



International
Labour
Organization

Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana



Final Report

**International
Programme
on the
Elimination of
Child Labour
(IPEC)**

March 2012

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Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana / International Labour Office, International Programme on the Elimination of Child Labour (IPEC) - Geneva: ILO, 2013. vol. 1.

ISBN: 978-92-2-127142-0 (Web PDF)

International Labour Office; ILO International Programme on the Elimination of Child Labour

ILO Cataloguing in Publication Data

Acknowledgements
<p>This publication was elaborated by Paul Asamoah Kukwaw, Development Consultant, for IPEC and coordinated by Alexandre Soho from IPEC Geneva Office.</p> <p>Funding for this ILO publication was provided by the United States Department of Labor (Project RAF/10/54/USA).</p> <p>This publication does not necessarily reflect the views or policies of the United States Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the United States Government.</p>

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Table of contents

Acknowledgements	vii
Abbreviations and Acronyms	ix
Executive Summary	xi
Introduction	xi
The Research – Scope, Objectives and Methodology	xii
Research Analysis and Discussions	xii
Research Findings and Remedial Actions	xiii
Guide/Toolkits for introducing Practical Measures.....	xiv
Conclusion	xiv
Chapter 1. Identification of practical measures to enhance productivity in cocoa growing communities in Ghana	17
1.1 Introduction.....	17
1.2 Cocoa industry in Ghana: policies and legislative framework, productivity and incidence of child labour in cocoa production	28
1.3 Highlights on programmes for enhancing cocoa productivity in Ghana	51
1.4 Analysis of cocoa farming in target communities and practical measures to enhance cocoa productivity – benefits, challenges and gaps.....	58
1.5 Farmer needs assessment, livelihood opportunities and coping strategies.....	84
1.6 Summary of findings, identified practical measures and recommended actions	94
Chapter 2. Practical guide/training the trainers toolkits for introducing productivity enhancement measures	103
2.1 Introduction.....	103
2.2 Approaches for introducing measures to farmers	104
2.3 Training the trainers toolkits	106
2.4 Recommended approaches for training farmers facilitators.....	108
2.5 Learning sessions: Introducing cocoa productivity enhancement measures to target farmers	111
Conclusion and further work.....	119
References.....	121
Annex: Field protocols (Questionnaires).....	123

Tables

Table 1: List of identified cocoa industry stakeholders for research engagement.....	24
Table 2: Performance of major cocoa varieties	30
Table 3: Cocoa production levels (main & mid-crop) in metric tons	31
Table 4: HAF in crop agriculture.....	38

Table 5: Average farm sizes.....	60
Table 6: Distances to farms by districts	61
Table 7: Average age of cocoa farms in target communities (by Districts)	62
Table 8: Farming tools used by farmers and CRIG recommended tools	63
Table 9: Prevalence of diseases and pests experienced by farmers.....	64
Table 10: General recommendations for child participation in cocoa farming.....	78
Table 11: Summary of identified practical measures to enhance productivity in cocoa growing communities.....	78
Table 12: Type of training received.....	87
Table 13: District split of training	88
Table 14: Summary of specific training and training providers	88
Table 15: Classes of livelihoods identified in target communities.....	92
Table 16: Identified income generating activities in target communities	93

Figures

Figure 1: Sex distribution of cocoa farmers	59
Figure 2: Distances to farms.....	60
Figure 3: Labour used in cocoa farms	61
Figure 4: Farmers perspective of appropriateness of farm implements	63
Figure 5: Knowledge on prevention of diseases	65
Figure 6: Farmers approach in treating diseases and pests.....	66
Figure 7: Cocoa drying days	66
Figure 8: Use of children in cocoa farms: knowledge and perceptions.....	68
Figure 9: Access to water and sanitation (toilet) services/facilities	90

Boxes

Box 1: Cocoa-specific farm activities.....	18
Box 2: Fundamental beliefs underlying the ABA.....	20
Box 3: COCOBOD reports of boom in Ghana's cocoa production for 2011.....	30
Box 4: Excerpts of ILO Conventions No. 182 (C182) and No. 138 (C138)	34
Box 5: Programme objectives of the NPECLC	39
Box 6: Summary of activities and support to the NPECLC	40
Box 7: Institutional perspectives on factors for low productivity in Ghana's cocoa production	48

Box 8: Basic concepts in child labour	50
Box 9: Suggestions on new methods that can be employed to improve productivity.....	68
Box 10: Opinions expressed by farmers on reasons for low cocoa productivity.....	69
Box 11: Quotes of a cocoa farmer.....	76
Box 12: Broad livelihoods identified	91
Box 13: Principles of adult learning.....	104
Box 14: Adult learning principles	106
Box 15: Types of non-formal education methods for PMEF.....	107
Box 16: Developing farmer learning groups	110
Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers	111

Acknowledgements

The Consultant (and his Support Team) acknowledges the contributions made by various organisations and individuals in executing the Research. Appreciation goes to all listed institutions in the Cocoa Sector and District Assemblies (and their staff) that were engaged in interviews and spent time to respond to questions from field staff. Special thanks goes to Farmers and their households in targets communities for allowing the field staff to hold one-on-one interviews, discussions and brainstorming sessions with them. To all those who accepted the invitation to Focus Group Discussions and took time off to participate in the discourse, your roles are deeply appreciated.

The Consultant further expresses profound appreciation to the ILO Team for the initiative to conduct the research and for the support rendered to the Consultant's team to enable the research come to its conclusion.

Abbreviations and Acronyms

ABA	Area-Based Approach
CCPCs	Community Child Protection Committees
CL	Child Labour
CLU	Child Labour Unit
CMB	Cocoa Marketing Board
CODAPEC	Cocoa Disease and Pest Control Programme
CRIG	Cocoa Research Institute of Ghana
CSOs	Civil Society Organisations
CSSVD	Cocoa Swollen Shoot Virus Disease
DCPCs	District Child Protection Committees
DTF	District Task Force
ECHOES	Empowering Cocoa Households with Opportunities and Educational Solutions Programme
ERP	Economic Recovery Programme
fCUBE	Free Compulsory Universal Basic Education
FFS	Farmer Field Schools
FGDs	Focus Group Discussions
FLGs	Farmer learning Groups
GDP	Gross Domestic Product
GNA	Ghana News Agency
GoG	Government of Ghana
GSFP	Ghana School Feeding Programme
Ha	Hectare
HAF	Hazardous Child Labour Framework
IABA	Integrated Area-Based Approach
ICI	International Cocoa Initiative
ILO	International Labour Organisation
IPEC	International Programme on the Elimination of Child Labour
LEAP	Livelihood Empowerment Against Poverty
LTF	Local Task Force
MASLOC	Micro Assistance Small Loans and Credit Scheme
MDG	Millennium Development Goals
MESW	Ministry of Employment and Social Welfare (formerly MMYE)
MLGRD	Ministry of Local Government and Rural Development
MMYE	Ministry of Manpower Youth and Employment
MOFA	Ministry of Finance and Economic Planning

MOWAC	Ministry of Women and Children's Affairs
NGOs	Non-Governmental Organisations
NHIA	National Health Insurance Authority
NHIS	National Health Insurance Scheme
NPECLC	National Programme on Elimination of Worst Forms of Child Labour in Cocoa
NSPS	National Social Protection Strategy
NYEP	National Youth Employment Programme
SFP	School Feeding Programme
STCP	Sustainable Tree Crop Production
STEP	Skills Training and Employment Programme
WACAP	West Africa Cocoa and Commercial Agriculture Project
WDF	Women Development Fund
WFCL	Worst Forms of Child Labour
YDK	<i>Yen Daakye</i> Programme

Executive Summary

Introduction

The Cocoa industry plays crucial role in the economy of Ghana. Cocoa (*Theobromae cacao L.*) was introduced in Ghana in 1879 from Fernando Po and maintained significant position in Ghana's Gross Domestic Product (GDP) as Ghana was the leading producer of the crop from 1910 to 1979, contributing up to 40 percent of the total world cocoa supply. Production expanded to a peak of 311,000tonnes in 1936 and to 600,000tonnes in 1964/65. Ghana's cocoa is highly prized for its excellent quality, rich and deep flavour and thus commanding a higher demand. Current estimates put the land area under cocoa cultivation at about 1.5 million ha; employing over 800,000 small farm families which constitute about 60 percent of the national agricultural labour force. Since the early 1980s however, Ghana recorded declining cocoa production with farmers producing only 40 percent of the country's potential cocoa yield, recording a low of 158,000tonnes in 1983. The low production recorded was attributable to many factors including low productivity per unit of land, and this was of grave concern to cocoa sector stakeholders including Government (and COCOBOD), NGOs and Private Sector players.

The recent negative media reports since 2000 regarding the possible use of children in the WFCL in West Africa, including Ghana's cocoa production attracted backlash from a number of trade unions, NGOs, international agencies and consumers. This sparked off series of international consultations which were anchored around the Worst Forms of Child Labour (WFCL) and Forced Adult labour in cocoa production. The resultant discussions prompted an action to deal with the practice in what has become known as the "Harkin-Engel Protocol"¹ which puts obligations and commitments on Governments and other cocoa sector players towards eliminating child labour and related obnoxious practices from cocoa production.

The Government of Ghana acknowledges the adverse effects of child labour and has taken series of measures in response to eliminate child labour (*in cocoa production*). Such measures include legislative frameworks (Children's Act, 1998 (Act 560), the Labour Act, 2005 (Act 651), the Human Trafficking Act, 2005 (Act 694) and Domestic Violence Act, 2006 (Act 732)); reform of institutional systems and structures including establishment of the Child Labour Unit at the MESW, the National Steering Committee on Child Labour, National Child Labour Elimination Programmes, Free Compulsory Basic Education (fCUBE), Ghana School Feeding Programme (GSFP), and the Capitation Grant. Others include Pro-Poor Policies and Economic Empowerment Initiatives (including National Social Protection Strategy (NSFS), National Youth Employment Programme (NYEP)) among other measures.

¹ Following the reported cases of child labour in cocoa production, two congressmen of the United States Congress, Senator Tom Harkin and Representative Elliot Engel championed a strategy dubbed the "Harkin-Engel Protocol" an agreement to eliminate the Worst Forms of Child Labour (WFCL) as described in the ILO Convention No. 182 from cocoa and chocolate sector. Major stakeholder representatives signed the agreement in September 2001.

The Research – Scope, Objectives and Methodology

Given the centre stage that cocoa occupies in Ghana's economy, the Government of Ghana in collaboration with the International Labour Organisation (ILO), has been implementing a number of programmes to eliminate the WFCL. In the cocoa sector in particular, the ILO has implemented, from 2003 to 2006, the Ghana component of the IPEC West Africa Cocoa and commercial Agriculture Project (WACAP) against child labour. In September 2010, the United States Department of Labour (USDOL) and the Cocoa industry renewed commitments to resources to address child labour in cocoa growing communities in Ghana and in Côte d'Ivoire. As a follow up to these commitments, the ILO has initiated: i) the Public Private Partnership Project (PPP) with a funding from the Cocoa and Chocolate Industry; ii) the project dubbed "Towards child labour free cocoa growing communities through an Integrated Area Based Approach (IABA) in Côte d'Ivoire and Ghana". The Governments of Côte d'Ivoire and Ghana, on their side, are committing resources, personnel and policy support for the initiative. The CCP recognizes that child labour perpetuates a cycle of poverty in preventing families and nations from reaching their full potential. It thus focuses on promoting decent work and enhancing better livelihoods so parents do not permit their children to engage in child labour. The objective therefore is to promote thriving cocoa growing communities in which all children are at school and through a family livelihoods approach reach greater numbers of children than would have been reached only by the targeted delivery of services to individual children withdrawn from WFCL.

The project thus commissioned this research – **"Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana"**. The research seeks to identify practical and sustainable measures to enhance cocoa productivity and improve livelihoods in cocoa growing communities in Ghana within the context of eliminating child labour in accordance with the specific needs of the target groups. The key research objective is to enhance sustainable livelihoods and improve the economic and social wellbeing through improving knowledge in agricultural practices and access to innovative opportunities to sustain increased productivity and reduce dependence on child labour.

The project proposed an Integrated Area-Based Approach (IABA) which refers to concentrating on protecting the rights of children and ensuring that all of them attend and attain full time formal schooling. The research dwelt on secondary and primary source information. Ten stakeholder institutions from where relevant data were gathered were identified. Cocoa household surveys covered six cocoa regions (Eastern, Western, Central, Brong Ahafo, Ashanti and Volta Regions) and seven cocoa growing districts (Birim South, Suhum Kraboa Coaltar, Wassa Amenfi West, Twifo Hemang Lower Denkyirah, Asunafo South, Adansi South and Hohoe). A total of 41 communities were covered and 205 respondents were contacted for interviews. Eight Focus Group Discussions (FGDs) were conducted across the target districts and communities.

Research Analysis and Discussions

On the basis of literature information, the research acknowledged that there is low cocoa productivity in Ghana and continued to discuss the causes in the light of factors as biological, technological, socio-technical, socioeconomic and agronomy. Diseases and pests,

mainly Cocoa Swollen Shoot Virus Disease, Blackpod, Mirids and parasitic mistletoes remains an important biological cause of low productivity in cocoa. The difficulty in controlling diseases is attributable to the fact that farmers spray twice a year instead of the recommended rounds. Poor farm practices, soil decline due to decades of cultivation, labour intensiveness of cocoa production, small size farm holdings, inadequate Extension Agents to offer technical support to farmers are some key causes of low cocoa productivity.

On child labour in cocoa, the research acknowledges the practice and examined the national response which involves actions undertaken by Government and stakeholders to remedy the situation. The research also highlights on programmes instituted to enhance cocoa productivity in Ghana. Notable among the programmes are the Farmer Field Schools (FFS), the Cocoa Diseases and Pests Control Programme (CODAPEC), Cocoa Hi-Tech Programme (HITECH), Ghana Cocoa Newspaper Project of CRIG, introduction of Cocoa hybrids varieties, Cocoa Livelihoods Programme, Cadbury Cocoa Partnership Project, Video Viewing Clubs, among others. The research report presents detailed discussions on these programmes in terms of the objectives and achievements.

On the basis of the fieldwork (primary data), a detailed analysis of cocoa farming in target communities and practical measures to enhance cocoa productivity have been provided. According to the analysis, cocoa farming continues to be a male dominated enterprise with 82 percent male farmers in target communities. Farm sizes stand at an average of 3.92ha (9.68acres) with Wassa Amenfi West District having the largest farm size of 6.53ha (16.13acres). Cocoa farming is still labour intensive and relies on the use of rudimentary equipment. There were wide admission of the effects of diseases and pests. On the issue of child labour, farmers indicated that children only help in farm by just running errands and come around on weekends when school is not in session. In ascertaining the knowledge and perceptions of farmers on child labour, as many as 70 percent do not think that the use of children in the manner as it happens in their farms constitute child labour.

An analysis of Government-led, NGO-led and Private-Sector-led measures have been presented in which challenges and gaps have been identified. These have been summarized in a table that gives a snapshot of the practical measures identified, their challenges/gaps and recommended remedial measures.

The research report also discusses needs assessment of farmers including livelihood opportunities and coping strategies. Farmer needs assessment focused on farm-based and non-farm based needs (i.e. access to land/land tenure, access to inputs, extension services and technology, financial support, processing and storage, good roads and market channels). Training needs and needs for social utilities have been discussed.

Research Findings and Remedial Actions

The research identified key positive and negative findings for which remedial measures have been proposed. Identified findings include the following:

- Ghana's cocoa farming is dominated by ageing farmers because the enterprise is unattractive to the youth.

- Ghana's cocoa sector is improving in terms of total production relative to the situation in the mid-1980s to early 2000s. However, productivity per unit of land is still not encouraging.
- Interventions into the cocoa production sector by Government, NGOs and Private Sector have contributed to significant improvement in production and productivity. However, the reach has not been extensive enough, leaving a large segment of cocoa farmers out of the benefits of those interventions.
- Constraints to achieving improvement in cocoa production (cost of chemicals, equipment, labour and access to land) severely hamper farmers' efforts at improving productivity.
- Extension services were reported to be absent in most cocoa growing communities. This also contributes to the low adoption rate of research recommendations by research institutions such as CRIG.

Recommended remedial measures have been proposed and these run through the discussions. However, specific remedial measures include the following:

- The need to attract the next generation of youthful population to cocoa farming is more urgent now than ever. Government and stakeholders must commit resources and actions to develop systems that will attract the youth to cocoa farming.
- The urgent need to intensify implementation of programmes to increase productivity per unit of land to march levels achieved in Côte d'Ivoire and Malaysia.
- There is wide expectation for scaling up programme interventions to further improve cocoa productivity in Ghana.
- Extension services need to be improved to facilitate knowledge transfer in terms of research findings and recommendations to enhance adoption by farmers.
- Efforts must be intensified, through strong collaboration with existing programmes and projects (such as the Land Administration Project – LAP) to tackle land tenure arrangements in Ghana.

Guide/Toolkits for introducing Practical Measures

Having identified the practical measures, the challenges/gaps need to be filled which requires collective efforts by Government, NGOs and the Private Sector. Ultimately, farmers are the means by which measures will be implemented to achieve results. It thus requires that training is provided to enable them adopt and implement the measures. A guide and toolkits to enhance trainers' capacity to engage farmers have been developed.

