RURAL INFRASTRUCTURE AND
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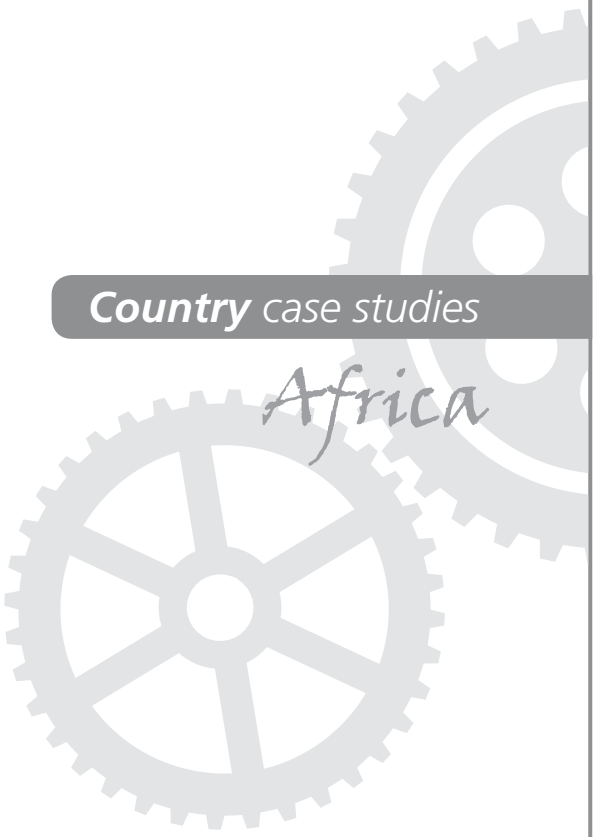
AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Ghana



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Africa

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AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Ghana

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Contents

TABLES

FIGURE

Preface

It is recognized that high levels of investments are required to unleash the potential of agriculture for sustainable development and poverty reduction in developing countries. However, in recent decades, many countries have decreased their relative budget allocations to the agricultural sector, yet at the same time, the expected increase of private sector investments and the associated efficiency improvements have not been forthcoming. The high risk (actual and perceived) of doing business in agriculture often deters private sector participation in agrifood sector investments. Against this backdrop, public private partnerships (PPPs) are being promoted as an important institutional mechanism for gaining access to additional financial resources, sharing risks, and addressing other constraints in pursuit of sustainable and inclusive agricultural development.

While various forms of collaboration between the public and private sector have existed for some time, there is limited systematic information available about the current experiences and best practice for using PPPs to initiate agricultural programmes. In addition, despite a surge of interest in PPPs in the agricultural sector in recent years, there remains significant variation in the type of partnerships involved; and poor documentation of the real potential for PPPs to deliver on commonly stated objectives associated with rural employment and income generation, food security and increased agricultural competitiveness.

In 2010, FAO initiated a series of appraisals of PPPs implemented in 15 countries in Africa, Asia and Latin America. The primary objective was to draw lessons that can be used to provide guidance to member countries on how to partner effectively with the private sector to mobilize support for agribusiness development. On this basis, a specific sub-set of PPPs were selected which conformed to two key criteria: each PPP must involve an agribusiness enterprise; and a formalised relationship between specific public and private partners must be in place. There should also be an expectation of positive societal impacts as a result of the partnership.

Seventy individual case studies have been profiled and details provided on the circumstances that led to their formation, management and performance to date. The partnerships analysed cover different topics and intervention areas and involve different types of arrangements and actors. Particular attention was given to the identification of specific roles and functions for each of the partners, including roles in governance, implementation and monitoring. Key results of the study include identification of the factors that influence success or failure in the development and implementation of PPPs, and best practices for creating an enabling environment for increased investment in agriculture through the PPP mechanism.

FAO is publishing this series of case studies of agribusiness PPPs as a contribution to enriching knowledge and sharing information on this type of mechanism for informed decision making on investment promotion for engendering agrifood sector development.

Executive summary

The Government of Ghana, through its Food and Agriculture Sector Development Policy (FASDEP II), has highlighted the importance of inter-sectoral collaboration for developing the agricultural sector. The Government has also partnered with the private sector and civil society in implementing and reviewing policies and programmes to develop the agricultural sector. Public-private partnerships (PPPs) have been targeted for extension services, research and innovation development, and for agricultural mechanization. The Medium Term Agriculture Sector Investment Plan (METASIP) 2011 – 2015 specifically targets a cost recovery of about 25.5 percent of the estimated domestic funds through Public-Private Partnerships (MOFA, 2011). The present study is an appraisal of five agribusiness PPPs that have been implemented in the country, namely:

The Rubber Project- a partnership between the Agricultural Development Bank of Ghana and AFD of France. The purpose of the project is to rehabilitate the distressed rubber estates, which used to be a traditional source of export commodity for the country. The objectives of the agribusiness investment are to, among others, cultivate 50 000 hectares of rubber by 2020 and rehabilitate the road infrastructure in the respective districts.

The Sorghum Value Chain Development Project- a European Cooperative for Rural Development (EUCORD) sponsored project. Guinness Ghana Breweries Ltd (GGBL) is the Private Sector Partner with TechnoServe (TNS) as the implementing partner. The Venture Capital Trust Fund is the public institution with investment interest. It provides funding for Sinapi Aba Trust to extend credit to the farmers. The public research institution, Savanna Agricultural Research Institute (SARI), participates in the project through supplying sorghum varieties. The project is being implemented in the northern parts of Ghana. The overall goal is to develop a stable and high-quality sorghum supply chain that will increase incomes of farmers and enable GGBL to substitute imported grains with locally produced sorghum.

The Allanblackia Project- the project created a partnership between Unilever, the Novel Development Ghana Limited (NDGL), the International Tree Seed Centre, the Forestry Research Institute of Ghana (a public research institute), and some other organizations. The project is an initiative to turn the seed of the Allanblackia tree into a second "cocoa" for Ghana. The edible oil extracted from the seed has a high potential for use in the food processing industry and Unilever is leading the partnership to develop the supply chain.

The Cadbury Cocoa Partnership (CCP) - a partnership involving Cadbury (now Kraft Foods), Ghana Cocoa Board (a public institution), implementing partners (international NGOs), and cocoa-growing communities. The purpose of the partnership is generally to provide extension services in selected communities to enhance productivity and incomes and thereby improve the socio-economic conditions of the farmers. The project is being carried out in seven cocoa-growing districts of Ghana.

Buabin Oil Palm Outgrower Project (BOPOP) - a PPP arrangement between the Government of Ghana (Ministry of Food and Agriculture), the Agence Francaise de Developpement (AFD - a French development agency), and Kreditanstalt fur Wiederaufbau (KfW - a German development bank). The goal of the project is to improve the palm oil industry in the relevant ecological zones. It is one of the projects being implemented under the Programme for the Promotion of Perennial Crops in Ghana.

Despite the fact that PPPs are being referenced in policy and strategy documents as a vehicle for driving economic activities in Ghana, there are not many concrete PPP initiatives in the country. Most of the initiatives encountered were development projects. Development projects differ from the strict definition of PPPs of co-equity investments and risk-taking from parties across the public-private divide that was adopted for the study. Nevertheless, the selected cases exhibited a fundamental level of commitment on the part of public institutions (or government) and private sector actors.

The PPPs ranged in age. For example, the Ghana Rubber (Outgrower) Project started in 1995, and the Cadbury Cocoa Partnership started in 2008. These cases were selected using the criteria agreed on for the African study. The obvious criterion which the study team adhered to was that the cases should

involve partnerships between public entities and private agribusiness enterprises. The other criteria included that the partnership must have been in operation for at least two years and that it should involve investments in excess of US$100,000.

The Ghana Rubber (Outgrower) Project has been on-going for the past 15 years whereas the West African Sorghum project, Allanblackia Project, and the Cadbury Cocoa Partnership commenced in 2006, early 2000s and 2008 respectively. The Ghana Rubber (Out-grower) Project implemented in three of the ten administrative regions of Ghana – the Western, Central and Ashanti regions. The West African Sorghum project is being implemented in Northern parts of Ghana and Sierra Leone. The Allanblackia project is being carried out in the Ashanti Region of Ghana, Tanzania, and Nigeria with the endowment for producing the Allanblackia seeds. The Cadbury Cocoa Partnership was launched in 2008 as Cadbury joined the Business Call to Action to secure the economic, social and environmental sustainability of cocoa farmers and their communities in Ghana, India, Indonesia and the Caribbean.

Agribusiness is a core component of the agricultural improvement strategies in Ghana. The Ministry of Food and Agriculture (MOFA) is the government institution responsible for formulation, planning, monitoring and evaluating policies to ensure the development and promotion of the agricultural sector. Some of the on-going programmes that the Ministry is currently implementing illustrate the importance of agribusiness. The PPP initiatives come in various formats and cut across the value chains in the agricultural sub-sectors. The cases covered in the study are examples of some of the agribusiness ventures executed in Ghana within the last ten years, which resemble to PPP initiatives.

OVERALL EFFECTIVENESS OF THE PPP ARRANGEMENTS AND CHALLENGES

In assessing the overall effectiveness of the PPP arrangements, the study noted the general purpose for which the PPP arrangements were initiated. They were initiated to improve the respective agribusiness domain of the PPPs. In the case of rubber, it was to rehabilitate the rubber plantations. For palm oil, it was to increase production in the project areas. CCP also aimed at enhancing cocoa production. Both the sorghum and the Allanblackia projects focused on developing new supply chains for the industry. The Allanblackia project was more challenging since the Allanblackia seed was previously uncultivated. At present, the arrangements have been effective in achieving the stated objectives. There are adequate financial resources to enable the specified activities to be carried out. The institutional frameworks for implementing the partnerships are appropriate and the partners and other actors are playing their assigned roles.

Nevertheless, the study highlighted challenges and problems which need to be addressed to enhance effectiveness. For example, in the rubber project there have been problems of land litigation and difficulties in getting farmers to adhere to technical advice and bureaucratic practices in the public institutions. Some of these issues surface in some of the other partnerships. MOFA plays an oversight role in the palm oil project. The project implementation has to contend with the bureaucracy that characterizes the civil service. But the fact that the Ghana Cocoa Board efficiently handles the CCP from the public sector means that bureaucracy needs not be an issue in the public sector. The solution is in the specific mechanisms put in place for the project in the respective public institution and the motivation of the responsible officers.

It is difficult to get farmers to heed technical advice. This is a challenge that one may expect in a country of relatively high illiteracy; Ghana has about 36 percent illiteracy rate. But it is not only the issue of illiteracy and farmers' low educational levels. It also has to do with farmers' limited resources and poverty. Even when agricultural inputs of fertilizers and chemicals are supplied, farmers sometimes fall to the temptation of diverting such inputs into other farming ventures or selling to other farmers. In some cases, money from such sales meets emergency situations at home. The problem of adhering to technical guidance and using supplied agricultural inputs can be addressed by strengthening the monitoring functions on the farms.

Ultimately, farmers will appreciate the value of strict adherence to technical direction. This is happening in the cocoa industry. More cocoa farmers are listening to technical advice and effectively using agricultural inputs of fertilizers and pesticides in their farming. Currently, the 2011 cocoa production is expected to reach a record total tonnage of more than 800 000 metric tons. This is an indication that the national goal of producing one million metric tons of cocoa per year can be achieved. This clearly justifies the emphasis on extension services in the CCP.

The development outcomes also provide substantial evidence of the progress being made in implementing the partnerships. Farmers' employment and production has increased significantly. In the case of rubber, over 6 000 farmers are said to have gained employment through the out-grower scheme. About 80 percent of the income from the tree farming is estimated to remain in the project areas.

The employment of women has also been enhanced with an estimated 30 percent of the farmers being women. Given the cultural norms which virtually dissuade women participation in cash crop farming, the percentage is very encouraging. Rubber exports are also increasing and new plantations are being developed. Out-grower schemes have been strengthened in the palm oil and rubber projects, as outlined in the national agricultural policy. The partnership arrangements are therefore also important in achieving national policy objectives.

CONCLUSIONS AND RECOMMENDATIONS

It is quite clear from the Ghana study that agribusiness PPPs will need to establish a specific focus and national development strategies. The five analyzed cases give a good indication that there is potential for successful agribusiness PPPs. For example the Allanblackia venture shows that investors can take justifiable risks and there is an enabling environment to support such ventures. The cocoa partnership also shows that public institutions are very open to business collaborations that offer win-win situations. The rehabilitation of the rubber industry and the revamping of the palm oil industry in the Buabin and its surrounding areas are good indications that PPPs can be successfully carried out for the agricultural commodities for which Ghana has a comparative advantage.

Nevertheless, there are certain crucial factors which need attention. The general contextual constraints in developing businesses hamper PPPs as they do non-PPP businesses. For example, the sorghum farmers in the northern parts of the country have limited support (such as tractor services and agricultural input supplies) There are difficulties reducing production costs on the part of farmers. Infrastructural limitations (e.g. poor feeder roads) also contribute difficulties in carrying out business. The public sector interest and support for the cocoa project, the rubber and oil palm projects, show that institutional partnerships can be forged. However, in order for the project to be successful, it is crucial that the public officers in these institutions are motivated and the bureaucracy is minimized.

Specific recommendations are made for the five cases studies. However, the following general recommendations are highlighted:

There has to be a national strategy for promoting agribusiness PPPs. The sectoral policies mention PPPs as mechanisms for attaining agricultural goals and objectives. However, PPPs have their own features and requirements. In this regard, there is a need to formulate a national strategy. MOFA may take the lead in this in collaborating with key stakeholders such as the private sector investors and development partners.

Land is a critical factor in initiating and implementing agribusiness PPPs. Given the problems of land litigation which has constrained the smooth implementation of some the PPPs, Ghana needs to develop land banks which can be used to promote agribusiness PPPs.

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Acronyms

ACDEP	Association of Church Development Projects in Northern Ghana
ADB	Agricultural Development Bank
AFD	Agence Française de Développement
AfDB	African Development Bank
BOPOP	Buabin Oil Palm Outgrower Project
CAADP	Comprehensive African Agricultural Development Programme
CAP	Church Agricultural Projects
CCF	Community Challenge Fund
CCP	Cadbury Cocoa Partnership
CFC	COMMOD Fund for Commodities
COCOBOD	Ghana Cocoa Board
CRIG	Cocoa Research Institute of Ghana
CSIR	Council for Scientific and Industrial Research
DED	German Development Service
ECA	Economic Commission of Africa
EDIF	Export Development and Investment Fund
EMQAP	Export Marketing and Quality Awareness Project
EU	European Union
EUCORD	European Cooperative for Rural Development
FAMAR	Farmers' Agricultural Production and Market Project
FASCOM	Farmers Services Companies
FASDEP	Food and Agriculture Sector Development Policy
FBO	Farmer Based Organisation
FFB	Fresh Fruit Bunch
FORIG	Forestry Research Institute of Ghana
GCBL	Ghana Cocoa Board
GDHS	Ghana Demography and Health Survey
GDP	Gross Domestic Product
GGBL	Guinness Ghana Breweries Ltd
Gh	Ghana
GoG	Government of Ghana
GPRS I	Ghana Poverty Reduction Strategy
GPRS II	Growth and Poverty Reduction Strategy
GREL	Ghana Rubber Estates Limited
GSGDA	Ghana Shared Growth and Development Agenda
GSS	Ghana Statistical Service
GTZ	German Technical Cooperation
ICA	Institute of Cultural Affairs
ICCO	Interchurch Organization fro Development Cooperation
ICI	International Cocoa Initiative

ICRAF	World Agroforestry Centre
ICT	Information and Telecommunication Technology
INADES	Pan African NGO
ITSC	International Tree Seed Centre
IUCN	World Conservation Union
KfW	Kreditanstalt für Wiederaufbau (a German government-owned Development Bank)
MCA	Millennium Challenge Account
MCC	Millennium Challenge Accounts
MDAs	Ministries, Departments and Agencies
MESW	Minister of Employment and social Welfare
METASIP	Medium Term Agriculture Sector Investment Plan
MDGs	Millennium Development Goals
MiDA	Millennium Development Authority
MOAP	The Market-Oriented Agriculture Programme
MoFA	Ministry of Food and Agriculture
MoFEP	Ministry of Finance and Economic Planning
MoH	Ministry of Health
MOTI	Ministry of Trade and Industry
MoU	Memorandum of Understanding
NDC	National Democratic Congress
NDGL	Novel Development Ghana Limited
NDPC	National Development Planning Commission
NGO	Non Governmental Organization
NIB	National Investment Bank
NPECLC	National Programme for the Elimination of Child Labour in the Cocoa sector
NTFP	Non Timber Forest Products
NTP	National Trade Policy
NYEP	National Youth Employment Programme
OPRI	Oil Palm Research Institute
PLA	Participatory Learning Action
PPP	Public Private Partnership
PSO	Personal Service Overseas
R&D	Research and Development
RELC	Research - estension - Farmer Linkages
ROAA	Rubber Outgrowers and Agents Association
ROU	Rubber Outgrowers Unit & Science and Technology
SARI	Savannah Agriculture Research Institute
SECO	Swiss State Secretariat for Economic Affairs
SFMC	Savannah Farmers Marketing Company Ltd.
SNV	Netherlands Development Organization
TNS	TechnoServe
TOPP	Twifo Oil Palm Plantation
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VSO	Voluntary Services Oversees
WAFF	West Africa Fair Fruits
WASVCDP	West African Sorghum Value Chain Development Project
WHO	World Health Organization

Chapter 1
Introduction

1.1 BACKGROUND AND PROBLEM STATEMENT

The agricultural sector is at the heart of Ghana's socio-economic development, as it is for other African countries. Until the year 2010, when the service sector became the highest contributor to Ghana's gross domestic product (GDP), the agriculture sector accounted for the largest share of GDP. It still employs about 65 percent of the population – the highest for any sector. In the past decade (up to 2009), the sector has grown at a modest average growth rate of 5.4 percent (NDPC, 2010).

However, to achieve the national aspiration of achieving and going beyond middle-income status by the year 2020, a growth rate of about 7 percent is required.[1] Given the dominance of agriculture in the economy, it is most likely that significant gains will be realized from increased growth in agriculture and its related industries - collectively known as the agribusiness sector. The agribusiness sector not only bridges the gap between agricultural production and industry and thereby contributes to wealth creation and poverty reduction; it also fits in well with efforts to diversify the country's exports. Agribusiness public-private partnerships (PPPs) are increasingly regarded as an important institutional mechanism for scaling up agribusiness development and mitigating the risks inherent in the sector. To this end, this study is an appraisal of agribusiness PPPs in Ghana as a way of gaining an in-depth understanding of factors influencing the need, set-up, and relevance of such partnerships for the development of the agribusiness sector.

While analytical work to characterize and appraise PPPs is not new, most of the past research has focused on making a general case for the role of PPPs in development. The present study takes a sector-wide approach on the topic as a way of generating knowledge on how to operationalize strategic plans by the many Ministries of Agriculture that call for closer working relationships with the private sector. These Ministries accelerate efforts to develop agribusiness PPPs in Sub Saharan Africa. The Government of Ghana recognizes and acknowledges the role of the private sector in increasing competitiveness, value- addition and generating employment in the agribusiness sector. This national study is especially timely. It follows the Declaration of the High Level Conference on African Agribusiness and Agro-Industries in March 2010 in Abuja that called for concerted efforts to accelerate agribusiness development.

1.2 OBJECTIVE OF THE STUDY

The Ghana study is one of six national studies commissioned by the Food and Agriculture Organization of the United Nations (FAO) to develop case studies in agribusiness PPPs in Africa. Whereas the national studies will provide comparative analysis of the identified PPPs, the cross-country appraisal will provide insights into the relevance and impact of the country context and the broader business environment on agribusiness PPPs. Lessons learned from the national studies will be used to develop practical guidelines for technical officers of Ministries of Agriculture and other relevant ministries dealing with the agribusiness sector.

Agribusiness is a priority area in Ghana's socio-economic development framework. In the agricultural sector policy, agribusiness is strategically elaborated. However, there is not much knowledge on the nature of agribusiness partnerships existing in Ghana, their effectiveness in achieving stated objectives and their contribution to the nation's socio-economic development. Thus, the country is yet to achieve a holistically developed agribusiness PPP strategy to aid the development of the agricultural sector and related industries. Consequently, the Ghana study will attempt to illustrate the extent to which in spite of a tailor-made agribusiness PPP strategy, there are PPP initiatives of important socio-economic dimensions.

The present study will inform the national PPP policy that is under preparation by the government and is aimed at addressing spe-

[1] Ghana's new vision is to attain a per capita income of US $3000 by the year 2020 (Government of Ghana, 2010a).

cific challenges of promoting agribusiness PPPs. It is also closely related to the broader theme of agricultural innovation identified by the Government of Ghana as a prime requisite for catalyzing economic growth. Findings from the study will also contribute to a comprehensive understanding of agribusiness PPPs in Africa. It will contribute to knowledge on how they can be used to enhance agricultural productivity and achieve national socio-economic goals.

