are the sizes of these enterprises?
3. Under what type of land tenure do you operate?
4. Does the land tenure inhibit your business?
5. What constraints do you face in your business?
6. What solutions do you suggest?
7. Are you a member of any farmers' organization?
8. What services do you obtain from the organization?
9. What channels exist for dialogue with government? How effective are these channels?
10. What channels exist for dialogue with processors? How effective are these channels?
11. What channels exist for dialogue with traders? How effective are these channels?
12. Who provides advisory and extension services?
13. Have you observed any conflict between federal and state government in their service delivery to you?
14. What difficulties do you experience in raising capital from the banking system?
15. Have you benefited from government subsidized inputs supply and credit system?
16. What reforms would you like to see introduced?

G. QUESTIONS FOR AGRICULTURAL COMMODITY TRADERS

1. What commodities do you deal with? Why did you choose this commodity?
2. Where do you purchase the commodity from and where do you sell it?
3. In which form do you buy the commodity and in what form do you sell it?
4. How do you finance your business?
5. What constraints do you face in the business?
6. What solutions do you suggest?
7. What opportunities do you see in agro-enterprise development?
8. Do you obtain any credit from government supported programs? If so, which ones? If not, what are the major reasons?

9. What government policies do you see as facilitating or promoting growth of your business and which ones hinder its growth?
10. In what way(s) do the policies promote the business? In what way(s) do the policies hinder the business?

H. QUESTIONS FOR PROCESSORS

1. What commodities do you process? Where do you get your inputs from?
2. What products do you make and for what markets?
3. What constraints do you face in the processing enterprise?
4. What solutions to the constraints would you propose?
5. What opportunities do you see for agro-enterprise development in Nigeria? (Domestic market? Export market? Import substitution? Etc)
6. What policies do you think would help to enhance your business?
7. What channels exist for dialogue with government? How effective are these channels?
8. What channels exist for dialogue with raw material suppliers? How effective are these channels?
9. How do you raise your financial capital? What barriers exist in raising capital locally?
10. What problems do you experience in trying to access the government supported credit schemes?
11. Do you see a role for a commodity exchange?

I. QUESTIONS FOR STORAGE OPERATORS (MEDIUM, LARGE)

1. What storage facilities do you have? Where are they located? How large are they?
2. What commodities do you deal with?
3. What major constraints they face in the processing enterprise?
4. What are their views on the appropriate solutions to the constraints they face?
5. Ask them to rank the 3-4 major constraints in terms of their importance.
6. What is your perception of the ministries and departments of agriculture, commerce and industry? Are they performing useful functions or not? If yes, what are those functions in your view. If no, what do you think they should be doing?
7. What are those policies you think would help to enhance enterprise development in your value chain?
8. What government policies have positively affected you and which ones have negatively affected you?
9. What kinds of advocacy are on board currently to assist the implementation of policy?

10. What kinds of advocacy has not worked and why? What kinds have worked and why?
11. What kinds of advocacy would you see being put into place to help implementation of policies? Who should undertake the advocacy?

J. QUESTIONS FOR NON-GOVERNMENTAL ORGANIZATIONS

1. What support does the organization provide to agro-enterprise development?
2. Which organization supports/funds your activities?
3. What programs and projects do you have in support of agro-enterprise development?
4. What constraints/problems do you encounter in your support of agro-enterprise development?
5. What constraints/problems do the enterprises that you support face in agro-enterprise development?
6. What solutions do you suggest for these problems?
7. Are your clients organized in any form or do you deal with individuals?
8. Do you perform any form of advocacy functions? If yes, explain what kind of advocacy and what specific policies/targets they target.
9. In what ways does your organization interact with the government?
10. Have you observed any conflicts between federal and state levels of government in the implementation of your programs and projects?

K. QUESTIONS FOR CBN

1. Do you have specific policies/strategies to support agro- enterprise development?
2. Do you have any program for financial support to agro-enterprises?
3. Are there specialized institutions for providing financial support to agro- enterprises?
4. What factors have contributed to the slow disbursement of the government credit scheme to the agricultural sector?
5. How could banks and other financial institutions be encouraged to provide medium to long term finance for agro-enterprises?
6. Is there a role for a commodity exchange?
7. Are there policy conflicts between the government's desire to push credit to agro-enterprises and financial institutions' risk minimization strategies? What comfort could CBN provide to financial institutions?
8. What is being done to reduce the cost of finance for agro-enterprises?
9. Please provide statistics on sectorial credit flows.

L. QUESTIONS FOR OTHER FINANCIAL INSTITUTIONS

1. What percentage of your lending have you extended to agro-enterprises?
2. Do you have any program for financial support to agro-enterprises?
3. What new policies would you suggest to improve credit access for agro-enterprises?
4. Is there a role for a commodity exchange?
5. What needs to be done to reduce the cost of funds for agro-enterprises?
6. What is required to encourage banks to provide long term finance?
7. What constraints do you experience in trying to support agro-enterprise development?
8. What solutions do you suggest for these problems?
9. Please provide statistics on sectoral credit flows.

M. QUESTIONS FOR COMMODITY EXCHANGE

1. When was the commodity exchange started?
2. Does the exchange have a linkage with the Nigerian Stock Exchange and the Capital Markets Authority?
3. Who are the members of the exchange?
4. How is it governed?
5. What benefits were expected for the agricultural sector?
6. What has been its performance since formation?
7. What commodities has it dealt with?
8. What constraints has it faced?
9. What solutions do you suggest?
10. What policy changes would you recommend to enhance the performance of the exchange?

Annex 3: The Assessment Framework

Focal Value chain	Value chain stage	Existing Policies	Existing Advocacy	Suggested Policy Change	Suggested change in implementation strategy and policy advocacy
Cassava					
	Input supply				
	Production				
	Assemblage				
	Storage				
	Processing				
	Distribution				
Rice					
	Input supply				
	Production				
	Assemblage				
	Storage				
	Processing				
	Distribution				
Sorghum	- Ditto -				
Cowpeas	- Ditto				
Aquaculture	- Ditto				
Poultry	- Ditto				

Annex 4: List of Persons and Institutions Interviewed

1.	Mr. Tom Prewitt	USAID MARKETS
2.	Mr. Alan Bright	USAID MARKETS
3.	Mr. Godson	USAID MARKETS
4.	Dr. Damian Ihedioha	USAID MARKETS
5.	Mr. Prakash Kanth	Olam Nigeria Limited
6.	Dr. James Sackey	International Food Policy Research Institute
7.	Mr. Dele Barbalola	National Bureau of Statistics (NBS)
8.	Mr. Samuel Adebayo	Senior Statistician, NBS
9.	Mr. Ichedu	Librarian, NBS
10.	Mr. Eric O Ani	National Investment Promotion Commission (NIPC)
11.	Mr. Hassan	Asst. Director Research and Statistics, NIPC
12.	Mr. Joe Adelugba	M& E Division, Federal Ministry of Agriculture and Water Resources (FMAWR)
13.	Mr. Zacheaus Atte	Deputy Director, Research & Statistics, FMAWR
14.	Mrs Ogunbela	Deputy Director, Policy, Planning & Programs, FMAWR
15.	Mrs Ayudele	In charge donor programs, FMAWR
16.	Eng F Y Akilapa	Director of Agriculture, FMAWR
17.	Mr D M Daudu	Deputy Director, Planning and Collaboration, FMAWR
18.	Mr O O Ashadiyo	ACLRO, FMAWR
19.	Mrs Scholastica Bello	SAO, FMAWR
20.	Eng. Adewuyi	Director Agribusiness Development , National Food Reserve Agency (NFRA)
21.	Mr Francis Idefoh	M&E Dept, NFRA
22.	Mr Wada Thomas	Statistics, NFRA
23.	Mr. Uzoma Onuoha	Assistant Director, Development Finance Dept., Central Bank of Nigeria
24.	Mr Frank Nweke Jr	Director General, Nigerian Economic Summit Group (NESG)
25.	Mr Innocent Azih	Senior Consultant, NESG
26.	Alh. Ali S Madugu	Dala Foods (Nigeria) Ltd
27.	Alh. Yahaya M Yakasai	Convenient Home Foods Beverages Ltd
28.	Mr. Earnest Ihedigbo	Product Development and Training Agribusiness Unit, First Bank, Nigeria Ltd
29.	Prof Eric Eboh	President, National Agricultural Policy Research Network.
30.	Prince Ube Ubaka	Vice President, All farmers Association of Nigeria
31.	Alhaji Abubakar Wodi	National Chairman, Rice Farmers Association of Nigeria, (RIFAN)
32.	Focus Group Discussion	with 15 Rice Farmers/Processors/Marketers - Members of RIFAN
33.	Mr S O Ojo	National Planning Commission
34.	Mr. Patrick V Aso	National Planning Commission
35.	Dr. Bola Adubi	Senior agricultural Specialist, The World Bank
36.	Dr. Lucas Akapa	Senior Agricultural Specialist, The World Bank
37.	Prof A O Ogungbile	Director Technical and Commercial Services, Premier Seeds Nigeria Ltd.
38.	Chief O J Shobowale	Executive Director, National Agricultural Seeds Council (NASC)
39.	Michael A Adeseko	SAO (SED) NASC