Conclusion

The research concludes that Ghana's cocoa sector holds enormous potential not only to reach the one million tonnes level by 2012/13 but to increase productivity per land

area within the same period and beyond. However, this cannot be achieved without pragmatic efforts in adopting measures in agronomy, biotechnology, diseases and pest control management, and technology transfer through research. The adoption of the measures will enhance cocoa productivity in target cocoa growing communities.

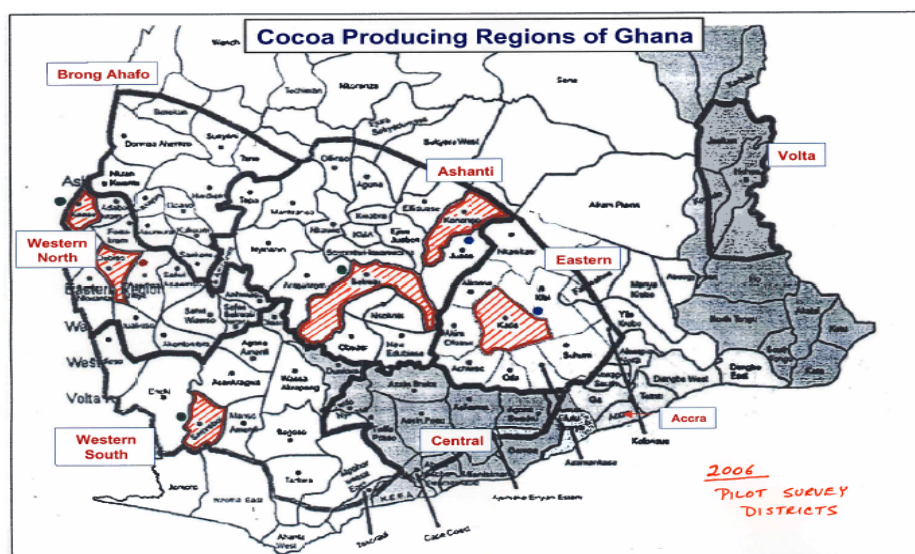
Chapter 1. Identification of practical measures to enhance productivity in cocoa growing communities in Ghana

1.1 Introduction

1.1.1 Background to the study

Cocoa (*Theobromae cacao L.*), an important commercial crop of the equatorial region, holds a unique position in Ghana's economy as one of the important sectors of international trade. The cocoa tree was introduced in Ghana some 133 years ago (in 1879) and has since been a major foreign exchange earner contributing significantly to agriculture, health, education and other services, thus stimulating general economic growth. The crop accounted for 40 percent of agricultural exports and 12 percent of Gross Domestic Product (GDP). As a leading producer of cocoa from 1910 to 1979, Ghana's cocoa production contributed up to 40 percent of the total world supply. The crop had comparative advantage over other crops like kola, coffee, oil palm etc. as farmers found it easier to cultivate and manage. Production expanded to a peak of 311,000 tonnes by 1936 and by 1964/65 production figure stood at 600,000 tonnes. Cocoa production has since showed fluctuations in growth.

Current conservative estimates put the land area under cocoa cultivation at about 1.5 million ha and employs over 800,000 smallholder farm families (COCOBOB, 1998) constituting about 60 percent of national agricultural labour force involved in cocoa production. Cocoa was introduced in the Eastern Region, making it the hub of production. However, in recent times, production of the crop has moved through Ashanti, Brong Ahafo to the Western Regions² as well as to the Central and Volta Regions of Ghana. The cocoa industry in Ghana began with rudimentary production technology.



² According to COCOBOD (2005), the Western Region has an estimated land area of 502,161 ha under cocoa cultivation representing a total land under cocoa cultivation and accounting for over 30 percent of national output. The regions also has the largest proportion of new plantings

Ghanaian cocoa is prized for its excellent quality and rich, deep flavour. In spite of the high demand for this valuable export, cocoa production in Ghana has been declining with farmers producing only 40 percent of the country's potential cocoa yield due in part to factors such as pests, diseases, ageing (or overgrown) cocoa trees and poor farm maintenance practices, inadequate extension services on one hand and quality, safety, environmental concerns and social ethics such as child labour on the other hand. Such decline in productivity has the potential to facilitate decline of cocoa farmers' incomes with attendant problems of attracting the next generation of cocoa farmers to the field.

Cocoa production entails different forms of activities. In Ghana, just as in many other cocoa growing countries, it tends to be labour intensive and overwhelmingly a family enterprise. Farmers therefore work in their own farms and also assisted by hired labour, who may be migrant workers or indigenous labour and could also include family hands. Year-round work on a cocoa farm includes underbrush, pruning and applying pesticides and fungicides; harvesting entails cutting the pods from the tree, slicing them open, scooping out the beans, covering them in baskets or on mats to ferment and then drying the beans in the sun (see Box 1).

Box 1: Cocoa-specific farm activities	
Land preparation	Harvesting
Land Clearing Felling and Chopping of trees Burning Destumping Pegs Cutting Lining and Pegging	Plucking of Pods Gathering Heaping of Pods Pod Breaking Scooping of Cocoa Beans Fermentation
Planting	Post-harvest
Preparation of Seedlings Spraying of seedlings with agro-chemicals (Confidor and Akati master) Carrying of Seedlings Planting of Seedlings Sowing at Stake	Carting of fermented beans to drying area Drying and sorting of beans Carting of dry beans for sale
Farm maintenance	Others
Weeding and thinning Sanitation and Pruning Mistletoe Control Carrying Water for Spraying Spraying/application of pesticides Applying of Fertilizer	Cooking Looking after toddlers Watching over drying beans at night

Child labour is common in the agricultural sector and widespread in countries where cocoa is grown. The ILO estimates that 70 percent of child labour occurs in the agricultural sector (ILO 2002: xi) but also occurs in many of spheres of human endeavour. Thus, in 1999, 132 countries adopted the ILO Convention No. 182 on the Worst Forms of Child Labour (WFCL) which calls on states to 'take immediate and effective measures to prohibit and eliminate all forms of slavery and forced or compulsory labour' as well as work which is likely to harm the health, safety or morals of children, determined by national laws or legislations'. In the particular case of cocoa production it has been argued in many circles that the nature of the work performed on cocoa farms by anyone under the age of 18, even

if voluntary, may qualify as prohibited child labour under the Convention No. 182.³ The Hazardous Child Labour Activity Framework for Ghana (HAF) and the Hazardous Child Labour Activity Framework for the Cocoa Sector (HAF) provides, in many respects, activities in agriculture (and of course cocoa production) involving children in hazardous work. It also provides specific tasks that are acceptable for legal-aged children (15+ years) as well as light work for the participation of children between 13 and 14 years.

1.1.2 Rationale for the research

Reports of slave labour (including forced child labour) on cocoa farms in West Africa surfaced around 1998, especially in Côte d'Ivoire, and quickly became an important enterprise issue for a number of organisations and groups. The media coverage and the threat of regulatory action mobilised the international cocoa industry to collaborate with other stakeholders to eliminate the Worst Forms of Child Labour from cocoa production.

Following the Harkin-Engel Protocol of 2001, governments and industry stakeholders intensified efforts towards processes to eliminate child labour in cocoa supply chain in Ghana and Côte d'Ivoire. The International Labour Organisation (ILO) through its in-focus programme the International Programme on the Elimination of Child Labour (IPEC) remains key actors in this fight.

There is enormous acknowledgement of the fact that cocoa production involves long hours in the sun performing physically demanding work as workers often use primitive tools, travel long distances, and are exposed to pesticides and chemicals, poisonous reptiles and rodents, and disease carrying insects. Families are compelled, for reason of low cocoa household incomes, inadequate hired labourers, low productivity from cocoa among other considerations, to use children as farmhands. The often limited options of livelihood opportunities reinforce the need to investigate into issues affecting productivity (including enhancement measures) and to eliminate child labour and promote decent work in cocoa growing areas.

The current ILO Cocoa Project, based on Integrated Area-based Approach (ABA), recognises that poverty and decent work deficits are key root causes of child labour in cocoa and that any efforts to eliminate child labour in cocoa growing communities, as part of wider national strategies, will enhance decent work, promote education and reduce poverty.

1.1.3 Integrated Area-Based Approach (IABA) – The concept

The concept, Area-Based Approach (ABA) and in a broader sense Integrated Area-Based Approach (IABA) has been applied to several disciplines. In recent times, attention has equally focussed on application of IABA to elimination of child labour and the attainment of universalise education. ABA refers to concentrating on protecting the rights of children and ensuring that all of them attend and attain full time formal schooling. For those children

³ The ILO Convention No. 182, Article 2 provides that 'the term "child" shall apply to all persons under the age of 18'. Any kind of employment/work that is likely to jeopardize the health, safety or morals of young persons' the minimum age is 18 years. ILO Convention No. 138, article 2 National legislation defines the types of work subject to this standard, and the minimum age can be 16 under certain conditions.

already in school, the ABA postulates that planning needs to ensure that they are retained in school and are assisted to remain in school without any disruption whatsoever (including coercion, deceit or persuasion). It also takes care of those children who may be out of school and in this context, the principle seeks to draw up specific plans to consciously withdraw these children from work and prepare them towards integrating them into schools. In doing so, the rights of children are duly protected. Ultimately, the ABA will enable declaration of 'child labour free zones' to serve as attraction and/or inspiration for others to join.

There are clear distinction between ABA and other programmes on child labour elimination. Generally, programmes seeking to address child labour have made several assumptions when it comes to the harsh realities of child labour. For majority of those programme interventions, the belief is held that parents are not in position and indeed unwilling to withdraw their children from work and enrol them in schools. It thus plays down on the confidence and ability of parents to boldly take decisions to send their children to schools. It further discards many instances where poor parents, in the face of all the challenges of life, including poverty, have sent their children to school against all odds. Rather, it believes that upon offering compensation in forms of financial incentives for loss of income as a result of withdrawal, parents oblige; thus undermining the capacities of parents to firmly stand by their children's education. In another breadth, some programmes premise their interventions on the belief that all forms of child labour cannot be eliminated probably being overwhelmed by the enormity of the challenges of child labour. In this context, the approach, while withdrawing children from one work (or hazardous work), other children continue to replace them or even those withdrawn find themselves in other forms of child labour. Thus, programmes based on these presumptions fail to see child labour elimination issue from a child rights perspective.

The ABA on the other hand is built on positive principle that recognises that parents (whether poor; hard core poverty) are motivated strongly to provide a better future for their children through education and strongly postulates that it is impracticable and unacceptable for children to join any form of labour force and be denied their right to education as well as all other entitlements that accrue to them as full pupil or students in formal schools. The outcomes of ABA often include a situation where the project area becomes a resource centre for all other areas in the country; children enjoy their rights to education and experience it; communities and their neighbours change their norms to adopt the norm 'no child should work'; and communities take ownership of child rights (*Anusha Bharadwaj, 2008*).

Box 2: Fundamental beliefs underlying the ABA

- All forms of child labour can be eliminated.
- Parents do not need financial incentives to substitute for their child's income.
- Parents want a better future for their children.
- Parents are more than willing and capable of making the necessary sacrifices to ensure that their children do not go to work but rather prefer to go to school.
- Communities can initiate, plan and implement programmes that ensures no child works but goes to school.
- Communities want the norm 'no child should work'.
- The State is responsible for providing schools with adequate infrastructure and school teachers and there shall be no setting up of parallel systems competing with the state.
- The State shall make all preparations to receive first generation learners into the school system.

Source: Anusha Bharadwaj, (2008).

Within a broader context, the IABA relates to interventions in cocoa-growing communities targeting all worst forms of child labour with emphasis on WFCL in the agricultural/cocoa sector and the provision of direct educational services. The IABA recognizes that poverty and decent work deficits are among the primary root causes of child labour - eliminating child labour in cocoa growing communities is managed as a process embedded in the wider national strategies for the elimination of the WFCL, the promotion of education and decent work and the reduction of poverty. This integrated approach aims to increase the effectiveness and sustainability of IPEC interventions by creating an environment in which children do not simply shift from one hazardous sector or occupation to another, in which vulnerable families and communities are empowered to address their livelihoods and economic situation and thus one of the root causes of child labour, and in which the necessary consensus at both community and national levels is generated to garner the ownership needed to support long-term change. (*ILO-IPEC, Cocoa Communities Project Document, December 2010*).

The IABA has the potential to improve general productivity in communities as it focuses on improving livelihoods of beneficiaries within a defined geographical area or region. Product selection and interventions are often based upon expected employment and income impacts within the target area. Two key issues emerge: (i) having greatest impact on community-based agro-enterprises and (ii) taking into consideration the development of business services and changes in policy and regulatory framework. The geographical focus of this approach also aims to enhance the monitoring processes and facilitates institutionalisation and scaling up of child labour interventions.

1.1.4 Research objectives and scope of work

The assignment seeks to identify and analyse innovative, practical and sustainable measures to enhance cocoa productivity and improve livelihoods in cocoa growing communities in Ghana as a way of improving knowledge in agricultural practices and promoting social wellbeing, leading ultimately to increased productivity and reduced dependence on child labour.

1.1.5 Research approach and methodology

One cardinal point of the research relates to the use of the findings. It has been argued that one of the promising ways of making research findings acceptable to farmers is to base research on the needs expressed by farmers and the challenges confronting them. Whilst that is key, it is important also to, as this research will seek to do, pay attention to policy issues. Two fields of research employed over the years to increase involvement of farmers in research and also offer researchers a better understanding of farmer's technology needs and efforts to address them are (i) farming systems research and (ii) on-farm research. The consultant skewed the research to a blend of farming systems research and farmer participatory research by being mindful of the shortcomings in each approach. Efforts were made to include farmers even from the initial stages of the research when problems were being identified and prioritised. Thus, the research created the needed synergy through interaction of farmers and other stakeholders, and hence has been able to secure the commitment to improved productivity, eliminate child labour through education and training, and promote of decent work.

The research employed various tools to collect and analyse data. At the institutional level, a structured questionnaire and interview checklist were developed to gather information and seek clarifications on several issues bordering on policy and technology. The research adopted qualitative methods to understand these dynamics and on why and how child labour permeates in the farming fabric. The qualitative methods involved the design of participatory instruments for Focus Groups Discussions (FGDs). Quantitative methods (in the form of structured and semi-structures questionnaires) were also designed to gather information from farmers.

1.1.5.1 The research process

In the research process, theory and practice provided the basis for learning, experience gathering and reflections on innovative practical measures that could be proposed. The process involved engagement at various levels as follows:

- a) **Documentation Review:** Several researches and studies have been done on the cocoa sector and many of these relates to enhancing productivity and reducing child labour in cocoa production in Ghana. These documents are within the domain of libraries, research institutions, worldwide web (internet sources) and individual researchers. The Consultant traced some of these important research documents and reviewed them with the aim of gathering secondary source information to build on.
- b) **Institutional Study:** A number of key institutions were identified as part of the important cocoa industry stakeholders and contacts were made with them for their inputs. The consultant engaged all such institutions and organised groups who have national, regional or district character for information gathering and for learning.
- c) **District and Community level engagement:** The consultant team met with the respective District Assembly Authorities for discussions on the list of cocoa growing communities with high incidence of child labour. At the community level, 3 main categories of respondents were contacted namely (i) community members and their opinion leaders (ii) Cocoa farmers and their households and (iii) organised groups including community-based farmer groups/associations.

1.1.5.2 Sampling and data gathering techniques

Sampling Techniques: The determination of the sample size is based on a number of principles in order to reduce sampling and non-sampling errors. Statistically, an increase in the sample size leads to the attainment of desired results in sampling errors. Alternatively, the non-sampling errors usually increase since it becomes quite difficult to control the quality of the survey. Consequently, the sample size must be manageable for effective operation of the survey. The sample design for the survey conforms to standard survey processes as applied by the Ghana Statistical Service (GSS) which is the national body mandated to develop all statistical data in Ghana. This was important to ensure that the sample reflects acceptable approaches and to be in conformity with the applicable formats in Ghana. The survey is designed to depend on information from two major entities namely

selected institutions in the cocoa sector and cocoa farming households in cocoa growing districts in Ghana.

Institutional Surveys: The research identified 10 stakeholders each of which comprises individual organisations and departments/sections engaged in one activity or the other in cocoa industry. Broad stakeholders included COCOBOD with its departments, sections and subsidiaries; Research institutions, License Buying Companies/Purchasing Agencies (of which about 17 were identified); Specific cocoa intervention projects; Associations (of Farmers and Fishermen, and COPAL), Cocoa Processors; NGOs, Cocoa Input Dealers, and Transporters. To gather relevant information from these institutions, tailor-made data gathering instruments and protocols were designed and administered to cover a total of 33 departments, sections and subsidiaries of the identified cocoa industry stakeholders located at both the national, regional and/or district levels.

Cocoa Farmers Household Surveys: The household survey was based on two domains of investigations: the cocoa growing districts of Ghana and specific cocoa farmer's households in each district. The ILO as part of the terms of the assignment demanded a full coverage of all the six cocoa growing regions namely Eastern, Western, Central, Brong Ahafo, Ashanti and Volta regions. In consultation with the client, the districts selected for data gathering included Birim South, Suhum Kraboa Coaltar, Wassa Amenfi West, Twifo Hemang Lower Denkyirah, Asunafo South, Adansi South and Hohoe Districts. The next stage of the exercise involved actual questionnaire administration and interviews. The cocoa farmer household surveys in each district were then based on purposive sampling that target cocoa growing families. Discussions with the client indicate that the project will cover 41 communities and so between 5 and 6 communities were selected per district (giving a total number of 41 communities). Based on anecdotal evidence, the Consultant assumed an average figure of 50 active cocoa growing families per community given a sample frame of 2050 families in the sample. It is expected that this sample frame will be a fair representation of the totality of the population that will make generalised statements to represent a true reflection of the situation on the ground. On the basis of these inferences, the sample size is determined by computing 10% of the assumed cocoa growing families. This gives a sample size of 205 farm families (respondents).