1.3 METHODOLOGY

There are five cases covered in the Ghana study. The criteria used for selecting the case studies were agreed upon at the continental level, mainly to facilitate the cross country appraisal. A fundamental criterion was that the cases should involve partnerships between public entities and private agribusiness enterprises. The additional criteria were that:

a. The partnership must have been in operation for at least two years;
b. There should be a stated, reasonable expectation that the partnership will have positive societal impacts (such as income, employment, and value addition).
c. There should be a reasonable expectation that the partnership will increase agribusiness enterprise investments in the agricultural sector.
d. The partnership should increase rewards and/or reduce risk for the participating agribusiness enterprise.
e. The partnership should support attainment of public sector development strategies and/or potentially enhance public sector revenues.
f. If the partnership involves an equity or joint ownership arrangement, there should be some degree of shared decision authority.
g. The scale of investment mobilized through the partnership should preferably be more than US$100 000.

On the basis of the criteria and the information gathered during the preliminary investigations, the following PPP cases were selected for the Ghana study: The Rubber Project; The Sorghum Value Chain Development Project; The Allanblackia Project; The Cadbury Cocoa Partnership; and the Buabin Oil Palm Outgrower Project (BOPOP).

To gather information on the five selected cases, there was an extensive desk research in the relevant ministries, research institutes and university departments. Internet searches were also used extensively in the research. However, the core activity of researching for current information and field knowledge was done through key informant interviews in the relevant public and private institutions. A questionnaire was administered for some of the key informants while some interviews were conducted by telephone to reach informants in distant locations. Additionally, informal interviews were used to gather supplemental information by the study team members.

1.4 RATIONALE

In terms of selection of the five cases, an attempt was made to choose cases that would give varied insights into agribusiness PPPs. The sorghum value chain was chosen on the basis that it is an effort to have a local raw material input for the operations of large scale brewery. More than that, it is a venture meant to link resource-poor farmers in some of the most deprived regions of Ghana (in the north) to a modern commercial enterprise with promise of higher incomes. There are important lessons to be learned from the implementation of the project.

The Cadbury Cocoa Partnership also has some altruistic objectives but in many areas it different from the sorghum value chain project. Cocoa is a long-established traditional export crop and it is already a major raw material for local processing industries. The selection of this case is therefore to explore the feasibility for introducing innovations in the business of Ghana's old cocoa. The rubber project relates to national efforts to resuscitate a virtually dead industry. Ghana exported rubber until the 1970s.

A similar rationale justifies the selection of BOPOP. While the oil palm industry is not a dead industry, BOPOP was designed to improve the palm oil industry. The selection of the Allanblackia Project is simply to analyze the progress being made in a novel business venture. This is a major business innovation to develop a new cash crop, not only in Ghana but in the African region. One should not miss the opportunity to understand the early stages, and the prospects are for success.

1.5 STRUCTURE OF THE REPORT

The report is organised into seven chapters. Chapter 1 is the introduction, which presents the problem statement for the appraisal, the purpose and rationale for the case selection. Chapter 2 presents the national development context describing the socio-economic conditions and the overview

of the agricultural sector of Ghana. Chapter 3 discusses the characterization of the PPP arrangements including the purposes of the arrangements, the nature of benefits and their appropriation, the public sector incentives and those of the private sector, among other issues, which best clarify the characterization. Chapter 4 gives some details about the circumstances leading to the arrangements, the procedures and criteria used to assess market opportunities, among other details about the PPP arrangement. Chapter 5 covers management and operations. This covers several issues pertaining to the management function of the PPPs including the institutionalized implementation process, actual operations, technology inputs, and performance monitoring processes. Chapter 6 analyzes performance and development outcomes – such as the market performance, commercial viability, and sustainability. The last chapter does an appraisal of the entire study and provides a conclusion. The appraisal focuses on the extent to which goals were achieved, the lessons learned, and the way forward.

Chapter 2
The country background and overview

2.1 GHANA'S DEVELOPMENT CONTEXT

The current national vision is to attain a per capita income of US$3 000 by the year 2020. This is a significant increase from the current level of about US$1 318 per capita GDP as stated by the Ghana Statistical Service following the rebasing of the national accounts in November 2010. The goal of attaining middle-income status was a driving motivation for the country in the late 1990s when the first strategy paper was published for poverty reduction. Now with the attainment of the middle-income (at least in statistical terms), the aim is to achieve a qualitative enhancement to reflect better socio-economic conditions in the society (Essabra-Mensah and Mensah, 2011).

Agriculture remains the center of national development in Ghana. It contributes 36 percent of the country's GDP and employs about 65 percent of the population both directly and indirectly (NDPC, 2010). Food security and self sufficiency in food production constitute a fundamental development goal for the country. The country has an estimated population of over 24.22 million with 51.3 percent being female (GSS, 2011). It is projected that the population will grow by 10 million by 2025. Ghana also has a young age structure. Children under 15 years of age comprise about 40 percent of its population leading to a high dependency ratio (USAID, 2009). However, the high dependency ratio notwithstanding, Ghana has the potential to address food security challenges when the full agricultural potential is exploited.

While working to obtain middle-income status and achieve the Millennium Development Goals (MDGs), Ghana has demonstrated substantial progress. The overall poverty rate has declined substantially from 50 percent in 1992 to 28.5 percent in 2006 (NDPC, 2010). The current national medium-term development policy framework, the Ghana Shared Growth and Development Agenda (GSGDA) (2010–2013) continues the focus on poverty reduction and elaborates on strategies to enhance economic activities including agribusiness.

Agribusiness is a core component of the agricultural improvement strategies. The Ministry of Food and Agriculture (MoFA) is the government institution responsible for formulating, planning, monitoring and evaluating policies to ensure the development and promotion of the agricultural sector. Some of the on-going programmes that the ministry is currently implementing illustrate the importance of agribusiness.

The PPP initiatives come in various formats and cut across the value chains in the agricultural sub-sectors. The cases highlighted here are examples of some of the agribusiness ventures executed in Ghana over the last 10 years. These ventures resemble PPP initiatives.

2.2 SECTORAL OVERVIEW AND TRENDS

Agriculture is predominantly practiced on smallholder, family-operated farms using rudimentary technology to produce about 80 percent of Ghana's total agricultural output. It is estimated that about 2.74 million households operate a farm or keep livestock (MOFA, 2007). About 56 percent of economically active labour force is employed directly in the agricultural sector. About half (48.7 percent) of the total female population is self-employed in agriculture, with the majority engaged in food production and marketing (MOFA, 2007). Agricultural production is generally dependent on rainfall. Ghana produces 51 percent of its cereal needs, 60 percent of fish needs, 50 percent of meat, and less than 30 percent of its raw material needed for agro-based industries (MOFA, 2007). Agriculture significantly contributes to the Gross Domestic Product (GDP). Its contribution to GDP has varied between 35.8 percent and 37 percent since 2000.

The Ghana Shared Growth and Development Agenda – 2010 – 2013 (GSGDA), which has become the current national development framework, highlights the main focus of agribusiness development in the country (National Development Planning Commission, 2010). The framework seeks to boost agribusiness through increasing agricultural productivity and production. Therefore, the Government will collaborate with the private sector to build their capacity to produce appropriate and affordable agricultural machinery, tools, and other equipment locally. Other strategies include strengthening the

Research-Extension-Farmer Linkages (RELCs), promoting collaboration between public agencies, private companies, and consumers, and between local and foreign research institutions. The policy framework is also based on value-chain development. The objective is to enhance and translate Ghana's comparative advantage into a competitive advantage in the production process to supply or export the needed commodity volumes and quality on timely basis. To this end, partnership between the private sector and District Assemblies will be encouraged to develop trade in internal markets and help minimize risks.

Improved agricultural financing will also be based on value chain financing, which will be achieved through the central bank promoting the building up of the capacities of the various financial institutions to develop products to that effect, including specifications and regulations for export market. It will also include establishing an Agricultural Development Fund to enhance the liquidities of all financial institutions. This will strengthen their capacities to provide the short, medium and long-term financing needs of agriculture and incidental infrastructure.

Additionally, the policy seeks to promote enhanced partnerships and the harmonization of efforts. This will create the right synergy to achieve maximum results in the growth and development of the agricultural sector. In this regard, the framework will enhance collaboration with other Ministries Departments and Agencies (MDAs) to promote the development agenda for agriculture. To achieve these, the strategies identified include: (1) strengthening the intra-sectoral and inter-ministerial coordination through a platform for joint planning, (2) facilitating the development and implementation of a communication strategy to improve institutional coordination as well as create and strengthen the framework for coordinating activities among the range of diverse stakeholders in the sector.

Broadly, the GSGDA underscores the acceleration of modernization of agriculture for employment generation, increased food security, poverty reduction, export earnings, import substitution and strengthened linkages with agro-industrial development through providing agricultural raw materials for value addition.

2.3 SECTORAL POLICY AND LEGISLATION

The Food and Agriculture Sector Development Policy (FASDEP II) is the revised version of FASDEP I. FASDEP I was meant to provide a framework for modernizing the agricultural sector and making it a catalyst for rural transformation. The revised FASDEP II has the following objectives:

- Improve food security and emergency preparedness, and reduced income variability;
- Improve growth in incomes;
- Sustainable management of land and environment;
- Increase competitiveness and enhance integration into domestic and international markets;
- Apply science and technology in food and agriculture development;
- Foster effective institutional coordination.

FASDEP II seeks to target risk-prone, largely subsistence farmers with interventions to reduce their vulnerability and help them improve their productivity. At the other end of the scale, the policy aims at assisting the commercial sector to among foster linkages with smallholders. The strategies in FASDEP II encompass all the interventions for modernizing agriculture as specified in Ghana's development framework.

Thirteen principles have been formulated to determine the direction of FASDEP II as well as guide its implementation. Among the principles are pursuance of inter-sectoral collaboration and government partnering private sector and civil society in the implementation and review of policies and programmes. PPP has been identified to be limited in the agricultural sector. Specifically, FASDEP II will use PPPs to increase investments in the sector and to build capacity of operators to compete effectively in the global market.

MOFA prepared an investment plan, the *Medium Term Agriculture Sector Investment Plan (METASIP) 2011 – 2015* to implement the broad strategies specified in FASDEP II. It is intended to achieve an agricultural sector growth of at least 6 percent annually and government expenditure allocation of at least 10 percent of the national budget in conformity with the GSGDA, the ECOWAS Agricultural Policy and the Comprehensive African Agricultural Development Programme (CAADP) of NEPAD. In the METASIP funding proposal, a cost recovery of about US$88 million is envisaged to be realised through Public-Private Partnerships. This constitutes about 25.5 percent of the total domestic funds projected for the 5-year period (2011 to 2015) (MOFA, 2011; p. 62).

The PPP approach is also relevant for research and innovation development. Key constraints to the policy objective on application of science and technology in agriculture include low uptake of

research findings and inadequate funding and commitment to agricultural research. In fact, the vision of Ghana's extension policy is to have an efficient and demand-driven extension service through partnerships between the government and the private sector.

However, participation of clients (such as farmers) in extension programme planning and implementation continues to be low. There is also limited private sector participation in the design and implementation of public irrigation schemes. Therefore, the government aims at encouraging PPPs, especially in irrigation development, agricultural mechanisation and the implementation of agricultural projects. A PPP is required if Ghana is to meet the machinery and equipment needs of the agricultural sector. The government intends to collaborate with the private sector to build capacity of individuals and companies to locally produce, assemble and maintain appropriate machinery and equipment.

Ghana is preparing a National PPP Policy to guide and encourage public-private ventures. The Government is in favour of using PPPs to address funding challenges, given the inadequacies of national resources mobilized through the traditional sources of tax revenues, domestic borrowing, external loans, foreign grants and donor support. The draft policy prepared by a team from the Ministry of Finance and Economic Planning (MOFEP) and the National Development Planning Commission (NDPC) was put up for public discussion at a Stakeholders Consultative Forum in Accra in September 2010. The draft policy mainly highlighted the implementation of projects in areas such as inter-city highways, rehabilitating rail networks, developing educational facilities, and providing health and social services. However, there are opportunities to use the policy to enhance agribusiness PPPs, given that it establishes the principle of public institutions engaging with the relevant private sector entities to undertake mutually rewarding socio-economic ventures. It is hoped that the PPP policy will be passed into law by Parliament.

2.4 SCOPE AND NATURE OF THE PPP COOPERATION IN THE AGRICULTURAL SECTOR

As indicated in the review of the current national policies, reference has been made to the use of PPPs as a vehicle for driving economic activities in Ghana. The scope is broad and it is in the direction of the conventional approach to PPPs emphasizing huge investments from both the private and public sectors. However, there appears not to be many concrete PPP initiatives in the country. Most of the initiatives encountered are development projects.

Indeed the study shows that in the strict definition of PPP with equitable investments and risk-taking from parties across the public-private divide, there are few PPP cases. Most of the PPPs may best be characterized as development projects. Nevertheless, the cases exhibit a fundamental level of commitment on the part of public institutions (or government) and private sector actors. The public sector commitment is in line with the prevailing national policies in agriculture and other economic sectors. The partnerships all have broad development objectives. The specific cases covered in this report were selected among several of these cases in the agricultural sector for having these characteristics.

In addition to the five selected agribusiness cases, the other development projects that collaborate with the public and private sectors include:

1. Market-Oriented Agriculture Programme (MOAP). The main goal of the Market-Oriented Agriculture Programme (MOAP), which began in 2000 and has been implemented in phases since, is to enhance the competitiveness of agricultural producers and entrepreneurs on the national, regional, and global markets. MOAP is an initiative that is jointly implemented by the Government of Ghana (Ministry of Food and Agriculture), the German Development Service (DED), and the German Technical Cooperation (GTZ) in close collaboration with USAID. The development partners are the main sources of funding. However, the Ministry also bears costs such as paying the salaries of the public officials on the programme. The components of the programme include supporting selected value chains, improving public sector support to agricultural development, and strengthening private sector organizations. Under the MOAP framework the Du Paul Wood Treatment Company based in Ejura in the middle belt of Ghana is executing an Alternative Livelihood Project with a funding of about 100 000 €. This project involves the cultivation of tree planting. There is also the West African Fair Fruit (WAFF) venture. Its main objective is to produce organic pineapple for the export market. The WAFF venture covers schemes aimed at outgrowers in rural areas with fruits meant for the export market in Europe.

Some contracts have been signed with various farmers groups and companies.

2. Livestock Development Project is one of the projects of the Ministry of Agriculture. It basically creates a partnership between public agencies and livestock producers. It has a credit facility from the African Development Bank (AfDB) for farmers to boost the production of livestock in the country. It is designed in five components (development of production, animal health, credit provision, capacity building, and project management). As a result of the high default rate among beneficiaries coupled with the misapplication of the livestock credit facility, the beneficiaries now receive credit in kind, in the form of live animals. The beneficiary is given one male and nine females or an animal (e.g. sheep and pig). The project covers 35 districts in 7 regions in Ghana.
3. Cashew Development Project is operative in 18 districts. It seeks to assist farmers in expanding their cashew farms and providing capacity to farmers to maintain their own plantations. Technical advice and training are also given to farmers. The project also creates market linkages for cashew farmers to sell their produce. The Government of Ghana secured the credit facility from the African Development Bank (AfDB), with the Agricultural Development Bank (ADB) controlling the credit (loan) facility. Some of the beneficiary associations include: Wenchi Cashew Farmers Union, Kintampo Cashew Farmers Union, Ashanti-Mampong Cashew Farmers Union, and Afram Plains Cashew Farmers Union. There are some individual farmers with large farms operating under the unions. Apart from the farmers, the project mandate also covers processors.
4. The National Mango Plantation Project was launched in 2010. It provided US$36 million dollars to develop mango orchards over a five-year period. This project was led by the private sector and sponsored by the Export Development and Investment Fund (EDIF). It targeted the cultivation of about 8 100 hectares in five regions out of the 10 administrative regions in Ghana. The project was to produce about 300 000 tonnes of mangoes worth about U$25.5 million annually when completed. The project would provide opportunities to the beneficiary communities.

All these projects are examples of some of the initiatives that bring the public sector and private sector together but the bulk of the investments coming from the development partners or the government. The principal actor in the public sector is the government acting through the respective sector ministries and public institutions. The private sector is comprised of a range of business organizations and farmer outgrower organizations. The examples only illustrate the various configurations of PPPs in Ghana. Some may (in the strict sense) be development projects with donor funding driving them. Others operate with government funding made possible by external loans. The selected PPP cases are typical of what prevails in Ghana. The following is a description of the five specific PPP cases selected for this study.

2.4.1 The Ghana Rubber Project

The Ghana Rubber (Outgrower) Project has been ongoing since 1995. The Fourth Phase of the Project began in August 2010 between the Ghana Government represented by the Agricultural Development Bank of Ghana (ADB) and AFD of France. The purpose of the Ghana Rubber Project is to rehabilitate the distressed rubber estates, which used to be a traditional source of export commodities for the country. The objectives of the agribusiness investments are to, among others, cultivate 50 000 hectares of rubber by 2020 and rehabilitate the road infrastructure in the respective districts. The project is being implemented in three of the 10 administrative regions of Ghana – The Western, Central and parts of Ashanti regions.

2.4.2 The Sorghum Project

The West African Sorghum Value Chain Development Project, which started in 2006, was aimed at exploiting sorghum as a raw material for the local industrial brewery. It was initiated with the sponsorship of the European Cooperative for Rural Development (EUCORD).

This PPP has the overall goal of developing a stable and high-quality sorghum supply chain that will increase incomes of sorghum farmers and enable national beverage industries to substitute imported grains with locally-produced sorghum. The implementation countries are Ghana and Sierra Leone. In Ghana, the Guinness Ghana Breweries Ltd (GGBL) is the Private Sector Partner with TechnoServe (TNS) as the implementing partner.

The public institution with investment interest in the sorghum project is the Ven-

TABLE 1
Selected projects, partners and investments

Project	Public Organization(s)	Private Organization(s)	Others	Investment
Ghana Rubber Project	MOFA, Agricultural Development Bank	Ghana Rubber Estates Ltd.; ROAA	AFD; KfW	€ 29 million
West Africa Sorghum Value Chain Dev. Proj.	Venture Capital Trust Fund; SARI	Guinness Ghana Breweries Ltd.; FBOs	EUCORD; CFC; Technoserve	US$2 897 000
Allanblackia Project	FORIG	Unilever; NDGL	International Tree Seed Centre; IUCN; ICRAF	€ 12 million
Cadbury Cocoa Partnership	COCOBOD	Cadbury (Kraft Food)	Local cocoa communities	US$4.6 million
BOPOP	MOFA; NIB	AFD	Farmers	€ 1 294 077.14

Source: Authors compilation, 2010/2011

ture Capital Fund which provided funding for Sinapi Aba Trust to extend credit to the farmers. The public research institution, Savanna Agricultural Research Institute (SARI), participated in the project through supplying sorghum varieties. The project is being implemented in the Northern parts of Ghana.

2.4.3 The Allanblackia Project

The Allanblackia Project is an initiative based on the Allanblackia tree's seeds. Since the early 2000s, Unilever and other commercial enterprises have launched onto a project to turn Allanblackia into a second "cocoa" for Ghana. The project is also being carried out in other African countries to produce the seeds, specifically Tanzania and Nigeria. In Ghana, the project has brought into partnership, Unilever, the Novel Development Ghana Limited (NDGL), the International Tree Seed Centre, the Forestry Research Institute of Ghana (a public research institute) and some other organizations. The project is mainly being implemented in the Ashanti Region.

2.4.4 The Cadbury Cocoa Partnership

The Cadbury Cocoa Partnership was launched in 2008 as Cadbury joined the Business Call to Action to secure the economic, social and environmental sustainability of cocoa farmers and their communities in Ghana, India, Indonesia and the Caribbean. The partnership brings the Ghana Cocoa Board (COCOBOD) (a public institution set up to oversee the cocoa industry in Ghana) and the multinational cocoa company Cadbury together. The purpose of the partnership is to provide extension services in selected communities to enhance productivity and incomes and thereby improve the socio-economic conditions of the farmers. The project is being carried out in some of the cocoa-growing districts of Ghana.

2.4.5 Buabin Oil Palm Outgrower Project (BOPOP)

The Buabin Oil Palm Outgrower Project (BOPOP) is a PPP arrangement between the Government of Ghana with the Ministry of Food and the Agence Francaise de Developpement (AFD) (a French development agency), and Kreditanstalt fur Wiederaufbau (KfW) (a German development bank). The goal and objectives of the project are directed towards improving the palm oil industry in the relevant ecological zones. This is one of the projects being implemented under the Programme for the Promotion of Perennial Crops in Ghana.

Table 1 summarizes the projects and their respective public and private partners. The subsequent sections go into discussions of the respective roles and the nature of responsibilities and commitments. However, the weight of responsibility of the actors in the PPP arrangements varies significantly. The level of investment is also considerable ranging from almost € 1.3 million in the case of BOPOP to € 29 million for the Ghana Rubber Project[2]. The private sector partners have usually been the main sources of the investment capital.

[2] This information is elaborated in Table 4.

Chapter 3
Characterization of PPP arrangements

3.1 STATED PURPOSES WITH RESPECT TO AGRIBUSINESS INVESTMENT AND DEVELOPMENT OF AGRIBUSINESS ENTERPRISES

The Ghana Rubber Project was initiated as part of the programme for the promotion of perennial crops. During the Third Phase, the project was implemented with the signing of a credit agreement with AFD and a German development bank, the Kreditanstalt fur Wiederaufbau (KfW) in August, 2006. AFD provided € 23 million while KfW provided € 6 millions to support the outgrower rubber plantation project in the country. The funds went into financing a 7 000 hectares rubber plantation project. It involved providing a credit line for about 1 750 farmers over a five-year period.