40. M H Yusuf CAO(SED) NASC
41. Dr. B O Maduekere D D Certification NASC
42. Dr. S E Arbimiku DD FSP, NASC
43. Mrs A F Atolagbe DD TSS, NASC
44. K A Adelugba DD PME NASC
45. Joshu Femi Olonilua DD (QC) NASC
46. Dr. P O Ojo DD (SI & CB) NASC
47. R Dahiru SAO (SCQC) NASC
48. A S Uteh AOII (M\$E), NASC
49. Mrs Biodun Alabi Ag. Managing Director/CEO, Arable Crops Development and Marketing Company
50. Mr Funsho James Ayeni Ag. Executive Director (Finance) ACDMC
51. Mr. Francis E. Umokoro ACDMC
52. Mr. Mahmoud Inuwa Executive Director Operations, ACDMC
53. Ms Zaheera Baba-Ari Group Head Management Services. Abuja Securities and Commodity Exchange
54. Mr. Ezekiel Davou Group Head, Risk Management and Surveillance, ASCE
55. Dr. Olajide Basorun Programme Manager, Lagos State Development Authority (LSDA)
56. Mrs E Olusaya Titileyo LSDA
57. Mrs A F Ogunsola Head Tech, LSDA
58. Oyebola O Akinola Head NPFS, LSDA
59. Mrs A T Ayoade Head Planning, LSDA
60. L O Elias LSDA
61. Mrs Aramide Gensallo LSDA
62. Tanimowo George Desk Officer ILEP LSDA
63. Olubiyi Dayo Zonal Executive Officer Western Zone, LSDA
64. Ajayi F. Musiliu Head Field Activities , LSDA
65. Mr Deji Odulesi Communication Officer, LSDA
66. Focus Group Discussion with Members of Aiyedoto Livestock farm settlement, Agric road, Ojo, Lagos State.
67. NIOVAS FARMS, Abib, Ojo, Lagos State, on aquaculture farm estate comprising 54 fish ponds and a hatchery.
68. Mr Jrimiya Kaura Chief Commodity Officer, Commodities and Products Inspectorate Dept, Fed Min of Commerce and Industry,
69. Mr Wale Fasanya Group Head, Planning, Research & Coordination), SMEDAN
70. Dr Friday Okpara SMEDAN,
71. Lots of valuable information was obtained.
72. Dr Victor Oboh PrOpCom
73. Mr.Taslim Owonikoko Berekotry Detergent Ltd
74. Mr.E O Adekogbe Bank Of Industry Ltd
75. Mr. Aliyu Umaru Zonal Manager, Bank of Industry

Annex 5: Highlights of Interventions by the Nigerian Government in Agricultural Sector Development

Intervention/ Program Title	Description of Intervention programs/projects/initiatives
National Accelerated Food Production Project (NAFPP) (1970s)	Objectives were to increase the yields of seed varieties and enhanced fertilizers use and promoted extension and credit services as well as adaptive research and staff training. A number of national crop centers were established at different locations, e.g. Ibadan for rice and maize; Zaria for sorghum, millet and wheat; and Umudike for Cassava. Started very well but the wheat program was affected by a basic withdrawal of political support and lifting of the ban on wheat import.
CBN Agricultural Credit Guarantee Scheme Fund (ACGSF) (1977-date)	The ACGSF was established by Decree No. 20 of 1977, and started operations in April, 1978. Its original share capital and paid-up capital were ₦100 million and ₦85.6 million, respectively. The Federal Government holds 60% and the Central Bank of Nigeria, 40% of the shares. The capital base of the Scheme was increased to ₦3 billion in March, 2001. The Fund guarantees credit facilities extended to farmers by banks up to 75% of the amount in default net of any security realized. The Fund is managed by the Central Bank of Nigeria, which handles the day-to-day operations of the Scheme. The scheme is a mechanism set up by the government to encourage bank /financial institutions to lend to agriculture. Any losses incurred by the bank through an irrecoverable capital are made good by the ACGS. The level of access of the funds by farmers has been very low.
CBN Interest Draw Back Program IDP	The Interest Drawback Program (IDP) was developed as an interest rate management framework under the ACGSF to reduce effective borrowing rates without the complication of introducing dual interest rate regime or contradicting the existing deregulation policy of the government. Under the IDP, farmers will borrow from lending banks at market-determined rates but the Program will provide interest rebate of a determined percentage to them where the loans are repaid as and when due. The IDP which has an authorized capital fund of about ₦2.0 billion is funded jointly by the Federal Government of Nigeria and the Central Bank of Nigeria in the ratio of 60:40. It is regarded as a dedicated fund for interest drawback on agricultural loans or IDP Fund and separated from the ACGSF capital. It is designed to increase the loan repayment rate under the ACGSF.
Agricultural Development Projects (ADPs) (1975 to Date)	World Bank funded at inception. ADP revolution started in 1974 with the establishment of the Gombe, Funtua and Gusau ADPs. They were set up to provide extension services, technical input support and rural infrastructure services. Though they were set up to perform a temporary role in providing advisory services, the ADPs have literally assumed a permanent status. They are now recognized as the major agricultural development institutions in the state. The decline in oil prices that started in 1982 had a substantial fiscal effect in Nigeria and led to shortages of counterpart funds for these projects. The emphasis on modern technology in the ADPs led their agricultural research and extension services to focus on relatively high input technology for sole cropping systems. These systems were not used by the majority of smallholders who used mixed/relay cropping systems as a rational strategy to reduce risks. Extension Methods: The change from the training and demonstration system to the T&V system was slow resulting in top down rather than responsive approaches.
Operation Feed the Nation(1976 to 1979)	This was a mass mobilization and mass awareness program created in 1976 through 1979 in reaction to the first real food crises in the country. The lack of continuity and shift in approach by successive governments were the reasons for the failure of the poverty alleviation programs.
CBN Rural Banking	The Rural Banking Scheme was instituted by the Central Bank in 1977. The scheme required

Scheme 1977	<p>all commercial banks to open branches in rural areas. The purpose of the scheme was to ensure resource poor rural dwellers have secure access to credit for investment in economically productive ventures. The scheme would encourage the mobilization of savings among people at the grassroots level and at the same time simplify the disbursement of funds through loans and advances. Even though the numerical target of at least one branch in every Local Government Area was met in 1991, these rural branches failed to meet the credit needs of the people and remained mere deposit takers. A major weakness of the scheme is that it is supply driven</p>
Green Revolution (1979 to 1983)	<p>The program focused on food production, input supply and subsidy, special commodity development, review of agricultural credit guarantee scheme and increased resource allocations to RBDAs. The lack of continuity and shift in approach by successive governments were the reasons for the failure of the poverty alleviation programs.</p>
Peoples Bank Program 1989	<p>The People's Bank (PB) was set up in 1989 to meet the credit needs of the rural and urban poor, artisans, farmers, petty traders, vehicle mechanics, etc. However, because it is supply-led and heavily dependent on subventions from the Federal Government for its operations, the recovery of loans has not been very efficient and it is facing problems of de-capitalization due to heavy overheads that outstrip earnings.</p>
The Community Banking system 1990	<p>The Community Bank (CB) was conceived to answer some of the observed weaknesses in credit delivery to the grassroots. The first CB was commissioned in December 1990, and the National Board for Community Banks (NBCB) was set up by decree 46 of 1992 to promote, develop, monitor, and generally supervise the CBs. The CB is a unit bank, a self sustaining financial institution owned and managed by a community or group of communities for the purpose of providing credit, deposit banking and other financial services to its members largely on the basis of their mutual group responsibility, self-recognition and merit. Informal forms of rural finance schemes exist in most parts of Africa and these have provided some basis for linkage with formal banking. CBs in Nigeria were established using the already existing rotating savings and credit associations (ROSCAs). The Bank was designed and modified to meet the needs of the small-scale entrepreneur who dominates the informal sector where many economic activities are carried out within a largely peasant mode of production. The primary objective of any CB is to mobilize funds for deposit and disbursement as loans and advances to members of the community. The one attribute that gives the CB system an edge over all other grassroots based financial efforts hitherto embarked upon by government is that, whereas the latter were "enterprises run for the poor", the CBs are "enterprises run by the poor". However, the reformation of the banking industry that was carried out in 2006 resulted in the transformation of CBs into Microfinance banks, the consequence of which is substantial deviation from the goals of the CBs. The microfinance institutions are no longer good credit sources for rural dwellers and micro enterprise operators since interest rates are as high as 36% per annum and repayment periods are very short.</p>
Directorate of Foods and Roads and Rural Infrastructure (DFFRI) (1986 to 1993)	<p>DFFRI was established in late 1986 to accelerate the rate of infrastructure development in rural areas. It was originally designed as a supra-ministerial body for channeling the proceeds of the liberalized foreign exchange market for rural development. The lack of funds and commitment limited the extent of infrastructural provisions in rural areas. The government programs for rural infrastructure were embarked upon without an effective program of action and appropriate institutional arrangements for their execution.</p>
The Small and Medium Enterprises Equity Investment Scheme (SMEEIS)1999-date	<p>A voluntary initiative of the Bankers' Committee aimed at the promotion of Small and Medium Enterprises (SMEs) as vehicles for rapid industrialization, sustainable economic development, poverty alleviation and employment generation, the Scheme requires all banks in Nigeria to set aside ten (10) percent of their Profit After Tax (PAT) to fund equity investment in eligible small and medium enterprises. Under the scheme, a small and medium enterprise is any enterprise with a maximum asset base of N500million (excluding land and working capital), and with no lower or upper limit of staff. After about six years in existence with very slow speed of implementation, the SMEEIS was systematically replaced by banks with a phantom N50 billion microcredit fund that never saw the light of the day.</p>