It must be emphasised that, of key importance to the survey was the need to spread respondents across the districts and communities in order to have a fair representation of issues on the ground and to ensure reliability of information. Field staff worked with specific district designated officials with focus on cocoa production as well as a community opinion leader to ensure that the target is adequately covered. Again, time constraints were paramount and that there was the need to avoid call backs resulting from unavailability of members within the sample. Given that the minimum sample for this survey was 80 percent, the sample size was increased by 20 percent to accommodate shortages from non-responses or absenteeism. Table 1 shows the list of identified cocoa industry stakeholders for the research engagement.

Focus Group Discussions: The conduct of FGDs was crucial part of the study. The instruments used were designed for conversational and semi-structured interviews. These two survey techniques were employed against the backdrop of the fact that at the heart of all good participatory research and development lies sensitive interviewing. Without it, no

matter what other methods are employed, the discussion will yield poor information and limited appreciation of the issues. The aim was to enable one-on-one semi-structured conversational interviews with groups and individuals, which allow them ample space to decide what to talk about and how to talk about it. The idea is to make the interview more conversational, while still controlled and structured for easier comparison, by making sure the list of topics suggested in the interview guide are covered.

Overall, 8 Focus groups and 10 key informants were engaged in conversational interviews. Focus groups engaged include Cocoa Farmers, other crop farmers, Youth groups, Adults (men and women) and children. Others include petty traders, artisans (including processors - people engaged in stone milling, oil extraction, carpenters, tailors/seamstresses etc.), interest groups (religious leaders, traditionalists, etc.). Key informants identified were community opinion leaders and these offered broad ideas and perceptions community-based productivity improvement issues. Whilst the Consultant exercised control over the selection of participants for the FGDs, the involvement of the communities and their leadership was noticeable. The Consultant identified the various target groups of the communities and tasked them to nominate individuals to attend the FGDs sessions. The nominees were subjected to acceptance by the entire interest/target group at meetings organised for that purpose.

Conduct of brief Needs Assessment of Cocoa Farmers/Communities: A key deliverable of the assignment relates to determination of farmer and/or community needs of which if consciously addressed could lead to enhance productivity in cocoa production. The Research Team therefore sought to conduct Needs Assessment from the perspective of all communities and interviewees. The question of farmer/community needs was put before every interviewee and the responses adequately captured in the analysis. The FGDs session however offered the opportunity to capture most of the farmer/community needs. Participants outlined a number of such needs which have been collated as [Section 1.5](#) of Chapter 1 of this Report.

Table 1: List of identified cocoa industry stakeholders for research engagement

1. COCOBOD	6. Processors
<ul style="list-style-type: none"> Produce Buying Company Seed Production Unit Cocoa Swollen Shoot Virus Disease Control Unit (CSSVDCU) Cocoa Diseases and Pest Control (CODAPEC) Ghana Cocoa Marketing Board Quality Control Division Cocoa Marketing Company 	<ul style="list-style-type: none"> Cocoa Processing Company Ltd. Cadbury Nestle Ghana Ltd. Cargill Ltd.
2. Research Institutions	7. NGOs/Private Institutions
<ul style="list-style-type: none"> Cocoa Research Institute of Ghana (CRIG) Sustainable Tree Crop Programme (STCP) West Africa Food Fair (WAFF) 	<ul style="list-style-type: none"> Citizens Network for Foreign Affairs (CNFA), Kumasi/Accra Farm Channel (www.farmchannelghana.org) Pest Destruction Company (former Infestation Control Dept. of COCOBOD)

3. License Buying Companies/Purchasing Agents	8. Development Partners (DPs)
<ul style="list-style-type: none"> Produce Buying Companies LTD Armajaro (GH) LTD OLAM Ghana Federated Commodities Transroyal Ghana LTD Cocoa Merchant Ghana LTD Royal Commodities LTD Adwumapa Buyers LTD Akuafo Adamfo LTD West Africa Commodities LTD Djo Jean LTD Diaby (Gh) LTD Evadus LTD Sunshine Commodities Sika Aba Buyers LTD CDH Kuapa Cocoa 	<ul style="list-style-type: none"> GTZ UNDP
4. Projects	9. Transporters
<ul style="list-style-type: none"> International Cocoa Initiative (ICI) NPECLC (National Programme on Elimination of Child Labour in Cocoa) World Cocoa Foundation Cadbury Cocoa Partnership 	
5. Associations	10. Cocoa Input Dealers
<ul style="list-style-type: none"> Ghana Association of Farmers and Fishermen Cocoa Producers Alliance (COPAL) Kumasi General Agricultural Workers Union (GAWU) 	<ul style="list-style-type: none"> AGRIMART SIDALCO, Tema Motorway CHEMICO, Tema
Districts and Communities	
1. Suhum-Kraboia Coalatar District	5. Birim South District
<ul style="list-style-type: none"> Suhum Kromameng Kwamekyire Gojiasi Ahafi Tetekasom 	<ul style="list-style-type: none"> Akyem Swedru Anyinu-Koyoku Akyem Ewisa Aduasah Adiambra Bieni
2. Twi Hemang Lower Denkyirah	6. Adansi South District
<ul style="list-style-type: none"> Twifo Praso Twifo Hemang Nsueam Apeaso Abekankwanta Paaso 	<ul style="list-style-type: none"> New Adubiase Atobease Tonokoase No. 2 Apagya Ankaase
3. Hohoe District	7. Asunafo North Municipal
<ul style="list-style-type: none"> Hohoe Likpe Akpafu Adorkor Lolobi Akpafu Adomi Santrokofi 	<ul style="list-style-type: none"> Goase Ayomso Fawoyeden Akrodie Mim Bediako

4. Wassa Amenfi West District

- Asankrangwa
- Samreboi
- Subriso
- Sikanti
- Gyaman
- Yereho



1.1.5.3 Collation, analysis and synthesis of data

The study employed multiple units of data collection and analysis. The data generated included information from secondary sources and primary data from the field involving household surveys, institutional surveys, data collection through Focus Group Discussions (FGDs). The volume of information generated required careful analysis and the use of more scientific tools, which will provide a systematic and logical trace of the assignment. The study therefore employed two levels of enquiry, which was necessary in responding to the three propositions of the assignment – cocoa productivity measures from the perspective of farmer households including needs assessment and identification of viable income generating activities, responses from FGDs all at the community level and responses indicating knowledge, perceptions and policy contributions from institutional surveys. The analysis was thus an output of Sampling Programme for Survey Statistician (SPSS) which is a computerised worksheet programme for statistical analysis.

1.1.6 Limitations to the study

The conduct of the study has largely been smooth with average cooperation of and assistance from by most stakeholders. However, field information gathering were severely constrained by unyielding and rather hostile attitudes of some institutional heads and District Assembly officials. Frantic efforts were made to convince the heads to cooperate. Several visits were made by the field team, introduction letter from the Client and the Consultant were presented to the heads yet they continued to demand letters from the Ministry of Employment and Social Welfare (MESW) and seem more like some DAs officials were perceived attempting to stifle the research.

1.1.7 Organisation of the research report

The Report is organised in two chapters. Chapter 1 provides background information on the subject matter and also an analysis of Practical Measures to enhance cocoa productivity; farmer needs assessment and livelihood opportunities in target communities. Chapter 2 presents the Action Plan and toolkits/guidelines for carrying out the recommended measures to the beneficiary farming communities.

Chapter 1 is organised as follows: Section 1.1 is the introduction of the Report in which the background of the study is given. Also provided is the research objectives, scope, methodology and approach; and sampling. The Chapter highlights on the Area Based Approach to child labour elimination as well as the limitations to the study. In Section 1.2, critical issues of Ghana's cocoa productivity is given providing background information on cocoa production and productivity levels. The Chapter also examines the incidence of child labour in cocoa production and the national response.

Section 1.3 highlights the measures introduced to enhance cocoa productivity in Ghana. Discussions have centred on stakeholder involvement in implementation of the measures and outcomes so far. In Section 1.4 a detailed analysis of field data on practical measures introduced within farmers and institutional perspective. In the course of the discussions, challenges and gaps have been examined. The Section closes with a summary of

specific practical measures, gaps in its implementation and remedial measures to achieve improved productivity in cocoa production in Ghana.

Recognising that beyond agronomic practices, issues of technology etc. as key factors for improved productivity in cocoa, meeting farmers' agricultural, socioeconomic needs as well as provision of improved livelihoods is critical to attain improved productivity, eliminate child labour and promote decent work. Section 1.5 responds to these issues as it looks at farmer needs assessment, livelihood opportunities and coping strategies of farmers. This Section outlines key findings to the research and recommends measures to address the negative findings.

Chapter 2 is the Guide/Toolkits for introducing productivity enhancing measures to farmers. The Chapter has five sections structured as follows: Section 2.1 focuses on the introduction, purpose, objectives and structure of the Guide. Section 2.2 examines the principles for introducing the measures to target groups and proposes Adult Learning as key principle for farmer training. In Section 2.3, toolkits indicating the learning principles and competencies are given while Section 2.4 recommends specific approaches for training farmer facilitators. In Section 2.5, learning sessions are given in a tabular form.

1.2 Cocoa industry in Ghana: policies and legislative framework, productivity and incidence of child labour in cocoa production

1.2.1 Cocoa productivity – realities and prospects

Cocoa growing in Ghana dates back over a century ago when it was introduced into Ghana in 1879 with the first recorded export of beans from Ghana in 1893 and reportedly shipped to Hamburg. Production grew rapidly to reach 20,000mt by 1908. With production of 41,000mt in 1911, Ghana was rated the world's leading producer of cocoa. For a period of about 66 years and until 1977, Ghana was the world's leading producer of cocoa with a market share ranging from 30-40 percent. The record clearly shows that cocoa production increased from a level of 36.3mt in 1891 to an all-time peak of about 557,000mt in 1964/65 making Ghana to achieve a global output share of about 33 percent and thus further retaining Ghana as the leading producer. Thus, cocoa has for some time occupied key position in Ghana's economy especially with respect to foreign exchange earnings, domestic income, and providing revenue to support socioeconomic development. The industry employs about 60 percent of the national agricultural labour force. The success of cocoa cultivation in Ghana is generally attributable to its comparative advantage over other competing crops such as oil palm, kola, coffee and coconut for the simple reason that farmers found it relatively easier to cultivate and manage. Thus, for many rural families in cocoa growing communities, cocoa provides the main source of employment, cash for non-food expenditures including education, hospital bills, housing, community development programmes.⁴

The cocoa production however suffered a decline around the period mid 1960s due primarily to low internal producer prices, the loss of over 30 percent of cocoa tree stock

⁴ Report on causes of recent decline in cocoa production in Ghana and measures to revamp the industry, Accra. June 1995. pp.1

caused by bush fires, reduction in the area under cultivation, low productivity, incidence of pests and diseases (mainly plague by the Cocoa Swollen Shoot Virus discovered and seemed prevalent in the Eastern Region from where the bulk of the cocoa was being cultivated), declining soil fertility and inadequate inputs and extension services. Other socioeconomic drawbacks included ageing of farms and trees, ageing of farmers themselves, high cost of labour and poor husbandry practices by farmers (Ackonor J.B et al, 2007). It is estimated that not more than 3 percent of farmers adopted pest and disease control technologies and recommendations. Again, the average age of a cocoa farming community was between 60 and 65 years; thus, affecting productivity because the ability of farmers to undertake cultural practices were severely hampered particularly so because of lack of cocoa farmhands. In fact the elderly cocoa farmers were unable to perform the heavy tasks of spraying and weeding, exposing the farms to pest and disease attack. Consequently production fell from the 1965 levels to a 60-year low of 158,000mt in the 1983/84 season constituting about 9 percent of world's production. The price reforms initiated under the Economic Recovery Programme (ERP) in the early 1980s saw moderate increase in cocoa production reaching a peak of 300,000tonnes in 1990 but soon showed downward trend reducing Ghana's share on the world cocoa market to about 10 percent.

The adoption of a new Cocoa Sector Development Strategy in 1999 based on the recognition that farmers adopted low production technologies which were not profitable within the medium and long term period injected significant assistance packages including credit to farmers to purchase inputs, improved extension services, quality control, infrastructure development, processing, finance and pricing, internal and external marketing and support to research. Also improved varieties were adopted: hybrid varieties were introduced through Government's Cocoa Rehabilitation Project. The variety outperforms the older "Amazon" and Amelonado" as it produces more pods per tree and begins bearing fruits in three years compared to the at least the five years of older varieties. The strategy led to gradual increases in producer price from 62 percent of FOB price to 70 percent by 2004. Some specific measures include the introduction of the CODAPEC and Cocoa Hi-Tech Programme. These interventions culminated in increase in cocoa production from a low of 158,000mt in 1983 to 410,000 in 2001 and to over 735,000mt in 2004 representing a cumulative increase of 289 percent for the period. In 2004, the cocoa sector contributed about 5.8 percent of Gross Domestic Product (GDP) and grew by 30 percent up from 16.4 percent in 2003 (ISSER, 2004).

Table 2: Performance of major cocoa varieties

Cocoa variety	Brief history	Bearing time	Yield per year
Amelonado	Growing in Ghana since introduction. Still forms the bulk of Ghana's cocoa especially in the non-swollen shoot virus disease endemic areas	6-8 years	680kg/ha (272kg/acre)
Amazon	Introduced in 1994 (open-pollinated). Some types were supplied to farmers in the early 1950s	4 years or less	1200kg/ha (480kg/acre)
Hybrids (Series II)	Amazon x Amel/trinistrio distributed to farmers since 1962. The hybrids have been used to gradually replace the Amelonado and Amazons	2 years	2300/ha (920kg/acre)
Hybrids (Inter-Amazon)	Amazon x Amazon. Distributed to farmers since 1983. More yield and relatively more tolerant to the CSSVD	2 years	2500-3000kg/ha (1200kg/acre)

Source: Plant Breeding Division, CRIG, 2011

Government continue to ensure efficient and sustainable cocoa cultivation, development of cocoa production and marketing technologies, production of good quality cocoa beans, transportation of beans from buying centres to the ports for export in effort to meet its target of reaching one million tonnes by 2012/2013. The Thursday, June 2, 2011 issue of the Daily Graphic indicates that COCOBOD announced that Ghana has achieved a record harvest during the cocoa main crop season provisionally fixed at 903,646 mt and this has been attributed to efforts by government, COCOBOD, farmers and other industry players' adherence to good agronomic measures among others. Table 3 shows the production levels (main and light/mid) since the last two decades. In computing the cocoa productivity levels, the Consultant liaised with the Research Department of the Ghana COCOBOD to determine the appropriate formula for estimation. Productivity level from 1989 to year 2000 is derived by dividing annual production by 1.2 million ha which was the approximate average area under cultivation. From 2001 the approximate area used is – 1.6 million ha. The productivity levels from 1989/90-2010/11 is as shown in Table 3.

Box 3: COCOBOD reports of boom in Ghana's cocoa production for 2011

The Ghana Cocoa Board (COCOBOD) has announced that Ghana achieved a record harvest during the cocoa main crop season provisionally fixed at 903,646 metric tonnes. A statement issued in Accra by the Public Affairs Department of COCOBOD said that was the highest since the country registered its name on the international market as a producer of cocoa. 'The record production has been the result of concerted efforts by the government, farmers, the Ghana Cocoa Board and major players in the industry through adherence to good agronomic methods, modern farming processes, the payment of remunerative prices for the produce, the development of hybrid cocoa seedlings, the application of fertilisers, disease and pest control and scientific research,' it said. The light crop season begins on June 10, 2011, according to COCOBOD. The statement said since 1999, governments, through COCOBOD, had put in place pragmatic measures to ensure that Ghana maintained the quality of its beans, for which it is noted world-wide, sustained and also increased cocoa production. 'Today, we can boast of a record production and hope to reach the one million tonnes target by 2012/2013,' it said. It congratulated hardworking cocoa farmers, licensed buying companies, haulers, chemical and processing companies, the national anti-smuggling task force, COCOBOD, its divisions and subsidiaries and all stakeholders on the relentless efforts that had propelled the country to attain the record level of cocoa production. 'As we prepare to start the light crop season for 2010/2011, we encourage all our stakeholders to continue to work strenuously to enable us to achieve an all-time record of one million tonnes by the 2012/2013 crop season,' the statement said.

—GNA (Thursday, 02 June 211 Daily Graphic).