The First Phase of the project started in 1995 and ended in 1999 after 400 farmers planted rubber trees on more than 1 200 hectares of land. The second phase was for 500 farmers who planted over 2 800 hectares of rubber plantation. In the Third Phase, the 1 750 farmers selected for the project received loans for each farmer to work on four hectares of land allocated to them for their rubber plantations. GREL bought the latex from their trees for processing.

During the Third Phase, funds for the cultivation of the rubber plantations were disbursed through the public National Investment Bank (NIB) to help farmers purchase agricultural inputs. However, part of the project funds were intended for the construction of 210 kilometres of farm roads and 77 kilometres of feeder roads that would improve access to the project areas to ensure easy access to production and marketing areas.

The rubber project has so far developed about 14 785.56 hectares of rubber plantation through the various phases. A total of 3 880 outgrower farmers have participated in the project. The Fourth Phase of the project aims at cultivating 10 500 hectares of rubber plantation by 2014 involving about 2 750 farmers in the Central and Western regions and parts of the Ashanti Region of Ghana. As in the other phases, each farmer cultivates four hectares of rubber.

The Fourth Phase is being executed within the framework of a tripartite agreement between the ADB as the financial operator, GREL as the technical operator, and the Rubber Outgrowers and Agents Association (ROAA) representing the farmers. The Fourth Phase has its own unique features. For example, the financing is a non-sovereign loan facility given directly to ADB. This is the result of the increasing confidence in the project implementation coupled with the need for the rehabilitation of the rubber estates to provide raw materials to the rubber-based industries, especially in France.

The specific objectives of the Sorghum Project are to enable sorghum farmers to increase productivity through greater access to improved inputs, processing technologies, and marketing options provided through commercial agribusinesses and producer associations. Guinness Ghana Ltd represents the private sector interest in the project; the Venture Capital Trust Fund, a public venture capital establishment, represents the public interest. The Savanna Agricultural Research Institute, a public research institution, also participates in the project in providing improved varieties of sorghum – Kapaala and Dorado – to farmers. The farmer-based organizations and associations take care of the farmers' interest. The objectives are summarized below:

- Identify and introduce high-yielding sorghum varieties with high-quality industrial processing characteristics.
- Establish rapid-multiplication farms and sorghum collection centres.
- Form and train village level producer associations and credit groups providing services and financing that enhances the ability of farmers to market increased amounts of quality sorghum.
- Assist reliable producer groups and leading commercial farmers in entering into longer-term partnerships with the beverage industry, to coordinate input delivery, to provide post-harvest collection and storage facilities, and to multiply improved sorghum varieties for the next growing season.

- Train private sector input dealers in supplying inputs to sorghum farmers through market mechanisms.

The Cadbury Cocoa Partnership was launched in 2008. Cadbury joined the Business Call to Action to secure the economic, social and environmental sustainability of cocoa farmers and their communities in Ghana, India, Indonesia and the Caribbean. The Cadbury Cocoa Partnership, a £45 million (US$73 million) commitment, supports sustainable cocoa farming and seeks to improve the lives and incomes of the farmers who supply Cadbury with cocoa beans.

In Ghana, about US$4.6 million has already been spent on the Cadbury Cocoa Partnership as of February 2010. The main goals of the partnership are to promote sustainable livelihoods, increase crop yields by 20 percent by 2012 and 100 percent by 2018, create new sources of income in 100 cocoa-farming communities, and address key issues affecting the cocoa sector, including child labour, health, gender diversity, and environmental sustainability.

In the case of the Buabin Oil Palm Outgrower Project (BOPOP), the goal is to improve the palm oil industry in the relevant ecological zones. It is one of the projects being implemented under the Programme for the Promotion of Perennial Crops in Ghana.

The Allanblackia Project generally aims at developing Allanblackia as a novel agricultural raw material for its food processing industry. Allanblackia ties in with Unilever's three long-term business goals to "halve environmental footprints of (our) products, source 100 percent of all agricultural raw materials sustainably, help 1 billion people improve their health and well-being" (Misbah, 2011). From 2000 to 2008, Unilever was the main driver invested € 7 million in the Allanblackia Project. Unilever again budgeted € 3.2 million for the period 2010 to 2012. The core principle underlying the project is sustainability. Biodiversity exploitation must be sustainable and must engage local communities in sustainably supplying the raw material profitably. On the basis of this, IUCN, whose organizational goal is to promote sustainability of biodiversity, invested € 1.2 million in the project. ICRAF, which is also promoting agro-biodiversity, invested € 200 000 annually (Misbah, 2011).

3.2 DIRECT BENEFICIARIES AND THE NATURE OF BENEFITS

In the case of the Ghana Rubber Project the funding is meant to address all the identifiable financial gaps in the project. The direct beneficiaries and the nature of the expected benefits are:

- *Forestation:* There is tree planting, thus contributing to forestation in the project area and enhancing the environment as well as regularizing the rainfall patterns.
- *Income generation*: The project increases income levels for farmers and their relatives thereby improving their living standards.
- *Job creation:* The project creates employment opportunities in the project area thereby checking rural-urban drift.
- *Raw material development:* There is the supply of raw materials to the local factories dealing with rubber products.
- *Export drive:* The project is boosting rubber export, thus increasing foreign exchange earnings for the country.
- *Gender considerations:* There is the participation of women in the project thereby enhancing women emancipation.
- *Infrastructure Development:* The development of access roads in the project areas ultimately enhances the road infrastructure for all farmers to transport their goods to marketing centres.
- *Rural economic enhancement:* There are the increased economic activities in the project communities.
- *Climate change solution*: The increased forestation will contribute to carbon absorption.

The direct beneficiaries of the CCP are cocoa farmers and the entire 100 project communities. The partnership is expected to increase productivity in the cocoa sector, particularly the quality and quality of cocoa and to enhance community development. Through the partnership, Cadbury hopes to increase productivity from current levels of 400 kg of cocoa per hectare to 1 000 kg per hectare by 2018. The partnership's focus on Fairtrade certification will help confectioners capture a significant chunk of the Fairtrade chocolate market. The Cadbury Cocoa Partnership investment in Fairtrade cocoa production could help the company generate as much as US$ 350 million per year in additional revenues. On the whole, the Cadbury Cocoa Partnership is meant to safeguard the future of the cocoa industry. Social infrastructure for education, health and water are expected to be improved through community mobilization and facilitation.

For the sorghum project, the direct beneficiaries are the farmers, where it sought to raise the income level of 7 000 sorghum farming households in the sorghum growing areas of the country by

50 percent. The project will also benefit the breweries because in the Guinness stout brand currently, sorghum makes up 20 percent of the grist material and could be increased to 40 percent. Sorghum could also be used in the production of other brands. The prospects for the use of sorghum in the brewing industry appear to be very good. The reason for the use of sorghum was corporate social responsibility and the preference of sorghum over maize grits because of the limited shelf life of maize grits.

Farmers are the direct beneficiaries of the Allanblackia project because the project aims at providing diversity in the cropping system and a ready market for Allanblackia seed oil. To achieve these, Novel Development Ghana was formed to strengthen the supply chain by providing seedlings to farmers to help domesticate the plant and provide ready market for the product. Unilever Ghana also stands to benefit as it can have access to alternative sources of vegetable oil produced through sustainable means. Similarly, outgrower farmers are the direct beneficiaries of the BOPOP. The farmers are trained in good agronomic practices to be able to produce quality oil palm. They are also linked to markets including palm oil processors.

3.3 NATURE AND LEVEL OF FINANCIAL SUPPORT, CONCESSIONS OR OTHER SERVICES

The level of financial support for almost all the PPP cases studied was very high. In the cases of the sorghum, Allanblackia, and cocoa projects which are private sector driven, the sources of the investment have been from the private sector. In the cases of the rubber and oil palm projects, the Government obtained loans to enable the project to be initiated.

Specifically, the Ghana Rubber Project was initiated during the Third Phase with Ghana's signing of a credit agreement with AFD and a German development bank, Kreditanstalt fur Wiederaufbau (KfW) in August, 2006. AFD provided € 23 millions while KfW provided € 6 million to support the outgrower rubber plantation project in the country. The funds went into financing a 7 000-hectare rubber plantation project. It involved providing a credit line for about 1 750 farmers over a five-year period. Similar arrangements also went into financing the oil palm project. Consequently, the Ministry of Food and Agriculture oversee the implementation of these projects.

In the case of the partnerships spearheaded by the private sector, the private sector actors provided the funding. For example, in the case of the sorghum project, sourcing the funding was led by the Guinness trans-national corporation. It was initiated with the sponsorship of the European Cooperative for Rural Development (EUCORD). The total project budget for 5 years to be implemented in Ghana and Sierra Leone was US$2 897 000 with CFC providing US$1 527 000. There is a co-financing of US$903 000 from the private sector and a counterpart contribution of US$467 000 from NGOs (WASVCDP, 2008; p.36). Within the first two years from 2006 to 2008, the total actual expenses from the identified sources amounted to roughly one third of the total budget (WASVCDP, 2008; p.36). The public Venture Capital Trust Fund also provided funding for Sinapi Aba Trust to extend credit to the farmers.

The private sector investment also came up in the Cadbury Cocoa Partnership. Cadbury made a £45 million (US$73 million) financial commitment to support sustainable cocoa farming and to improve the lives and incomes of cocoa farmers and other people in the cocoa-producing communities. The proposal for the partnership came at a time when Ghana was facing challenges with extension services in the cocoa industry as a result of the dissolution of the Cocoa Services Division. Since the 1990s, the Extension Services Division of MOFA was responsible for unified extension services for all the agricultural sub-sectors in the country. Previously the cocoa sub-sector had its own extension service system with approximately 3 000 workers. Currently, the Cocoa Swollen Shoot Disease Control Unit of COCOBOD, a public institution with 250 workers, has been assigned the responsibility of providing extension services. This unit also controls the swollen shoot disease. The public investment therefore comes through COCOBOD.

For the Allanblackia project, the main sponsorship was by Unilever. Funding also came from international organizations such as ICRAF and IUCN and international NGO's such as SNV and Technoserve. The local partners, specifically the public institutions FORIG and CRIG also made some contributions in terms of their research inputs. Some of the funding came indirectly e.g. the Swiss State Secretariat for Economic Affairs (SECO) funded the IUCN's participation in the project.

The nature and level of financial support for the BOPOP is in the form of a five- year credit

facility agreement signed between the Government of Ghana, the Agence Francaise de Developpement (AFD), and the Kreditanstalt fur Wiederaufbau (KfW). A total of € 255 592.94 has been allocated to the Ministry of Food and Agriculture for institutional support to steering committee meetings and programme supervision (the programme for the promotion of Perennial Crops in Ghana). As of 31 December 2010, an amount of € 1 294 077.14 had been transferred to the National Investment Bank (financial operator) to be given as loans to the BOPOP farmers (outgrowers).

3.4 PUBLIC SECTOR INCENTIVES, COMMITMENTS OR OTHER BENEFITS FOR PRIVATE PARTNERS THAT ARE PROVIDING SUPPORT TO BENEFICIARY AGRO-ENTERPRISES

The West African Sorghum Value Chain Development Project, which started in 2006, was aimed at exploiting sorghum as a raw material for the local industrial brewery. This PPP has as an overall goal the development of a stable and high-quality sorghum supply chain that will increase incomes of sorghum farmers and enable national beverage industries to substitute imported grains with locally produced sorghum. The project was implemented in Ghana and Sierra Leone. In Ghana, the Guinness Ghana Breweries Ltd (GGBL) is the private sector partner. TechnoServe (TNS) is the implementing partner and Savanna Agricultural Research Institute (SARI) provides the scientific and technical support.

According to the mid-term evaluation report, the impact of the project has made the entire supply chain very efficient. The project ensures that farmers have easy access to inputs in a timely manner. There has been a phenomenal increase in the annual supply from less than 100MT to 1 300MT (see Table 2 below). As a result, more farmers have gotten involved resulting in a corresponding increase in their family income. It is estimated that about 2 000 jobs have been created. Similarly, various beneficiaries along the supply chain have witnessed an improvement in their socioeconomic well-being. While some have built houses from their earnings from the sorghum value chain project, others have made acquisitions including motorbikes, donkeys, and donkey carts to help them improve upon the efficiency of their production.

In spite of the favourable progress made, there are still some challenges. If these challenges are not addressed could derail the project. The first and foremost is the gap between the demand for sorghum by the brewery and the supply by the farmers. Farmers' current production of sorghum is not even at 10 percent of the projected demand.

Second, there is a price differential between what the brewery is offering and what the farmers can obtain even on the open sorghum market. There is a fundamental concern with the increasing cost of production. The costs of labour and tractor services are reported to be very high. It is feared that if the price of the produce does not increase, then, the business will become unprofitable. Already the open market price of sorghum has more than doubled over the past few years, making the price offer of the brewery unattractive.

Third, farmers rationally shift to crops that give higher returns. The prices of other crops, such as maize and groundnuts, have become more attractive than the price of sorghum. It means that not even a contractual agreement with the farmers will make them stick to cropping sorghum under the project.

Fourth, there is also the issue of breaking the dependency of production on the weather. Irrigation systems need to be established to counter the vagaries of the weather which sometimes leads to poor yields.

Apart from these concerns from the farmers' perspective, all the other stakeholders have issues relating to improving the performance of roles in the value chain and for the success of the project. The scientists in the project need to be engaged in developing better yielding seeds for the farmers. Currently, the yield average of the varieties being cropped is about 1.5 tons per hectare.

TABLE 2
Sorghum production in Ghana 2005 - 2008

Indicator	2005/6	2006/7	2007/8
Sorghum output (mt)	112	904	1 272
Spread (No. of communities)	44	56	204
No. of participating farmers	Less than 900	3 210	5 670
Cash income generated	35.84	372.90	524.70

Source: WASVCDP, 2008

For the project to be sustained and made much more profitable for farmers, yields need to be increased to about 3.5 tons per hectare. It appears that more investment needs to be made in the scientific research backing up the project to develop higher yielding varieties.

Perhaps the most important development for Guinness Ghana Breweries is the potential of using sorghum in their production process. The significant increase by the farmers is worth applauding. However, there is need to improve production yields in subsequent years to ensure the sustainability of the project. At the initial stages of the project and specifically in the first two years, the supply schedules of the brewery were met with satisfaction. But the projected use of 2 000Mt of sorghum per annum amounted to only 10 percent of the entire grain requirement of the brewery. The brewery's concerns are over issues of food safety.

There is the challenge of ensuring traceability – the ability to trace consignments to the source of supply and verification. There is the challenge of ensuring control at production centres. It relates to using good agricultural practices employing safe agronomic practices devoid of contentious methods such as genetic engineering. Safety also has to do with post-harvest treatment of grains implying the use of acceptable treatment chemicals for fumigation. There is also the issue of level of contaminants such as residual levels of pesticides, herbicides, and mycotoxins within the acceptable levels.

With regard to the sustainability of the supply chain at the end of the project, Guinness Ghana Breweries Limited considered two possibilities: private sector investors taking over grain handling and supply or the brewery drawing off grains held for it in warehouses. The brewery wants to monitor the management of warehouses and post harvest treatment of grains. It proposed visiting farms during harvest time to observe the threshing processes. Currently, the supplier Dizengoff Ghana provides the agro-chemical inputs e.g. fertilizers, pesticides, and herbicides and monitors their use.

The brewery has indicated that it has no experience with malting sorghum but would be interested in using malted sorghum if a good source of supply is available. The brewery would also prefer using the malted sorghum enzymes with unmalted sorghum for its brewing processes. This provides a big economic opportunity for the local farmers to develop sorghum into an industrial crop. A major challenge coming with this is the mobilization of farmers to develop the production and supply system. To address this challenge, the project has adopted the use of farmer-based organizations and nuclear farmer systems. One organization which has played an important role in this regard is the Association of Church Development Projects in Northern Ghana (ACDEP).

ACDEP was formed in 1977. It was then known as the Association of Church Agricultural Projects (CAP), as a loose association of church agricultural projects. The membership soon expanded beyond the agricultural stations to include other church rural development work such as the water projects, health, nutrition and primary health care, gender and development, and rehabilitation of the blind. To reflect the diverse nature of the network, the name was changed in 1988 to the Association of Church Development Projects (ACDEP). Now ACDEP has become an ecumenical network of largely, but not only, church sponsored development NGOs in Northern Ghana. Its main goal is to provide a collective platform for the participation of churches in the socio-economic development of Northern Ghana as a whole and the rural poor in particular.

ACDEP came to play a role in the sorghum project through its own Farmers' Agricultural Production and Market Project (FAMAR). FAMAR aimed at providing market access for rural farmers to improve household incomes, and stimulate agricultural development and household food security. The Northern regions of Ghana are bedevilled with a plethora of problems, including low agricultural production, inadequate health educational facilities, roads, electricity supply, water supply, and communication facilities. Efforts have been made by past and present governments and the international organization to address these challenges. However, poverty levels continue to rise, which is a source of great concern.

Farming remains the mainstay for over 70 percent of the people in Northern Ghana. Farming provides the needed income for paying school fees, medical bills, casual farm labour, fuel, and other family expenses. It is against this background that most government institutions and NGOs, including ACDEP, have committed their resources to helping farmers increase productivity and enhance market access. This is crucial to ensure that their produce gets sold and more importantly that they get fair prices for their produce. ACDEP launched the Farmers' Agricultural Production and Market Project (FAMAR) with funding from ICCO and PSO (both Netherlands based NGOs), to address the problems of market-

ing for small rural farmers. ACDEP hoped to increase farmers' household incomes.

FAMAR established a private limited liability company called Savanna Farmers Marketing Company Ltd. (SFMC). The shares in the company are currently held in trust by ACDEP, but will be transferred to FBOs in the near future. In terms of securing the market, SFMC is building supply chains to companies such as Guinness Breweries Ghana Ltd. and others in and outside Ghana.

In these contracts the companies have guaranteed to buy agreed quantities of the contracted farmers' produce at a fixed fair price. SFMC subsequently contract farmers'- based organizations to produce the required quantities of the produce. At harvest time, SFMC buys the produce from the farmers and organizes the logistics, cleaning, and grading of the produce, based on customer specifications. The company thereby solves the farmers' problem of difficulties with marketing their produce and companies that do not provide a reliable supply of raw materials.

The building of strong FBOs is crucial for improving the living conditions of rural farmers. The project through the ACDEP member agriculture stations started organizing farmers into groups of between 10-20 farmers. For the 2006 season, over 300 groups, numbering 4 000 farmers, (45 percent women) have been organized. In subsequent years, the project was opened to farmers that were organized through other NGOs. The total number of farmers is projected to grow to 10 000 in the coming years.

FBOs are being developed at primary, secondary and tertiary levels. The capacity of primary groups is developed for the farmers to be represented at a secondary group level in a district. These groups are further developed and aggregated into tertiary groups at the regional level. The roles of the secondary and tertiary groups will include negotiating better terms with suppliers and SFMC for their members, sourcing for various kinds of support for their members and engaging in policy advocacy. Farmer groups will also be taken through a series of community-based capacity building programs that will enhance group cohesion, management, and their business acumen.

Increasing yields is essential to both farmers and SFMC. Therefore, farmer groups received extension services from the ACDEP stations and the Ministry of Food and Agriculture (MOFA) extension officers. In collaboration with MOFA, scientists from the Savannah Agriculture Research Institute (SARI) and other NGOs, extension officers under the project are supported to improve their knowledge and skills in providing extension support to farmers for the selected crops.

The role of the nucleus farmer is to serve as the liaison officer between the West Africa Sorghum Development Project consortium and the farmers. They impart knowledge gained from training workshops organized by the project team. They also arrange credit for farmers from venture capital. Moreover, they purchase produce from farmers on behalf of Guinness Ghana Limited. SARI provided viable seeds and agronomic practices training. Apart from the Savannah Marketing Company, the other nucleus farmers operated individually. They therefore came under one umbrella to form a company. Some of the services provided by the nucleus farmers include: ploughing; inputs; training; and working out the purchasing price with the farmers.

Interviews conducted with five of the sorghum farmers highlighted the nature of their organization, the challenges, and the benefits gained from the sorghum project. (See summaries of the interviews in Appendix 3). The farmers are spread out in the three northern regions and appear to be operating in remote communities. By organizing the farmers, they become integrated into the project and facilitate their roles.

The direct benefits of the project highlighted by the farmers are:

1. Increased income for farmers. A farmer with five acres of land could make about US$1 000 after offsetting expenses.
2. The livelihood of farmers has changed for the better.
3. The effects of the training offered to sorghum farmers trickle down to other crops since best practices are applicable to other crops.

But the project faces challenges which have to be addressed to ensure success of the project. Some of the challenges of the project include:

1. Limited tractors in the communities which affect the timing of farming. This could expose the crop to drought or flood. Sorghum season is noted to be short and if planting is not well timed, it might cause disaster to farmers. Given the high numbers of sorghum farmers, it always difficult to meet the numerous request of ploughing under a short period of time with the limited number of tractors.
2. Late arrival of fertilizer inputs affects the crop. Sometimes fertilizers do not arrive early enough to enable farmers to apply at the right time.