<p>Presidential Initiatives on Cassava (1999 to 2007) FGN/FMCI</p>	<p>This was initiated by the FGN through the Federal Ministry of Commerce and Industry. A major focus of this initiative was to expand income from cassava production through the expansion of market opportunities. The initiative focused on substantially increasing the export potentials of local cassava products as well as the use of cassava locally as industrial raw materials. One major strategy was the 10% cassava floor inclusion in bakery products. The initiative failed because of poor funding and lack of institutional arrangements for implementation.</p>
<p>Refinancing and Rediscounting Scheme of the CBN (RRF) 2002-date</p>	<p>This program aims to encourage long term lending in the real sector. The refinancing facility is a special window for banks that are willing to advance loans for medium and long-term investments in agriculture, semi manufacturing and manufacturing. Eligible projects under the scheme are those with tenor of 5 years and above. The refinancing facility is at a concessionary rate of 2% points below the minimum rediscounting rate (MRR). The window applies to facilities that must have been held for not more than one year and enable banks to access funds up to 60% of qualifying loans. According to CBN sources, the evaluation of the RRF since 2002 shows that out of 89 banks operating in Nigeria then, only 4 sent in applications amounting to N818.59million, out of which 2 were approved for refinancing and only 1 actually accessed the fund. This is an indication that the incentives provided by the RRF were not sufficiently attractive to banks. The scheme is thus currently under review to boost its attractiveness.</p>
<p>Commerce 44 Program (2006) Fed Ministry of Trade and Commerce</p>	<p>The major goal is to accelerate the export of identified products with a view to contributing towards achieving 10% rate of growth in Non-Oil Export (NOE) products. The strategy is to develop and promote the export of 11 agricultural commodities, 11 solid minerals, and 11 Manufactured Products and Services, with high export potentials and take advantage of the concessions offered by subsisting bilateral and multilateral agreements as well as MOUs that will facilitate the smooth export of Nigerian products into the markets of 11 selected countries. The 11 agricultural commodities selected for promotion are: Cocoa, Cotton, Cassava, Ginger, Shea nut, Gum Arabic, Sesame Seed, Poultry, Cashew Nut, Palm Oil, Fruits/ Vegetables. The 11 target markets are EU, Japan, China, USA, India, Ecowas, Southern African Countries, Central African Countries, South East Asia, and the Middle East. The initiative seeks to adopt universally acceptable best practices in production, manufacturing, packaging, marketing, etc. for the selected products to enhance their competitiveness in the world market. After training, operators expect to be mobilized and empowered. However, the reality is that there such empowerment has not occurred for the most part. Training programs are more or less a waste since most of those trained never get to adequately use the skills acquired due lack of access to resources. Malaysia, for example, has a SMEDAN type organization, but it has a back up fund that helps to empower trainees.</p>
<p>Industrial Clusters Initiative (2007) Fed Ministry of Trade and Commerce</p>	<p>The program is aimed at developing industrial parks or incubators in selected locations. Implementation has been very sluggish and Cluster has been built so far. The development of industrial development centers was handed over to SMEDAN in 2008. This program aims to encourage states to open industrial clusters and promote OLOP (one local government one product). The one village one product model is a Japanese model. It has been difficult getting states and Local governments to cooperate with SMEDAN. There is a high cost of operating small enterprises in Nigeria due to very weak infrastructure. There is a lot of duplication of functions. For example, the Bank of industry seems to be doing what should be the preserve of SMEDAN and they are more successful because they have funds. The bank should have limited itself to providing financial back up for the activities of SMEDAN. There is need for streamlining of operations of government agencies.</p>
<p>National Food Security Program (NFSP), 2008-date</p>	<p>This program is currently the major agricultural policy strategy document that Nigeria has to ensure sustainable access, availability and affordability of quality food to all Nigerians and for Nigeria to become a significant net provider of food to the global community. The main focus is on providing a conducive environment for private sector involvement, encouraging large scale commercial farming with strategic linkages to small holder farmers, and significantly reducing post harvest losses through adequate storage, processing and appropriate market outlets. Focus is also on strategic crops, livestock, fishery and agro forestry commodities. The program targets small, medium and large scale farmers and covers all 774 LGAs in 37 States of the Federation, including FCT. The strategy document is currently being updated even though</p>

	implementation has started.
Rice processing Capacity enhancement program 2005-date Fed, Govt of Nigeria	This program involved the following projects: Federal government encouraged foreign investment inflow to the tune of US\$1.2billion directed at establishing processing facilities in Kano, Kwara, Ogun, and Benue states with a combined installed capacity of 730,000 MT per annum. This led to the licensing of multinational rice firms such as Veetee Rice, Olam and Stallion Group (SG2000) to import brown rice at a preferential tariff rate of 50 percent. License holders were expected to invest in rice processing and cultivation schemes in return for the exclusive license to import brown rice for polishing. Second, 10 billion naira is set aside to fund the establishment of rice mills around the country. The project is expected to establish ten medium scale rice mills each with two 40 tons per 8 hour -day capacity (Single shift) in each of the selected 10 states (Ebonyi, Kebbi, Niger, Bayelsa, Ekiti, Taraba, Benue, Ogun, Kano, and Kaduna States). Given a total of 220 working days per year, the nation will have an additional milling capacity of 17600 MT of milling capacity per year for each state and 176000 MT per year for the nation. Third, the Federal government has also initiated a 7.33 billion naira project directed at funding the establishment of 22 semi-automated rice milling clusters across the country. Each cluster will consist of six plant buildings with five milling plants each, giving a total of 30 milling machines with related processing equipments. The project is expected to add an additional 1,089,000 metric tons of rice milling capacity to the nation when completed.
National Program for Food Security (NPFIS), 2009-date	The objective of the program is to improve national food security and reduce poverty on an economically and environmentally sustainable basis. To enhance food security of beneficiaries, through establishment of 218 production and demonstration sites, facilitate community development through community empowerment and promotion of outreach activities, by improving critical rural services in the project areas. 70,000 farm households participating in site development programs and 785,000 farm families covered under the outreach program. The program is to cover 327 Sites and about half of the LGAs in the country, with a total of about 4 million farm households
Patronizing Made in Nigeria Products. (2009) Fed Ministry of Trade and Commerce	The program is a Federal Ministry of Commerce and Industry Initiative and started in October, 2009. The program was based on the diagnosis that enterprise development has been sluggish due to the low patronage of domestically produced goods and services. The approach will consist of organizing workshops throughout the federation to expose producers to the skills needed to produce products that will meet the needs of domestic consumers thereby creating demand. The program will also sensitize the consumers to the quality of products available through domestic production. Funding for program implementation is lacking. Qualified personnel are lacking. Engagement of workers leans more towards quota than merit
Rural Finance Institution Building Program (RUFIN)	Program objective is to develop and strengthen microfinance institutions (MFIs) and establish linkage between these institutions and formal financing institutions in order to create a viable and sustainable rural finance system. Major focus is in supporting existing grass root institutions to understand their constraints and need for capacity building and institutional support; and to alleviate poverty and enhance participation by women and the physically challenged. Target groups include vulnerable poor, the poor and less poor. The well-off are to provide leadership and contribute to the effort of the program. Coverage is 12 States at 2 States per geo-political zone and 36 LGAs.
Rural Micro Enterprise Development Program (RUMEDP)	To promote sustainable Rural Micro Enterprise (RME) development through the strengthening of the public-private institutional capacity, supporting and enhancing the policy for Medium Small and Micro Enterprises (MSMEs), facilitating the linkage between non-financial and financial services, enhancing access to finance, improving and disseminating technologies for RME. The main focus is on building capacity of current and additional service providers to provide technical skills and entrepreneur development, as well as process to link RME clients with the service providers and markets. The target groups are the vulnerably poor, the poor and less poor. Project beneficiaries will include 50% women, 20% youth, 10% physically challenged and HIV/AIDs affected families, while the better off will provide leadership and contribute to the program, particularly women. Eight (8) States from 4 zones comprising; North, North Central, South East, South west
IFAD/FGN/NDDC	To improve the standard of living and quality of life for at least 400,000 poor rural households