Table 3: Cocoa production levels (main & mid-crop) in metric tons

Crop year	Main (Mt)	Mid (Mt)	Total (Mt)	Estimated productivity (Mt)
1989/90	282,578	12,473	295,051	0.24
1990/91	261,219	32,133	293,352	0.24
1991/92	229,122	13,695	242,817	0/28
1992/93	262,431	49,692	312,123	0.26
1993/94	221,302	33,351	254,653	0.21
1994/95	287,095	22,359	309,454	0.25
1995/96	349,305	54,567	403,872	0.34
1996/97	297,702	24,786	322,488	0.27
1997/98	365,483	43,900	409,383	0.34
1998/99	340,033	57,642	397,675	0.33
1999/2000	406,399	30,548	436,947	0.36
2000/01	350,359	39,413	389,772	0.24
2001/02	321,321	19,241	340,562	0.21
2002/03	444,135	52,711	496,846	0.31
2003/04	668,787	68,188	736,975	0.46
2004/05	526,828	72,490	599,318	0.37
2005/06	649,672	90,786	740,458	0.46
2006/07	587,502	27,030	614,532	0.38
2007/08	663,954	16,827	680,781	0.47
2008/09	634,256	76,386	710,642	0.44
2009/10	587,179	44,858	632,037	0.39
2010/11	916,810	107,744	1,024,553	0.64

Source: Research, Monitoring and Evaluation Department of COCOBOD, December, 2011.

1.2.2 Cocoa Sector Policies and Legislative Framework in Ghana

1.2.2.1 Cocoa sector policy interventions

Ghana has had policies to influence agriculture in general and trade as a way of boosting the macro-economy and in many cases such policy directives had been consultative. Agricultural policies have sought to modernized and expand agriculture production. Whilst policies might be sector-wide affecting all segment of agriculture production, specific policies are instituted to enhance specific crop production. Trade policies on the other hand have seen the private sector as the engine of growth with government providing the enabling environment to stimulate private sector initiative.

Since the introduction of cocoa in Ghana in the 19th century, several policy interventions have been directed to boost cocoa production and have largely been in the area of disease and pests control, farm rehabilitation, producer price management, producer payment processes, soil fertility management, planting materials and research and extension services provision. Summary of specific cocoa policies include the following:

1. ***Diseases and pest control policies (initially to deal with the problem of the Cocoa Swollen Shoot virus):*** Ghana's cocoa was beset with a strange disease which was initially detected and reported by a cocoa farmer, Opanin Sabeng of Nankese in 1936. Investigations led to the identification of the Cocoa Swollen Shoot virus and was indeed later learnt to have existed as far back as the 1920s. This formed the basis for the first disease control policy in cocoa production in Ghana culminating in the establishment of a Research Station at Tafo and mandated to investigate into the disease and pest problems of cocoa. The research led to the cutting out of all affected cocoa trees. Given the threats to the CSSV, the Cocoa Swollen Shoot Virus Disease Control Unit (CSSVD Unit) has been established as a division within COCOBOD and mandated to cut out all affected trees and compensations paid to the farmers. Since the identification of the CSSV, other diseases have been identified including the Cocoa Black Pod disease which was initially reported in the Ashanti and Brong Ahafo Regions in the early 1980s with an estimated 50 to 100 percent crop losses. The CRIG identified its causal agent as the *Phytophthora megakarya* for which spraying with fungicides have been recommended. Capsids which is a disease also detected around 1944 came to add to the disease and pest woes of the cocoa sector. Over the past three decades, programmes such as mass spraying have been implemented. In 1986 the COCOBOD initiated the "*Ye Wafuo Yie*" (literally meaning maintain your farm properly) as a mass spraying measure which was based on encouraging farmers to adopt recommended farm practices alongside fungicide spraying to improve yields. The "*Si Anonom Kwan Preko*" (Meaning prevent the incidence of blackpod disease) was introduced in 1988. In 2001/2002, COCOBOD again embarked on a nation-wide Cocoa Diseases and Pests Control Programme (CODAPEC) and was done free of charge for farmers. The programme came to be popularly called "Mass Spraying" and it is credited with the recent production levels of 700,000 mt in the 2003/2004 and 2005/2006 cocoa season and as a key contributor to the close to 1000,000mt being recorded in 2011.
2. ***Policy to Rehabilitate Cocoa (Policy to supply subsidized improved planting materials to farmers and provide fertilizers):*** Policy to sustain cocoa production led to the Cocoa Rehabilitation Projects I, II and III. The Cocoa Rehabilitation Projects I and II covering areas around Suhum in the Eastern Region (called Suhum Cocoa project) and parts of Ashanti Region (called Ashanti Cocoa Project) were carried out from 1970 to 1979 and was aimed at replanting and rehabilitating all dead and abandoned cocoa farms in the two regions. The cost of the activity was defrayed with proceeds from farms as farmers began harvesting. The areas rehabilitated are now the heaviest production zones in the regions concerned. Other interventions have been supply of improved planting materials (seeds and seedlings) and application of fertilizers to boost productivity which has been dubbed "Cocoa Hi-tech" introduced in 2002/2003 crop year after a series of farm trials. These projects were the result of studies by CRIG that identified low land productivity to result from soil mining from continuous harvesting of pods. In the supply of improved planting materials, the old Amelonado type of cocoa introduced by

Tetteh Quarshie from Fenando Po and the Amazonian type from Trinidad were being replaced with a new variety, a hybrid developed through research as a cross-hybrid between Amelonado and Amazon varieties. The current policy focuses on the phasing out all Amalonado and Amazon varieties and being replaced with high yielding and early bearing hybrid varieties of cocoa. These new types are found to be quite prolific and produce all-year-round under favourable climatic conditions. The “Cocoa-Hi-tech” programme encourages farmers who are supplied with fertilizers on credit to apply fertilizers to a minimum of two bags per acre of cocoa farms initially to boost performance of farms. Payments for the fertilizers are made during harvesting season by instalments.

3. ***Policy to deal with low producer price of cocoa:*** The Cocoa Rehabilitation Project III was implemented between the periods 1988-1996 and specifically addressed the issue of low producer price. Recognising that low producer price was a disincentive to cocoa cultivation (*which records show that some farmers at point cut down cocoa trees to enable food crops to grow*), the Policy was to increase it annually to 65 percent of the world market price. Beginning in 1988, the producer price was increased from ₵85,000 (GHc8.5) per mt to ₵150,000 (GHc15). This showed immediate positive impact on cocoa production. In 1999, the policy was reviewed for which the producer price was expected to gradually raise to 70 percent of FOB price by the 2004/2005 cocoa season (Ghana Cocoa Sector Development Strategy, 1999). The annual increases of producer price of cocoa have culminated in the retrieval and rehabilitation of abandoned farms, expansion of old farms and the establishment of new cocoa farms.
4. ***Restructuring of the internal and external marketing of cocoa sector:*** Among the important policy interventions in the cocoa sector is the restructuring of the internal and external marketing of cocoa. The internal marketing of cocoa had been the monopoly of Ghana COCOBOD, thus limiting private sector participation in cocoa marketing. The policy change saw the liberalization of cocoa marketing to allow License Buying Companies (LBCs) to operate alongside COCOBOD whilst the external marketing of cocoa remains an exclusive responsibility of the Cocoa Marketing Company (Ghana) Limited as a subsidiary of COCOBOD.

Other aspects of the policy to restructure the industry relates to payments of farmers produce. Since the inception of cocoa industry in Ghana, payment of cocoa produce had been cash payment at farm gate; a practice that offered little or no opportunity for farmers to save, and forced buying agents to withdraw huge sums of money from the Banks against the backdrop of higher risks. The phenomenon also constrained farmers’ access to credit from financial institutions. To remedy the situation, the policy introduced the Akuafo Cheque payment system in 1986 in which farmers were paid through cheques which they withdrew from the Banks. Thus, all Buying Agents were obliged to pay farmers only with cheques drawable at the nearest Bank. As laudable as the policy is, it has been beset with problems as most cocoa growing communities do not have Banks and therefore could not be sustained.

1.2.2.2 Legislative framework – National response to child labour and promotion of child welfare

Against the backdrop of the threat posed by engagement of children in cocoa production, and indeed on all other WFCL, Ghana has taken pragmatic actions to confront the problem of child labour. Such actions anchor around legislative reforms, reform of institutional systems and structures, programme interventions (including pro-poor issues) and direct action to prevent, withdraw, rehabilitate and integrate children in education and society. The national response to child labour has been pragmatic.

The rights of children, their protection and welfare have been matters of concern to Government and stakeholders and measures have been put in place to secure the future of children. Over the past two decades or more some of these measures have included the promulgation of Children's Act of 1998 (ACT 560), the Labour Act of 2005 (ACT 651), the Human Trafficking Act of 2005 (ACT 694) and the Domestic Violence Act of 2006 (ACT 732).

The Children's Act, 1998 (ACT 560) and its Child Rights Regulation (LI)

The Children's Act provides a clear understanding of child labour as articles 87 (1) No person shall engage a child in exploitative labour and (2) Labour is exploitative of a child if it deprives the child of its health, education or development and this is in accordance with the ILO Convention No. 182 on the Worst Forms of Child Labour and the ILO Convention No. 138 on the Minimum Age. Whiles Ghana is bound by these conventions following her ratification, the Conventions also mandates countries, in accordance with their national laws and regulations, to set specific minimum age for employment which the Children's Act sets as 13 years for light work; 15 years for engagement in non-hazardous work and 18 years for full employment (including engagement in hazardous work).

In line with the above, organisations have endeavoured to comply with the provisions of the Act and have therefore prescribed specific activities permitted to be undertaken by children even within the non-hazardous age bracket. This has largely been within the formal sector. The informal sector, which employs a substantial number of people, including children is still not much regulated and do not have such prescriptions (even though the Act provides for the monitoring of child labour in the this sector by the Social Services Sub-Committee of the District Assemblies and the Department of Social Welfare). Thus, the cocoa sector which falls within the informal sector cannot boast of any such guidelines, making it exposed to various forms of WFCL. However, the MESW in collaboration with ILO has finalised HAF for cocoa sector and provides guidelines to regulate working children in the cocoa sector.

Box 4: Excerpts of ILO Conventions No. 182 (C182) and No. 138 (C138)

Worst Forms of Child Labour Convention No. 182 (C182), 1999

Having decided upon the adoption of certain proposals with regard to child labour, which is the fourth item on the agenda of the session,

Having determined that these proposals shall take the form of an international Convention; adopts this seventeenth day of June of the year one thousand nine hundred and ninety-nine the following Convention, which may be cited as the Worst Forms of Child Labour Convention, 1999.

Box 4: Excerpts of ILO Conventions No. 182 (C182) and No. 138 (C138)

Article 1:

Each Member which ratifies this Convention shall take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labour as a matter of urgency.

Article 6:

1. Each Member shall design and implement programmes of action to eliminate as a priority the worst forms of child labour.
2. Such programmes of action shall be designed and implemented in consultation with relevant government institutions and employers' and workers' organizations, taking into consideration the views of other concerned groups as appropriate.

Article 7:

1. Each Member shall take all necessary measures to ensure the effective implementation and enforcement of the provisions giving effect to this Convention including the provision and application of penal sanctions or, as appropriate, other sanctions.
2. Each Member shall, taking into account the importance of education in eliminating child labour, take effective and time-bound measures to:
 - (a) prevent the engagement of children in the worst forms of child labour;
 - (b) provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration;
 - (c) ensure access to free basic education, and, wherever possible and appropriate, vocational training, for all children removed from the worst forms of child labour;
 - (d) identify and reach out to children at special risk; and
 - (e) take account of the special situation of girls.

Minimum Age Convention No. 138 (C138), 1973

Having determined that these proposals shall take the form of an international Convention, adopts this twenty-sixth day of June of the year one thousand nine hundred and seventy-three the following Convention, which may be cited as the Minimum Age Convention, 1973:

Article 1:

Each Member for which this Convention is in force undertakes to pursue a national policy designed to ensure the effective abolition of child labour and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons.

Article 2:

3. The minimum age specified in pursuance of paragraph 1 of this Article shall not be less than the age of completion of compulsory schooling and, in any case, shall not be less than 15 years.
4. Notwithstanding the provisions of paragraph 3 of this Article, a Member whose economy and educational facilities are insufficiently developed may, after consultation with the organisations of employers and workers concerned, where such exist, initially specify a minimum age of 14 years.
5. Each Member which has specified a minimum age of 14 years in pursuance of the provisions of the preceding paragraph shall include in its reports on the application of this Convention submitted under article 22 of the Constitution of the International Labour Organisation a statement--

Article 3:

1. The minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons shall not be less than 18 years.
2. The types of employment or work to which paragraph 1 of this Article applies shall be determined by national laws or regulations or by the competent authority, after consultation with the organisations of employers and workers concerned, where such exist.
3. Notwithstanding the provisions of paragraph 1 of this Article, national laws or regulations or the competent authority may, after consultation with the organisations of employers and workers concerned, where such exist, authorise employment or work as from the age of 16 years on condition that the health, safety and morals of the young persons concerned are fully protected and that the young persons have received adequate specific instruction or vocational training in the relevant branch of activity.

Box 4: Excerpts of ILO Conventions No. 182 (C182) and No. 138 (C138)

Article 6:

This Convention does not apply to work done by children and young persons in schools for general, vocational or technical education or in other training institutions, or to work done by persons at least 14 years of age in undertakings, where such work is carried out in accordance with conditions prescribed by the competent authority, after consultation with the organisations of employers and workers concerned, where such exist, and is an integral part of:

- (a) a course of education or training for which a school or training institution is primarily responsible;
- (b) a programme of training mainly or entirely in an undertaking, which programme has been approved by the competent authority; or
- (c) a programme of guidance or orientation designed to facilitate the choice of an occupation or of a line of training.

The Human Trafficking Act, 2005 (ACT 694)

Trafficking in humans has been reported in many sectors of the Ghanaian economy for some time now. Specific areas of trafficking include fishing and agriculture (which is also noted in the cocoa sector). The need to have legal backing in pursuits of dealing with human trafficking had been conceived following findings from studies and researches that confirmed the existence of the practice. Consequently on 5th December, 2005, the Human Trafficking Act (ACT 694) was promulgated as an “Act for the prevention, reduction and punishment of human trafficking, for the rehabilitation and reintegration of trafficked persons and for related matters”. The law defines trafficking as “recruitment, transportation, transfer, harbouring, trading or receipt of persons within and across national borders by (a) use of threats, force or other forms of coercion, abduction, fraud, (b) giving or receiving payments and benefits to achieve consent. The laws is emphatic on trafficking of children in which no consent from parents or guardian or even the child can serve as defence for prosecution under the Act and irrespective of whether or not there is evidence.

The Act provides for the establishment of the Human Trafficking Management Board with the mandate to recommend for the formulation of National Plan of Action against Human Trafficking and related activities, advise the Minister on policy matters under the Act, promote strategies to prevent and combat trafficking in persons, provide guidelines for fund disbursement, among others. Again the law provides for establishment of Human Trafficking Fund aimed at meeting the basic material support of victims of trafficking, skills training, construction of shelters, tracing of families etc. The Board was established and inaugurated in 2007 and the Fund has also been established. Both the Board and Fund has so far been beneficial to target groups including support to children.

In recent times, the Human Trafficking Act has been applied in prosecuting cases of trafficking in persons including children who were being trafficked into cocoa sector, fishing, commercial sex and for ritual purposes and the results have been remarkable.

The Domestic Violence Act, 2006 (ACT 732)

The need for a law to regulate and put in place measures on violence which are domestic in nature stem from increasing reports recorded over the past decade. The Domestic Violence Act therefore was promulgated to provide avenues for redressing critical domestic violence in the home and family setting. The Act clearly defines domestic violence and includes assault (of marriage and within families), deprivation (of food, clothing, health, education, shelter etc.), abuse (physical, emotional and financial). For all purposes and

intents, the law seeks to protect the vulnerable segment of society including children and women and this has the greatest potential to fight against WFCL. While it has not been applied strictly to issues of child labour as of today, it is still an important mechanism for checking any abuses that would otherwise have arisen within settings where children abound.

1.2.2.3 Reform of institutional systems and structures

The institutional systems and structures which have been put in place as part of national response are many and vary in scope and purpose. Key examples are establishment of the Child Labour Unit of the MESW as a focal point for National Child Labour Elimination Programme, establishment of the National Steering Committee on Child Labour as overall coordinating entity for child labour elimination programmes in Ghana, programme intervention on National programme for elimination of Child Labour in Cocoa (NPECLC). Others include institution of Free Compulsory Universal Basic Education (fCUBE), School Feeding Programme, Capitation Grant and the Schools under Trees Project,

The Child Labour Unit of the Labour Department (MESW)

The position taken by Government of Ghana in handling the issue of WFCL in Ghana demanded high level commitment especially in the area of technical assistance for action. The Child Labour Unit (CLU) was thus established under the Ministry of Employment and Social Welfare as the focal institution on action against child labour in Ghana and has since its establishment been coordinating with MDAs, Employers and Workers Organisations, International agencies (IOM, ILO, UNICEF etc.), CSOs etc. in the area of policy and legislative formulation towards eliminating WFCL and again in the area of direct action for withdrawal and rehabilitation of WFCL in Ghana. In the area of cocoa production, the CLU has been an active partner in the work of the NPECLC where it has been involved in community sensitisation programmes in the 45 cocoa growing districts. It is a member of the Technical Working Group and has conducted various training programmes for regional and district labour officers. The Unit is the key department which spearheaded development of the National Plan of Action for the Elimination of the WFCL in Ghana by 2015 and coordinating its implementation. One critical area of concern is the involvement of children in hazardous work. The CLU has led the process for the development of comprehensive hazardous child labour activities framework for Ghana. The HAF which was validated in December 2011 by national stakeholders was produced by an Occupational Safety and Health Expert, in consultation with the social partners and other OSH and child labour experts has been finalised and being disseminated for use by the various stakeholders.