3. There is a high cost of supervision, especially since there is no support.
4. Unreliable weather.

Apparently, the challenges need solutions that come with stronger inter-partner deliberations and commitment to meeting the challenges. The sorghum project is on track. However, its future success depends on the extent to which the challenges (which are not insurmountable) are addressed.

The partnership to implement the Allanblackia concept is complex but based on documented agreements. There should be good communication and understanding between partners to ensure success. So far, there has been progress in establishing market supply chains for oil, based on wild harvests and cultivation by smallholders. Further work will involve developing rural resource centres to deliver improved germplasm to growers. At the same time, these centres will provide other services such as market information, credit, and access to buyers (Jamnadass et al, 2010).

The development of the resource centres is crucial to the overall success of the venture. It is a strategy that is at the heart of the development of a market value chain that removes producers' constraints to profitable involvement. Furthermore, the diversification of farmers' cropping systems should have positive impacts for biodiversity and provide resilience in the face of climate change. Currently, the most important activity under the initiative is the promotion of *Allanblackia* planting, so that production constraints do not hamper market development (Jamnadass et al, 2010).

Ghana, as one of the pilot countries, is providing important lessons and experience in implementation this innovative business concept especially as the partnership involves the relevant knowledge institutions. It is funded by the Swiss State Secretariat for Economic Affairs (SECO). The first phase of the allanblackia known in local parlance as Sonkyi or Kusiadwe project. It started in 2002. The main stakeholders were the World Conservation Union (IUCN), the Netherland Development Organization (SNV), the World Agroforestry Centre (ICRAF), a research institution (Forestry Research Institute of Ghana - FORIG), local/ national government (Ministry of Land and Natural Resources/ Ministry of Trade and Industry), and NGOs like TechnoServe, which supplemented the efforts of FORIG in awareness-raising, capacity-building and finding alternative markets for farmers.

To promote sustainable value chain for allanblackia in Ghana, these institutions worked closely with Unilever, which initiated the Novel Development Ghana as a private enterprise, to buy allanblackia seeds, and process and supply the processed oil to Unilever. Thus, the project was supposed to provide a ready market for allanblackia seed oil. To that end, the Novel Development Ghana should strengthen the supply chain by providing seedlings to beneficiaries to help domesticate the plant and provide a ready market for the product.

Cocoa is an important cash crop for Ghana as it brings in more than 40 percent of the total foreign exchange earnings. It is also a major source of employment for the country's working population. Several hundreds of thousand people are engaged in producing cocoa on the farms and in the cocoa value chain. It is estimated that about 800 000 farmer families are involved in cocoa farming in Ghana.

The goal of the government is to increase cocoa production from the current 740 000 tonnes to one million tonnes annually by 2012. Therefore, the public interest in cocoa is extremely high and the initiation of the Cadbury Cocoa Partnership is in line with Ghana's own socio-economic agenda. For example, COCOBOD realized that the merger of cocoa extension services with the MOFA extension services in 1998 created a shortfall in the provision of extension services to cocoa farmers. Therefore, COCOBOD appealed to the government to address the shortfalls and government agreed.

COCOBOD set up a committee that developed a lean, cost effective and efficient extension programme (named the new cocoa extension service). This programme is in line with the CCP's objective of improving cocoa production. Cadbury was involved in the programme as a lead private sector partner. The private sector provides technical and financial support for the cocoa extension services. The implementing partners are already working on community development; the partners seek to improve the welfare of rural communities, therefore getting senior managers convinced about the importance of CCP.

3.5 ROLES AND FUNCTIONS PROVIDED BY EACH PARTNER INCLUDING ROLES IN GOVERNANCE, IMPLEMENTATION AND EVALUATION OF THE AGREEMENTS

In terms of the roles and specific functions provided by each of the partners, there are issues in governance, project implementation, monitoring and evaluation of the agreements. Each project has the roles and functions for attaining the partnership objectives.

The following are the highlights of the roles and specific functions of the partners in the Rubber Project:

The oversight body includes representatives of all the partners – the Steering Committee's responsibilities

- There is an oversight body for the project – the Steering Committee – with representation from all the partners. It undertakes the following:
  - Approve the Annual Work Programs and its corresponding budgets;
  - Audit the projects financial statement (which is entrusted to a specialized firm and the monitoring and evaluation missions are carried out by MOFA);
  - Make recommendations on the annual audited report, and the monitoring and evaluation reports.

Technical operators' responsibilities

- Create a special department (Rubber Outgrowers Unit or ROU) that will be in charge of the implementation of the actions relating to rubber outgrowers' plantations;
- Select the farmers (together with the Financial Operator);
- Provide technical assistance to the farmers;
- Monitor the farmers' operational activities on the farm;
- Supply inputs to the farmers;
- Monitor the support actions for the Rubber Farmers Association and the supportive Research Programme;
- Purchase the rubber from the farmer at an economic price to be agreed upon from time to time;
- Assist the farmers in their endeavours to obtain their land indentures.

Financial operators' responsibilities

- Finance the agricultural credit component of the project;
- Ensure a follow-up of the loans granted to the farmers by making quarterly visits to the plantations;
- Honour all the invoices from GREL relating to delivering inputs and providing services;
- The Bank shall for the purposes of the repayment of the loan make deductions from payment made to it;
- Inform and educate the farmers about their debt situations and payments to be made with respect to loans that are re-financed through funds of the credit facility every six months.
- Select the farmers jointly with GREL from among the list to be submitted by GREL.

Role of rubber farmers association

- The farmers association is meant to transform the farmers into major stakeholders in the rubber industry;
- To defend and promote the economic and social interest of its members;
- To set up services for its members in the management of their farms;
- To set better markets in terms of good prices and other facilities at both natural and international levels;
- To promote sound welfare and healthy relationships among its members.

GREL's role and responsibilities

- Responsible for the administrative functions of engaging the farmers; GREL attends to application letters, processes application forms, and issues identification numbers;
- Administers the Inputs and Services Request and Supply Voucher;
- Issues the Certificate of Completion of Farm Activity;
- For its technical functions, it carries out field visits (which are routine and technical);
- Conducts Tapping Inspection;
- Holds quarterly zonal meetings;
- Provides training.

The bank's financial monitoring system

- Creates Project Desk within the bank to liaise with AFD, MoFA, and MoFEP, GREL, and Farmers Association;
- Opens bank accounts for farmers;
- Ensures that farmers receive statement of accounts every six months;
- Checks cost and quality of inputs supplied to farmers;
- Undertakes field visit during major operations e.g. planting, applying fertilizer, and tapping;
- Prepares repayment schedule and reviews it from time to time;
- Develops software to capture the farmers' credit details (inputs and services vouchers and cash refunds).

The key stakeholders and their roles in the Sorghum Project are summarized in Table 3:

Table 3 shows the variety of actors in the sorghum project and the diversity of roles which

TABLE 3
The Stakeholders and roles in the sorghum value chain

Project management	**Technoserve**	**VANCIL/CBAN**
End user of sorghum	Guinness Ghana Ltd.	Sierra Leone Breweries Ltd.
Producer Supplier	Nucleus farmers with outgrowers Farmers associations and companies Individual commercial farmers Individual small scale farmers Sorghum purchases	
Input providers		
Credits	Venture Capital Trust Fund and Sinapi Aba Trust Fund	Finance Salone
Agro-chemicals	Dizengoff Ghana Ltd.	
Agronomical support	Savanna Agricultural Research Institute (SARI), Wa Station	Community Biodiversity Action Network (CBAN), Rokupr Agricultural Research Centre
Cleaning and drying		
Storage	Nasia Rice Mills Company Ltd., Tamale	Bolon community farm warehouse; Stella Kafta community farm warehouse
Transportation	Various transporters	Various transporters and brewery

Source: WASVCDP, 2008

have to be performed for the project to make progress. The value chain activities are assigned to specific actors including input suppliers and produce suppliers. To achieve the stated goal and objectives of the project, all stakeholders play their respective roles in the sorghum value chain. The sorghum seed farmers are expected to supply the required high-yielding varieties for the farmers to cultivate. The private input suppliers provide agro-chemicals and other inputs for the farming activities. The farmers do not only grow and harvest the sorghum crops but they also dry and clean the grains so that they can be used by breweries.

Storage is an important activity in the value chain given the possibilities of spoilage and pest infestation when not properly stored. The Nasia Rice Mills Company Ltd. has the facilities to store grain and therefore has the specific role for storage in the project. Many entrepreneurs play diverse roles in ensuring the proper movement of the sorghum grains from the farm to the breweries. These include purchasers of sorghum from the farmers who then take the responsibility of drying and cleaning the grains to sell to the brewery and the transporters who move the grain from Tamale in the North of Ghana to Kumasi in the more southern part of the country. There are also farmers' associations whose roles are to bring farmers together and educate them on the objectives of the project. These farmers' associations facilitate the farmers' work. Extension officers provide services to client farmer groups to ensure quality sorghum production.

The Ghana programme is managed through the nucleus (lead) farmer concept. The project management team selects the lead farmers using a set of criteria. The criterion takes into account the ability of an individual or an organization to organize out-growers to produce and supply sorghum to the brewery. The nucleus farmer must possess or have access to land preparation equipments. The individual or organization must be a trusted member of the community with high integrity. The main stakeholder is Guinness, which provides the market for the sorghum produced. The other stakeholders are service providers. The service providers range from credit providers, input suppliers transporters, tractor owners and operators, warehouse operators, and cleaning centres. The others are the primary producers who are the out-growers.

The financial arrangement to support all the value chain activities is fairly simple. Sinapi Aba Trust is the manager of the credits. The Trust makes payment to the input suppliers who provide the sorghum farmers with agro-chemicals and other inputs. The sorghum farmers produce and supply sorghum to Guinness Ghana Ltd through the established procedures. Sinapi Aba Trust pays the farmer on the balance of what remains after

deduction of the costs of inputs and other loans. Guinness Ghana then pays Sinapi Aba Trust directly. The Venture Capital Trust Fund provides funding for Sinapi Aba Trust to extend the credits to the farmers.

Indeed sorghum cultivation under the project is done by nucleus farmers and their out-growers, individual commercial farmers, and farming companies and associations. A nucleus farmer typically works with about 100 to 300 out-growers. The sorghum farms have been done in blocks with each out-grower cultivating between one and five acres of field. The out-growers are made up of both men and women.

In project assessments, the farmers were positive about the outcomes experienced. The farmers listed the introduction of high-yielding varieties, the training provided on agricultural practices such as land selection, land preparation, correct planting distances, thinning and the provision of credit facility as some of the benefits they gained from their participation in the project. The general increase in farmers' income is estimated to be about 40 percent.

The roles have been well-delineated for the public and private partners in the case of BOPOP. The Crop Services Division of the Ministry of Food and Agriculture plays the oversight responsibility by conducting socio-economic surveys, and designing policy. The private partner, the Twifo Oil Palm Plantation (TOPP) Limited, is the technical operator. It has the responsibility of providing recommended seedlings to out-growers, and providing training on agronomic practices. The National Investment Bank (NIB) is the financial operator, which therefore administers the credit to farmers (out-growers). GOPA-Nkum is a consortium which is given the task of building the capacity of the out-growers for a two-year period.

The Allanblackia project is funded by the Swiss State Secretariat for Economic Affairs (SECO). The first phase of the project started in 2002. The main stakeholders were the World Conservation Union (IUCN), the Netherland Development Organization (SNV), the World Agroforestry Centre (ICRAF), a research institution (Forestry Research Institute of Ghana - FORIG), local/ national government (Ministry of Land and Natural Resources/ Ministry of Trade and Industry) and NGOs like TechnoServe, who supplemented the efforts of FORIG in awareness-raising, capacity-building and finding alternative markets for farmers. To promote sustainable value chains for Allanblackia in Ghana, these institutions worked closely with Unilever, which established the Novel Development Ghana as a private enterprise to buy allanblackia seeds, process and supply the processed oil to Unilever. Novel Development Ghana played a key role strengthening the supply chain by providing seedlings to beneficiaries to help domesticate the plant and provide ready markets for the product.

Cadbury, now Kraft Foods, is the initiator of the CCP. The idea came from realizing that cocoa production was not increasing mainly due to inadequate technical support through extension services. Also, most cocoa producing areas were found to be deprived and lacking in a number of social infrastructures. Cadbury International, after determining what intervention to put in place, made contact with some partners including UNDP. UNDP made all the initial contacts with core partners such as VSO, World Vision, and Care International. Cadbury also made the initial implementation arrangements and then became the managing partner.

Later, the Programmes Coordination Unit was formed in Ghana to coordinate the development, implementation, monitoring, assessment, appraisal and evaluation of the CCP. Implementation partners were VSO, World Vision and Care International. These partners have been assigned different project districts and communities. Care Ghana for example, drew up a 10-year programme in which they lined up strategies, activities, and outputs. They are involved in community mobilization and facilitation where they assist communities in identifying development objectives, determine their needs, and the resources required to meet those needs. Through participatory learning action (PLA), action plans are developed, prioritized, and presented to the district assemblies to integrate into their development programmes. They also coordinate activities of some public institutions to deliver services e.g., COCOBOD and extension departments of MOFA.

The partnership has government representatives on its board: the chief executive of COCOBOD and an official from Cadbury co-chair the board of the CCP; the Minister of Finance and Economic Planning; the Deputy Minister of Employment and Social Welfare (MESW); and the Ministry's Director of Monitoring and Evaluation attend CCP's board meetings where important decisions are made.

The National Programme for the Elimination of Child Labour in the Cocoa Sector (NPECLC) under the MESW also provides technical support

to the CCP in terms of strategies, guidelines and even in selecting communities to work in. For example, NPECLC's child labour and hazardous activity frameworks have been adopted by the implementing partners. Departments of cooperatives under the MESW have also been engaged to provide technical support to the implementing partners to form farmer groups in the communities. These groups are sensitized to understand that groups can also enjoy many other benefits beyond easy access to funds.

The Cocoa Swollen Shoot Disease Control Unit of COCOBD, a public institution, is responsible for providing extension services along with the mandate of controlling the swollen shoot disease. Other private partners are Kuapa Kokoo (a cocoa farmer's cooperative that works to improve the social, economic and political wellbeing of its members) and West Africa Fair Fruits (an NGO that promotes sustainable agriculture in West Africa).

3.6 THE FORMALIZATION OF THE PARTNERSHIP AGREEMENTS

All the partnerships have documented agreements. In the formalization of the CCP arrangement, there were specific steps. A series of meetings were held to discuss the common problems in the cocoa sector and common goals and objectives were set. The CCP is a documented agreement bringing the private sector actor Cadbury and the public sector actor COCOBOD into a partnership. Subsequently, other licensed cocoa buying agencies joined the partnership. The partnership has government representatives on its board: the chief executive of COCOBOD and an official from Cadbury co-chair the board of the CCP; the Minister of Finance and Economic Planning; Deputy Minister of Employment and Social Welfare (MESW); and the Ministry's Director of Monitoring and Evaluation attend CCP's board meetings where important decisions are made. All the partnerships are backed by written memoranda of understanding (MOU). The functions of the partners are indicated in the MOUs.

In the case of the palm oil project, the agreement was formalized by the signing of a five year credit facility agreement signed between the Government of Ghana and the Agence Francaise de Developpement (AFD), a French development agency and Kreditanstalt fur Wiederaufbau (KfW) a German development bank. This is the main document. There are also other documents such as on the financial transactions among the partners (e.g. NIB, TOPP and GOPA-Nkum).

The purpose for the Buabin Oil Palm Outgrower Project (BOPOP) is the rehabilitation of the palm oil industry in the Buabin area. The stated objectives are:

i. To promote palm oil on the basis of comparative and competitive advantage of agro-ecological zones and market availability;
ii. To promote linkage of smallholder production to industry;
iii. To promote formation of viable farmer-based organizations with gender equity, to enhance their knowledge, skills, and access to resources along the value chain, and for stronger bargaining power in marketing;
iv. To advocate improved rural infrastructure;
v. To promote strong outgrower-nucleus farmer linkages as a way of improving smallholders' access to credit, improved planting material, extension on improved agronomic practices, and capacity to expand farm size per holder.

The Crop Services Division of the Ministry of Food and Agriculture (MoFA) benefits directly from the project's allocation for institutional support for socio-economic surveys, supervising missions, audit and steering committee meetings. However, the primary and major beneficiaries of the project are the farmers (outgrowers). Under the project, 3 000 ha of palm oil are supposed to be cultivated in the Buabin and surrounding villages in the Central Region. Palm oil farmer-based organizations (Oil palm Outgrower Association) can benefit from training on agronomic practices, to improve productivity. They will also benefit from applied research of the Oil Palm Research Institute (OPRI). Another return of the project is that the road networks are expected to be improved and the benefit of a policy on the oil palm industry.

The public sector benefits specified in the BOPOP are the commitments of the Ministry of Food and Agriculture in offering training and supervision, and the research support provided by the Oil Palm Research Institute (OPRI) to the benefit of farmers.

TABLE 4
Agribusiness cases, partners and roles

Agribusiness Case	Partners		Role of Actors and their investments
	Public	**Private/NGO/Donor**	
Sorghum Project	Savanna Agricultural Research Institute (SARI)		Agronomical support
		Guinness Ghana Ltd.	End user of sorghum
		Guinness trans-national Corporation	Led sourcing of funding
		European Cooperative for Rural Development (EUCORD)	Sponsor
		CFC	Provided US$1 527,000.
		Technoserve	Project management
		Nucleus farmers with out-growers	Producer supplier
		Farmers associations and companies	
		Individual commercial farmers	
		Individual small-scale farmers	
		Sorghum purchasers	
		Venture Capital Fund and Sinapi Trust Fund	Credit providers
		Dizengoff Ghana Ltd.	Agro-chemical suppliers
		Farmers	Cleaning and drying services
		Nasia Rice Mills Company Ltd., Tamale	Storage services
		Various transporters	Transportation services
Allanblackia Project	Forestry Research Institute of Ghana (FORIG), Cocoa Research Institute of Ghana (CRIG)		Provides technical and research input, capacity- building, awareness-creation
	Ministry of Land and Natural Resources Ministry of Trade and Industry		Oversees the implementation
		World Conservation Union (IUCN), Netherland Development Organization (SNV), World Agroforestry Centre (ICRAF), Swiss State Secretariat for Economic Affairs (SECO)	Donors, technical partners; IUCN invested € 1.2 million; ICRAF invested € 200 000 annually (assuming an investment for 3 years, total is € 600 000)
		Unilever	Initiated the project, main funder, established the NDGL, buys Allanblackia oil, Invested € 7 million during 2000-2008; and € 3.2 million 2010-2012
		Novel Development Ghana Limited (NDGL),	Buys allanblackia seeds, processes and supplies the processed oil to Unilever
		TechnoServe	Capacity-building, awareness-creation, finding alternative markets for farmers

Agribusiness Case	Partners		Role of Actors and their investments
	Public	**Private/NGO/Donor**	
Buabin Oil Palm Outgrower Project	Ministry of Food and Agriculture (MOFA)		Oversees the implementation, conducts socio-economic surveys, and designs policies
	National Investment Bank		Financial operator
	Oil Palm Research Institute		Performs technical and research input, and capacity-building,
		Kreditanstalt fur Wiederaufbau (KfW), Germany Agence Francaise de Développement (AFD), France	Donors (have provided € 255 592.94 to MOFA)
		Twifo Oil Palm Plantation (TOPP) Limited GOPA-Nkum	Technical operator (provides recommended seedlings to outgrowers, and trains farmers on agronomic practices) A consortium, which builds the capacity of the out-growers
Ghana Rubber Project	Agricultural Development Bank, Ghana		Financial operator
	National Investment Bank		Loan disbursement
	Ministry of Food and Agriculture		Oversees the implementation
	Ghana Rubber Estates Ltd. (GREL)		Technical Operators
		Kreditanstalt fur Wiederaufbau (KfW), Germany	Provided € 6 million to support the out-grower project.
		Agence Francaise de Développement (AFD), France	Provided € 23 million s to support the out-grower project.
		Rubber Outgrowers and Agents Association (ROAA)	Farmers, out-growers
Cadbury Cocoa Partnership	COCOBOD		Technical partner (e.g., set up a committee that developed the new extension programme)
	Ministry of Food and Agriculture		Technical partner (provides extension staff paid by the government)
	Ministry of Employment and Social Welfare		Strategic and technical partner (serves on CCP board, makes technical input, provides cooperative staff)
	Ministry of Finance and Economic planning	Cadbury International Cadbury Ghana Ltd.	Strategic partner (serves on CCP board, oversees affairs of COCOBOD) Main financier has already provided £45 million (US$ 73 million) Management unit
		Care International, Ghana	Implementation partner
		Voluntary Services Organization (VSO), Ghana	Implementation partner
		Kuapa Cocoa, West Africa Fair Fruits	Technical and financial support

Source: authors compilations from various sources, 2010

Chapter 4
Developing the PPP arrangements

4.1 CIRCUMSTANCES THAT LED TO DEVELOPMENT OF THE PARTNERSHIPS

The circumstances leading to the development of the PPP cases covered in the study are different. Nevertheless, the PPPs share the objective of improving prevailing socio-economic conditions in the respective areas of the cases. For example, the development of the Ghana Rubber Project came with the deterioration of the rubber industry in the 1980s and 1990s. It was a major economic challenge for those living in the rubber-growing parts of the country. The GREL used to offer employment for the youth and people in the area. It had to stop production since the production of rubber declined and it was unable to cope with the competition in the world market. The rubber project was intended to address some of the constraints of farmers regarding marketing rubber and also the difficulty in retrieving government loans from farmers.