CBNRMP-ND ongoing NFRA, FMAWR	of the Niger Delta states. The main focus is sustainable livelihood, Improvement and Stemming youth restiveness. Women, Youths and Core Poor. The main strategy is the use of Community Driven Development (CDD) approach in the holistic intervention on the social and economic well-being of participating communities.
Community Based Agricultural and Rural Development program (AfDB/FGN-CBARDP) ongoing NFRA, FMAWR	Poverty reduction through improvement of livelihoods and living conditions of the rural poor. Main focus of program is strengthen and sustain the capacity of rural communities to plan and implement development activities, the capacity of Local and State Governments to support, monitor and evaluate project activities, increase crop productivity and livestock production, improve social and rural infrastructure. Target group is 135 communities (RVAs) including their 1,650 community Based Organizations (CBOs) in the 45 participating LGAs of the 5 project implementing Units (PIUs); Adamawa, Bauchi, Gombe, Kaduna & Kwara States
Multinational NERICA Rice Dissemination Project ongoing NFRA, FMAWR	The Project aims to enhance rice production and rice import substitution. The project focuses on supporting small scale rice producers to improve production and their household income through the transfer of NERICA varieties and complementary technologies. The target groups are farmers, NGOs, Traders The project covers seven West African countries namely; Benin, the Gambia, Guinea, Ghana, Mali, Nigeria & Sierra Leone while in Nigeria, the Project covers six states – Kaduna, Ogun, Nasarawa, Ondo, Taraba & Ekiti
IFAD Community Based Agriculture and Rural development Program (IFAD – CBARDP), ongoing NFRA, FMAWR	To improve the livelihoods and living conditions of the rural poor with emphasis on women and other vulnerable groups. The program focuses on creating awareness and building Capacity, community social Infrastructure, supporting rural and enterprise development, as well as financial Linkage Support. It targets the very poor rural women and men and other vulnerable groups (disabled, unemployed youth etc). Covers 7 states namely: Borno, Jigawa, Katsina, Kebbi, Sokoto, Zamfara, Yobe
National Fadama II Development Project (NFDP - II) 2003-2007 NFRA, FMAWR	To reduce poverty by improving the living conditions of the rural poor and to contribute to food security and increased access to rural infrastructure. Main focus is to reduce poverty in rural communities, to contribute to food security through increase production and productivity, increase income of rural communities. Program targeted Fadama Resources User Groups (FRUGS) and Fadama Community Association (FCAs), disadvantaged groups, and Service Providers. The Project covered six participating states of Borno, Jigawa, Katsina, Kwara, Kogi and Plateau (10 Nos LGAs per states). Fadama I and II projects successfully refined approaches for improved utilization of these lands. Fadama II implemented an innovative local development planning (LDP) tool, building on the success of the community-driven development mechanisms. The cumulative impact of these earlier successful Bank-assisted projects attests to the robustness of the small-scale and community based approach to Fadama development in an environmentally sensitive manner
National Fadama III Development Project (NFDP – III) <i>2009-date</i> NFRA, FMAWR,	This is a World Bank funded Fadama program that aims to: increase the incomes of users of rural land and water resources on a sustainable basis; contribute to Food Security and Food Reliance; increase income of rural communities by 20%; and provide rural Infrastructure to communities that will enhance agricultural production. The program is a comprehensive five-year action program to raise productivity and incomes in rural areas, emphasizing production land and alternative income generating schemes. The approach taken is centered on the community-driven model and includes investing in: 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. The target groups are Fadama User Groups (FUGs) and Fadama Community Association (FCAs), disadvantaged groups and Service Providers. The project is expected to contribute to achieving the goals of the National Food Security Program (NFSP) and the Rural Sector Strategy (RSS), as well as the Comprehensive African Agriculture Development Program (CAADP) target of 6 percent agricultural growth.
Commercial Agriculture	The Project is financed by an IDA financing of \$150.00M. The Project Development Objective is to strengthen agricultural production systems and facilitate access to market for targeted

<p>Development Project (CADP) (2009-Date)</p> <p>NFRA, FMAWR</p>	<p>value chains among small and medium scale commercial farmers in the five participating states. These value chains are: oil palm, cocoa, fruit trees, poultry, aquaculture and dairy, with maize and rice as staples. Nigeria's agricultural sector suffers from a series of inter-related constraints. Key among these are lack of infrastructure, appropriate technology, weak advisory services, post harvest losses, poor access to markets and lack of finance. The CADP is designed to address these issues. The project has two components, namely: Agricultural Production and Commercialization and Rural Infrastructure. Component 1 will provide resources to facilitate the adoption of appropriate and existing agriculture technologies. The project will provide matching grants of about US\$15.0 million. The matching grant is to <i>support the adoption of known and superior technologies</i> and build capacity of small and medium-scale commercial agriculture farmers. Component 2 provides resources for construction of new roads, rehabilitation of existing ones and maintenance of roads to communities and selected agricultural activities. Maps of areas of interventions showing the value chains, energy and network of farm access roads have been identified and drawn. The maps also indicate the geographic location of the CIGs that will participate.</p>
<p>CBN Commercial Agricultural Credit Scheme (CACs) April 2009</p>	<p>The scheme which provides a 200 billion Naira loan facility through selected commercial banks was initiated by the CBN in the first quarter of 2009 as an effort to enhance the flow of credit to the agricultural sector. However, at the end of 2009, not a single kobo had been disbursed through the scheme due to official bureaucracy and unresolved technicalities among parties involved in the management of the scheme.</p>
<p>CBN Real Sector Intervention Fund (RSIF) March 2010</p>	<p>The Monetary policy committee of the CBN announced that the CBN will release N500 billion as a real sector intervention fund to unlock credit flow within the country. The facility is provided for investment in debentures issued by the Bank of Industry (BOI) for investment in emergency power projects dedicated to industrial clusters. The funds are to be channeled through the Bank of Industry for on-lending to the DMBs at a maximum interest rate of 1.0 per cent for disbursement of loans with a tenor of 10 - 15 years at concessionary interest rate of not more than 7.0 per cent. Although a finance sector expert commended the initiative, he said that it is vulnerable to bureaucratic bottleneck, and hence could end up like similar past initiatives. The cost of doing business will reduce. If the various sectors are doing well, banks will be able to lend more money out and that will begin to increase business activities.</p>

Annex 6: Government Agencies Formed to Implement Interventions in the Agricultural Sector

Name of Development Agency of Government	Description of Roles and Responsibilities
Cooperatives (1935 to Date)	The Nigerian Cooperatives Ordinance was promulgated in 1935 to regulate Cooperative activities in the country. In 1974, a law was enacted which established the Department of Cooperatives. A weakness of this initiative has been policy inconsistency and administrative dislocations of the Federal Department
Commodity Boards (1947 to 1986)	Commodity Marketing Boards started during the colonial era with the establishment of first generation marketing boards as follows: Cocoa Marketing Board in 1947, Palm Produce, Groundnut and Cotton Marketing Boards in 1949. The second generation established in 1954 was the regional marketing boards. They served as buyers of last resort, at fixed prices and held strategic or buffer stock. A major weakness of the program was the inability to pay farmers the subsisting market price then. The program was scrapped in 1986 under Structural Adjustment Program.
Agricultural Research Institutes (1964 to Date)	Four research institutes namely: Cocoa, Oil Palm, Rubber and Trypanosomiasis were established by the Nigerian Research Institute Act in 1964. In 1975, the Agricultural Research Institutes were established to conduct research in various crop, livestock and fisheries. Instability of the Research Institutes resulted from the constant movement of agricultural research institutes from one Ministry to another. There was also a major problem with funding of these institutes.
Nigerian Agricultural Cooperative Bank (NACB) (1973 to Date) Now Nigerian Agricultural Credit and Rural Development Bank (NACRDB)	The main specialized institution for agricultural credit delivery in the country. Directed to provide subsidized credit at single digit interest rate (8%) without the corresponding subsidy provided by the government. Major problems have been low stock of loanable funds and low repayment rates. To keep afloat, Interest rates have been increased to double digits (14%) defeating the original purpose of its establishment. It needs to be reformed for greater efficiency and effectiveness in resource mobilization and credit delivery.
River Basin Development Authorities (RBDAs) (1977 to Date)	The major instrument of the water resources and irrigation policy was the establishment of 11 RBDAs in 1977 to develop and take advantage of available water bodies in the country for agriculture, fishing and other purposes. The failure of the RBDAs was due to unnecessary political interference and managerial problems resulting from socioeconomic cleavages which permeated the nation's socio-political, economic and cultural institutions. There is also the lack of qualified manpower to provide effective leadership at departmental levels
National Agricultural Insurance Company (NAIC), 1987 –date FMAWR	NAIC is wholly own by the Federal Government of Nigeria. It was establish in 1987 to provide risk cover to Nigerian farmers. The primary mandate of NAIC is to operate the Nigerian Agricultural Insurance Scheme (NAIS). The scheme is a mechanism put in place to shield farmers from the effect of natural hazard which has led many farmers to abandon farming and move to cities in search of non-farm income. The enabling act of the corporation empowers it to underwrite policies in general businesses such as fire, burglary, workmen compensation, motor marine (haul and cargo), goods in transit, performance bond, etc. NAIC also provides insurance cover and risk advisory services on insured projects. NAIC is also mandated to compulsorily insure loans granted to farmers by NACRDB or other financial institutions. The operation of NAIC has however not met with much success. Currently, the activities of NAIC have been reduced to mere insuring of loans to farmers by NACRDB and other financial institutions. Most of the other insurance functions now performed by NAIC are directed at non-farming enterprises. There is also the issue of poor funding of NAIC.
National Fertilizer Company	The National Fertilizer Company of Nigeria also called NAFCON but now called