Table 4: HAF in crop agriculture

Hazardous work	Non-hazardous work	Light work
<ul style="list-style-type: none"> • Clearing of forest • Felling of trees • Removing tree stump • Bush burning • Use/working of/with Agrochemicals i.e. purchasing, transport, storage, use (mixing, loading and spraying/applying), washing of containers and spraying machine and Disposal of agro-chemicals containers/materials • Present or working in the vicinity of farm during spraying of agro-chemicals or re-enter a sprayed farm in less than 12 hours • Grafting in citrus and rubber farming • Using machetes/long cutlass for weeding or pruning • Climbing trees higher than 2.5metres to cut mistletoe or harvest or prune with sharp cutlass or implement • Working with motorized farm machinery i.e. mist blower, knapsack sprayer, chainsaw, tractor and bulldozer • Harvesting overhead cocoa pods, palm fruits, orange or rubber with Malayan knife, axe or other implements • Heaping of cocoa, orange, rubber or oil palm • Breaking cocoa pods with sharp breaking knives, stripping palm fruit from stem bunches with sharp axe or cutlass • Carrying heavy load beyond permissible carrying weight i.e. above 30% of body weight for more than 2 miles (3Km). • Working without adequate basic foot and body protective clothing (e.g. long sleeves, trousers and 'Afro Moses') • A child working alone on the farm in isolation (i.e. beyond visible or audible range of nearest adult) 	<ul style="list-style-type: none"> • Making a shed to provide shade for seedlings • Assisting in planting seedlings and securing seedlings • Planting other crops e.g. cassava and maize • Weeding/brushing under-growths with age-appropriate small (sua-ado or small cutlass) • Plucking within hand-reach pods or oranges • Collecting rubber latex • Breaking cocoa pods with breaking mallet or hitting on the ground • Carting age appropriate load (permissible weight) e.g. seedlings, water, harvest • Gathering of harvest • Carrying age appropriate load at time • Scooping of cocoa beans • Covering the counted oranges with branches to hide it and shade it from the sun • Assisting in loading harvest into vehicles 	<ul style="list-style-type: none"> • Filling the plastic bags with back soil • Picking and gathering cocoa, orange and loose palm fruits during harvesting • Counting oranges • Fetching water for spraying and leaving the farm before spraying commences • Running basic farm errands • Helping in cooking and serving food • Assist in taking care of babies and toddlers on the farm during weekends and holidays

The National Steering Committee on Child Labour (NSCCL)

National efforts at eliminating WFCL require high level consultations and decisions and therefore a National Steering Committee on Child Labour was established in 2000 as a coordinating body of all child labour elimination programmes in Ghana. The composition of the Committee include MDAs, Employers and Workers Organisations, Research Institutions and CSOs and its comprises individuals and institutions that provide policy advise on issues of child labour in Ghana. The Committee is chaired by the Minister of MESW and has three sub-committees namely Policy Advisory, Education and Skills Training; Advocacy, Social Mobilisation and Child Labour Monitoring and Cocoa, Fisheries and Mining and Quarrying Sub-Committees.

National Plan of Action for Elimination of Worst Forms of Child Labour in Ghana (NPA: 2009-2015)

The Government of Ghana recognises the serious nature of child labour in various sectors of Ghanaian economy and its impact on the rights and welfare of children as well as the negative consequences on national goals including fCUBE, human resource development, poverty reduction, alleviation of vulnerability and social exclusion and ultimately Ghana's quest to achieve middle income status by 2015. In response to these and many other issues on child labour, a National Plan of Action (2009-2015) has been developed as a coordinated framework to provide a concrete and coordinated platform for implementation of interventions that give effect to the various national constitutional and legislative instruments. It also constitutes the practical instruments for fulfilling Ghana's obligations relating to a number of international instruments to which Ghana is a party.

National Programme for the Elimination of the WFCL in Cocoa (NPECLC)

The National Programme for the Elimination of the Worst Forms of Child Labour in Cocoa (NPECLC) was instituted by the Government of Ghana in August 2006 to deal with the WFCL in Ghana's cocoa sector. The programme, which is in response to the agitations in foreign countries about the use of child slave labour in the production of cocoa in West Africa is being implemented by the MESW in collaboration with the COCOBOD, the Ministry of Finance and Economic Planning (MFEP) and other key national and international partners. NPECLC which is the cocoa sector component of the Ghana National Plan of action, has also built on the achievements of previous ILO-IPEC programmes in Ghana and in particular WACAP. The overall goal of the programme is "to eliminate the worst forms of child labour in the cocoa sector by 2011 and contribute to the elimination, by 2015, of WFCL in other sectors of the economy". Specific objectives are outlined for the programme.

Box 5: Programme objectives of the NPECLC

1. Enhancement of the knowledge base about the WFCL in cocoa
2. Strengthening of the legal framework for dealing with WFCL
3. Community mobilisation for action against WFCL
4. Development and implementation of interventions to eliminate WFCL in cocoa
5. Promotion of universal basic education and human resource development among cocoa growing communities
6. Development and implementation of interventions that reduce the need for child labour in cocoa
7. Development of institutional and technical capacities at central, regional, district and community levels to effectively address child labour in Ghana

The implementation of the NPECLC is based on structures and systems including a National Steering Committee on Child labour to provide technical support at policy level, a NPECLC Secretariat which coordinates activities concerning elimination of WFCL in cocoa; a Multi-sectorial Technical Working Group with representatives from MDAs, Research institutions, workers Unions, UN Agencies and NGOs; a Research team, District Child protection Committees (DCPCs) to implement action plans and monitoring; Community Child Protection Committees (CCPCs) to do community surveillance, sensitisation and implement CAPs, a National Partners Forum comprising all partners implementing projects to eliminate WFCL in cocoa (MDAs, Trade Unions, Research Institutions, local industry

partners, NGOs etc.) which meet to share best practices and monitors adherence to the national framework.

The NPECLC has since its inception implemented a number of activities as noted in the Cocoa Labour Survey in Ghana (2007/2008):

- Key stakeholder sensitisation in cocoa growing administrative districts culminating in the design of District Action Plans to eliminate WFCL in cocoa;
- Capacity building of 45 personnel drawn from the districts involved in the pilot and scale-up surveys to undertake data collection using different methods;
- Initiating several researches and disseminating research findings as well as observations from field activities to a range of audiences including Parliament, national and international audience;
- Engagement of Consultant to complete Hazardous Child Labour framework (HAF) in cocoa which seeks to provide a list of activities of hazardous nature (including conditions under which various cocoa-growing processes could be considered hazardous for children);
- Provision of support to over 1200 children in cocoa growing communities to access formal education and employable skills;
- Formation of District and Community Child Protection Committees in the cocoa-growing districts;
- Design of Community-Based Child Labour Monitoring (CCLM) system of data collection, analysis, reporting and remediation with the technical and financial support of ILO-IPEC Projects in Ghana;
- Creation of partnership with various key stakeholders (MDAs) whose actions are anchored around child welfare issues, agriculture and labour issues;
- Institution of a Partner's Forum in which organisations implementing projects and programmes to eliminate WFCL come meet to discuss activities and plans and to share best practices.

Box 6: Summary of activities and support to the NPECLC	
<ul style="list-style-type: none"> • Surveys funded by World Cocoa Foundation and COCOBOD • Labour Practices in Cocoa Production in Ghana (Pilot Survey) 2006/2007 supported by WCF and COCOBOD • Cocoa Labour Survey in Ghana (Scale up Survey, 2007/2008) • Development of Hazardous Child Labour framework (HAF) • Supported by Danish Embassy and ICI • Remediation (initial 11 Municipal/District (MDAs) 	<ul style="list-style-type: none"> • Development of OSH messages using HAF – supported by COCOBOD • Scale-up of remediation activities to 36 M/DAs – funded by COCOBOD, UNICEF and Danish Embassy • Individual Partner Projects • COCOBOD self-supported interventions • Yen Daakye (YDK) Project funded by ICI • GAWU interventions supported by ILO • University of Ghana (UoG) – Dept. of Agric Economics and Agribusiness

Box 6: Summary of activities and support to the NPECLC

- | | |
|---|---|
| <ul style="list-style-type: none">• Funded by Danish Embassy in Ghana, COCOBOD and Municipal/District Assemblies• Community Sensitisation• Supported by UNICEF, Danish Embassy and MDAs | <ul style="list-style-type: none">• UoG – Medical School: Cargill• ECHOES/INROCK: CARE• iMPAT – Mars: FURDEV• STCP: IFES• IBIS: Barry Callebaut |
|---|---|

Source: Owusu-Amankwah Rita: Presentation at Expert Panel Meeting on Progress and way forward for the NPECLC, 18-20 May, 2009, Holiday Inn, Accra.

Free Compulsory Basic Education (fCUBE)

The cost of education mainly in the form of payment of fees and the provision of school supplies etc. have been a factor in low school attendance in many districts, cocoa-growing districts inclusive. The 1992 Constitution of the Republic of Ghana incorporated the Free Compulsory Universal Basic Education (fCUBE) as a window of opportunity encourage school attendance and ensure that children from the age of six years enjoy fee-free formal education. By 1995 the fCUBE had taken off and the first review was made in 2005 following the quest to achieve the MDG 2. Following this, an Educational Strategic Plan was designed in which a Capitation grant was proposed to boost the achievement of the universal basic education in relatively shorter time. The Plan provides for attainment of gender parity in basic education by 2015. An Educational Reform Programme was launched in 2007 in which Junior and Senior Secondary Schools were replaced with Junior High and Senior High Schools.

The Capitation Grant

The Educational Strategic Plan proposed the introduction of the Capitation Grant to serve as a booster for achieving universal basic education within a shorter time period. The Capitation Grant was introduced and initially piloted in 40 districts with World Bank funding during 2004/2005 academic year and by the beginning of the 2005/2006 academic year, the grant was extended to all basic schools countrywide with Government funding. The Grant is a fee-free policy of GHC3.00 per child per year (currently stands at GHC4.50) to cover culture, sports and schools internal development fees. In the first term of the 2010/2011 academic year, government released GHC8.398 million as Capitation Grant based on the previous year's academic year enrolment of 5,598,133 pupils.

The School Feeding Programme

Government's efforts to encourage and increased attendance in school, especially basic school, led to the introduction of the School Feeding Programme (SFP) which was informed by the fact that children going out of the school compound or home to eat during break results in many not returning to school for the rest of the day. The Programme seeks to provide one hot meal per child per school day which responds to the assertion by educationists that children study better when they have had a good meal. It thus stand to reason that the SFP will encourage children to go and remain in school whiles ensuring full concentration in class and participation in school curricular activities. The programme also sought to increase domestic food production and household incomes as well as ensuring food security in deprived communities so that over 80 percent of the feeding costs of school children is retained in the local economy. The SFP has been piloted in 10 schools in late 1995 has grown progressively to serve 1,741 public schools and benefitted 700,202 pupils as of January, 2011 (Daily Graphic, August 15, 2011 edition). The SFP is implemented nationally in all the 170 districts in Ghana by an Accra-based National Secretariat and operates under the Ministry of Local Government and Rural Development (MLGRD). The Netherlands Development Organisation/SNV and the World Food Programme (WFP) are two institutions that have supported the GSFP in a number of ways. The first phase of the programme scheduled to end by 2010 was extended for one more year and that the need has been identified for programme evaluation and re-designing of the next phase of the programme (issues to address will include re-designing, re-targeting as well as development policy framework to guide the programmes).

1.2.2.4 Pro-poor policy issues and economic empowerment interventions

These involved Social Protection Programmes instituted by Government of Ghana and other bodies to cushion the poor and the vulnerable. Specific interventions include the Poverty Reduction Strategies (PRS), National Social Protection Strategy (NSPS), National Youth Employment Programme (NYEP), National Health Insurance Scheme (NHIS), Micro Assistance Loans and Credit Schemes (MASLOC) and Women's Development Fund.

National Social Protection Strategy (NSPS)

The poverty profile of Ghana indicates that an estimated 40percent of Ghanaians are poor and approximately 26.8 percent of population are extremely poor whiles 14.7 percent are classified as "poorest of the poor" (GLSS 5). This frightening statistics underlies the design of the Ghana National Social Protection Strategy (NSPS) in 2007 which represents GoG's vision of creating an all-inclusive and socially empowered society through the provision of sustainable mechanisms for the protection of persons living in situations of extreme poverty and related vulnerability and exclusion. Specifically, the NSPS aims "to help lift the socially excluded and vulnerable from situations of extreme poverty and to build their capacity to claim their rights and entitlements in order to manage their livelihoods (Government of Ghana, 2007). The programme intends to improve social protection coordination, coverage and impact in Ghana by targeting the 15 percent "extreme". The NSPS is being implemented through the Livelihood Empowerment Against Poverty (LEAP) as a Social Grants Scheme which assist the poor to "cope with social risk and vulnerability". It also focuses on enrolling and retaining school going of children, school feeding, capitation

grant, NHIS and elimination of child trafficking as well support to families. Under the LEAP, each child receives between GHC8 and GHC15 as subsistence allowance. The programme is to be implemented in a five-year period from 2008 – 2012.

National Youth Employment Programme (NYEP)

Ghana's youth unemployment situation had been a major concern and the issue had featured in public discussions. The World Bank country statistics for youth unemployment in Ghana had it that 65 percent of Ghanaian youth are unemployed. The Trades Union Congress (TUC) stated yearly youth unemployment in Ghana increases by 250,000. These revelations came up even with the existence of the Skills Training and Employment Programme (STEP). In finding more proactive measures towards addressing youth unemployment situation, the National Youth Employment Programme (NYEP) was instituted in October 2006 to address Ghana's youth employment and aimed at empowering the youth so they could add positively to the socioeconomic and sustainable development of the country. Indeed the STEP programme was converted to NYEP and that by 2007, over 104,000 young persons (aged 15-34 years) had been trained and employed in various skills including sanitation, education, security and healthcare. The programme started with 9 modules in 2006 and new modules are regularly created to promote the programmes objectives.

The NYEP receives support from Government and international organisations with the World Bank as the major international agency that supports the programme. In January 2011, the World Bank announced its intention to assist the programme with funds from a multi-million dollar facility to support the youth in entrepreneurship modules (which seeks to train the youth in formulating and implementing various strategies for development with sub-sections in ICT, agriculture and oil and gas industry) and in February 2011, the Bank provided US\$65 million to help train the youth in entrepreneurship module. In February 2011 a new three-year Strategic Plan was developed by the programme and estimates that its implementation of new modules would engage 400,000 youth by the end of 2013. Within the same period (i.e. February 2011, it was announced that the programme had recruited, trained and employed over 108,000 unemployed youth in 15 employment modules.

National Health Insurance Scheme (NHIS)

Ghana healthcare system had been operated under the "cash and carry system" in which the health needs of people were only attended to after initial payment for the service was made; even in cases where patients were brought into hospitals on emergencies, it was required that money was paid at every point of service delivery. The situation resulted in deaths and exclusion of the poor even in spite of the exemption policy which excluded children under age five and persons beyond 70 years as well as paupers from paying for health care. The National Health Insurance Scheme (NHIS) was instituted and passed into law in 2003 by Act of Parliament (Act 650) to replace the "cash and carry" system and to allow everyone to make contributions into the fund so that in the event of illness, contributors could be supported by the fund to receive affordable healthcare in our health facilities. Under the law, a National Health Insurance Authority (NHIA) which licenses, monitors and regulates the operation of health insurance was established.

The NHIS policy established three types of health insurance schemes namely (i) the District-Wide Mutual Health Insurance Scheme (ii) the Private Mutual Health Insurance Scheme and (iii) The Private Commercial Health Insurance Scheme. The District-Wide Mutual Health Insurance Scheme enjoyed massive government support and created opportunity for all Ghanaians to have equal access to the functional structures of health insurance. To ensure that the Scheme is sustained, all citizens made contributions of 2.5 percent as health insurance levy on selected goods and services. Other sources of support were a 2.5 percent social security contributions and annual premiums. By 2007, at least 47 percent of Ghana's population were hooked on to the NHIS and by 2008 coverage had reached 12,269,503 registered members representing 54 percent of the population according to official statistics. By 2009 62 percent of the population were registered with the NHIS. As at June 2010, 66 percent of population were covered with NHIS. Arrangements are advanced for the detachment of parents from their parent's registration. In other words this will make it possible for children to benefit even if their parents have not registered.

Micro-Finance Schemes

Ghana's economy is dominated by the informal sector that require massive credit support to enable it contribute significant to economic development. The main goal of Ghana's GPRS II was to ensure "sustainable equitable growth, accelerated poverty reduction and the protection of the vulnerable and excluded within a decentralised, democratic environment" and with the intention to eliminate widespread poverty and growing inequality especially among the productive poor who constitute the majority of the working population. Among the many microfinance schemes are Women's Development Fund (WDF) and the Micro Assistance Loans and Credit Scheme (MASLOC). The WDF was instituted by the Ministry of Women and Children Affairs (MOWAC) in 2001 to provide micro-credit, micro-insurance and other financial products to several thousands of people living in rural areas of Ghana. The essence of the focus on women was to improve the quality of life of children. Over the past years, the WDF has improve the lives of some 10,000 women who are in position to support their children to access education as they are able to provide them with school supplies and other school-related costs. The MASLOC was the initiative of the Government of Ghana and mainly targets individuals and groups engage in various forms of businesses. In all districts, private micro-finance institutions exist and are willing to provide financial support (albeit modest interest) for people.