In the case of the Sorghum Project the circumstances of development were quite different. Sorghum is a popular cereal staple used mainly in the Northern regions of Ghana. It is used in the preparation of main meals as well as in brewing a traditional beverage called pito. In almost all settlements of the Northern people in Ghana, whether in the rural or urban areas, pito brewing and its consumption is a thriving socio-economic activity. There have been several initiatives to promote development in the North to reduce the incidence of poverty which is much higher than it is in the South. The idea of promoting industrial inputs for the brewery led to the initiation of the Sorghum Project.

The development of the Allanblackia Project was due to interesting circumstances. The tree species belong to the genus Allanblackia (Clusiaceae) found in the humid forests of West Central and East Africa. It is known that the seeds contain edible oil that has significant potential in the global food market as a "hardstock" for the production of healthy spreads that are low in trans-fats (Ochieng 2007). The Allanblackia oil has attracted a lot of commercial interest culminating in a partnership that spread across a few countries.

In the early 2000s Unilever and other commercial enterprises launched onto a project to turn Allanblackia into a second "cocoa" not only for Ghana but also for other African countries that are able to produce the Allanblackia seeds, specifically Tanzania and Nigeria. Unilever estimated that the potential market for oil is more than 100 000 tonnes annually provided that the right quality standards are met. Unilever has therefore linked up with the World Agroforestry Centre (ICRAF) and the World Conservation Union (IUCN), along with the public research institutions Forestry Research Institute of Ghana (FORIG) and the Cocoa Research Institute of Ghana, farming communities, market traders and other parties to form a private-public partnership (PPP) known as "Novella Africa" to develop the Allanblackia oil business on a sustainable basis (Attipoe *et al*. 2006, Jamnadass *et al*, 2010).

For the BOPOP, the circumstances leading to the development of the project related directly to the constraints highlighted by the Food and Agricultural Sector Development Policy (FASDEP) of Ghana, which included:

i. Gender inequality and discrimination against women;
ii. Inadequate road infrastructure;
iii. Limited market access;
iv. Lack of long term credit; and
v. Unavailability of high-yielding planting material, poor agronomic practices and cultivation of smallholdings.

The idea to establish the CCP came after realizing that cocoa production was declining due to inadequate technical extension services support. Also, most cocoa producing lacked social infrastructures. Cadbury, after determining what intervention to put in place, started looking for partners to enable them implement the interventions. Thus, Cadbury, now Kraft Food initiated the CCP.

UNDP made all the initial contacts with core partners such as VSO, World Vision, and Care International. UNDP also made the initial implementation arrangements and then became the managing partner. Later, the Programmes Coor-

dination Unit was formed in Ghana to coordinate the development, implementation, monitoring, assessment, appraisal and evaluation of the CCP.

Implementation partners include VSO, World Vision, and Care International. These partners have been assigned different project districts and communities. Care Ghana for example, drew up a 10-year programme in which they have lined up strategies, activities, and outputs. They are involved in community mobilization and facilitation where they assist communities to identify development objectives, determine their needs, and the resources required to meet those needs. Through participatory learning action (PLA), action plans are developed, prioritized and presented to the District Assemblies to integrate into their development programmes. They also coordinate activities of some public institutions to deliver services e.g., COCOBOD and extension departments of MOFA.

4.2 MAIN DRIVERS BEHIND DEVELOPMENT OF THE PUBLIC-PRIVATE COLLABORATIVE ARRANGEMENTS AND THE SPECIFIC ROLES OF THOSE DRIVERS

The Government and MOFA were the driving forces behind the palm oil project. MOFA prepared FASDEP and addressed some of the challenges that the policy highlighted. The positive response from the stakeholders, development partners, and the palm oil company, made the PPP possible

The rubber project also has MOFA as the main driver. The two projects belonged to the set of initiatives pursued in the perennial crops project. However, in the case of the cocoa partnership, the main driver of the CCP arrangement was Cadbury. Cadbury International designed the CCP to enable cocoa farmers and cocoa- producing communities to address the needs of the company's raw material requirements.

Cadbury International is the sole funder of the CCP and has already spent about US$4.6 million on the CCP in Ghana as of February 2010. Cadbury Ghana (Kraft Ghana) now manages the central coordinating office of the CCP. The UNDP also played a key role at the initial stages by acting as the managing partner, making all the initial contacts, and engaging local partners.

Previously, what existed in the catchment area of the palm oil project was a smallholder scheme with the same financiers. It was not difficult to engage farmers in the out-grower schemes because the government controlled over 40 percent of the shares of TOPP and by default controlled an integral part of it. The issue of palm oil was on top of the government's agenda. Development partners are usually ready to support projects that are in line with the overarching development goal of the country. In the case of the rubber project, the farmers expressed high interest in engaging in the cultivation of the rubber. GREL was also ready to provide extension services on behalf of the MOFA.

The main drivers in the Sorghum Value Chain Development Project are Guinness Ghana Ltd. and the farmer-based organizations. The partners in the project want to lead the project to a successful completion. In the case of Allanblackia, the real driver was Unilever. The initiative of the Novel Development Ghana was in line with the core business of the parties.

The project tried to maximise individual organizations strengths. For example, the IUCN is engaged in forest, biodiversity and poverty alleviation. ICRAF is involved in the development of tree crops, which is consistent with the overall objectives of the Novella Partnership. The development of the Allanblackia by Unilever was consistent with the vision of the World Agroforestry Centre (ICRAF) and the International Union for Conservation of Nature (IUCN). So the partnership is seen by the parties involved as win-win since they all share the same aspirations and challenges.

4.3 HOW AND OVER WHAT TIME-FRAME DID THE PARTNERS NEGOTIATE DEALS?

For each of the partnerships, there were different forms of negotiations and different time-frames. For the palm oil partnership, after a positive feasibility study, negotiations for the initiation of the project took five years. A comprehensive plan was drawn that determined the cost of establishing a farm against outcome. Farmers are supposed to put 30 percent in the form of labour into the project and the project takes care of the remaining 70 percent by way of credit scheme for farmers. A socio-economic survey was carried out and the second phase is on-going.

The results were positive in terms of the benefits the project had for both private and public institutions involved in the project. There was a financial institution which provided credit for out-growers and TOPP was responsible for the role of a technical agent to help in the training,

providing viable seedling, and other means to meet market standard. Once the project got underway, officers in the respective partner organizations played their specified roles.

The idea to establish the CCP came from findings of a survey that showed that cocoa production was declining. Cadbury is a chocolate manufacturer that relies on cocoa beans from Ghana. Therefore, if cocoa production is not sustainable then access to cocoa beans for future chocolate manufacturing could be a problem. Considering the impact of lack of cocoa on Cadbury, the impact of low production on Ghana and farmers, their families and communities, the CCP came in at the right time to minimize these impacts.

The negotiation for the initiation of the rubber project took one and half years. Farmers were responsible for the production of a specific quantity of rubber at a particular time for GREL to procure and process. The government then had to release a specific amount of funds to the bank for disbursement to farmers at a particular time for production activities. A consultant was engaged to conduct a feasibility study to determine the expected cost, revenue, and returns on investment. An economic analysis was also done by the consultant, which established the expected private and public benefits of the arrangement.

For the CCP, one may say negotiations with cocoa farmers and community members is an ongoing process. This is because some partners were brought on board later when there was a need. Implementation partners were given adequate time to develop strategic and action plans over a specified period. Care Ghana for instance, presented a 10-year strategic plan which was sub-divided into medium (2008-2013) and long-term plans.

4.4 HOW WERE EXPECTED PRIVATE AND PUBLIC BENEFITS ESTIMATED?

Research estimated private and public benefits. The broader needs of cocoa farmers and cocoa-producing communities were noted in a study on "Sustainable Cocoa Production in Ghana" by the Institute of Development Studies, Sussex, and the University of Ghana, Legon (a public institution), funded by Cadbury. This, together with insights obtained from a survey conducted by the NPE-CLC of MESW provided enough justification for an intervention programme to boost and sustain cocoa production and to improve livelihoods of people in cocoa-producing communities.

In the communities, the implementing partners help communities to identify their development needs and the resources required to meet these needs. The CCP then provides funds and with support from the communities development projects are executed. The expected private and public sectors benefits of the sorghum project include FORIG identifying and introducing high yielding sorghum varieties with high quality industrial processing characteristics for the benefit of the private sector. The project also makes good use of expertise of the scientists and assists reliable producer groups and leading commercial farmers to form longer-term partnerships with the beverage industry. Other expected outcomes are to coordinate input delivery, provide post-harvest collection and storage facilities, multiply improved sorghum varieties for the next growing season and provide ready market for farmers' produce. Similar benefits are expected for the Allanblackia and BOPOP projects.

4.5 WHICH ASPECTS OF THE ENABLING ENVIRONMENT POTENTIALLY IMPACTING ON SUCCESS OF THE ARRANGEMENT WERE APPRAISED AND HOW APPRAISED?

The enabling environments that could potentially impact on success of the arrangement were appraised through research. Government policies were appraised with reference to the potential impact to engage private sector to achieve modernization of agriculture, to improve extension services to cocoa farmers, to increase cocoa production, to eliminate child labour in the cocoa sector, and to increase youth participation in agriculture. Specifically, the policy to take over extension services from MOFA Extension Directorate has led to the creation of the new cocoa extension services under which the CPP has hired 17 community officers to offer free training in 100 m communities. The technical assistance provided by the officers is expected to yield significant increases in productivity.

According to the country's laws, the Government can only sign the type of credit facility obtained for BOPOP if Parliament approves. Thus, the processes it went through were to secure cabinet and parliamentary approvals. During the financial analysis, the moratorium period was determined. The minimum of 30 percent farmers' labour contribution was put in the agreement.

The farmers participating in the rubber project have the potential to increase their incomes. Rubber has a high price in Ghana and at US$1.5 dollar per kilo.

A farmer cultivating 4 hectares (ha) earns approximately US$1 000 when harvesting.

In assessing the market opportunities and prospects for Allanblackia, Unilever estimated that the potential production level for the Allanblackia oil was more than 100 000 tonnes annually provided that the right quality standards were met. The ICA collected socio-economic and indigenous knowledge data in the targeted communities. On the part of Technoserve, a supply chain stakeholder analysis was conducted.

4.6 HOW WERE DECISIONS MADE ON THE ROLES OF EACH PARTNER IN STRATEGIC AND DAY-TO-DAY MANAGEMENT AND IMPLEMENTATION OF THE ARRANGEMENT?

The partners' roles in the rubber project were assigned in the documents. The partners in the arrangement already had roles they played as independent institutions; each institution already had an established role in the agri-business arrangement. MoFA provided project oversight, farmers cultivating the rubber for sale to GREL to procure and process and the Banks providing credit to farmers for their production activities.

For the CCP, potential implementation partners were contacted by the managing partner (UNDP) on behalf of Cadbury International. Care Ghana presented a 10-year strategic plan which was sub-divided into medium (2008-2013) and long-term plans. For most of the public institutions, their roles in the partnership were just an extension of their core duties in public services. COCOBOD for example, already played a key role in providing of extension services. The Ministry of Employment and Social Welfare has a programme that seeks to promote the welfare of children of cocoa farmers and to enhance livelihoods of cocoa farmers, their families, and communities.

The sorghum project is managed through the nucleus farmer concept. The project management team selected the lead farmers using a set of criteria. The criteria took into account the ability of an individual or an organization to organize out-growers to produce and supply sorghum to the brewery. The nucleus farmer must possess or have access to land preparation equipment. The individual or organization must be a trusted member of the community with high integrity. The main stakeholders are Guinness which provided the market for the sorghum produced. The others are service providers. The service providers ranged from credit providers, inputs suppliers transporters, tractor owners and operators, warehouse operators and cleaning centres. The others were the primary producers who are the out-growers.

The financial arrangements to support all the value chain activities are fairly simple. Sinapi Aba Trust is the manager of the credits. The Trust makes payment to the input suppliers who provide the sorghum farmers with agro-chemicals and other inputs. The sorghum farmers produce and supply sorghum to Guinness Ghana Ltd. Sinapi Aba Trust pays the farmer on the balance of what remains after deduction of the costs of inputs and other loans. Guinness Ghana then pays Sinapi Aba Trust directly.

4.7 FORMAL TOOLS (ANALYTICAL, FINANCIAL, PARTICIPATORY, ETC.), THAT WERE USED TO SUPPORT THE NEGOTIATION AND PLANNING PROCESS

There were formal tools to support the negotiation and planning processes. For the CCP, participatory learning action (PLA) was used in the communities to identify social needs and resources required to meet the needs. Action plans were developed, prioritized and presented to the district assemblies to integrate into their development programmes. For all the cases, quarterly meetings with all partners, annual learning conferences, farmers' forums, and regular reviews were some participatory methods used for negotiations and planning. In the other cases, many of these tools were used in engaging farmers and relevant stakeholders. These were necessary steps to ensure effective negotiation and planning.

Chapter 5
Management and operations

5.1 ROLES OF EACH PARTNER IN STRATEGIC AND DAY-TO-DAY MANAGEMENT AND IMPLEMENTATION OF THE ARRANGEMENTS; ACTUAL RELATIVE TO PLANNED OR ANTICIPATED

In all the five cases, the partners involved defined roles and responsibilities according to their institutional functions and competences. The variations seen related mainly to the nature of the PPP case and the objectives.

For the rubber project, the Government through MoFA paid for the cost of extension services delivered by GREL to farmers. GREL also procured the rubber from farmers whiles NIB was responsible for disbursing loans to farmers to procure inputs and debit the accounts of farmers after they sold their produce. The arrangement for the palm oil project is similar.

For the BOPOP, the day-to-day management of the project was assigned in the project document. The Crop Services Division of the Ministry of Food and Agriculture had the oversight responsibility to conduct socio-economic surveys and design a policy. The technical operator was the Twifo Oil Palm Plantation (TOPP) Limited. TOPP was responsible for providing training, inputs, and agronomic practices. The National Investment Bank was the financial operator, which administered the credit to farmers (out-growers). GOPA-Nkum, a consortium which operated in the industry, helped the farmer out-growers with capacity-building.

For the CCP, the roles of the partners are also well-defined. Cadbury was the initiator of the CCP and the major financier of the partnership. Cadbury Ghana also hosted the Programmes Coordination Unit that coordinates the development, implementation, monitoring, assessment, appraisal and evaluation of the CCP. The unit is made up of a Director, and three programme managers for extension, community development and environment. Implementation partners are VSO, World Vision, and Care Ghana. These partners have been assigned different project districts and communities. VSO and Care International operate in two districts each while World Vision operates in three districts.

Care International, for example, drew up a 10-year programme in which they lined up strategies, activities and outputs. They are involved in community mobilization and facilitation where they assist communities in identifying development objectives, determining their needs, and the resources required to meet those needs. Through participatory learning action (PLA), action plans are developed, prioritized, and presented to the district assemblies to integrate into their development programmes. They also coordinate activities of some public institutions to deliver services e.g., COCOBOD and extension departments of MOFA. Some public institutions have representatives on the CCP board. The chief executive of COCOBOD co-chairs the board of the CCP with an official from Cadbury. The Minister of Finance and Economic Planning, Deputy Minister of Employment and Social Welfare (MESW) and the Ministry's Director of Monitoring and Evaluation participated in CCP's board meetings. The MESW provided technical support through the National Programme for the Elimination of Child Labour in the Cocoa Sector (NPECLC) and the Department of Cooperatives. NPECLC provided technical support in terms of strategies, guidelines and even in selecting communities in which to work. Their tools such as the child labour and hazardous activity framework have been adopted by the implementing partners. The department of cooperatives provides technical support to the implementing partners in forming and mobilizing farmer and community groups. These groups are sensitized to understanding that beyond easy access to funds, groups can also enjoy many other benefits. The Cocoa Swollen Shoot Disease Control Unit of COCOBOD, a public institution, is responsible for providing extension services along with the mandate of controlling the swollen shoot disease. COCOBOD is the main technical partner providing extension services and developing capacities of extension agents. The provision of social infrastructure is done with lots of support (such as communal labour) from community members.

5.2 MATERIALS, TECHNOLOGY, AND SERVICES PROCUREMENT AND DELIVERY UNDER THE ARRANGEMENTS

The Oil Palm Research Institute (OPRI) provided research for the development of the palm oil cultivation. The *Tenera* variety was provided to farmers to enhance productivity. OPRI also provided capacity building to out-growers on how to increase productivity and meet market standards. Similarly, materials supplied to in the rubber projects included planting materials, agro-chemicals and extension support services.

The CCP provided funds through the community challenge fund community projects. The funds are used to purchase materials and make payments for essential human resources. Under the sorghum, rubber and Allanblackia projects, materials and services such as input, seedlings, credits, agro-chemicals, agronomical support, post-harvest handling, cleaning and drying, storage, transportation are provided to the beneficiaries.

5.3 HOW EXPERTISE REQUIRED FOR IMPLEMENTATION WAS OBTAINED

For better implementation of the palm oil project, better capacity-building of MoFA staff in project management was needed. The farmers involved in all the partnerships also needed to have their knowledge and expertise improved. Another important expertise required for the implementation of the CCP was performance measuring. More than 60 indicators have been developed for measuring performance. The implementation partners were trained in tools such as social return on investment framework for monitoring and evaluation. Implementation partners were also trained in the application of the hazardous child labour framework. The Programme Coordinating Unit also organized unified training (learning conferences) for all the implementers and other partners annually.

Scientific expertise in the development of the product was also important. In the case of Allanblackia, propagation techniques were needed to produce planting materials for the farmers. Scientists in FORIG were engaged to conduct the necessary experiments to establish the basis for multi-propagation and nurseries. In the case of sorghum, scientists in SARI were engaged to conduct the necessary agronomic research to improve farmers' sorghum cultivation.

Sorghum yields doubled from 0.8MT/ha in 2006 to 1.7MT/ha in 2008 (WASVCDP, 2008; p.28). Nevertheless, this is still well below the sorghum yield of 4.5MT/ha achieved in the United States or 5.0MT/ha realized in Argentina (Technoserve, 2010).

The project needs more expertise in crop breeding, genetics, agronomy and other related sciences to strengthen the participation of scientists in the projects. The scientists needed to conduct further research to improve further on the sorghum varieties.

5.4 MANAGERIAL PROCEDURES FOR OUT-SOURCING AND SUB-CONTRACTING – DIVERSE PROCEDURES AND REQUIREMENTS FOR DIFFERENT PARTNERS

Open tendering is the main procedure for outsourcing and sub-contracting for the palm oil project. This is in line with the Procurement Law. It is a similar arrangement for the rubber project. GREL manages all technical aspects of the Rubber Out grower Project and does not outsource. However, MoFA outsources consultancy services. Research institutions were also engaged to undertake specific assignments though open competitive bidding. In the case of the sorghum project, outsourcing or contracts existed between producers, input providers, intermediate agents and agro-processors.

Input suppliers, credit providers, and tractor owners and operators provide services to seed growers, nucleus farmers, grain assemblers, and outgrowers. This group then provided services to agroprocessors, warehouse keepers and transporters before the products get to the brewery. For the CCP, the implementation partners mobilize, facilitate, and assist communities in identifying development objectives, determining their needs and the resources required to meet those needs. Through participatory learning action (PLA), action plans are developed, prioritized, and presented to the district assemblies to integrate into their development programmes. Where the district assembly alone cannot provide the resources, required community members and the CCP provide support. CCP provides funds while the communities provide "in kind" support.

5.5 PERFORMANCE MONITORING AND APPRAISAL MECHANISMS; USES OF MONITORING FOR IMPROVING IMPLEMENTATION, PERFORMANCE AND IMPACTS

An important expertise required for the implementation of the CCP is performance measuring. More than 60 indicators have been developed for measuring performance. The implementation partners have been trained in tools such as social

return on investment framework for monitoring and evaluation. Implementation partners were also trained in the hazardous child labour framework. The Programme Coordinating Unit also annually organized unified training (learning conference) for all the implementers and other partners. The implementation partners mobilize, facilitate, and assist communities in identifying development objectives, determining their needs and the resources required to meet those needs. Through participatory learning action (PLA), action plans are developed, prioritized and presented to the district assemblies to integrate into their development programmes. Where the district assembly alone cannot provide the resources required, the community members and the CCP provide support. The CCP provides funds while the community provides "in kind" support.

The major monitoring and evaluation mechanisms for the BOPOP have been instituted by the Ministry of Food and Agriculture and the Ministry of Finance and Economic Planning to review the project bi-annually. However, other related institutions also monitor and evaluate the project. In the case of the rubber project, the project is appraised by:

- MoFA yearly evaluation mission;
- Development partners yearly evaluation mission;
- Midterm and end of year completion missions by independent consultants;
- Steering committee meetings to monitor the progress;
- Recommendations made in the reports for improvement are then adopted.

The monitoring and appraisal exercises have benefitted the project. For example, in the beginning of the palm oil project, the coverage area was narrowed to only to Buabin. In the course of implementation, it was decided that the coverage area should be extended. The Steering Committee gave approval for the expansion to include the Twifo areas as well.