<p>(NAFCON) 1987-</p>	<p>Notore Chemical Industries was a state owned company which was later sold to a private firm, O-Secul Nigeria Ltd for \$152 million. The NAFCON plant was established in 1981 at Onne, Rivers State, as the first and the largest modern nitrogenous fertilizer complex, not only in Nigeria, but also in West Africa. The plant started production in July 1987. Originally, it started out as a joint venture between the Federal Government of Nigeria (70%) and Kellog of Houston (30%). However, the Nigerian National Petroleum Corporation acquired the shares held by Kellog in 1991. The fertilizer plant was built at a cost close to \$800m. By 2005, total indebtedness was put at It N23, 239,274,274. This include : Trade Creditors; N3,500,000,000, Bank loans, N5,100,000,000, National Auto Council N3,725,000,000, Nigeria Gas Co. Ltd, N1,314,274,274 and Staff terminal benefit/allowances, N9,600,000,000. The rehabilitation of the plant which was started in 2000 was abandoned in 2001. Notore Chemical Industries Ltd acquired the assets of NAFCON in August 2005. On January 7, 2009, Notore began commercial production of ammonia fertilizer from its plant in Onne, Rivers State. Notore is the major fertilizer producing firm in Nigeria but because of its comatose production rate since 1999, it did little to dent the nation's need to import fertilizer or to assuage the perennial shortage of fertilizer in the country.</p>
<p>National Agricultural Land Development Authority (NALDA) (1991 to 1999)</p> <p>Agency of Fed Ministry of Agriculture and Water Resources (FMAWR)</p>	<p>The objectives of the Authority include providing strategic public support for land development, promoting and supporting optimum utilization of Nigeria's rural land resources, providing gainful employment opportunities for rural people as well as raising incomes and improving general living standards in rural areas. The NALDA approach increased rather than reduce the direct public provision of goods and services which could be provided by the private sector instead. Many of NALDA's services were duplications, albeit on a more intensive basis of services provided by the ADPs</p>
<p>Small and Medium Enterprise Development Agency (SMEDAN)</p> <p>2003 – date</p> <p>Federal Ministry of Commerce and industries (FMCI)</p>	<p>The Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was established by the SMEDAN Act of 2003 to promote the development of the MSME sector of the Nigerian Economy. The Agency positions itself as a "One Stop Shop" for Micro, Small and Medium Enterprises Development. Micro Enterprises are included in the clientele of the Agency since they form the bedrock for SME's. The mandate of SMEDAN is to facilitate the access of micro, small and medium entrepreneurs/investors to all resources required for their development. A well developed MSME sector has proven to be one of the most veritable channels to combat poverty. The establishment of SMEDAN is therefore justified by the need to trigger the development of Nigeria's MSMEs in a structured and efficient manner. However, the accomplishment of these goals has been constrained by the lack of cooperation by states and local governments, inadequate funding from program implementation, inadequate manpower, duplication of responsibilities of SMEDAN by Bank of Industry, lack of funding provisions for the mobilization and empowerment of trainees of the agency. Finally, there is low clientele response due to the high cost of operating small enterprises in Nigeria which is a consequence of very weak infrastructure.</p>
<p>Nigerian Investment Promotion Commission (NIPC)</p> <p>1995-date</p> <p>Federal Ministry of Commerce and industries</p>	<p>The main responsibility of the commission is to encourage, promote and co-ordinate investment in the Nigerian economy. The clientele includes both Nigerians and non-Nigerians and cuts across all productive enterprises. The Commission will initiate and support measures which shall enhance the investment climate in Nigeria for both Nigerian and non-Nigerian investors, and promote investments in and outside Nigeria through effective promotional means. It will collect, collate, analyze and disseminate information about investment opportunities and sources of investment capital, and advise on request, the availability, choice or suitability of partners in joint-venture projects, register and keep records of all enterprises to which this Act applies, identify specific projects and invite interested investors for participation in those projects, provide and disseminate up-to-date information on incentives available to investors, assist incoming and existing investors by providing support services.</p>
<p>National Food Reserve</p>	<p>The National Food Reserve Agency (NFRA) was established in July 2007, following</p>

<p>Agency (NFRA)</p> <p>(2007-date)</p> <p>Agency of FMAWR</p>	<p>the merger of some Departments of the Ministry, one of which was the PCU (Project Coordinating Unit). The PCU had earlier emerged in April 2000, from a merger of FACU (Federal Agricultural Coordinating Unit) and APMEU (Agricultural Project Monitoring and Evaluation Unit). Until, 1987, APMEU was known as APMEPU (Agricultural Project Monitoring, Evaluation, and Planning Unit). APMEPU came into being in 1975 when the enclave Agricultural development Projects (ADPs) in the northern cities of Funtua, Gombe and Gusau were created under World Bank funding.</p> <p>NFRA is a major project implementing agency of the FMAWR. It is also charged with the monitoring and evaluation of projects under its coordination and supervision, as well as the generation and documentation of agricultural data. NFRA currently oversees the implementation of about 10 agricultural sector development projects/initiatives.</p>
<p>Nigerian Agricultural Seed Council (NASC)</p> <p>Established December 2007</p> <p>Agency of FMAWR</p>	<p>NASC is an autonomous body under FMAWR. It is a regulatory body responsible for the coordination and regulation of the national seed system to ensure adequate production, distribution, access and use of high quality seed by farmers. The council was established in December 2007 and is responsible to the Honorable Minister of Agriculture. Its operation is currently done through the use of seed certification officers at the state levels who do inspections and ensure that producers of certified seeds adhere to standards. Statutory responsibility is that of quality control and coordination of certified seed production in the nation. NASC currently produces foundation seeds through an Out-growers scheme. The seed companies pick up foundations seed from them to produce certified seeds and these seeds have to be certified by NASC for them to get into the market. Currently, the council is putting into place the framework that is necessary for it to effectively perform its responsibilities of coordinating activities in the seed sector. One of the identified weaknesses of the NASC is the lack of analytical capacity among the staff to effectively perform their information management function. Human capacity is also low especially in the area of data processing and analysis for decision making. Funding for M& E is also very low.</p>
<p>Agricultural Research Council of Nigeria (ARCN)</p> <p>2007-date</p> <p>Agency of FMAWR</p>	<p>The Agricultural Science Department of Agric sciences of the FMAWR metamorphosed into the ARCN. The Council came aboard in 2007 at the appointment of an Executive Secretary. The role of ARCN is to serve as a catalyzing agent for the management of the much needed changes in Nigeria’s national Agricultural research system within the context of innovation system which brings together on one platform all actors and actions for greater synergy, collaboration, partnerships and accountability. ARCN has the responsibility of coordinating, supervising, and regulating agricultural research and extension in Nigeria. Major functions of this agency includes advising the Federal government on national policies and priorities in agricultural research, training and extension activities; preparing annual budget for agricultural research, training, and extension programs of institutes, and receiving grants for allocation to the institutes for implementation of annual programs and to universities and other bodies for special research or training projects; ensuring the implementation of approved master plans for agricultural research, training and extension; maintaining an up to date record of all existing facilities for research, training and extension in agricultural sciences in Nigeria and advise the federal government on their adequacy and efficient utilization; establishing and maintaining a national agricultural sciences library and documentation center and publishing or sponsoring the publication of research results in agricultural sciences.</p>

Annex 7: Summary of Constraints and Affected Commodities

Step in Value Chain	Constraint	Commodities Affected	How manifested
Policy direction	Lack of a shared vision among various stakeholders such as government ministries, Private Sector stakeholders (Producers, processors, and marketers either individuals or organized in associations), Ministry of Agriculture, NFRA, NGOs, etc.	Cassava Rice Aquaculture Sorghum Cowpea Sesame Poultry Cocoa	Different actors not cooperating but acting against the interests of others while seeking to better their own. This is destructive competition, e.g. when processors underpay farmers, they cannot sustain supplies of tubers. Association of 14 cocoa producing states complains that the Federal Ministry of Agriculture has failed to prepare a blueprint for the development of the crop; that the ministry did not attend a convention they organized on the crop; that cocoa has been excluded from the N200 billion credit from the CBN; and that there is lack of transparency and accountability in the use of cocoa levy in the Ministry of Commerce. The states have recognized the need for joint self-help action. ³
	Inconsistencies in policy	Rice Cassava Cocoa	Rice: Erratic FGN policy environment creates disincentives for the necessary private-sector investment in key functions of the rice value chain, primarily processing and input supply; and highly fragmented and poorly serviced domestic rice value chain, which provides few incentives for upgrading. The major constraint is the lack of a consistent, reliable supply of high-grade paddy to the mills, and therefore a viable large mill requires investment in developing reliable supply. Cassava: erratic production and failure of processing factories. Cocoa is mentioned as a major crop in the country but is not being accorded the status it deserves.
	Competition between ministries instead of collaboration	Tea/coffee, Cashew, Gum Arabic, shea nut, palm oil, rubber, cassava, ginger, bee keeping, ground nut, sesame seed, cocoa and cotton.	Registered commodity associations The Ministry of Commerce and Industry (MOCI) has registered 13 commodity associations. These are: Tea/coffee, Cashew, Gum Arabic, shea nut, palm oil, rubber, cassava, ginger, bee keeping, ground nut, sesame seed, cocoa and cotton. Each commodity association is made up of operators at all levels of the value chains: producers, processors, marketers, exporters. It is not clear what role the MAWR has played in this but it is obvious there is no need to reinvent the wheel. Who provides the capacity building to these associations to ensure they are functional?