1.2.2.5 Specific programme interventions of the private and NGO sectors

The International Cocoa Initiative (ICI) has been implementing the *Yen Daakye* Project (referred as YDK in 5 districts in the Western and Ashanti Regions in collaboration with several NGOs. In specific relation to child labour issues, the ICI's YDK has carried strong advocacy for passage of bye-laws on child participation in cocoa farming. Support for the development of Community Action Plans (CAPs) resulting in the improvement in school infrastructure, building of teachers bungalows, contributions that have led to improvement in BECE results and to ensure commitment of parents and community leaders on supervision of children.

The Sustainable Tree Crop Project (STCP), a public-private partnership platform, through its innovative productivity enhancement mechanisms delivers training modules to

cocoa farmers. The module integrates awareness messages on child labour and adoption of responsible labour practices by cocoa farmers.

In 2008, Cadbury established the Cadbury Partnership Project (CCP) as part of its corporate responsibility and committed a substantial portion of its £45 million fund over a ten year period to activities to help address the structural problems faced by the cocoa sector in a number of countries that supply cocoa beans to the confectioner. In Ghana, a huge part of this fund is channelled through the implementation of the Ghana Medium-Term Strategic Plan (MTSP). The overall objective of the CCP Ghana programme is to assist cocoa growing communities in Central, Eastern, Central, Western, Ashanti and Brong Ahafo Regions to prosper and thrive and that thriving of communities will be built by ensuring sustainable cocoa production, sustainable livelihoods from alternative sources, improve access to social amenities and service through improve engagement with institutions that provide essential services.

1.2.3 Highlights of causes of low cocoa productivity in Ghana

The decline in cocoa production in Ghana to its lowest level especially in 1983 was due to many factors most of which are biological in nature. Other contributing factors are technological, socioeconomic, socio-technical and agronomic in nature.

Severe biological factors (pests and diseases)

Pests and diseases including Epiphytes and parasitic plants are important causes of low yield in cocoa production in Ghana. The major biological factors affecting cocoa production in Ghana are Cocoa Swollen Shoot Virus Disease (CSSVD), Blackpod Fungal Diseases and Mirids. Others are due to termites, stem borers, stink bugs, weeds and parasitic mistletoes. Mirids for instance constitute the most significant insect pests and are considered as extremely damaging causing 30 percent or more yield loss annually and could even kill the trees. The CSSVD is estimated roughly to cause 11 percent yield loss and could potentially lead to total crop loss and has led to about 190 million cocoa trees loss in Ghana. The blackpod disease (caused by *Phytophthora palmivora* and *P. megakarya*) can lead to substantial pod loss (J.B Ackonor et al, 2007). Parasitic mistletoes *tapinanthus bangwensis* is identified as causing low yield in many cocoa farms. Epiphytes identified include *Bulbophyllum spp.*, *Chasmanthera dependens* and *Cyrtorchis hamerta*.

A study commissioned by CRIG (2006) to assess the impact of CRIG-recommended technologies, revealed that farmers control capsids and blackpod diseases by spraying twice a year instead of 4 times and 9 times per annum respectively. This might be attributable to high cost of inputs including agro-chemicals, equipment and labour.

Poor Farm Practices

Poor farm practices are a great contributor to low productivity in cocoa. Prior to selling to License Buying Companies (LBCs), storage and transportation, cocoa production process anchors around five main practices which include farm establishment, farm maintenance, harvesting, pod breaking, fermentation and drying of cocoa beans. Four weeding rounds per year and spraying of cocoa tress against pests and diseases, removal of

mistletoes and other epiphytes, shade management through pruning and removal of basal suckers are essential activities in farm maintenance as it leads to improvement in the quality of cocoa beans. Harvesting at the appropriate time (at a time when the pods are well matured and ripen) to improve the quality of the cocoa beans; pod breaking (which is also important to remove the beans from the pods which should be done with care to avoid cutting the beans) and fermentation and drying of beans (which are important activities for bean flavour or aroma and bean quality required for chocolate manufacturers) are all important practices.

Decades of cultivation leading to decline in soil fertility

Cocoa growing started in the Eastern Region of Ghana where it was introduced in 1879 and remained as the hub for many years. Later it moved through Ashanti and Brong Ahafo Regions to the Western Region. It is known that the several years of continuous cropping of the cocoa for over a century potentially affects the fertility of the land as the case has been for the Eastern, Ashanti and Brong Ahafo Regions. The migration of cropping to the Western Region made the Region have the largest proportion of new plantings. The available land sizes however tend to be small.

Closely tied to the soil fertility is the spread of the some diseases. For instance, the virus that causes blackpod disease is known to have the soil its main site of survival and that remains the primary infection of the more virulent *P. megakarya*. It is therefore established that the movement of soil or materials associated with the soil (cocoa seedlings, plantain suckers, cocoyam corms, yam tubers etc.) carry with them the danger of spreading the disease to new areas or farms. Other movable objects (including vehicles) from one cocoa farm to the other within and between districts facilitate the dissemination of pathogens.

Labour intensiveness of cocoa farming

Cocoa production is known to be labour intensive as a result of the cultural practices involved and the nature of farm lands. Besides weeding rounds per year, removal of mistletoes and other epiphytes, shade management through pruning, and removal of basal suckers, other cultural practices which are labour intensive include harvesting, opening of pods, fermenting and drying the beans. Various researchers have estimated the labour requirements for cocoa production and the result show high man-days input. For instance Aneani and Asamoah (2004) estimated that the without-placenta mode of fermentation is more labour-demanding with 93.94 mandays relative to 42.38 mandays for the with-placenta fermentation. The only way a cocoa farmer, especially an old aged farmer, can meet the labour requirement is to hire labour, the cost of which tends to be high, or rely on family labour (which often give rise to child labour in cocoa production). The high cost couple with shortages sometimes of labour (as a result of out-migration of the youth from their villages to the cities to seek greener pastures or to do *galamsey* activities in other communities) explains the difficulties farmers face in replanting their old cocoa farms.

Small farm sizes

The size of farms, though not an accurate measure, could also be a yardstick for attaining quantities of products. Unlike in some parts of cocoa growing countries (e.g. Côte

d'Ivoire) where plantations of cocoa exist, cocoa farmers in Ghana are generally smallholders operating family farm and cultivate acreages that range from about 3 acres or less in Eastern and Ashanti Regions to an average of 10-20 acres in the Western North and Western South cocoa regions. A few outliers operate relatively less farms of less than an acre or about 100 acres but these are mostly in minority.

Challenges from Cocoa Extension Service

Central to the quest to increase on-farm productivity lays the knowledge state of farmers. Studies⁵ have shown abundantly clear that there is a huge knowledge gap between cocoa research results and farmer practice to the extent that on research farms, yields of over 1 ton have been obtained (Adomako et al., 1995; Manu and Tetteh, 1987). A consequence of the knowledge gap is the low adoption of cocoa production technologies by farmers⁶. It is recognized by policy makers that the knowledge gap is due largely to a malfunctioning extension support system for cocoa farmers (Ghana Cocoa Board, 2005).

The upsurge in national output has been attributed to policy interventions including increasing proportion of the producer price paid farmers but also to access to information - (the lack of it is more critical in agriculture than in other areas of human endeavours). The goal of the cocoa extension service of the COCOBOD is to facilitate farmers' acceptance of innovative practices from research invariably leads to increase output, productivity and incomes. Central to this goal is the role of extension agents who by their functions are pivotal to the attainment of this goal.

Practical measures to increase cocoa productivity should include the evaluation of perceptions of Extension Agents who are the knowledge repositories that farmers look up to for information in the rural cocoa communities and incorporated into policy decisions that target increased farm productivity.

Previously the COCOBOD depended on MOFA extension for disseminating technical information and agricultural education to cocoa farmers along the value chain. However in recent years these two services have been separated thus affecting the extension farmer ratio of the COCOBOD.

Data collected from the research indicated that farmer-extension worker ratio in the Western and Eastern and Central Region are 1:1200, 1:1500 and 1:2000 respectively. Ideally, the farmer extension ratio should be 1:500.

Following the separation, the ratio of cocoa farmers to Extension Workers has decreased leading to reduction in farmers' access to extension services to the extent that in many cocoa growing districts, cocoa extension services are non-existent. The effects include poor adoption rate and given weak extension services production techniques are not effectively communicated to farmers.

⁵ (Baah 2002, 2008a, 2007a, 2007b; Ministry of Manpower Youth and Employment, 2008; Ghana Cocoa Board, 2005).

⁶ (MASDAR International Consultants, 1998; Mensah, 2006).

Limited Farmer Participation in Cocoa Research

Given that cocoa farmers are generally resource-poor, their capacity to access advisory expertise on technology in forms that are comprehensible is less. There is less involvement of farmers at all stages of research process (i.e. from conceptualization through to interpretation of the results and technology transfer). Thus, in Ghana farmers are usually left out of issues of technology and its diffusion as well as on the impact in improving productivity. Whilst this holds true as far as reality of the facts are concerned, farmers can play active role in research. Through their Apex bodies.

Effects of Low Producer Prices on yield

Low producer price had constituted a key factor in low productivity and a great disincentive to cocoa farmers for really long time and this has been noted by both researchers and Government of Ghana. In the 1983/84 cocoa season, Ghana recorded the lowest cocoa production level and the producer price paid to farmers was 21.3 percent of the FOB price (COCOBOD records referenced in E.N.A Dormon et al, 2004). The impact was serious disinterest shown by existing and new-entrants farmers. Typically, the consequences were low incomes, inability of farmers to hire farm labour (culminating in increased used of children/child labour), low level of crop management, low investment (inability to buy inputs) and ultimately low yields. The Government revamping policy of the cocoa sector however sought to correct the phenomenon and in 2003 producer prices increased to 68 percent and further increases have since been recorded. This was expected to motivate farmers to produce more cocoa.

Low impact of Research due to low farmer adoption of Research Results

Whiles the Government's Cocoa Sector Development Strategy attempts to tackle both the economic (liberalised market and pricing policy) and technical issues, the overall strategy remain top-down linear approach having limited institutional reforms. It is also found that the agenda for research on cocoa have often been drawn up in a linear fashion of technology development and transfer without the adequate involvement of farmers. For instance, CRIG develops technologies and these are carried out by agricultural extension system as recommendations (including the development of high yielding hybrids, breeding of cocoa types resistant to Swollen Shoot and Black Pod disease, control of capsids with insecticides and cultural practices to control shade, weed control) for the adoption by farmers. On the contrary most of the recommendations have not been widely adopted by farmers attributable to reasons including farmers not finding the recommendations relevant, recommendations not applicable at farm level or incompatibility with prevailing production systems.

Box 7: Institutional perspectives on factors for low productivity in Ghana's cocoa production

Agronomic and biological Factors

- Poor husbandry practices in cocoa farms
- Over-aged cocoa trees whose productivity has declined
- Climate change and deforestation

Technological Factors

- Use of rudimentary tools (e.g. cutlasses and hoes)

Box 7: Institutional perspectives on factors for low productivity in Ghana's cocoa production

- Poor access to cocoa inputs such as fertilisers and insecticides
- Poor access to improved planting

Institutional Practice and Support

- Poor distribution of fertilisers and insecticides
- Inadequate extension services
- Low level of genuine and active farmer groups

Economic Factors

- Investment in farms by farmers
- Unavailability of labour during some periods of the season
- Producer price not remunerative enough
- Limited access to credit

Socio-ethics Factors

- Poor land tenure systems
- Effects of share cropping arrangements
- Youth out-migration

1.2.4 Incidence of child labour in Ghana (in cocoa) and national response

1.2.4.1 Incidence of Child Labour

The use of children (or perceived child labour) in Ghana's cocoa industry, especially in farms, have been reported in many circles with the Western Media taken a swipe on Ghana about the practice. The reports indicate that a substantial number of smallholder cocoa farmers in Ghana in some cocoa-growing communities still engage children, majority of which are males between ages 11 and 15 years and undertake one or more activities classified as hazardous in the Hazardous Child Labour Activity Framework of the National Programme for the Elimination of Worst Forms of Child Labour in Cocoa - (Public Agenda, 2010)). Other studies have categorically stated that "children and young people aged 9 through 17 years are subject to hazardous occupational exposures including strenuous work, sharp tools, and pesticides. Lack of training in proper safety practices and inadequate personal protective equipment were commonly noted. Injuries and illnesses included musculoskeletal disorders, sprains, strains, lacerations to the head, fractures, eye injuries, rashes, and coughing⁷.

Contrary to the above reports, stakeholders in Ghana's cocoa industry (and some Ghanaian Officials) have continually expressed dismay at the assertion citing misinterpretation and lack of understanding of the relationship between Ghana inheritance system and local cocoa production business such that a few cases of children helping parents and guardians on family cocoa farms to mean the WFCL. In an instance cited by the Ghana News Agency – GNA (Thursday, March 13, 2008), the Chief Executive of COCOBOD in briefing the Parliamentary Select committee on Employment, Social Welfare and State Enterprises, reassured the committee that there are enough measures in place to check any such unacceptable practice on farms. His exposition was that there is the tradition to pass on cocoa farms from one generation to the other and to younger people in the family thus

⁷ Mull dane L. Kirkhorn, Steven R in Child Labour in Ghana Cocoa Production: Focus upon Agricultural Tasks, Ergonomic Exposures, and Associated Injuries and Illnesses. A webpage publication, 2005.

debunking the notion to equate practice of children helping parents (and family members on farm) to child labour as defined by the ILO.

Notwithstanding these reactions, the fact still remains that child labour in Ghana's cocoa is a reality as confirmed by researches, studies and programme interventions aimed at stemming the menace.

Box 8: Basic concepts in child labour

Child Labour

The term "child labour" is often defined as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development.

It refers to work that:

- is mentally, physically, socially or morally dangerous and harmful to children; and
- interferes with their schooling by:
 - depriving them of the opportunity to attend school;
 - obliging them to leave school prematurely; or
 - requiring them to attempt to combine school attendance with excessively long and heavy work.

The Worst Forms of Child Labour (WFCL) is defined as:

- All forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, as well as forced compulsory labour, including forced compulsory recruitment of children for use in armed conflict;
- The use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances;
- The use, procurement or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in relevant international treatise; and
- Work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children, such harmful work to be determined by national authorities.

Two types of WFCL may be defined: (a) **unconditional worst forms** – these are often illegal and also unacceptable for adults; and include all those activities whose status as worst forms cannot be altered no matter what is done to improve conditions of work e.g. Commercial sexual exploitation of children; and (b) **hazardous work** – include those forms that need to be determined on the national level by a competent authority after consultations with organisations of employers and workers; and some of the activities can be improved by changing the circumstances. It is recommended that any definition of hazardous work should include (i) work which exposes children to physical, psychological or sexual abuse; (ii) work underground, underwater, at dangerous heights or in confined spaces; (iii) work with dangerous machinery, equipment and tools or carrying heavy loads; (iv) exposure to hazardous substances, agents or processes, or to temperatures, noise levels or vibrations damaging to health; and (v) work for long hours, night work, and unreasonable confinement to the premise of employer. Convention No. 182 which forms the basis of this definition applies to all boys and girls below 18 years.

Hazardous activities in Cocoa

- Clearing of forest and /or felling of trees
- Bush burning
- Working with agrochemicals, that is, purchasing, transporting, storage, use (mixing, loading and spraying/applying), washing of containers and spraying machine and disposal.
- Present or working in the vicinity of farm during pesticide application or re-entering a sprayed farm in less than 12 hours
- Using machetes/long cutlass for weeding
- Climbing trees higher than 3 metres to cut mistletoes
- Working with motorized mist blower, knapsack sprayer and chainsaw
- Harvesting overhead cocoa pods with harvesting hook
- Breaking cocoa pods with breaking knife
- Carrying heavy load beyond permissible weight that is above 30% of body weight for more than 3Km.
- Working on the farm for more than 3 hours per day or more than 18 hours per week when not in school.

Box 8: Basic concepts in child labour

- For children in school, working more than 2 hours a day on a school day.
- Working without adequate basic foot and body protective clothing (e.g. long sleeves, trousers and 'Afro Moses')
- Working on the farm in isolation (that is, beyond visible or audible range of nearest adult)
- Working on farm after 6.00 p.m.
- Going to or returning from the farm alone
- A child withdrawn from school to work on cocoa farm
- Working full time on farm and not attending school (applicable to children under 15years).

Sources: International Labour Organisation and HAF, NPECLC 2007.

1.3 Highlights on programmes for enhancing cocoa productivity in Ghana

Following the decline in cocoa production, Government, NGOs and the Private Sector Institutions have acted jointly and severally to design and implement programmes aimed at enhancing cocoa productivity in target communities. Besides cocoa productivity, improvement in the general livelihoods of target communities have also been included in the programmes with the view of ensuring that socioeconomic life of cocoa growing communities are sound enough to contribute to improvement in cocoa production. This Chapter presents highlights of key programmes which are also measures to enhance cocoa productivity.