5.6 MAIN RISKS IDENTIFIED WITH RESPECT TO IMPLEMENTATION OF THE ARRANGEMENT AS PLANNED, AND ACTIONS TAKEN TO MITIGATE RISKS

In the rubber case, there are miscellaneous technical challenges for the prevention of fire outbreaks on the plantations, wind damage, and diseases. There are also the protracted chieftaincy disputes which often are disruptive to plantation development. Family disputes as a result of the death of an out-grower also create disruption. Sometimes, farmers abandon their farms. In order to manage risks, the management has a number of strategies summarized in Table 6.

On the question of risks, whereas it was said that no risks emerged in the BOPOP, the rubber project showed some risks. Those listed include:

- Land acquisition/disputes – socio-cultural problems;
- Conflict of land use – agriculture versus surface mining;
- Financial risks;
- Low motivation of personnel delivering extension service;
- Poor commitment of personnel in public institutions whose roles are to facilitate processes and procedures at governmental level;
- Interest rate on loans granted to farmers;
- How to motivate insurance companies to insure farmers' farms.

The risks and uncertainty in the CCP implementation stem from the fact that Cadbury is the only financier for the CCP implementation (i.e. the portion dealing with Cadbury). The implementation partners cannot be confident that Cadbury will continue to provide funding on a long-term basis. Care International for example has a 10-year strategic plan, which started in 2008, and

TABLE 5
Management of risks for the rubber project

The risk	Management strategy
Wind and fire outbreaks	Insure out-grower farms
Family disputes	Clause in Tripartite agreement
Abandoning the farm	Clause in Tripartite agreement
Low market price for rubber	Institute a fund to protect income levels.
Default in loan repayment – clause in Tripartite agreement	Default in loan repayment – clause in Tripartite agreement

Source: author's compilation, 2010

will thus continue to rely on Cadbury for funding. The uncertainty is further deepened because of the change of ownership of Cadbury International to Kraft Foods. Kraft Foods has however, pledged its continued support for the CCP.

5.7 SUPPLEMENTARY SUPPORT RECEIVED FROM OTHER PUBLIC AND PRIVATE PARTNERS BEYOND THOSE DIRECTLY IDENTIFIED IN THE PARTNERSHIP ARRANGEMENTS

There was supplemental support from other public and private partners beyond those directly identified in the partnership arrangement of the rubber project. For example, District Assemblies provided the maintenance of road networks rehabilitated under the project design. The Department of Feeder Roads collaborated with GREL in the identification of roads to be rehabilitated. The Chiefs in the project area assisted in the resolution of land issues. Under the project, some 227 km of internal roads for palm oil have been constructed by TOPP, from the funding made available.

On supplementary support in the BOPOP, the Ministry of Road and Transport are facilitating the construction of both internal and external roads within the catchment areas. The Environmental Protection Agency has been also involved in the environmental impact study of the works of the project. The Forestry Commission has been involved in agro-forestry practices. OPRI conducts applied research for harnessing investment.

Other institutions also play roles in the CCP although they are not part of the partnership. COCOBOD has set up the new cocoa extension services whereby its staff provides extension services and train community level extension facilitators to support extension agents. COCOBOD is a public institution. Therefore the salaries of its staff are paid by the government of Ghana. The community-level facilitators are, however, paid by private partners including Cadbury and Kuapa Kokoo. All other public sector partners such as the Department of Cooperatives, which provide technical support, are not paid by the CCP but by the government of Ghana. The approach the implementation partners adopted is to assist communities in carrying out their development projects. Therefore, various forms of support emanates from the communities. Communities are actively involved in identifying and mobilizing resources to support their own development agenda.

5.8 KEY CHALLENGES FACED BY PUBLIC AND PRIVATE SECTOR OFFICIALS AND MANAGERS DURING THE IMPLEMENTATION

The key challenge in the CCP is that working with numerous government departments and private partners makes it difficult for the officials to ensure that delivery is uniform. This is especially so when locations are different and different organizations have different levels of capacity. Apart from the core partners, there are numerous district and community level partners which have to work for a common goal. Another challenge for the CCP implementation stems from the fact that community partners often expect free gifts from donors. However, with time, the communities have learned that they need to drive their own development and therefore are now taking some initiatives in that direction. Some community members have become more emboldened as a result of the participation in the partnership. Implementation partners have also provided guidance and generally there is exchange of ideas between the partners. The partnership has also encountered institutional problems such as bureaucracy and the tendency for civil and public servants to demand monetary rewards for any services offered that are contrary to the MoUs.

The key challenges faced by public and private officials and managers during the implementation of the rubber project include:

- Delay in response to farmers request by public institutions;
- Legal issues – problems of succession leading to some managers being personally sued (instead of the institution);
- Non compliance by some farmers to technical advice;
- Limited cooperation of other stakeholders;
- Processing land documents by the land department –long and cumbersome.

In the case of the Allanblackia project, there have been some challenges in implementing the project. For example, although Novel Development Ghana is established as a profit making business, it is currently not making profit because the awareness level is low and it is still in its development stage. Also, production is far below the needed volume. There is also currently a weak relationship between the government wing and the novella partnership. Continuous efforts are being made to involve the government sector actively, to help design a policy to

create an enabling environment not for only Allanblackia oil but for all Non Timber Forest Products (NTFP). Nevertheless, the three-year, second phase was launched in 2010 and all the stakeholders, except the SNV, were actively involved. According to a Project Officer of SNV, the withdrawal of SNV was a strategic choice made as a result of a shift in policy direction of the organization.

In the sorghum project, there are some challenges which could derail the project. These challenges include:

- The wide gap between the demand for sorghum by the brewery and the supply by the farmers. Farmers' current production of sorghum is not even up to 10 percent of the projected demand.
- The price differential between what the brewery is offering and what the farmers can obtain even on the open sorghum market. There is a fundamental concern with the increasing cost of production. The costs of labour and tractor services in particular are reported to be very high. It is feared that if price increases for the produce are not addressed the business will become unprofitable. Already it is known that the open market price of sorghum has more than doubled within the past few years making the price offer of the brewery unattractive.
- Farmers rationally shift to crops which give higher returns. The prices of other crops such as maize and groundnuts have become more attractive than the price of sorghum. It means that not even a contractual agreement with the farmers will make them stick to cropping sorghum under the project.
- There is also the issue of over-dependence on the weather for production. Therefore, irrigation systems need to be established to counter the vagaries of the weather which sometimes lead to poor yields.
- Higher yielding varieties should be developed and supplied to farmers. Two specific varieties *Kapaala* and *Dorado* have been developed and supplied to farmers. But the challenge is to improve on these varieties further to perform better in the field. For example, the two varieties have good potential for malting, but are highly susceptible to mould development (WASVCDP, 2008). There are other improved varieties besides the *Kapaala* and *Dorado* such as *Naga White* and *Framida*. However, there is need for an elaborate research programme to enhance the genetic constitution of these varieties. The more important challenge is the conservation and utilization of landraces which farmers have cultivated over the years serving a wide range of needs of the local farmers e.g. food types and nutrition, brewing of local beer, early maturity and yield. In one study, 59 neglected sorghum landraces were collected after the harvest, of which farmers classified 19 as early maturing, 20 as intermediate, and another 20 as late-maturing (Buah, et al, 2010). The scientific value of landraces is in the options it offers for breeding for specific qualities, which in the case of the sorghum project is the commercial need of the breweries (e.g. high yields and good malting properties).

Apart from these concerns from the farmers' perspective, all the other stakeholders have issues relating to improving the performance of roles in the value chain and for the success of the project. The scientists in the project would need to be engaged in developing better yielding seeds for the farmers. Currently, the yield average of the varieties being cropped is about 1.5 tonnes per hectare. For the project to be sustained and to make it much more profitable for farmers there is need to increase yields to about 3.5 tonnes per hectare. It appears that much more investment needs to be made in scientific research backing up the project, particularly to develop higher yielding varieties.

In the case of palm oil, improved planting materials are available in the Oil Palm Research Institute. There is a fairly good supply of seedlings and germinated seeds. The challenges however are in the organization and management of the farmers. The litigation over land and the complex property inheritance traditions in some of the communities also present challenges. Of course there are national laws pertaining to inheritance and property ownership. But in the rural areas where traditions hold strongly, enforcing national laws are difficult.

5.9 MAIN PROBLEMS ENCOUNTERED IN MAINTAINING PARTNERSHIP RELATIONSHIPS AND ACTIONS TAKEN TO ADDRESS THEM

There is no problem in maintaining the relationships in the project as the partners get along well and the project is on track. However, the public

sector officers indicated that the key challenge was the low motivation for them. Unlike other projects where additional top-up allowances are regularly paid to the project officers in the sector ministry, they were not getting anything in the BOPOP.

The main problem of the CCP is how to work effectively with numerous government departments and private partners with different capacities and in different locations and still be able to deliver uniform outcomes. Apart from the core partners, there are numerous district and community level partners all of which have to work for a common goal. This problem is being addressed by instituting joint planning, implementation, monitoring, and evaluation. Roles are planned together but not shared and unified training is occasionally given to all the implementers and other partners.

A major problem is also the master-servant relationship approach adopted by some partners. The continued dialogue on issues that generate misunderstanding has been the strategy adopted by partners to maintain good relationship.

With regard to the way forward for the stakeholders in the Allanblackia project, an Officer of TechnoServe noted that they intend to move beyond dealing with focal persons to reaching out to the communities in the second phase. The mobilization of communities has become crucial to the project and all efforts are being directed to this in this newly launched phase.

The Project Officer of IUCN was confident that the Allanblackia oil would provide an additional source of income to farmers. It noted that about 95 percent of Allanblackia plants were found on cocoa farms and cocoa farmers leverage on that to earn more income. In the long run, the project would help in biodiversity conservation.

Chapter 6
Performance and development outcomes

6.1 INCREMENTS TO INVESTMENT, REVENUES, RATES OF RETURNS TO INVESTMENT, AND EMPLOYMENT

Development outcomes usually are directly related to performance in the implementation of the projects. Generally the performance and development outcomes of the selected cases are positive within the range of "average" to "good". For the Ghana Rubber Project the development outcomes are in line with the project objectives. Clearly, the project is an ambitious one with social and economic goals interplaying. It is said to be achieving positive results. Over 6 000 farmers are said to have gained employment through the out-grower scheme. About 80 percent of the income from the tree farming is estimated to remain in the project areas. In terms of addressing gender issues, about 30 percent of the farmers are women, which is a fairly significant percentage given the fact that traditionally, cash crop farming is the preserve of men. According to the sources, the export of rubber for 2006 to France came to 13 618.36 tonnes, increased to 15 318.16 tonnes in 2007. This however decreased to 14 132.12 tonnes in 2008 as the old rubber trees were cut down to make way for new plantations.

The Allanblackia project also has already seen some concrete outcomes. Overall, what has been achieved in the mobilization of the communities is quite impressive even though it remains below the threshold for full-scale commercialisation of Allanblackia. So far between 3 000 and 6 000 farmers have been collecting seeds from the wild. Over 200 focal people are buying from about 200 communities spread out in parts of the Ashanti, Central and Western regions. In 2008, 150 tonnes were collected. Farmers acknowledged the contribution it is making to their livelihoods as additional income sources. Thus, the eventual outcome of the partnership promotes development and helps alleviate poverty in the catchments areas.

For the CCP, the productivity of cocoa has not been assessed scientifically since the commencement of CCP but farmers are saying that they have seen improvement in yields. The PLA sessions have enhanced the leadership capacities of community members such that now, they are conscious of the problems in their communities and can identify and mobilize resources to support their own development. Now they provide support for social services such as hand-dug wells. Communities have physical access to certain social services and other communities are also learning and replicating the same projects in their communities.

CCP has already spent US$4.6 million with the main goal of promoting sustainable livelihoods, increasing crop yields by 20 percent by 2012 and 100 percent by 2018, creating new sources of income in 100 cocoa-farming communities, and addressing key issues affecting the cocoa sector, including child labour, health, gender diversity, and environmental sustainability. The CCP hopes to increase cocoa productivity from current levels of 400 kg of cocoa per hectare to 1 000 kg per hectare by 2018. The CCP's investment in Fairtrade cocoa production could help the Cadbury generate as much as US$350 million per year in additional revenues.

In terms of the increments in investments, revenue, and returns in the BOPOP, there is little to report on as the gestation period for the palm oil takes a while. For that matter, harvesting has not started to realise the full benefits. Nonetheless, it has the potential of cutting down the amount of imported palm oil in to the country. Palm oil is estimated to be the source of income to over 9 000 people in the catchment area and ensuring incomes for these people is crucial. On the other hand, the rate of return on investment is 20 percent for the rubber project and so far the employment generated extends to 20 000 families.

In the case of the sorghum project, investment in developing the supply value chains seems to be profitable. An evaluation of the project indicates that the economic incentives for the stakeholders are "real and perceived." The project is making a positive impact on the lives of the farmers. For the service providers, there is increased business. Credit recovery is high with low risk of default. The breweries have access to a reliable supply of a major raw material locally at a competitive rate (WASVCDP, 2008).

However, the sustainability of the project is key. Farmers need to be assured of a ready market and

the breweries need to strengthen the value chain components responsible for the purchase, processing and transportation of the sorghum from the distant farms to the breweries. Sorghum is a food crop and there is market in the localities for consumption. Sorghum as a cash crop gives the best returns on the stakeholders' investments.

6.2 STIMULATION OF ADDITIONAL AGRIBUSINESS INVESTMENT

Additional investment needs to be made in evacuating farmers' produce to the factory. Also there is need to hire transporters to supply planting materials and fertilizer to farmers. For CCP, there is need to strengthen farmer and community groups so that they can use innovative means of funding and technical support.

Farmer groups have been sensitized, through business training, to view cocoa farming as a business and invest their own money into it. Nevertheless, more has to be done. Indeed in the selected PPP cases, various components of the value chain stimulated additional agribusiness investment. However these are still within the design of the cases. For example the investment in organising clusters of sorghum farmers to grow and produce sorghum for the project is still within the scope of the project.

The CCP is a clear example of additional agribusiness investment. Currently, the CCP has evolved into the New Cocoa Extension Service. It was launched in March 2011 under the auspices of the COCOBOD. Initially, only Cadbury participated. Currently, Kuapa Kokoo and West Africa Fair Fruits have joined the partnership, making additional business investment in providing extension services to improve the cocoa industry. Kuapa Kokoo is noted for organic cocoa, which sells at a higher price than the normal cocoa in the world market. Joining the partnership enabled the company to strengthen its niche.

6.3 PRODUCT OR PROCESS INNOVATIONS INTRODUCED

The product or process innovations coming with the BOPOP arrangement is that, the following have been introduced by the project arrangements:

- The reinforcement of the use of the tenera variety for seedlings;
- The involvement of the private sector (TOPP) in the payment of the cost of extension;
- That the Government creates roads to the farm yards; and
- The existence of ready market for farmers.
- For the rubber project the innovations are:
- Improved and high yielding planting materials;
- New fertilizer application regimes;
- Weed management;
- New stimulation number of rounds to improve yields;
- New approach to extension service delivery.

For the CCP, the main innovation is the new cocoa extension services programme. Under this programme, COCOBOD is in partnership with licensed cocoa buying companies (Amanjaro, West Africa Fair Fruit and Kuapa Kokoo) and Cadbury – these companies provide efficient extension services. District and community level facilitators are being trained to support extension agents in the districts and communities. Another innovation is the use of PLA sessions to sensitize the communities to change their mind-set about community development.

For Allanblackia, the use of the Allanblackia oils in food industry is in itself an innovation. For Allanblackia to become another cash crop is also a major innovation. It comes with the evolution of various actor groups collecting the seeds from the wild or planting in the manner of cocoa, purchasing and semi-processing for the transnational corporations such as Unilever.

The sorghum project focuses on a gamut of issues along the sorghum value chain. Previously, the processing and market was not readily available for the farmers. To increase the standard and productivity, a lot of measures were introduced. These measures include: involving input dealers, research centres financial institutions and nucleus farmers to maintain standards and harmonize the sector. The farmers and the research institutions mutually benefit from each other. The research institutions developed viable seeds for farmers and farmers learned about some technologies that they would not have otherwise known. In effect, the right agronomic practices are adhered to, and the right seeds are sown – this go a long way to enhancing the final product for the benefit of industry.

6.4 RISKS MITIGATED OR CREATED FOR BENEFICIARY AGRIBUSINESS ENTERPRISES

The main risk that cocoa farmers have is low productivity due partly to lack of technical support by extension personnel. Secondly, the migration of youth to urban centres is a threat to the cocoa sector because the current crop of farmers is ageing. Through the CCP, extension delivery has been improved with the involvement of community level facilitators. At the community level, there is increased youth participation right from PLA sessions to community

projects. Youth participation is being translated into participation in farming.

Risk mitigation has come through the following in the case of the rubber project - a guaranteed market, technical support, transparent price mechanisms, and processing farmers' produce. In the case of the Allanblackia project, Unilever provided a guaranteed market and there were buyers going to the villages to buy the produce. A similar arrangement was also there for sorghum with the nucleus farms serving as the focal points of supply to the breweries.

6.5 HOW DID TRADE, TAX, LAND AND OTHER POLICIES AFFECT BENEFITS – WHAT HELPED, WHAT HURT?

One key principle that guided the implementation of the FASDEP II is inter-sectoral collaboration and government partnering with the private sector and civil society to implement and review policies and programmes. Public-private partnership PPP has been identified to be limited in the agricultural sector. Therefore, the FASDEP II states that government will use PPPs to increase investments in the agricultural sector and to build capacity of operators to complete effectively in the global market.

The Government will ensure sustained funding of agricultural research by partnering with the private sector and NGOs to identify and adopt innovative approaches to agricultural research funding and commercialization. In addition to the private sector, the Ministry of Food and Agriculture will also collaborate with Ministries, Departments and Agencies (MDAs) such as Ministry of Trade and Industry to attract private sector investments. The vision of the extension policy is to have an efficient and demand-driven extension service through partnership between the government and the private sector.

Ghana is preparing a National PPP Policy to guide and encourage public-private ventures. The Government would like to use PPPs to address funding challenges given the inadequacies of national resources mobilized through the traditional sources of tax revenues, domestic borrowing, external loans, foreign grants, and donor support.

Thus, the Government's interest in the PPP has, for instance, enabled the CCP to engage ministries and public departments in the cocoa partnership. For the rubber project, no taxes are paid so it is a form subsidy. Also the project benefits from the Government's fertilizer subsidy to farmers. The overall legislative and regulatory frameworks pertaining to accessing international funding, project implementation and institutional collaboration had a positive effect. In the case of the rubber project, because the contract between farmers, GREL and banks is a legal document, each party has to respect the terms of contract. In the process there are restrictions, which some parties find disadvantageous (e.g. farmers having to plant a given plantation size and being confined to that land).

The land issue also comes up in the case of Allanblackia. The existing regime of farmers who are already cultivating their lands makes it fairly easy for those deciding to go into Allanblackia production to obtain seedlings and plant. However, the land tenure system prevailing in Ghana does not lend itself to large scale commercial farming. Thus, investors interested in buying large hectares of land and growing Allanblackia on a large scale cannot easily get land. Even when such land is obtained, there is a high probability of litigation following even when there are documents granting ownership because the original ownership is often not clearly proven.

A 10-year tax break has helped. This tax break is similar for the palm oil project. Farmers are guaranteed the ready market for their produce. This serves as a motivation for them to cultivate more and increase productivity. It also has the possibility of reducing the oil deficit of the country. The expected oil production is 36 000 FFB (Fresh Fruit Bunch).

In the case of Allanblackia, on the back of the Technoserve report highlighting problems of farmers getting credit, the IUCN intends to broaden their mandate to include linking farmers with banks to enable them access loans easily.

For the sorghum project, the farmers have not utilized the Government's policy of mechanized centres. The tractors in the catchment areas are very few and are not able to cultivate for the increasing number of sorghum farmers. Poor timing in cultivating the sorghum farms leads to poor yields. The policy of subsidizing fertilizer to farmers has many challenges. Fertilizer sent to farming communities is often not useful. The fertilizer comes to the communities too to be useful.

6.6 HOW DID LEGISLATIVE AND REGULATORY FRAMEWORK AFFECT BENEFITS – WHAT HELPED, WHAT HURT?

On the issue of legislative and regulatory framework, the COCOBOD is the public institution that controls cocoa production and marketing in Ghana. The functions of COCOBOD as described in the Ghana Cocoa Board Law, 1984, (PNDC. L.81) are to purchase, market, and export cocoa produced in Ghana and to secure the most favorable arrangements for the purchase,

inspection, grading, sealing, certification, sale and export of cocoa. Such cocoa must be graded and sealed under the provisions of the Cocoa Industry (Regulation) Consolidation Decree, 1968 (NLCD. 278).

With these objectives, COCOBOD has been keen on improving cocoa production and therefore their role in the CCP has been enormous. Because of government's interest in the cocoa sector, it has been easy to engage public institutions in the partnership and this has translated into the benefits that farmers and communities are getting. The decentralization process has also contributed to CCP's success because projects identified by communities are integrated into the district assembly's development projects and this reduces the degree of bureaucracy that would have existed without decentralization.