³ Interview of Deputy Governor of Abia State reported in Vanguard newspaper of Friday March 19th, 2010 p.28.

Step in Value Chain	Constraint	Commodities Affected	How manifested
			<p>The MOCI is about to establish an umbrella association called the Federal Agricultural Commodities Association of Nigeria (FACAN). Its headquarters will be built in Abuja and all registered commodity associations will have an office in the premises. This will allow for coordination of all commodity associations centrally.</p> <p>The Ministry of Commerce and Industry has set up the Abuja Securities and Commodity Exchange but the MAWR reportedly wants to start its own; and MAWR has three parastatal commodity marketing organizations covering arable crops (Arable Crops Development and Marketing Company), livestock and fisheries.</p>
	Inadequate data on the sector for planning purposes.	Poultry	Poultry: Lack of strong base to compensate farmers who experienced heavy losses due to Avian flu.
	Limiting land tenure system under the Land Tenure Act of 1978.	Cassava Rice Aquaculture Sorghum Cowpea Poultry	Farmers cannot use land as collateral because of lack of title and this limits access to credit finance. Commercial farmers are unable to expand their farm sizes because accessing land is a tortuous process that may take years.
	Lack of training of Senior Executives of banks and financial Institutions in the basics of agriculture so that they can understand the biological cycles of farming and the related financial needs and develop financial products appropriate to such cycles.	Cassava Rice Aquaculture Sorghum Cowpea Poultry	Limited access to credit finance to producers, processors etc
Input supply	Inadequate supply of inputs	Rice Sorghum Cowpeas Aquaculture Poultry	<p>Rice: Demands for production inputs are far from being met. Fertilizer and improved seed are difficult to obtain. Discussions with the chairman of the Rice Farmers Association of Nigeria (RIFAN) emphasized the constraint faced by farmers particularly due to shortages of fertilizer and quality seed.</p> <p>Cowpeas: The adoption of improved cowpea technology by 5 farmers for every one participating in the seed multiplication program is evidence of the demand for improved seed. Participating farmers received seed from IITA in kind and this was repaid in kind after harvesting. These farmers sold some of their seed to nearby farmers who wanted to adopt the improved cropping system.</p>

Step in Value Chain	Constraint	Commodities Affected	How manifested
			There seems to be no shortage of new rice varieties but as usual, foundation seed is scarce or non-existent both at WARDA and NARS. The new lowland NERICA's are of particular interest and were tested by MARKETS in 2008 and 2009.
	Inadequate quality inputs	Rice Cassava Aquaculture Poultry	Rice: Farmers using poor quality seed (farmers' own seed) and low yielding varieties Cassava: Farmers using stems of low quality cassava. Aquaculture and poultry: Farmers using low quality feeds; inadequate inspection of feed quality. Rice and cassava: Inadequate specificity of fertilizers for different crops and growing conditions (formulation should be based on soil analysis). Lack of appropriate blends of fertilizers specific to cassava needs. (For example, cassava requires 10:20:27 fertilizer formulation due to its high potassium requirement.) Agrochemicals: tendency of suppliers to supply low quality (cheap) chemicals due to inadequate surveillance by the regulatory authorities.
	Raw materials for the making of inputs for agro-enterprises not easily available	Poultry	Inadequate availability of expertise for poultry feed milling with such raw materials as maize and soybean. Hence, capacity of feed mills is under-utilized and cannot produce adequate volumes of feeds.
	Farmers lack access to finance for purchase of improved seed	Rice Aquaculture Poultry	Rice: High cost of improved rice varieties. Aquaculture: High prices of fingerlings (juveniles) Poultry: High prices of day-old chicks and point-of-lay chickens and other inputs.
	High cost of feed	Aquaculture Poultry	Fish farmers do not use purchased feed or use sub-optimal amounts or low quality feeds
	Unstable power supply	Poultry	Power is a major challenge to the feed manufacturers.
	Producers not organized effectively for efficient input distribution and to deal with poor quality of inputs	Rice Cassava Sorghum Cowpeas Aquaculture Poultry	Producers pay high prices for inputs and often obtain supplies late (example seeds and fertilizers). They also suffer from low quality inputs in the market with little success in dealing with the menace.
Production	Due to high levels of functional illiteracy, farmers lack adequate knowledge and skills about the benefits of using improved seeds and	Rice Cassava Sorghum	Rice: Farmers use own seeds and do not adopt improved seeds e.g the Nerica varieties. Cassava: Farmers use own stems or old varieties instead of new improved varieties. Cassava yields can easily double from 9-10 t/ha to 20-25 t/ha if proper

Step in Value Chain	Constraint	Commodities Affected	How manifested
	other inputs.		agronomic practices are observed - weed control; pre- & post-harvest planting; fertilization; etc. Such an increase in yield will reduce per unit production cost. Sorghum: Farmers use traditional varieties instead of adopting the high yielding varieties.
	Small-scale farmers	Rice Cassava Sorghum Cowpeas Aquaculture Poultry	Low average yields (<1 t/ha) Small size and scattered farms High costs of production and transportation Inadequate flow of information Technology uptake low. In the north where much of the sorghum variety used for the Aba malting plant is produced, rainfall can be very erratic, and in some areas brief; producers therefore want varieties that are early maturing, drought and salinity resistant. Apart from these, the crop must have resistance to covered smut, loose smut, ergot, head smut and striga, and in late planting, resistance to stem borer. Where resistance is not available, producers must buy chemicals for seed treatment and crop spray. Finally, producers want guaranteed market and profitable prices – these will enable them to expand their production and also to adopt package of best practices for the production of their sorghum. Producers also need good quality and pure seeds that can meet the exacting and specific industrial standards.
	Inadequate access to credit	Rice Cassava Sorghum Cowpeas Aquaculture Poultry	There is very low patronage of government supported loan programs because farmers do not have adequate information on all existing government supported funding facilities. Even when such are known, access is limited by high interest rates by commercial banks (20-22%), microfinance banks (36%), requirement of collateral for loans exceeding 1million naira, short moratorium for repayment of principal (3-6 months), short gestation periods (12 – 18 months), no moratorium for interest payments, high cost of processing loan (requirement for 25% of amount of loan in fixed deposit, about 10% miscellaneous cost of processing including cost of many visits to bank), and long periods between loan application and delivery (4-6 months).
	Low adoption of dry season-dual purpose cowpea	Cowpeas	The major constraints to the adoption of dry season dual-purpose cowpea include insect attack both in the field (e.g. nematodes), and in storage, and insufficient water, land, and seed. The magnitude of these problems also varies with location.
	Inadequate dissemination of	Rice	Farmers lack access to adequate technology and technical know-how to prepare

Step in Value Chain	Constraint	Commodities Affected	How manifested
	information on the latest and most appropriate planting techniques, machinery requirement, fertilizer application, weed control and harvesting (Best practices).	Cassava Sorghum	large scale farms for efficient operation that can cost effectively increase the yields of high quality cassava. Low yields
	Geographically dispersed location of farms and processors served by inadequate rural access road networks.	Cassava Poultry	While the sun presents a free input, drying is time-consuming and there is a greater risk of spoilage. Solar drying removes some seasonality from the process, as it is difficult to dry cassava during the rainy season. Poultry farms are in scattered locations and not in clusters. Access roads to the various poultry farms are barely passable during the dry season and other complementary infrastructures like water and health facilities are also lacking in these farm locations.
	Access to appropriate farming equipments	Cassava	Opening up of land for cassava cultivation is a big challenge because it requires heavy machinery. Where such machinery has been made available, farmers are able to expand their acreage under the crop.
	Inadequate extension service provision	Rice Cassava Sorghum Cowpeas Aquaculture Poultry	There are too few extension agents and they are not reaching the farmers with extension service provision as effectively as should be. Also many of the feedback information given to extension agents is not acted upon in time by the government. A good example is the case of need for a vet clinic in the farm settlement area which has been on for about 5 years now. Efforts are just being made to put the facility in place.
	Unstable power supply	Poultry Rice	Poultry: Power is important for lighting chicken houses and for running cold storage for eggs and slaughtered chicken. Rice: Powered paddy processing is still limited in many producing areas in Nigeria. Due to credit constraints, usually no more than two threshing machines are available in rural producing communities, even in communities with electricity. Many farmers sell their paddy unprocessed, which results in poor quality and low farm gate prices. Where accessibility is an added problem (for example, in isolated markets), farmers must accept a further cut in the farm gate price from rural assemblers or wholesalers, or both. Most operations in the farm are carried out with a generator since electricity supply from the national grid is almost non-existent. This has resulted in