1.3.1 Farmer field schools (FFS) approach and video viewing clubs

The Farmer Field School (FFS) was originally developed in Southern Asia⁸ for the integrated management of rice pests but was later adapted to other crops and to the extent for livestock and fisheries. FFS are intensive, season-long programmes where farmers meet regularly to learn and experiment on a given topic and have shown remarkable impacts in terms of reducing farmers' use of pesticides for environmental and health benefits, increasing their on-farm productivity, improving knowledge gains among farmers and empowering rural communities. In recent times, FFS have served as platform for information exchange and interactive communication between farmers, researchers, extensionists and other stakeholders in the cocoa sector. FFS also find a place in creating synergies. The Cocoa Research Institute of Ghana (CRIG) in collaboration with the MOFA, Conservation International, Kuapa Kokoo and the Sustainable Tree Crop Production (STCP) has adapted the FFS concept in cocoa production with the aim of transferring cocoa cultivation technologies to farmers in a manner that makes farmers partners in technology development.

Video Viewing Clubs have been used in a number of ways. The use of videos as educational tool has been employed by Sustainable Tree Crop Production (STCP) to create a convenient and comfortable learning environment for women. Video Viewing Clubs have been formed and participants are required to share their knowledge with two or more cocoa farmers, ensuring that lessons reach a greater number of farmers in the community.

⁸ FFS is an experimental learning approach originally developed in Southeast Asia for the integrated management of rice pests but adaptable to other crops even to livestock and fisheries. In Ghana, the FFS experiences were applied to cocoa in studies in the central and Ashanti Regions where STCP has since 2002 conducted FFS.

1.3.2 Cocoa diseases and pests control programme (CODAPEC)

The recognition that the decline in Ghana's cocoa is attributable to factors including reduction in the area under cultivation, low productivity, low producer prices, incidence of pests and diseases, declining soil fertility and inadequate supply of inputs led to government seeking for pragmatic solutions. The Cocoa Sector Development Strategy was instituted in 1999 and among other things led to the introduction of the Cocoa Diseases and Pests Control (CODAPEC) programme in 2001. The programme came to be called "Mass Spraying" and aimed at assisting all cocoa farmers in Ghana to combat the Capsid/Mirid and the Black Pod diseases. Its objectives also included the training of farmers and technical personnel on the cultural and chemical methods of pests and diseases control, educate and train local sprayers on safe pesticides usage, help put more money in the pockets of farmers and create jobs for the unemployed youth in rural communities.

The programme covers 72 political districts spanning all the cocoa growing areas: 21 districts from Volta, Brong Ahafo, parts of Western, Ashanti and Eastern Regions benefited from blackpod disease only; 35 districts from Central, Eastern, parts of Western and Ashanti Regions benefited from Mirids only and 16 districts benefited from both programmes. Each farm is sprayed 3 times between June and October for black pod control and 2 times between August and December for mirids control.

A key component of the programme is training of farmers, gang supervisors and Mechanics by Project Coordinator and Resource Persons from CRIG. Trainees are taken through the appropriate methods of pesticide application emphasizing on dosages of the various pesticides, dangers of exposure to pesticides, importance of the use of protective clothing, handling and minor repairs of spraying machines, observance of personal hygiene, environmental safety issues, first aid and techniques application, handling and disposal of empty containers.

The CODAPEC programme has made enormous strides in terms of achievements. As a source of employment for the youth, it employed over 60,000 rural folks as sprayers, supervisors and mechanics. Incidence of Black pod disease and mirid infestation has reduced substantially. Ghana's cocoa production has thus increased from 380,000 mt at the programme start to almost 500,000 mt in 2002/2003 and reached all-time high of 740,458 mt in 2005/2006.

Notwithstanding the above achievements, some challenges are noted as follows:

- Lack of adequate cooperation from farmers
- Farmers rely solely on CODAPEC provisions to the neglect of advising them that additional spraying for blackpod and mired is required
- Lack of reliable data on cocoa farmers and their farm sizes
- The alleged illegality of fee charging by sprayers
- High level of pilfering and diversion of inputs

- Inadequate field personnel to do the spraying
- Untimely supply of inputs

Empirical and anecdotal evidence suggest that in 2002 farmers linked their yield improvements to the effects of the free mass spraying received. The improved practices have been an increase in productivity of about 30 percent which brought back the productivity to the levels achieved in 1980.

1.3.3 Cocoa high technology programme (HITECH)

The Cocoa “Hi-Tech” Programme started in 2003 and aimed at increasing productivity by providing fertilizers and pesticides to cocoa farmers on credit. In the first year, 50,000 farmers benefited from the programme, and increased to 100,000 one year later. The ‘Hi-Tech’ programme is managed jointly by the CRIG, COCOBOD and MoFA. The average purchase price of a bag of fertilizer is GHc54.05. COCOBOD however offers a bag for GHc29.00 representing a subsidy of 48 percent with the aim of improving the yield of cocoa farms and subsequently increasing the incomes of cocoa farmers.

1.3.4 Ghana cocoa farmers’ newspaper project

The CRIG, in collaboration with Cadbury International Limited, launched the Ghana Cocoa Farmers’ Newspaper to reach out to cocoa farmers with new research findings on cocoa including provision of extension information on CRIG-recommended cocoa production technologies for adoption by farmers to increase cocoa output. Being the first of its kind, the newspaper is designed to equip farmers with new technologies to improve production and thereby improve cocoa farmers’ incomes. It uses cartoons and simple language to advise farmers on cocoa planting, proper fermentation methods and disease prevention. The newspaper is expected to address issues of agronomy, pest and disease control, soil fertility, varietal and socioeconomic problems. New research findings and technological innovations are presented in simple illustrative format and language in order to afford the average farmer and primary and high school pupils who are potential future generation cocoa farmers to read, understand and appreciate the issues.

In 2006, a survey was conducted with the view of assessing the impact of the project on actual farm practices of cocoa farmers and the adoption levels of CRIG-recommended technologies. Findings show there are serious shortcomings – inadequate maintenance of cocoa farms especially with respect to control of pests and diseases as well as low fertility of soils resulting mainly from inadequate use of production inputs and low adoption of improved technologies by farmers because of insufficient money for buying inputs.

1.3.5 Farmer associations/groups and cooperatives

Research has confirmed that improving capacity of Farmer Associations can enhance farmer’s access to credit, information and provide collective voice to demand policies and ultimately improve productivity (Francis Baah, 2008). It has been found that if properly constituted, supported and harnessed, Farmer Associations can support extension support delivery to farmers, and provide them with needed inputs etc. Five types of Farmer

Associations exist within the Ghana's cocoa sector namely Farmer's Cooperative marketing organizations, cocoa farmer marketing societies, farmers' marketing companies, farmers' production associations and farmers' assistance societies. Generally, the interest of these Farmer Associations is to create avenues for production and marketing of their produce, eventually increase their incomes. Their focus tend to be on farm inputs (chemicals, equipment for pests and diseases control, as well as other yield increasing input technologies such as fertilizers) at low cost. Whilst this is done, their ability to mobilize savings to attract farm investments is also enhanced and they are able to access labour at low prices for maintenance of farm. It also serves as forum for information dissemination. The Associations are formed through farmers own initiative as against elsewhere in cocoa growing countries where they evolve from top-down approach alienating the very farmers they are meant to support.

Some of the constraining factors to their performance in the cocoa value chain relate to lack of capital, low level of warehouse for input storage and distribution. Quite discouraging experiences of earlier failed farmer associations continue to threaten formation of new ones as some farmers are sceptical and unwilling to be involved in formal cooperatives activities.

The real solution lies in associations having stronger capital base as well as free hand to run their own cooperatives. Farmers thus require education and empowerment to apply cooperative principles in their organizations. This will also increase credibility and make associations eligible to raise capital from formal financial markets to buy their farm input needs. The platform they create serve as fora for the dissemination of technological innovations. Other specific benefits are:

- Ability to improve accessibility to farm inputs through bulk purchasing: mobilization of funds could take the form of kilo-kilo deductions; farm inputs could be purchased in bulk and distributed to members;
- Platform for introduction, education, adoption of innovations and research and extension recommendations at the right time and in the right place
- Improving accessibility to credit: by Association, they become stronger and more credit worthy and therefore can access funds for farm activities and for other socioeconomic necessities including payment of children's school fees, for funerals etc. Indeed the first Cooperative Bank in Ghana was established by farmers
- Collective responsibility in pest and disease control: given the nature of smallholder farms which lie side-by-side each other, pest and disease affecting one farm can invade others. This calls for community action in pests and diseases control. Farmers organized in groups can help one another to apply disease control measures together, thus making it cost effective.

The Kuapa kooko for instance, though not a real apex body, provides services to their clients and has been a key player in the fight against child labour in Ghana (e.g. it supports the Kids Camps). Its involvement in cocoa marketing and financing process is remarkable.

1.3.6 Introduction and adoption of cocoa hybrid varieties

In 1984, the Government of Ghana, through the Government's Cocoa Rehabilitation Project (CRP) introduced for adoption a Hybrid Cocoa Varieties (called Series 2). The new variety outperformed the older "Amazons" and "Amelonado" as it produces more pods per tree and bore fruits in three years compared to at least 5 years for the older varieties. The hybrid however performed only under optimal weather conditions and when complementary farming practices like the application of chemical inputs, the adoption of new planting procedures, pruning and spraying are down. The hybrid also made farmers harvest more rounds at the beginning and at the end of the season which often conflicts other activities including trading.

In spite of the improved husbandry that should go along with the hybrid cocoa trees, farmers readily and increasingly adopted them. While in 1980 only 10 percent of cocoa grown in Ghana were of the high yielding type (Nyanteng, 1993), by 2002, 57 percent of farmers from the 3 main areas of production were growing hybrid trees (Vigneri, 2005).

1.3.7 Sun drying of cocoa beans (use of simple wood fired flue-type flatbed dryer)

Cocoa drying is an important part of the curing process as the fermentation of beans must be dried to a safe moisture level to avoid deterioration. In small holder farms, sun drying is paramount and uses a wood fired flue-type dryer. The process is weather dependent and takes a relatively longer time. The process is quite laborious but it is also necessary to ensure that drying uniformity of beans is achieved. Sun drying has a potential for child labour as children are often used to turn the beans from time to time to ensure uniform drying.

1.3.8 Participatory approaches for agricultural extension

The Transfer of Technology has been a model of agricultural extension in which technological innovations are transferred from research to farmers through extension agents. The practice made agricultural extension a key instrument for inducing change in agricultural communities. The transfer of technology model has had its criticisms in recent times; the model makes farmers merely passive receivers of the ideas of scientists, making research recommendations quite remote from farmers. To correct the shortcomings, stronger participatory approaches in which farmers participate in agricultural research and extension is being sought against the backdrop of the realization that the socioeconomic and agro-ecological conditions of farmers are complex, diverse and risk-prone. Such approaches include the farming systems research and extension, farmer participatory research, the farmer first and last etc. Whilst all these have had their criticisms, FFS have indeed been admitted as an approach.

1.3.9 Cocoa livelihoods programme– farmer production and business training

The Cocoa livelihoods programme began in early 2009 when the World Cocoa Foundation (WCF) announced a new five-year \$40 million innovative funded by the Bill & Melinda Gates Foundation and 14 chocolate industry companies to significantly improve the livelihoods of about 200,000 cocoa farmers in Cameroon, Côte d'Ivoire, Ghana, Liberia and Nigeria. The programme focuses on enhancing farmer knowledge and competitiveness,

improving productivity and quality, promoting crop diversification and improving supply chain efficiency. The initiative is expected to help increase farmers' incomes and significantly improve cocoa community wellbeing. In Ghana, some 60,000 cocoa farmers and their households located in 21 districts in the Ashanti, Eastern, Brong Ahafo and Central Regions would have their incomes improved. Some key aspects of the programme include, training of farmers in better production techniques, quality improvement and business skills; professionalise farmer organizations to better meet member needs; improve farmers access to agricultural inputs and improved quality seedlings; improve farmer access to market information and opportunities for diversification into alternative food and cash crops to maximize income and security.

1.3.10 Empowering cocoa households with opportunities and education solutions (ECHOES) program

The World Cocoa Foundation's ECHOES Programme is a USAID-supported alliance aimed at strengthening cocoa growing communities by expanding opportunities for youth and young adults in cocoa growing communities. The program's livelihoods and innovative activities support the next generation of cocoa farmers through a comprehensive vocational training, youth livelihoods, and leadership development. The ECHOES literacy and teacher training activities also focuses on increasing educational opportunities for in and out-of-school youth of the next generation of cocoa farmers through literacy and numeracy interventions and comprehensive teachers' training. The collective impact of these interventions are to reach over 20,000 young people and indirectly impact over 140,000 people across Ghana and Côte d'Ivoire.

The ECHOES is implementing Family Support Scholarship Program, a three-tiered programme designed to help mothers keep their children in school while improving their existing enterprises. Fund disbursement follows a pattern of activities: the first component goes direct to the school to pay school fees and related expenses while the other components is given out after passing the business training course to invest in the business. After two years, it is expected that the profit made are put towards the children's school-related expenses.

1.3.11 Cadbury cocoa partnership project

The Cocoa Partnership project (a \$45 million commitment) was launched in 2008 by Cadbury with the view of encouraging the development of thriving communities in Africa, Southeast Asia and the Caribbean. The project supports sustainable cocoa farming by improving the lives and incomes of farmers who supply Cadbury with cocoa beans as inputs to cocoa products. The goals of the project include, among others, promoting sustainable livelihoods for one million farmers; increasing crop yields for farmers participating in the programme to 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 project specifically aims at addressing the root causes of low productivity by enhancing farmer productivity and helping to attract the next generation to cocoa farming. Several strategies have been designed to achieve this and include improving cocoa farmer

incomes by increasing yields and cocoa quality, introducing new income streams in rural cocoa-producing areas; and investing in cocoa growing communities by providing opportunities for education and improving infrastructure. It also supports the development of farmer groups aimed at ensuring that a sustained growth of the cocoa sector, driving from the grassroots is achieved in the long term. The intervention has attracted a large number of collaborators (Government, International organizations and NGOs) who are working in over 100 communities in Ghana to provide the necessary training and technical assistance to increase cocoa productivity and quality; expanding access to finance for farmers and entrepreneurs; enhance community infrastructure to improve daily life; and promote opportunities for new business ventures.

The Partnership is governed by international and country-level boards made up of stakeholders that provide input on strategy, objectives and oversight of project activities. These partners include International organizations (members of ICI, Reps from Anti-slavery international; senior advisor from UNDP, human rights organization), Government Officials (including Ghana COCOBOD), NGOs (including CARE, World Vision and VSO) Farmer Associations/Groups. The international NGOs with strong local ties work with farmers and other community members to identify strategies for community-led engagement and mobilization. The NGOs work in collaboration with farmer organizations to develop Community Action Plans (which outlines community priorities in areas of cocoa production, infrastructure development, environmental sustainability and social growth). The project also engages Community Extension Officers to provide relevant training and technical assistance to meet cocoa production goals. Other NGOs and farmer organizations are engaged and/or encouraged to associate to strengthen their ability to negotiate terms of trade and gain access to cocoa buyers who are usually Licensed Buying Companies. The main source of Cadbury's cocoa comes from the Ghana COCOBOD and by so doing guaranteeing farmers a set of minimum price for their cocoa. Thus farmers are insulated from fluctuations in world cocoa prices.

The Partnership has achieved enormous results: (i) through Cadbury's investment in sustainability of cocoa supply, the risk of higher costs and inadequate supply of cocoa in the future for confectioners is reduced (ii) through the initiative, Cadbury hopes to increase productivity from 400kg of cocoa per hectare to 1000 kg per hectare by 2018 (iii) the focus of fair-trade certification will help confectioners capture significant quantity of the fair-trade chocolate market (iv) the company will contribute to achievement of MDG 1 to end poverty and hunger by providing farmers with training and opportunities to improve their incomes (v) the offer of free training on farming practices and access to reduced price for farming inputs in the 100 partnership communities and the technical assistance help yield significant increases in productivity, and (vi) through the fair-trade certification, cocoa farmers earn additional income . There is increased awareness on child labour and provision of educational and empowerment programmes help community life.

1.3.12 Kids camp (educational project with young people)

The "Kids Camp" is a child-focussed initiative of Trading Visions and Kuapa Kokoo which encourages children to speak out, be helped to negotiate actively with their parents and peers as they best could. The two organizations have collaborated on an educational project involving young people from several schools in cocoa farming communities with the

aim of better educating and empowering these people through increasing their understanding of fair-trade and the role of their communities in the global chocolate supply chain, and co-producing educational materials for their peers in the UK. Trading Visions and Kuapa in November 2009, ran the “Kids Camp” which focused on child labour. Participations were young teenagers from several villages who took part on the facilitated discussions. The programme was held in English, often switching to the Twi Language (i.e. their local dialect) for better appreciation. The discussions dwelt on health, education, right to work, right to be protected and cared for and that child labour is injurious to this right. Discussants distinguished between acceptable child work and unacceptable child labour in relation to ILO definitions. Examples were cited to create a better understanding and appreciation. The essence of the “Kids Camp” is to create a platform for a productive approach to tackling child labour issues on cocoa farming.

1.3.13 Farmer participatory cocoa improvement project

This project is a joint venture of four organizations including CRIG and began in early 2004. Based on a survey of selected farmers in all the six cocoa growing regions, stakeholders in the cocoa sector including farmers, marketers, quality control, agents, representatives from CRIG and STCP initiated the project. The initiative sought to test pilot research findings and facilitators, researchers agreed to On-farm Trials and FFS.