Similar observations can be made for the Allanblackia venture. In the project catchment areas, farmers already have their farms made in the Allanblackia growing areas. In Ghana, farmers everywhere are supported with extension services in their respective districts. There are also farmer-based organizations which facilitate the mobilization of farmers. Agricultural research as carried out in institutions such as FORIG and CRIG is also an important feature of Ghana's agricultural sector which helps this project.

6.7 HOW DID AGRICULTURAL SECTOR INSTITUTIONS AND SERVICES (EXTERNAL TO ARRANGEMENTS) AFFECT BENEFITS – WHAT HELPED AND WHAT HURT?

Agricultural input suppliers have contributed immensely in selling cutlasses, normally in large quantities. That is good business. In the case of Allanblackia, there has been the additional agribusiness investment in forming businesses that purchase the seeds. There are also transporters (even if some already are in business, now they have more business).

Processing the Allanblackia seeds is also an agribusiness that has emerged. In the CCP, the Ministry of Food and Agriculture (MOFA) extension staff at the district and community levels has been offering extension services and are assisting the new cocoa extension staff to train community extension agents and other volunteers in providing extension services. Non-governmental organizations such as the Millennium Village Project and Nature Aid Ghana have been engaged by the implementation partners to offer various services.

6.8 IMPROVED PERFORMANCE IN MARKETS (PROFITABILITY, MARKET SHARE)

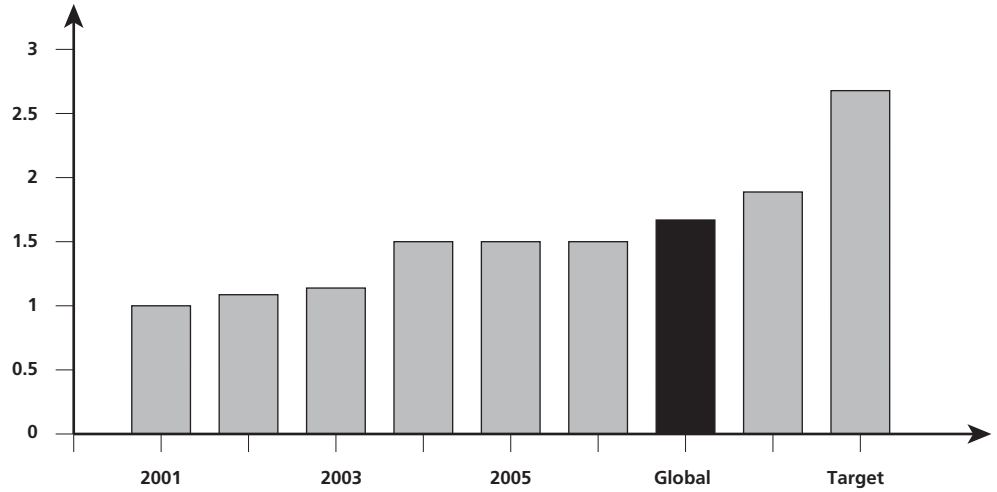
In the case of the rubber project's improved performance, profitability has improved by 30 percent as there has been an increase in rubber prices on the world market. Productivity on farms has improved due to technical support given to farmers by GREL. On the issue of expectations, the key informants expected a great impact from the rubber project on their lives. They hoped to see farmers being able to send children to school, build decent houses, afford good medical care, and are able to access extra credit from the banks for other investments. Such expectations exist in all the cases studied.

For the CPP, the productivity of cocoa has not been assessed scientifically since the project commenced. However, farmers say that they have seen improvement in yields. The PLA sessions have enhanced the leadership capacities of community members such that now, they are conscious of the problems in their communities and can identify and mobilize resources to support their own development. Now they provide support for social services such as hand-dug wells. Communities have physical access to certain social services and other communities are also learning and replicating the same projects in their communities.

The CCP has already spent US$4.6 million with the main goal of promoting sustainable livelihoods, increasing crop yields by 20 percent by 2012 and 100 percent by 2018, creating new sources of income in 100 cocoa-farming communities, and addressing key issues affecting the cocoa sector, including child labour, health, gender diversity, and environmental sustainability. Awareness has been increased about key issues such as child labour and gender equality through education and empowerment programs. Currently, about 30 percent of partnership communities are run by women. The CCP hopes to increase cocoa productivity from current levels of 400 kg of cocoa per hectare to 1 000 kg per hectare by 2018. The CCP's investment in Fairtrade cocoa production could help the Cadbury generate as much as US$350 million per year in additional revenues.

Figure 1 shows the performance of the sorghum project over a five-year period. From less than 1 MT/ ha in 2001, the yield increased to about 1.2 in 2003 and then to about 1.5 in 2005. It is currently about 1.8 MT/ha and surpasses the world average of about 1.6MT/ ha. However for the sorghum project to become sustainable and profitable, it has to achieve a target of about 2.5MT/ ha. All stakeholders have a part to play in achieving the target.

FIGURE 1
Ghana yields of sorghum (MT/ha)



Source: Technoserve, 2010

The scientists need to work on new varieties, farmers cropping according to good agronomic practices and Guinness Ghana ensuring that there are no bottlenecks in the uptake of the sorghum.

6.9 INDICATIONS OR EXPECTATIONS OF FORWARD AND BACKWARD LINKAGES

There is limited scope for forward and backward linkages in the rubber project. For the palm oil project, there are some forward and backwards linkages especially between the out-growers and the palm oil company BOPP. Some of the local community members could obtain some of the raw material for micro and small scale extraction. Some use the palm oil to produce soap. On a much larger scale, the oil produced by the oil palm company feeds into the Lever Brothers soap manufacturing. In the case of the sorghum project, there are evident backward and forward linkages in the activities of the farmers. Inputs and research support is provided by the input dealers and SARI respectively. The impact of these services is an enhanced product which is sold to Guinness Ghana through agents. In other words, the fund of the project is provided by Guinness Ghana and implemented through different stakeholders and Guinness Ghana helps buy the enhanced produce from the farmers. The CCP also presents the scope for forward and backward linkages.

6.10 INDICATIONS OR EXPECTATIONS OF IMPROVEMENTS IN RURAL INCOME AND EMPLOYMENT

There is visible improvement in the number of people employed in implementing the palm oil project. There is the likelihood of appreciation of income of the people involved once they start to harvest, if the expected oil production is 36 000 FFB. The expected long term societal and developmental impacts are to improve on the livelihood of the people involved in the catchment areas. The people expect that the project will reduce poverty among the farmers and create employment for the youth living in the catchment area.

The Ministry of Food and Agriculture (MOFA) extension staff at the district and community levels has been offering extension services and are assisting the new cocoa extension staff in training community extension agents and other volunteers to provide extension services. Increased access to extension services is expected to result in improved cocoa yields and hence more income for farmers.

The community extension agents are also being paid by CCP hence the partnership is contributing to job creation. Farmers have been given business training on how to invest in other income generating ventures. The community development projects provide jobs for com-

munity members who provide special services. These expectations are realistic judging from the commitment and investments being made into the partnership activities.

Under the sorghum project, there are significant indicators that the project has made a great impact on the lives of the rural poor engaged in sorghum farming. Sorghum production is an alternative if not main source of income to many farmers under the project. Farmers are guaranteed markets for their produce, which serve as a source of motivation to farm more. The increasing numbers of farmers venturing into the sorghum farming coupled with the expansion of sorghum farmlands in the catchment areas attest to the benefits that accompany sorghum farming.

6.11 MEDIUM-TERM PROSPECTS FOR COMMERCIAL VIABILITY AND SUSTAINABILITY

On the question of what the key informants consider to be the medium-term prospects for commercial viability and sustainability, there are salient points to note for the CCP. The partnership has hired 17 community officers to offer free training on farming practices and access to reduced price farming inputs in the 100 partnership communities. The technical assistance provided by the officers is expected to yield significant increases in productivity. Fair trade-certified cocoa farmers were given an extra £500 000 (US$770 000) premium, to be invested in community development activities. The PLA sessions have enhanced the leadership capacities of community members such that now they are conscious of the problems in their communities and can identify and mobilize resources to support their own development. Now communities provide support for social services such as hand-dug wells. Communities have physical access to certain social services. Other communities are also learning and replicating the same projects in their communities. Under the CCP bicycle project, school children have been given bicycles and this has boosted children's interest to be in school.

Under the BOPOP, 3 000 ha of oil palm are supposed to be cultivated in the Buabin and surrounding villages in the Central Region. Palm oil farmers would benefit from training on agronomic practices to improve productivity. They will also benefit from applied research of the Oil Palm Research Institute (OPRI). Another return of the project is the expected improvement in the road network of the area and the benefit of a policy on the oil palm industry.

6.12 EXPECTED LONGER-TERM SOCIETAL AND DEVELOPMENTAL IMPACTS

Generally, there were high expectations for longer-term societal and developmental impacts. On the part of the Allanblackia project, the expectations of the key informants are the improvement of the living standards of the people in the catchment areas, improvement in the forest cover and the enhancement of biodiversity conservation.

For the CCP, the expectations of the key informants are similar. It is expected that the increased access to extension services will result in improved cocoa yields and hence more income for farmers. The community extension agents are also being paid by CCP and hence the partnership is contributing to job creation. Business trainings have been offered for farmers to invest in other income generating ventures. The community development projects provide jobs for community members who provide special services. These expectations are realistic, judging from the commitment and investments being made into the partnership activities.

In terms of societal and development impacts, the long-term expectations are to see effective farm management practices that will culminate into higher cocoa productivity and improved income of cocoa farmers. Youth participation in community development, cocoa farming, and farming as a whole are expected to increase as well as household income through additional income-generating activities. The informants expect to see improved environmental management practices, capable community-based organizations, active linkages between communities and district assemblies, and policy and practice frameworks and organizational structures that support thriving cocoa communities. The benefit of the sorghum project has a spill-over effect in terms of societal and developmental impact. If farmers make enough income, it reflects on general living standards, which also is reflective of the society.

The other cases have also shown important societal and developmental impacts. For example, the Allanblackia project has contributed to creating livelihoods in the forest communities of seed collection and planting. There is a strong indication that Allanblackia will evolve into another cash crop for the villages. The rehabilitation of the rubber industry will also create jobs in the respective districts.

Chapter 7
Appraisal and conclusion

7.1 OVERALL EFFECTIVENESS OF THE PPP ARRANGEMENTS

In conclusion, the PPP arrangements were initiated to improve the respective agribusiness domains of the PPPs. In the case of rubber, it rehabilitated rubber plantations. For palm oil, it increased production. CCP also aims to enhance cocoa production. Sorghum and Allanblackia have aimed at developing new supply chains for the industry with the latter being the more challenging since the Allanblackia seed is previously uncultivated. At present, the arrangements are generally effective in achieving the stated purposes. There are adequate financial resources to enable the specified activities to be carried out. The institutional frameworks for implementating the partnerships are appropriate with the partners and other actors playing their assigned roles.

Nevertheless, the previous sections have highlighted challenges and problems which need to be addressed to enhance effectiveness. For example, in the rubber project there have been problems of land litigation and difficulties in getting farmers to adhere to technical advice and bureaucratic practices in the public institutions. Some of these issues surface in some of the other partnerships as well. MOFA plays an oversight role in the oil palm project and the project implementation has to contend with the bureaucracy that characterizes the civil services. But the fact that COCOBOD quite efficiently handles the CCP from the public sector means that bureaucracy does not need to be an issue in the public sector.

It is difficult for farmers' to heed technical advice – Ghana is a country of relatively high illiteracy rate of about 36 percent. However, it is not only the issue of illiteracy and farmers' low educational levels. It also has to do with farmers' limited resources and poverty. Even when agricultural inputs of fertilizers and chemicals are supplied, sometimes farmers are tempted to divert such inputs into other farming ventures or sell them to other farmers. In some cases, monies from such sales meet emergency situations at home.

The problem of adhering to technical guidance and using supplied agricultural inputs can be addressed by strengthening the monitoring functions on the farms. Ultimately, farmers will appreciate the value of strict adherence to technical direction. Actually, this is happening in the cocoa industry. More cocoa farmers are listening to technical advice and using agricultural inputs of fertilizers and pesticides effectively in their farming. Currently, the 2011 cocoa production is expected to reach a record total tonnage of more than 800 000 metric tonnes. This is an indication that the national goal of producing one million metric tonnes of cocoa in a year can be achieved. This clearly justifies the emphasis on extension services in the CCP.

The development outcomes as detailed in Chapter 6 also provide substantial evidence of the progress being made in implementing the partnerships. Farmers' employment has increased significantly as well as their production. In the case of rubber, over 6 000 farmers have gained employment through the out-grower scheme. About 80 percent of the income from the tree farming is estimated to remain in the project areas. Women's employment is also improved with an estimated 30 percent of the farmers being women. Given the cultural norms which virtually dissuade women from participating in cash crop farming, the percentage is very encouraging. Rubber exports are also increasing as expected with new plantations being developed. The palm oil and rubber projects have strengthened out-grower schemes as outlined in the national agricultural policy. The partnership arrangements are therefore also important in achieving national policy objectives.

The other projects have also shown similar positive outcomes. In the Allanblackia project between 3 000 and 6 000 farmers have been collecting seeds from the wild and over 200 focal people have bought from about 200 communities in the catchment area of the project. Even if this is below the threshold, it is a significant outcome and contributes to achieving the project's goals. The question, however, is what has to be done to sustain or even improve the momentum of the partnerships and amplify the impacts. The answers comes through examining the lessons learned and understanding why things went the way they went.

7.2 KEY ISSUES TO BE CONSIDERED IN DEVELOPING AGRIBUSINESS PPPS

As elaborated in national policy documents, agribusiness is one critical vehicle for exploiting Ghana's natural resource endowments and human capabilities. What the Ghana study has shown is the vital role that agribusiness PPPs are playing – or can play – in addressing various national socio-economic aspirations. Each of the PPPs have illustrated how their implementations have contributed to meeting both business and government interests. Business interests may be purely economic and focused on ensuring the sustainability of the respective economic activities (i.e. ensuring that there is a sustainable supply line for raw materials). Government, on the other hand, has key interest in bringing development into all communities especially those in deprived and marginalized parts of the country. The agribusiness PPP cases in this study have shown that they can cater effectively to both interests.

Ghana needs to take the PPP model in agribusiness more seriously. It has great potential to improve economic activities. Risk mitigation comes with the investment in the organization of people and infrastructural facilities. The mobilization of people at the primary end of the value chain is crucial for the success of the PPP.

7.3 LESSONS LEARNED THROUGH SUCCESS FACTORS AND PITFALLS TO AVOID

Indeed some lessons from the case studies stand out clearly. First, people in the rural communities can be mobilized into appropriate labour force groups to undertake production activities. However, when that is done, the necessary compensatory and incentive packages have to be effectively worked out. The right incentives both in cash and in kind need to be put in place to solicit the needed response. The CCP ensures that the communities are provided some needed common amenities such as good sources of drinking water and the farmers are motivated to participate in the programme. The extension officer is paid better than the counterparts outside of the programme and given a means of transportation to enable him or her perform assigned duties. The emphasis on incentives has been effective in achieving the programme objectives.

Second, in developing agribusiness PPPs, the key issues to consider are the linkages in the value chain and the definition of roles and functions of the participating partners. In each of the PPP cases, there is an elaborate and documented institutional arrangement to ensure that roles are performed effectively. The business actors have effectively linked with the public actors in the respective ministries (specifically MOFA) and other government establishments. More importantly, there have been extensive negotiations among the partners from the conceptualization of the partnerships to their implementations. The substantive assignment of roles on the basis of competence and capacity is crucial for effective performance.

Third, a key success factor in these PPP cases is the availability of the investment funds. The millions of dollars invested in these ventures enabled the goals to be achieved – rehabilitation of the rubber plantations, production of sorghum and cocoa, and the development of Allanblackia as an economic crop. Private sector interests and more specifically business interests are important drivers in pursuing the partnership ventures. It reflects in the organization at the production level in the rural communities all the way to the marketing end. Therefore in all PPP cases, even where there is development objectives, business principles have to be emphasized and dominate.

Fourth, the public institutions have shown the readiness of public establishments to partner with the private entities in developing and implementing PPPs. COCOBOD is one of the largest public institutions – if not the largest – in Ghana. Its partnership with Cadbury has been effective in addressing concerns in the cocoa industry such as the need for extension services, the need to attract youthful labour into cocoa farming and the need to provide social amenities. Unilever's partnership with public research institutions and NGOs in the Allanblackia project enables important innovations to be made. However, public institutions need to be aware not to get too bureaucratic.

The fifth lesson relates to the specific linkage to scientific and knowledge institutions or expertise in the PPP cases. It is an important factor in making the PPPs successful. Research support for Allanklackia and sorghum provided the vital inputs for implementation. Although the role of such institutions was not amplified in the case of rubber, there were still the technical services extended to the out-growers pertaining to the agronomic practices and farming systems. This is an important sixth lesson.

The seventh point relates to the need for continuous education and dialogue with stakeholders beyond negotiation and conclusion of agreements. For example, the sorghum project has to battle with

the price differentials coming with supplying to the local food markets and the industrial raw material market. The latter offers a guaranteed but lower price. But this situation arises only when farmers do not factor in the inputs given by the project at the production stages. Institutionalized dialogue and education of the critical stakeholders need to be sustained throughout the duration of the partnership.

The need for continuous education and dialogue also relates to the broader issues of accountability and transparency without which trust cannot be built and relations between different stakeholders suffer. The nucleus farmer in the village need to trust that at the end of the season, the contract he or she has signed is binding and his or her produce will be purchased. The buyers also need to trust that the suppliers will not default especially where inputs have been made into the production activities. It appears that building trust between the partners should be given special attention in PPP arrangements.

7.4 RECOMMENDATIONS TO IMPROVE PERFORMANCE

It is quite clear from the Ghana study that agribusiness PPPs will need to establish a specific focus and efforts in the national development strategies. The five cases analyzed give a good indication that there is potential for successful agribusiness PPPs. For example, the Allanblackia venture shows that investors can take justifiable risks and there is the enabling environment to support such ventures. The cocoa partnership also shows that public institutions are very open to business collaborations that offer a win-win situation. The rehabilitation of the rubber industry and the revamping of the palm oil industry in the Buabin and its surrounding areas are good indications that for the agricultural commodities which Ghana has comparative advantage, PPPs can be successfully carried out.

Nevertheless, there are certain crucial factors which need attention. The general contextual constraints in developing businesses hamper PPPs as they do non-PPP businesses. For example, the limitation of support services (e.g. tractor services and agricultural inputs) such as being experienced by the sorghum farmers in the northern parts of the country, and the difficulties in reducing production costs on the part of farmers and infrastructural limitations (e.g. poor feeder roads), all contribute to difficulties in carrying out business. Public sector interest and support such as shown in the cocoa project, the rubber and palm oil projects show that institutionally, partnerships can be forged. However, the motivation of the public officers in these institutions and the minimization of bureaucracy are crucial for total success.

Given the conclusions, below are the recommendations:

National efforts to promote agribusiness PPPs

There has to be a national strategy to promote agribusiness PPPs. The sectoral policies mention PPPs as mechanisms for attaining agricultural goals and objectives. However, PPPs have their own features and requirements. In this regard, there is justification for formulating the National PPP Policy. However, the National PPP Policy only highlights the approach to developing partnerships mainly in infrastructural development.

The land tenure system is a critical constraint in initiating and implementing agribusiness PPPs. Given the problems of land litigation which has constrained the smooth implementation of some the PPPs, Ghana needs to develop land banks which can be used to promote agribusiness PPPs. Below are specific issues that need to be tackled in the studied agribusiness PPPs.

Allanblackia

- Novella Development Ghana should carry out more sensitization forums in the relevant communities to encourage more people to engage in Allanblackia collection and planting to ensure the sustainability of the industry and for the farmers to exploit the unlimited potential demand of the seeds by Unilever.
- The planting of Allanblackia should be up-scaled into a major national scheme making use of unemployed youth through the National Youth Employment Programme. This is important given the fact that it will contribute to conservation and sustainable management of biodiversity resources in the respective geographical areas.

Buabin Oil Palm Project

- The potential benefits to the farmers are real and efforts should be made to accentuate them. The youth in the project area can be encouraged to make a good living from the industry.
- There is need to develop the forward and backward linkages more effectively. Local industries could be enhanced through capacity building and innovation.

Cadbury Cocoa Partnership

- Efforts should be made by the Cocoa Swollen Shoot Disease Control Unit to mainstream the CCP's mode of operations and activities into COCOBOD's programmes and to promote ownership of the activities by the cocoa farmers.
- The CCP should be collaborating with the NYEP to sensitize the youth to the benefits of engaging in cocoa farming. The NYEP can have a special programme designed for the youth with interest in cocoa farming.

The Rubber Project

- The project should grow to increase the output of rubber.
- The local authorities need to be engaged more in the enhancing the impact of the project in the areas.

Sorghum Project

- The role of SARI needs to be increased with further development of other improved varieties of sorghum for farmers. SARI may be engaged in a contract research to develop new higher-yielding varieties which can withstand the biotic and abiotic stresses of the Northern Region.
- Regular and institutionalized dialogue among the stakeholders will contribute to achieving the goals of the project.