Step in Value Chain	Constraint	Commodities Affected	How manifested
			skyrocketing costs of production.
	Cost of labor	Rice Cassava Aquaculture Poultry	Rice: Labor is the largest component of on-farm costs, representing 83, 87 and 86 percent respectively of costs of lowland, upland and irrigated systems. Technologies that improve productivity of labor are key to increasing Nigerian rice competitiveness. Land preparation, weeding, harvesting, threshing and winnowing are the major requirements for labor. Mechanization for land preparation, zero tillage, herbicides and mechanization of threshing and winnowing offer opportunities for improved labor productivity.
	Inadequate skills in enterprise management	Poultry	Most of the poultry farmers have no formal training on poultry management. Though some of them are graduates and retired civil servants who are motivated by their interest in the enterprise, there is still the need for organized training on poultry management.
Storage	Unstable power supply	Poultry	Power is important for lighting chicken houses and for running cold storage for eggs and slaughtered chicken.
	Poor storage methods	Rice Cassava Sorghum	High post harvest losses from pests Rice storage at the farm level is still small in scale and based on traditional uneconomic methods. Rice storage functions are mainly performed by grain traders within the cereals marketing chain. As with maize, the lack of adequate funding leads to short-duration rice storage.
	Inadequate finance for storage services	Cowpeas	In the absence of major industrial use for cowpea, storage and marketing is the next most important area of financial service needs.
Assemblage	High transport costs because of bad roads	Cassava Rice Poultry	Part of the production does not reach markets in time. High post harvest losses. Traders offer low farm-gate prices
	Unreliable power supply	Vegetables Fruits	Lack of cold storage for commodities leads to high rates of waste.
Processing	Inadequate access to capital for investment and working capital due to the substantial collateral requirements and the high commercial rates charged on loans and the limited interest from banks	Cassava Rice Aquaculture Poultry	Potential investors unable to raise capital to invest in processing or expanding their operations.

Step in Value Chain	Constraint	Commodities Affected	How manifested
	to lend to agriculture.		
	Inadequate supply of raw materials to factories	Cassava Rice Sorghum	End users first and foremost want adequate supply of raw materials to meet the installed capacity of their plants. Urban Nigerian taste is for well packaged and long grained imported rice. Rice processors are looking for long grain varieties with good taste. In addition, they want high parboiling and milling qualities, resistant to mechanical breakages during processing. Under-utilization of factory capacity and hence high unit costs of production. Rice: Processors sometimes forced to invest in production (e.g. Olam); and contamination with sand, especially during threshing and sun drying after parboiling of rice is a major problem for small scale producers.
	Lack of processing technology	Cowpeas	The cow pea chain does not have a notable value-added processing niche. Cowpea continues to be largely a food security crop rather than an industrial crop, with limited opportunities for value addition and processing.
	Heavy capital investment requirements for industrial processors	Rice Sorghum	Very few large-scale processors in the industry
	Inadequate markets for processed products	Cassava	Processors unable to sell processed products and unable to service debts. For example, most cassava processors have closed down - they could not repay loans borrowed from banks because of lack of markets. First Fund (Venture Capital) had an equity of Naira 75 million in a cassava processing factory that closed down because of lack of markets and therefore the closure has also affected financial institutions that had loaned funds to the factories.
	Location of processing factories far from major cassava growing areas which are not served by good roads.	Cassava	The 5-6 large-scale factories that produce starch and glucose face the challenge of getting adequate raw material supply to meet factory demand.
	Unstable power supply	Cassava Rice Sorghum Poultry	Unreliable power forces poultry feed manufacturers to use manual mixing of feed ingredients, which results in sub-optimal feed quality with consequences to the poultry farmers. Power is also a major challenge to large manufacturers. SMEs generate their own power and costs are not as high as for the large firms.

Step in Value Chain	Constraint	Commodities Affected	How manifested
			Some of the visible effects of this on production efficiency and productivity are: the supplementation of machine mixing of poultry feeds with hand mixing. Second is the viability of the farm to establish a processing plant which would have made a broiler enterprise more viable and profitable and increased the investment in chicken production enterprise. Currently, broiler production is on a very small and irregular scale.
	Processors identified the lack of a client base as the key constraint to increased industrial production.	Cowpeas	Processors identified the lack of a client base as the key constraint to increased industrial production. The major barrier to assisting informal processors is that they are spatially dispersed and do not have a professional association. Almost all the informal processors are women, and many of them practice seclusion.
	Limited number of large-scale processors	Cassava Rice Sorghum	Cassava: Large scale cassava processing in Nigeria is still limited and most farmers still dispose of tubers at very low prices. The bulkiness of cassava tubers increases transport cost to processors. Yet, there is no option for increasing the shelf life of cassava products other than processing. Rice: There is only one large-scale rice processing mill and it still suffers from inadequate supply of raw materials. With poor roads and being distant from supply points, the cost of transport erodes the margins for both farmers and processors. Sorghum: Unlike rice and cassava which are bulkier, sorghum when dry is easier to transport.
	Lack of standardized quality systems	Rice	The processing sector is dominated by small scale traders and service pay per use millers without standardized quality systems or the capacity to develop branded packaged rice products. It is estimated there are about 5,000- 7,000 millers in clusters around the country. In total, around 60% of millers belong to an association. They lack access to finance to scale up their activities and invest in processing. Kano and Kaduna lack large scale processors that can use their supply chain to increase productivity and competitiveness. Both states have tried to attract large scale processors.
	Inefficient processing technology	Rice	Considering the different processing operations, parboiling remains the most expensive operation representing more than two thirds of total processing cost in Nigeria. Parboiling is inefficient because of the technology commonly used in which the rice is boiled in 200 litre drums using firewood as fuel. The cost is

Step in Value Chain	Constraint	Commodities Affected	How manifested
			<p>much reduced when more energy efficient methods are used. Most of the parboiling of rice is done through traditional methods (the drum and firewood approach which is considered unfriendly to the environment.) Finance requirements for parboilers are primarily to upgrade the boiler technology as well as meet the recurrent cost of energy and labor. An indicative cost of a manufactured parboiler is N60,000 (\$445); the parboiling process is energy intensive and most parboilers are fairly primitive. Opportunities exist for consolidating the process to increase operational efficiency and the quality of output through larger scale parboilers that are more energy efficient. The estimated cost of this will depend on the technology and source of energy, which is the critical component of the cost.</p>
	Inadequate de-stoning	Rice	<p>De-stoning removes stones, other foreign matter and split grains. De-stoning is performed on rice after milling as a separate operation. Unfortunately, not all the rice is de-stoned and this leads to consumer preference for imported rice. Owners of rice will decide on de-stoning the product depending on the intended market. Owners of milled rice usually decide on de-stoning the product depending on the intended market. A de-stoner with 700 Kg/hr capacity would cost about N 250,000 (\$1,850) and would be a worthwhile investment for many millers if all rice were de-stoned. Lack of quality standards and enforcement discourages more widespread de-stoning. The team interviewed the owner, a de-stoner who used to market rice in bags imprinted with the de-stoning certification as a marketing tool. Since bags are re-used, traders who marketed inferior product in the recycled bags tarnished reputation for the de-stoned rice. A simple certificate of de-stoning on the bag upon closure has replaced the certification printed on the bag.</p>
	Milling quality	Rice	<p>Milling is cost competitive but the technology employed, with high percentages of stones and other foreign matter that results in Nigerian rice earning a quality discount compared to imported rice. The quality of milling is undermined by the fact that Nigerian paddy often includes several varieties.</p>
	Environmental concerns arising from application of technology	Rice	<p>Outside one rice milling complex lie rice husk, chaff, cracked grains, and other foreign material dumps that constitute an environmental problem. Through technology and capital injection, there is high potential for use as feed and fuel. For example, a prototype machine for producing fuel bricks from the by-product</p>

Step in Value Chain	Constraint	Commodities Affected	How manifested
			from South Korea cost about \$22,000. The bricks could serve as a source of fuel for parboiling and other heating applications, perhaps for cassava drying.
Marketing	Inadequate Branding, Marketing and Information flow	Cassava Rice Sorghum Sesame Cowpeas Aquaculture Poultry	Most food products sold without branding and hence cannot fetch high prices as opposed to branded products.
Distribution	Consumer preferences for maize/wheat flour compared to cassava flour for baking.	Cassava	One of the major challenges for cassava producers and processors is access to markets and creating interest in new market opportunities. These include, for example: high quality cassava flour (HQCF); improved and more convenient versions of traditional processed products; starch, sugar syrups; use in livestock feed rations; use for bio-ethanol production; and energy drinks.
	Urban consumer preference for the higher-quality imported rice (well cleaned, polished and color-sorted) over domestic rice, which contains a high volume of stones	Rice	Low demand for poorly processed domestic rice.
	Sharp practices in trading in cowpeas are common.		Engagement in sharp practices by cowpea marketers is an exploitation of cowpea consumers who are forced to spend more of their income on cowpea purchase. This has the possibility of making the poor consumer poorer because he spends more of his disposable income on food consumption.
	Need for large amount of capital for trading.		
	Inadequate development of branding	Cassava Rice Sorghum Cowpea Aquaculture Poultry products	Much of the rice produced in Nigeria is sold unbranded. Recently, large millers and marketing companies have started to produce Nigerian rice in branded, packaged form enabling them to compete more effectively against imported rice, achieving a premium of around 5%.
	Weak linkages between producers, processors and consumers	Cassava Rice	Market capture by well organized cartels of market women (aquaculture); Lack of markets and/or low prices when products are ready for sale;