Generally, given that there are opportunities to recreate these projects within the country and elsewhere, it is necessary to carry out more comprehensive studies on these country experiences. It is recommended that this study should be a springboard for further studies. Agribusinesses must be enabled to grow and develop beyond their present levels. To this end, there is need to formulate strategies specific to the factors that will promote growth.

Finally, Ghana's attainment of middle-income status is both an achievement and a challenge. The current national vision of attaining US$3 000 income per capita from the present level of just over US$1 000 by 2020 shows that people have high expectations. Even currently there is the general consensus that the socio-economic conditions prevailing in the country need to be improved significantly to reflect middle-income status. In this regard, exploiting the natural resource endowments and mobilizing the productive capacity of the people through mechanisms such as the partnerships studied, are very crucial. Without doubt, such partnerships have the potential to accelerate agribusiness investment and development.

References

Al-Hasaan R. M., Sarpong D. B., & Mensah-Bonsu K. 2006. *Linking Smallholders to Markets.*

Attipoe L., van Andel A. & Nyame S.K. 2006. The Novella project: developing a sustainable supply chain for Allanblackia oil. pp. 179–189 in Ruben R., Slingerland M. and Nijhoff H. (eds) *Agro-food chains and networks for development*. Springer, Amsterdam, The Netherlands.

Bettignies, J. and Ross, T.W. 2004. *The economics of public-private partnerships. Canadian Public Policy* 30 (2), pp.135 – 154.

Buah, S.S.J., Huudu, A.B., Ahiabo, B.D.K., Yakubu, S. & Abu-Juam, M. Farmer Assessment, Conservation and Utilisation of Endangered Sorghum Landraces in the Upper West Region of Ghana, *West African Journal of Applied Ecology*, Vol. 17, pp. 11 – 25.

Business Call to Action. 2010. Cadbury Coca Partnership: Improving Productivity and Farmers Incomes available at http://www.businesscalltoaction.org/wp-content/files_mf/1286825168BCtACadburyCocoaPartnershipCaseStudy.10.10.2010ForWeb.pdf accessed on 30 January 2011.

Clark, N.G., A.J. Hall, R. Sulaiman V., & G. Naik. 2003. Research as Capacity Building: The Case of an NGO Facilitated Post-harvest Innovation System for the Himalayan Hills. *World Development* 31(11): 1845-1863.

Essabra-Mensah, E. and Leslie Dwight Mensah. 2011 Economy still middle-income...despite new population figures, *Business and Financial Times*, Issue 1204, Accra.

Essegbey, G.O. 2009 Chapter Two – Ghana: Cassava, Cocoa and Poultry, in Kurt Larsen, Ronald Kim and Florian Theus (Editors), *Agribusiness and Innovation Systems in Africa*, The World Bank, Washington D.C., pp. 63 – 87.

FAO, 2008. *Market-oriented agricultural infrastructure – an appraisal of public-private partnerships.* Agricultural Management Marketing and Finance Occasional Paper 23. Rome.

Ghana Statistical Service, GSS. 2009. Ghana Demographic and Health Survey, Accra, Ghana.

Government of Ghana. 2010a. *An Agenda for Shared Growth and Accelerated Development for a Better Ghana – the Coordinated Programme of Economic and Social Development Policies (2010 – 2016),* Presented by H.E. Prof. John Evans Atta Mills, President of the Republic of Ghana to Parliament, Accra.

Government of Ghana. 2010b. Budget Statement and Economic Policy for 2010 Fiscal Year Presented to Parliament on Wednesday, 18 November, 2009, Accra, Ghana.

Holtzman, J., Maxwell J., Crouzet J., & DeSantis D. 1995. *Innovative Approaches to agribusiness Development in Sub-Saharan Africa.* Volume 4: West Africa. USAID Final Report.

Institute of Development Studies and the University of Ghana. 2008. *Sustainable Cocoa Production in Ghana,* Legon and Sussex.

Jamnadass, R., Ian K. Dawson, Paul Anegbeh, Ebenezer Asaah, Alain Atangana, Norbert J. Cordeiro, Harrie Hendrick, Samuel Henneh, Caroline A.C. Kadu, Cyril Kattah, Maha Misba, Alice Muchugu, Moses Munjuga, Lucy Mwara, Henry J. Ndangalas, Christine Sirito Nja, Samuel Kofi Nyame, Daniel Ofori, Theresa Peprah, Joanne Russell, Fidelis Rutatina, Corodius Sawer, Lars Schmidt, Zac Tchoundjeu, & Tony Simons. 2010. *Forests, Trees and Livelihoods,* Vol. 19, pp. 252 – 268.

Kolchanov Oleksiy S. June 2010. Public-Private Partnerships for Agribusiness, *Ukrainian Journal of Business Law*, pp. 31-32.

Larsen, K., Kim, R. & Theus, F. (Eds.) 2009. *Agribusiness and Innovation Systems in Africa.* Washington D.C: The World Bank.

Ministry of and Agriculture, MOFA. 2007. *Food and Agriculture Sector Development Policy (FASDEP II),* Accra, Ghana.

Ministry of Health, MOH. 2008. *Ghana Maternal Health Survey 2007*, Accra, Ghana.

Ministry of Trade and Industry, MOTI. 2005. *National Trade Policy*, Accra, Ghana.

Misbah, M. 2011. Unilever Sustainable Living Plan and Allanblackia Project, Accessed 5 August 2011, http://www.povertyenvironment.net/files/Unilever_Sustainable_Living_Plan_and_Allanblackia_ Project.pdf

MOFA. 2010. *Medium Term Agriculture Sector Investment Plan (METASIP) 2011 – 2015*, MOFA, AccraMytelka, L.K. 2000. Local Systems of Innovation in a Globalised World Economy. *Industry and Innovation,* 7 (1).

Narrod, C., Devesh Roy, Julius Okello, Belen Avendano, Karl Rich & Amit Thorat. 2009. Public-private partnerships and collective action in high value fruit and vegetable supply chains. *Food Policy* 34 (2009) 8 – 15. (doi: 10.1016/j.foodpol.2008.10.005).

National Development Planning Commission. 2003. *Growth and Poverty Reduction Strategy (GPRS II).* Policy Framework. Vol. 1 Accra.

National Development Planning Commission. 2010. *Ghana Shared Growth and Development Agenda (GSDA I) 2010 – 2013*, NDPC, Accra.

National Development Planning Commission, NDPC. 2010. Ghana Millennium Development Goals Report, April, 2000. Accra, Ghana.

Nyame S.K. 2008. Impact of *Allanblackia* nut harvesting on Wildlife: Is the Ecosystem at Risk? *Nature et Faune* 23: 57-58.

Ochieng C.MO. 2007. Revitalising African Agriculture through Innovative Business Models and Organizational Arrangements: Promising Developments in the Traditional Crops Sector, *Journal of Modern African Studies*, 45: 143-169.

Ofori, D.A., Peprah, T., Henneh, S., Von Berg, J.B., Tchoundjeu, Z, Jamnadass, R., & Simons, A.J. (2008). Utility of Grafting in Tree Domestication Programme with Special Reference to Allanklackia parviflora A.Chev. *Ghana Journal of Forestry*, Vol. 23 &24, pp.42-48.

Oyelaran-Oyeyinka, B. and Kaushalesh Lal. 2006. *SMEs and New Technologies – Learning E-business and Development.* London: Palgrave Macmillan Ltd.

Peprah, T., Ofori, D.A., Siaw, D.E.K.A., Addo-Danso, S.D., Cobbinah, J.R., Simons, A.J., & Jamnadass, R. 2009, Reproductive biology and characterization of Allanblackia parviflora A. Chev. in Ghana. *Genetic Resources Crop Evolution*, 56: 1037 – 1044.

Spielman, David J. 2006.. Systems of Innovation: Models, Methods and Future Directions. *Innovation Strategy Today*, 2 (1), pp. 55-66. (e-journal at http://www.biodevelopments.org/innovation/index.htm).

Technoserve. 2010. West Africa Sorghum Value Chain Development Project Guiness Ghana Presentation to Technoserve Staff, M-Plaza Hotel, Accra.

UNICEF and World Health Organization. 2008. *A Snapshot of Drinking Water and Sanitation in Africa; A regional perspective based on new data from the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation*. Cairo, Egypt.

USAID. 2006. USAID/GHANA Strategy Statement, Empowering Ghanaians Through Partnerships to Build a Prosperous Nation. Accessed 23 September 2010. http://www.usaid.gov/gh/index.htm

USAID. 2009. *USAID/GHANA Health Sector Strategy 2009-2013*. Accessed 23 September 2010. http://www.usaid.gov/gh/home/country_context.htm

USAID. 2009a. USAID/Ghana Democracy and Governance Strategy. Update August 2009 Accessed 23 September 2010 http://www.usaid.gov/gh/index.htm

USAID. 2010. USAID/GHANA 2010-2013 *Education Strategy Extension.* Accessed 23 September2010. http://www.usaid.gov/gh/index.htm

Van Wijk, J. and Kwakkenbos, H. 2011. Beer multinationals supporting Africa's development? How partnerships include smallholders into sorghum-beer supply chains. In: Van Dijk, M.P. and Trienekens, J. *Promoting Sustainable Global Value Chains: The Role of Governance, Amsterdam*. Amsterdam University Press, forthcoming. Accessed 5 August 2011, http://research.msm.nl/Document-library/Occasional-papers/Vanwijk-Kwakkenbos-Beer-multinationals-chapter-fin.aspx

West African Sorghum Value Chain Development Project (WASVCDP). 2008. *Mid-Term Evaluation Report*, CFC/FIGG/34, Ghana and Sierra Leone. Accessed November, 2010, http://eucord.org/wp-content/uploads/2011/04/mid-term_evaluation_report.pdf

World Agroforestry Centre. 2011. http://www.worldagroforestry.org/projects/allanblackia/Partner.html accessed 3 January 2011; http://www.flickr.com/photos/icraf/sets/72157624272636656/ accessed 3 January 2011.

World Bank. 2009. World Development Indicators Database, April 2009.

World Bank. 2007. *Enhancing Agricultural Innovation: How to Go Beyond the Strengthening of Research Systems?* Agriculture and rural development series. Washington, D.C.: World Bank.

Appendix 1
List of people interviewed

Name	Institution	Position
1. Mrs. Yaa Peprah-Amekudzi	Kraft Foods (Cadbury Ghana Ltd)	Director, Cadbury Cocoa Partnership
2. Hope Wordu	Kraft Foods (Cadbury Ghana Ltd)	Project Officer
3. Dr. I.D.K. Atokple	Savanna Agricultural Research Institute, CSIR, Nyankpala, Tamale	Principal Research Scientist
4. John Fuseini	Association of Church Development Programme (ACDEP)	Project Officer
5. Dr. Daniel Ofori	Forestry Research Institute of Ghana, CSIR, Kumasi	Principal Research Scientist
6. Alazi Akankagu	SNV	Project Officer
7. Samuel Kofi Nyame	IUCN, c/o Forest Services Division, P.O. Box 527, Accra	Project Coordinator
8. Edu Sarkodie	Technoserve	Project Officer
9. Stephen Mwinkaara	Technoserve	Project Officer
10. Mr. James Larbi	Ministry of Food and Agriculture (MOFA)	
11. Suzzy Wohuno	MOFA	
12 Behrens Ruediger	GTZ/ MOAP Programme	Programme Officer
13. Wandum Mumuni	Alagimtaba Zaara Alantaba Farmer Based Organization, Garu Tinpani District of the Upper East Region of Ghana. The group known as	Sorghum farmer (won 2010 Best Sorghum Farmer, FBO leader)
14. Seidu Dinko	Sungtaaba- Wurikambo Farmer Base Organization in the Garu Timpani District of the Upper East	Sorghum farmer
15. Cornelius Kuukaara	Association of Church Development Project (ACDEP), Tamale	Project Officer
16. Raymond Tuure	West Africa Sorghum Value Chain Development (WASVCDP)	Nucleus Farmer
17. Augustine Sandow	WASVCDP, Jirapa-Nadowli District	Nucleus Farmer
18. Charles Ninwiiri	WASVCDP, Saguli	Nucleus Farmer
19. Ahmed Ben Odum	Rubber Plantation Farmer	
20. William Baidoo,	Coordinator, MOFA, Accra	Coordinator, MOFA
21. Mr. Mawuli Asigbee	Care Ghana, Kumasi	Coordinator (Cadbury Cocoa Partnership
22. Mr. Eugene Ofori-Gyamfi	Cocoa Swollen Shoot Virus Disease Control Unit, COCOBOD, Accra	Liaison Officer
23. Mrs. Rita Owusu-Amankwah	National Programme for the Elimination of Child Labour in the cocoa (NPECLC) sector	Former Programme Manager
24. Mr. Ahmed Ben Odum	Rubber Farmer	
25. Mr. Al-Hassan Awal	Rubber Farmer	

Name	Institution	Position
26. Awulae Agyefi Kwame –Farmer	Rubber Farmer	
28. Mr. Kwame Awuah Asante	Rubber Farmer	
29. Mr Akwasi Owusu	GREL	Director
30. Awulae Agyefi Kwame – Farmer	GREL	Employee

Appendix 2

Summary of interviews with sorghum farmers

RAYMOND TUURE

Raymond Tuure is a nucleus farmer under the West Africa Sorghum Value Chain Development Project. The role of the nucleus farmer is to serve as the liaison officer between the West Africa Sorghum Development Project consortium and the farmers. They impart knowledge gained from training workshops organized by the project team. They also arrange credit for farmers from venture capital. They purchase from farmers on behalf of Guinness Ghana Limited. Savannah Agriculture Research Institute (SARI) provided viable seeds and agronomic practices training. Apart from the Savannah Marketing Company, the other nucleus farmers operate individually. They have therefore come under one umbrella to form a company. Some of the services provided by the nucleus farmers include ploughing, inputs, training and negotiating with farmers on the purchasing price.

Raymond Tuure has six Farmers Based Organizations with membership of about 500 people. The FBO's include the:

- Busa Community FBO from the Upper West region of Ghana;
- Charia Community FBO from the Upper West region of Ghana;
- Oli Community FBO from the Upper West region of Ghana;
- Niiri Community FBO from the Upper West region of Ghana;
- Danafuro Community FBO from the Upper West region of Ghana; and
- Gindabuo Community FBO from the Northern region of Ghana.

When the project started, equipment of the NASIA Rice Company was used to thresh, winnow and store the sorghum seeds. Recently, efforts were made to use abandoned storage facilities of the defunct Farmers Service Company (FASCOM) and small threshers and winnowers were also used in place of the NASIA equipment.

The relationship between the nucleus farmers and the venture capital in the consortium was not good in the previous farming season. A newly formed Board of Directors in the venture capital has shifted its priority area from sorghum to cassava cultivation, making access to finance very difficult for farmers. The consequence of the difficulty in finding finance is that, it has reduced productivity of sorghum in the area.

The direct benefits of the project he claimed were:

- It has increased farmers' incomes;
- The livelihood of farmers has improved; previously farmer with five acres of land could make about GH 1 000 after offsetting expenses.
- The effects of the training offered to sorghum farmers trickle down to other crops. Best practices are applicable to other crops.

Some of the challenges of the project include:

- Limited tractors in the communities which affect the timing of farming, which could expose the crop to drought or flood. Sorghum season is noted to be a short crop and if it is not well timed, it might cause disaster to farmers. Given the high numbers of sorghum farmers, it always difficult to meet the numerous ploughing requests in a short period of time with the limited number of tractors.
- Late arrival of fertilizer inputs affects the crop. Sometimes fertilizers do not arrive early enough to enable farmers apply at the right time.
- High cost of supervision, especially now that there is no support.
- Unreliable weather.

AUGUSTINE SANDOW

Augustine Sandow is a nucleus farmer in the Jirapa-Nadowli District of the Upper West Region of Ghana. He has been working with out-growers since 2008. He offers tractor services to farmers and inputs like fertilizers and seeds. Other services include: threshing for farmers on a special arrangement - ten bags for the charge of one bag. At the end of the farming season, the farmers that benefitted from this promotion pay back in kind (sorghum), and pay

for the rest in cash. Augustine deals with five to six out-grower groups across the Upper West region of Ghana. He personally owns 100 acres of sorghum fields.

Some of the benefits of the project include:

- Farmers are able to access tractors easily because the nucleus farmer provides the service at the right time.
- Farmers benefit from training on agronomic practices and business management.
- There is ready market for produce. This motivates them to produce more.
- Farmers use quality seeds provided by SARI and the Seed Company of Ghana.

The challenges of the project include:

- Difficulties in supervising and recovering of produce to offset expenses incurred;
- Unreliable weather;
- Monopoly position of the sole user – Guinness Ghana Ltd.; and
- Absence of storage facilities.

CHARLES NINWIIRI

Charles Ninwiiri is also a nucleus farmer stationed at Saguli in the Jirapa-Nadowli District of the Upper West region. He provides credit to farmers through the venture capital in the consortium. He also helps train the farmers. He has 103 out-growers under his tutelage who enjoy credit. The farmers based organizations (FBOs) including Vuurong, Nuoriyen, Nontaa, Tietaa, Tudedidona and several others. There are other farmers that farm on their own and do not benefit from the credit facility.

According to Charles Ninwiiri, the production of sorghum is checked. It is largely dependent on sporadic rainfall, which sometimes can have a debilitating effect on the crop. However there have been benefits from the project. Sorghum provides a ready market for farmers, which guarantees farmers of sales. It has provided food for some farmers, as some of the produce is reserved for domestic consumption. The main challenges remain the unreliable rainfall and some logistical challenges with regard to the supply of inputs.

WANDUSIM MUMUNI

Wandusim Mumuni is a leader of a Farmer Based Organization. He is also one of 2010's best sorghum farmers in the Garu Tinpani District of the Upper East Region of Ghana. The group known as Alagimtaba Zaara Alantaba was created in 2008 after two groups (Asuntaba zaari and Adawalitaba zaari) came together. The group has a membership of 23 farmers, out of which four are women. Although the interviewee has had no formal education, he can express himself very well in the English language.

Wandiusim mentioned that he owns four acres of land, which yielded 62 mini bags of sorghum in 2010, an increase from previous years. In 2005 when he cultivated one and a half acres of land, it yielded 12 mini bags. Wandusim attributed the increase in the production to the effect of a credit line given to the Farmer Based Organization by a local bank, the Garu Rural Bank. The loan facility was facilitated by the Garu Presbyterian Agriculture, a faith-based organization.

Wandusim was disappointed in the absence of support from the Government agencies like the Ministry of Food and Agriculture. In the past, they were encouraged by the Ministry of Food and Agriculture to register their group to enable them to benefit from some monetary support, which never happened.

At the moment, there is a ready market from the Savannah Marketing Company. Usually pricing of sorghum is determined much before the farming season begins, by representatives of the marketing company and the farmers.

Wandusim claimed that the main benefit of being a sorghum farmer was that he could sell in bulk to earn enough to pay his children's school fees.

Wandusim identified the challenges of the industry:

- Poor pricing of the product. He felt that the buyers could do better than the current pricing. A mini-bag was sold in 2009 for GH23, and sold for 25 in 2010 in the wake of the country's economic downturn;
- Difficulty in accessing finance to acquire bullocks for ploughing their lands;
- Lack of and high cost of modern agricultural implements like tractors.

SEIDU DINKO

Seidu Dinko is a member of the Sungtaaba- Wurikambo Farmer Based Organization in the Garu Timpani District of the Upper East Region. The group started with a membership of 10 in 2004, but now has 16 members, out of which 7 are women. Members pay monthly dues. The money is saved in the Garu Rural Bank. As a result of the good relationship between the group and the local bank, it is easier to access loan from the bank.

The interviewee mentioned an increase in both

land size and output of sorghum since he started in 2004. He produced 16 mini bags in 2004 when he cultivated only one acre. He has since increased his output to 32 mini bags and to two acres of land.

Seidu claimed that the benefit of being part of the Sorghum Development project included:

- The farmers are better mobilized and trained on some required management practices, to enable farmers meet standards.
- They benefit from the existence of ready markets for their produce. Savannah Marketing Company buys all their produce.
- Because they operate in a group, they are able to access credit facilities from the bank.

Their challenges however are that:

- Farmers use bullocks to till the land. However, there are only a few bullocks and numerous farmers in the community. The scarcity of the bullocks therefore causes untold consequences including delays in planting.
- The marketing company (the Savannah Marketing Company) capitalizes on their sole presence in the market to determine pricing for farmers.

There is no good drinking water. The few bore-holes are situated far from the community.

Country case studies

Africa

AGRIBUSINESS PUBLIC-PRIVATE PARTNERSHIPS

A country report of Ghana

Public private partnerships (PPPs) are being promoted as an important institutional mechanism for gaining access to additional financial resources, sharing risks, and addressing other constraints in pursuit of sustainable and inclusive agricultural development. While various forms of collaboration between the public and private sector have existed for some time, there is limited systematic information available about the current experiences and best practice for using PPPs to initiate agricultural programmes.

In 2010, FAO initiated a series of appraisals of PPPs implemented in 15 countries in Africa, Asia and Latin America. The primary objective was to draw lessons that can be used to provide guidance to member countries on how to partner effectively with the private sector in order to mobilize support for agribusiness development. The outcome of FAO appraisals is presented in this series of Country case studies as a contribution to enriching knowledge and sharing information on PPPs mechanisms for informed decision making on investment promotion for engendering agrifood sector development.

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