Step in Value Chain	Constraint	Commodities Affected	How manifested
		Sorghum Cowpea Aquaculture Poultry products	Low quality products; Inadequate volumes of commodities in the market; Adulteration of produce
	Lack of communication and coordination of the market through accurate market intelligence that is disseminated in a timely manner.	Cassava Rice Sorghum Cowpea Aquaculture Poultry products	Market capture by well organized cartels such as market women who take advantage of the asymmetrical market information to cheat farmers and who also use intimidation, threats or real violence to fight off attempts by farmers to market their own products.
			Producers as individuals are price takers and hold little market power. There are substantial profits in the marketing of the product. Marketing of sorghum to industrial processors depends on aggregating product through commodity merchants and assemblers. Should producers organize and participate in the marketing of sorghum, substantially higher income could be realized. The marketing margin for sorghum in the RUSEP Assessment for Katsina State was 18 percent of the farm-gate price.
	Lack of Regulatory Framework for the Industry.	Catfish	<p>There is a growing concern on the possibility of a glut in farmed catfishes in Nigeria's domestic market despite increasing demand for fish and fishery products. This can be attributed to lack of regulation in the developing industry. Many small-scale farmers are actively engaged in virtually all facets of catfish farming ranging from seed or fingerling production, table size or growers production to feed -milling.</p> <p>The glut could also arise if there is a decline in taste or appeal for farmed catfishes especially in the absence of alternative farmed fish, processed or novel catfish products, inadequate supplies and persistent high selling prices for popular fish species such as <i>Chrysichthys nigrodigitatus</i>, <i>Gymnarchus niloticus</i>, <i>Heterotis niloticus</i> etc., with high potentials for culture.</p>

Annex 8: Detailed Structure of Social Venture Capital Company

Structure Details:

The Technology Support Group (TSG) would be made up of one Manager (Technical) at headquarters and two Technical Specialists for each of the regional centers. Its functions include:

- ◆ Searching for, identifying, assessing and appraising technologies; technology testing and commercial demonstration; sourcing energy efficient, or alternative energy technologies that rely less on fossil fuel energies and are more environmentally suitable.
- ◆ Identifying investment opportunities (technologies): this will occur in both a proactive and a reactive manner. The Group will react to specific requests for assistance from the various existing enterprises as well as actively seek out investment opportunities. TSG will be responsible for appraising the investment potential of technologies; will facilitate needed testing and if necessary arrange for field demonstration of such technologies in pilot projects;
- ◆ Assisting the other Groups in the preparation of state-wide resource surveys for each of the two states in which the Company operates. These surveys will identify significant economic activities, the agricultural and industrial base, distribution of employment, natural resources, physical infrastructure, market systems and institutional infrastructure (government and private) as part of the information base for identifying investment opportunities for enterprise investments;
- ◆ Identifying and arranging for necessary technical training required by joint venture partners; and
- ◆ Responsibility for networking with the science and technology R&D community in Nigeria, particularly the Agriculture Research Council (ARCN) in order to facilitate linkages between the SVCC, its venture partners and the vast array of technology related institutions throughout the country.

Business Support Group (BSG) consists of one Manager (Business) at headquarters and two Business Specialists stationed at each of the two state centers. BSG staff will be available for long term assignments to work on joint venture management. Its functions include:

- ◆ Preparation of financial feasibility studies on potential investments; preparation of business plans for approved investments, that include cash flow projections, markets assessments;
- ◆ Providing ongoing assistance to joint ventures in enterprise management, establishing accounting systems, record keeping, and inventory control; and identifying and arranging for training for joint venture partners; monitoring and evaluation of enterprise performance; and liaison with the local business community and banks.

Extension Services Group (ESG) consists of five extension workers stationed at each of the state centers, under the supervision of the Center Manager. These men and women will be residents of the region in which they will work and will have proven field work experience and ability to communicate with local men and women involved in the selected agricultural sectors. They will

work closely with the Business Facilitators at the Ag. Business Services Centers in communicating the services the SVCC can provide and obtaining feedback from the local level. The functions of this Group include:

- ◆ Identifying and motivating potential business clients and introducing them to the Company;
- ◆ Explaining the objectives of the program's activities and the role of the SVCC as well as its operating procedures to the entrepreneurs; and
- ◆ Monitoring on a regular basis of cash flows, gathering information on social impact analysis for joint ventures and trouble shooting for existing or potential problems.

Joint Venture Investment Identification and Approval Processes Investment Opportunity Identification Process:

Step 1: Regional Resource Survey to identify significant economic activities, the agricultural and industrial base, and distribution of employment, natural resource endowment, physical infrastructure, market systems, and institutional infrastructure (public and private). From this information base, certain promising sectors will be identified.

Step 2: Detailed analysis of the sectors identified in Step 1. Examination of these sectors from the perspective of their marketability, competitive advantage, replicability, employment/income generation, benefits, and potential for adopting appropriate technologies and improved practices.

Step 3: Selection of one, or at most two, sectors (initially) for investment appraised on the criteria detailed below.

Project Appraisal Criteria:

While all investments will be made only to joint ventures that have been determined to be commercially viable (profitable and sustainable), other criteria will also guide investment decisions.

1. The Company will invest its funds based on the following guidelines:
 - a. The level of investment in joint ventures by the Company and the absolute size of these joint ventures (as determined by total assets) should be commensurate with the potential impact anticipated on the improvement of the economic status of the rural poor in the target areas. One measure of impact is the extent of participation of rural small-shareholders in the investment. At least 50% percent of total equity investment might well be placed with the economically weaker sections.
 - b. Each investment should have the potential for widespread replication within the country.
 - c. The Company will only invest in ventures with legal entities.
 - d. The investment portfolio will strive for a balance between high risk, innovative joint ventures and those less risky businesses that attempt to commercialize proven technologies in the program area. Thus, not all investments will feature new technologies.
 - e. Projects should demonstrate use of locally available skills, particularly through self-employment.

- f. The Company will strive to provide opportunities, particularly for women.
 - g. The Company will strive to make use of local resources.
 - h. Conventional loan financing to joint ventures must be organized in such a way as not to pose a threat to the VCC's operational viability, i.e. VCC should avoid responsibility for such loans.
2. The following types of activities are suitable for joint venture investments: (indicative list only)
- a. agricultural products processing and agricultural waste utilization and marketing
 - b. horticulture products processing and marketing
 - c. farm and rural based engineering
 - d. forest based products
 - e. animal husbandry and related activities
 - f. fisheries, aquaculture, and related activities
3. The Company will co-venture with:
- a. private companies
 - b. public companies
 - c. associations in the program area
 - d. corporations and other statutory boards, e.g. trusts, societies.
 - e. banks and other financial institutions
 - f. individuals
- Private companies shall be required to invest a minimum of 25 percent of the total equity. Public companies and non-profit organizations shall be required to invest a minimum of 15 percent of the total equity. Producer associations and individuals from economically weaker sections shall be required to invest no less than 10 percent of the total equity or show cause why this requirement is inappropriate on a case by case basis. Equity capital contributions from economically weaker groups can be made in both cash and/or kind, such as labor, land, buildings, etc.
4. Each venture in which the Company invests must:
- a. sign a shareholders' agreement prior to investment of funds;
 - b. agree to and have the capacity to maintain complete and accurate books and records in accordance with generally accepted accounting principles and to retain all supporting documentation thereof; and
 - c. arrange to have its books of accounts audited annually by an independent chartered public accountant, and to submit a copy of any reports of such audits, including the management letter, if any to the Company.
5. When ventures are sold or interests therein put on the market, the selling price of such ownership interests shall be the fair market value, as determined by a firm of independent chartered public accountants.
6. Formal investment review and approval procedures to be completed before an investment is finalized are:

- a. Concept Stage: a concept paper of not more than two pages that describes the technology, its consistency with investment criteria, its environmental suitability, replication potential, benefits and an estimate of the time needed to develop the concept for investment. The Concept Paper is reviewed internally.
- b. Feasibility Stage: The approved concept is developed into a business plan and is analyzed for its technical feasibility; its commercial feasibility; its marketability; its economic benefits; and the capability of the proposed venture partner.
- c. Investment Stage: The Company determines whether it will make an investment based on the results of a feasibility study and business plan.

7. Investment opportunities will be reviewed monthly by the Investment Advisory Committee.

8. A legal shareholders agreement must be in effect. This agreement must address, at a minimum, the issues regarding management control, buyout and dissolution provisions that protect the value of each equity holder's interest in the venture and a viable exit strategy for the Company.