1.3.14 ILO-IPEC projects on child labour in cocoa sector

The ILO-IPEC has been implementing interventions in the cocoa sector aimed at fighting against child labour in cocoa production. Such interventions include the ILO-IPEC West Africa Cocoa and Commercial Agriculture Project (WACAP) which was implemented in the West Africa Sub-Region, including Ghana, from 2003 to 2005. The on-going projects are West Africa ECOWAS I and II , the Cocoa Communities Project (CCP) and the Public Private Partnership (PPP) , involve a number of interventions in cocoa growing communities aimed at strengthening national and local capacity, promoting coordination, cooperation and social and civil society dialogue, effective policy development and implementation, productivity and decent work and the provision of key services to children and communities, including through the development of a broader reach of effective child labour monitoring systems (CLMS). The projects community interventions supports sensitization and awareness-raising activities related to the identification of hazardous child labour in conjunction with its CLMS activity. With the ILO-IPEC’s estimates of the 115 million child labourers engaged in hazardous work, (60 per cent work in agriculture), the project is of more relevance. Children engaged in the agricultural sector are often exposed to several hazards including poisonous pesticides, fertilizers , excessive working hours (with little or no pay), the use of sharp implements, carrying heavy loads, attacks or bites from animals and exposure to harsh weather conditions.

1.4 Analysis of cocoa farming in target communities and practical measures to enhance cocoa productivity – benefits, challenges and gaps

This Chapter presents the analysis of fieldwork as it highlights on the farmer and farming characteristics of target communities. It also assesses the practical measures which have been introduced by government, NGOs and the private sector towards enhancing

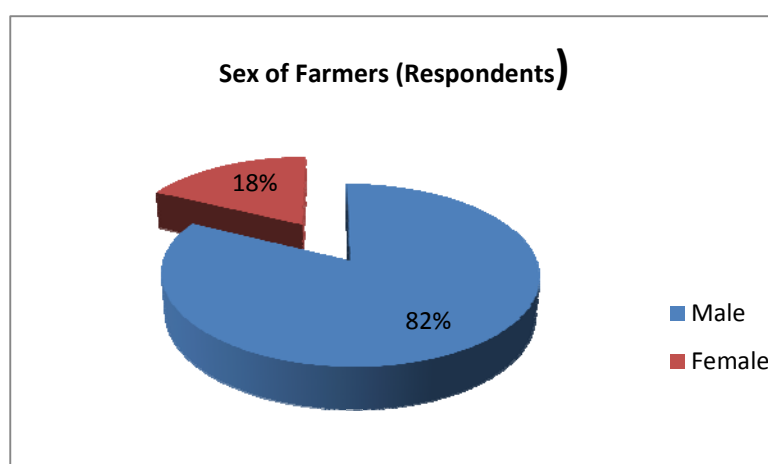
cocoa productivity in target communities and the extent to which these have been beneficial to farmers.

1.4.1 Farmer and farming characteristics of target communities

1.4.1.1 Sex distribution of cocoa farmers in target communities

Sex distribution of cocoa farmers in target communities shows a male dominated enterprise. As much of 82 percent of respondents are male cocoa farmers and are usually the household heads or heads of families. Female cocoa farmers (who might also be household or family heads) constitute 18 percent. Figure 1 shows the sex distribution of cocoa farmers.

Figure 1: Sex distribution of cocoa farmers



1.4.1.2 Farm sizes

Existing information indicates that Ghana's cocoa farming is smallholding with average farm sizes of between 3-5ha. The survey result corroborates this assertion as shown in Table 5 below. The overall reported average farm size is 3.92ha (9.68 acres). The Wassa Amenfi West District has the largest average farm size of 6.53ha (16.13 acres), followed by the Adansi South District with average farm size of 5.0ha (12.45 acres) and then by the Suhum-Krabo-Coaltar District with average farm size of 4.70ha (11.56 acres). As the Western Region falls predominantly within rain forest agro ecological zone of Ghana, it is no wonder that cocoa farm sizes in the Region are the largest, while those in the Volta region, mostly Costal Savannah zone has the least holdings.

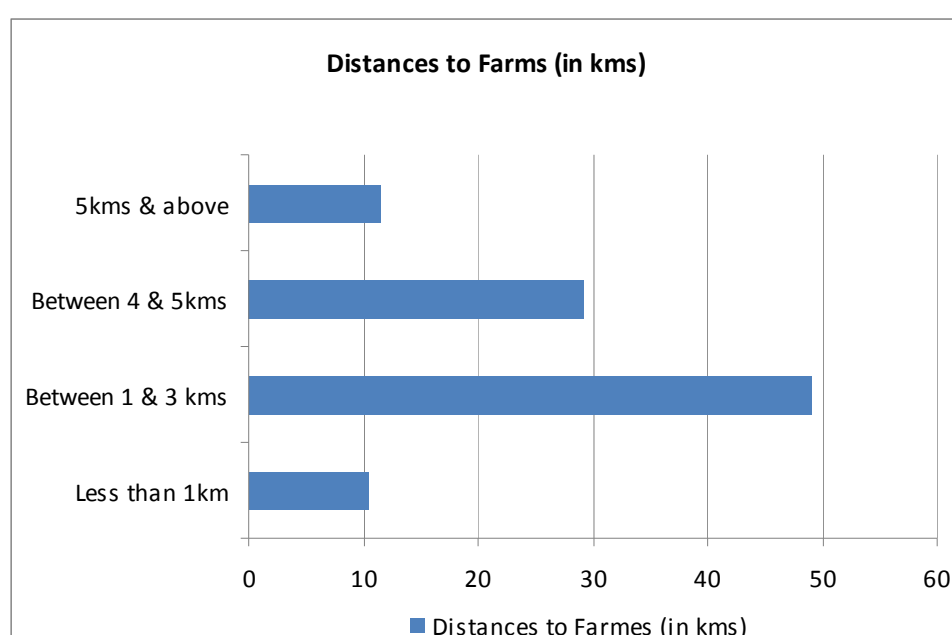
Table 5: Average farm sizes

District	Average farm sizes in hectares (acres)					Mean
	Less than 2	Between 2 & 5	Between 5 & 10	Between 10 & 15	15 & above	
Adansi South	0.0 (0.0)	8.09 (20.0)	18.21 (45.0)	4.04 (10.0)	10.12 (25.0)	5.04 (12.45)
Asunafo North	5.38 (13.3)	6.75 (16.7)	12.14 (30.0)	12.14 (30.0)	4.04 (10.0)	3.03 (7.50)
Birim South	3.92 (9.7)	6.51 (16.1)	16.95 (41.9)	5.22 (12.9)	7.85 (19.4)	3.52 (8.71)
Hohoe	6.75 (16.7)	20.23 (50.0)	6.75 (16.7)	5.38 (13.3)	1.33 (3.3)	1.86 (4.60)
Suhum Kraboa Coalta	2.87 (7.1)	14.44 (35.7)	8.66 (21.4)	7.24 (17.9)	7.24 (17.9)	4.68 (11.56)
Twifo-Hemang Lower Denkyirah	1.37 (3.4)	4.16 (10.3)	18.13 (44.8)	9.75 (24.1)	6.96 (17.2)	3.79 (9.38)
Wassa Amenfi West	0.0 (0.0)	3.52 (8.7)	15.82 (39.1)	8.78 (21.7)	12.30 (30.4)	6.53 (16.13)
Total	3.19 (7.9)	9.30 (23.0)	13.55 (33.5)	7.60 (18.8)	6.79 (16.8)	3.92 (9.68)

Note: 1acre =0.40469ha.

1.4.1.3 Distance to farms

Generally, distances from communities to farmlands are longer implying more travel times and thus fewer times can be spent on farms. About 10 percent of respondents have their farms located within less than 1 km from their homes; 49 percent have their farms located within 1-3 kms from their homes and 11.5percent have their farms located 5kms or more away from their houses. Figure 2 shows distances to farms.

Figure 2: Distances to farms

Distribution of the distances to the farms by district is shown in the Table 6. Overall mean distances to the farms is 2.83km but there appears to be district differentials with those in the Suhum-Krabo-Coaltar district having the least mean distance of 1.76km and those in the Hohoe district having the highest mean distance of 3.62km. Although many factors contribute to yields in cocoa production, distance to farms will also influence the work quality. Long distances could result in spraying gangs doing shoddy works leading to low productivity. Farmers should be encouraged to build farmsteads on the farm, where they could stay for a number of days to facilitate work and reduce travel distances

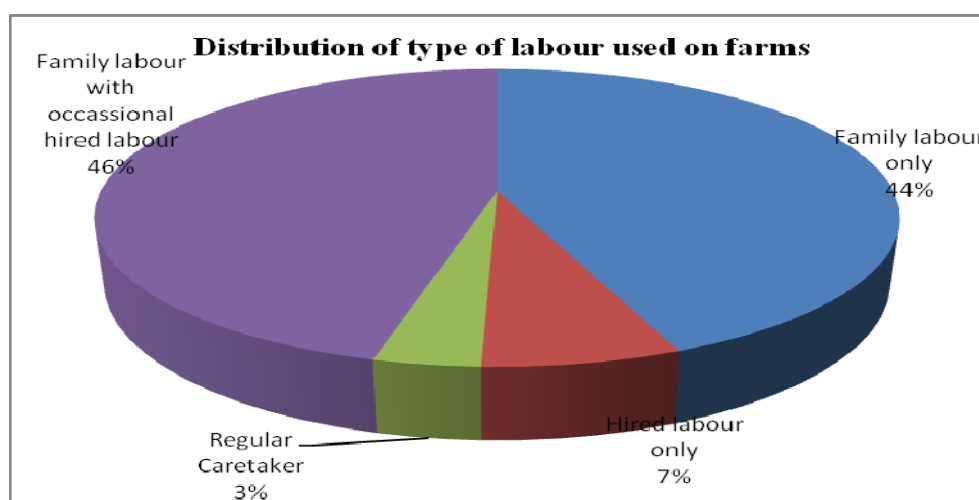
Table 6: Distances to farms by districts

District	Distance (km)				Mean distance
	Less than 1	Between 1 and 3	Between 3 and 5	5 and above	
Amansie South	15.0	45.0	30.0	10.0	2.94
Asunafo North	10.0	50.0	30.0	10.0	2.78
Birim South	3.2	38.7	41.9	16.1	3.48
Hohoe	6.7	40.0	26.7	26.7	3.62
Suhum Krabo Coalta	17.2	58.6	24.1		1.76
Twifo-Hemang Lower Denkyirah	6.9	51.7	31.0	10.3	2.95
Wassa Amenfi West	17.4	60.9	17.4	4.3	2.11
Total	10.4	49.0	29.2	11.5	2.83

1.4.1.4 Type of labour used in cocoa farms

Farmers in target communities mainly use family labour (which includes the farmer, spouse, children and other members of the household) and this constitutes 44 percent of respondent farmers. However, a number of the farmers also indicated that hired labour is employed in cases where the demands of the work are beyond the capabilities of the available family labour, especially during harvest periods. Others use regular caretakers (3 percent) on a share-cropping basis. Figure 3 shows labour use in cocoa farms in target communities.

Figure 3: Labour used in cocoa farms



1.4.1.5 Age of cocoa farms

Overall, survey results indicates that cocoa farms are aging and this is a key factor in the declining cocoa productivity. The distribution of the average age of cocoa farms by district is shown in the Table 7. About 44.3 percent of the farms have average age of more than 20 years while only 4.2 percent have average age of less than 5 years. This shows that not many new farms are being cultivated. Thus, many farmers are managing inherited farms, or farms they cultivated several years ago. The field evidence suggesting that cocoa trees are over 20 years call intensification of the cocoa rehabilitation (replanting and rejuvenation exercise in all productions areas). The younger cocoa farms should be considered to benefit from the Cocoa Hi-Tech Program.

Table 7: Average age of cocoa farms in target communities (by Districts)

District	Average age of cocoa farm (years)					Mean distance
	Less than 5	Between 5 and 10	Between 10 and 15	Between 15 and 20	20 and above	
Adansi South	0.0	5.0	15.0	20.0	60.0	24.05
Asunafo North	6.7	3.3	30.0	20.0	40.0	19.23
Birim South	6.5	6.5	22.6	35.5	29.0	18.71
Hohoe	6.7	20.0	10.0	16.7	46.7	27.83
Suhum Kraboa Coaltar	6.9	20.7	24.1	3.4	44.8	20.21
Twifo-Hemang Lower Denkyirah	0.0	6.9	31.0	24.1	37.9	17.76
Wassa Amenfi West	0.0	8.7	21.7	8.7	60.9	23.04
Total	4.2	10.4	22.4	18.8	44.3	21.36

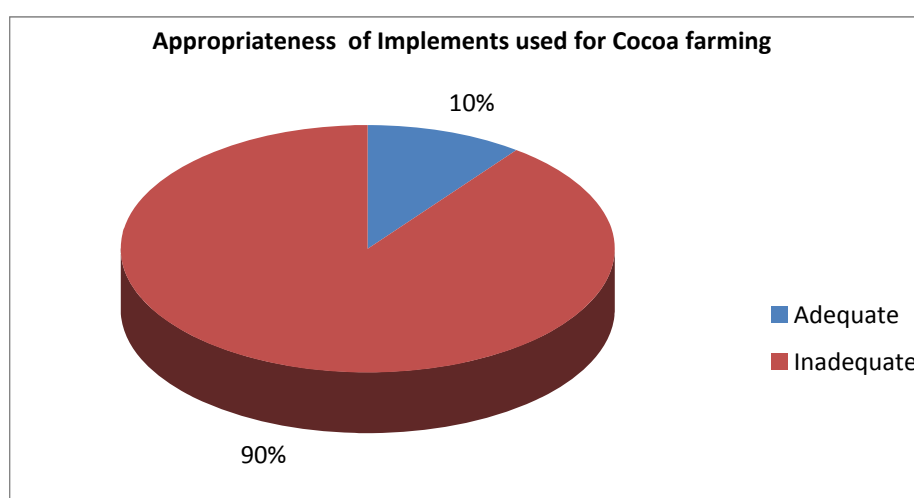
1.4.1.6 Type of implements used in cocoa farming

Empirical evidence demonstrated by several researches confirms the rudimentary nature of cocoa farming in Ghana especially against the backdrop of the farm implements/tools used. Farmers' response on implement use shows that cocoa farming still relies heavily on the use of simple tools. Contact with CRIG does not show any difference in terms of recommended tools for cocoa production⁹. Farmers were however quick to admit that the use of these implements is highly inappropriate and slows down productivity. In fig 4.4, about 90 percent find the implements inappropriate while 10 percent find the implements adequate. Farmers find the initial purchase of modern implements such as motorised sprayers very expensive. There is the need to educate farmers on importance of investing on farm implements to reduce drudgery while increasing productivity. Table 8 shows farm tools currently being used by farmers in cocoa production and CRIG recommended tools.

⁹ Except for cocoa fermentation where practices like heap fermentation, box fermentation and tray fermentation require the use of specially designed facilities. This seems more appropriate for very large scale (or plantation farming) as the cost involved may be beyond the means of peasant cocoa farmers.

Table 8: Farming tools used by farmers and CRIG recommended tools

Farm operation / production activities	Tools in use	CRIG recommended tools
A. Establishment		
• Land preparation		
• Clearing	Cutlass, axe, chain saw machine	Cutlass, chain saw machine, axe
• Stumping	Cutlass	Earth chisel, cutlass
• Gathering of debris	Cutlass, earth chisel	Cutlass
• Holing	Cutlass	Earth chisel, cutlass
• Planting	Cutlass	Earth chisel, cutlass
• Shade establishment	Cutlass	Cutlass, earth chisel
B. Maintenance		
• Weeding	Cutlass	Cutlass, mechanical slasher
• Pruning	Cutlass	Cutlass, pruning knife, pruner
• Pest control	Motorised mist blower	Motorised mist blower
• Disease control	Knapsack sprayer	Knapsack sprayer
• Mistletoe control	Cutlass	Pruner (or standard pruner)
C. Harvesting		
• Plucking	Cutlass, go-to-hell (for pods on canopy)	Cutlass, harvesting hook
• Picking of pods	Hand picking, baskets	Hand pod picker
• Gathering/heaping of pods at 'aboye'		
• Pod breaking	Cutlass, breaking mallet	Breaking knife, cutlass/club
D. Fermentation		
• Fermenting beans	Fertiliser, rice sacks	
• Carting fermented beans	Baskets, washing basins	
• Drying, sorting beans and bagging	Platform with raffia mats, Jute sacks	

Figure 4: Farmers perspective of appropriateness of farm implements

To those who find the implements adequate only admitted so because they have no alternative and thinks they should make maximum use of what is available. Those who do not find the implements adequate think that more should be done to provide them with

implements that would make the work easier and more productive. To solve the problem of inappropriate farm tools, NPECLC is working with other stakeholders to produce 10 simple tools for cocoa production to reduce the drudgery involved. Possibilities of innovative solar driers with mechanisms that will not call for covering and uncovering of the cocoa beans during the drying process and can even be left unattended to in the rain be invented to help boost productivity.

1.4.1.7 Prevalence of diseases and pests in cocoa farms

Farmers indicated that two well-known diseases affecting their farms are the Black-pod disease and the Swollen Shoot disease. About 10 percent of farmers indicated they do not experience any diseases on their farms¹⁰. Majority of 40 percent experience only the Black-pod diseases while 26 percent experience the Swollen Shoot diseases. There are about 25 percent of farmers who experience both the Black-pod and the Swollen Shoot diseases. There do not appear to be any noticeable differentials in the prevalence of the diseases by district. Table 9 shows the prevalence of diseases as indicated by farmers.

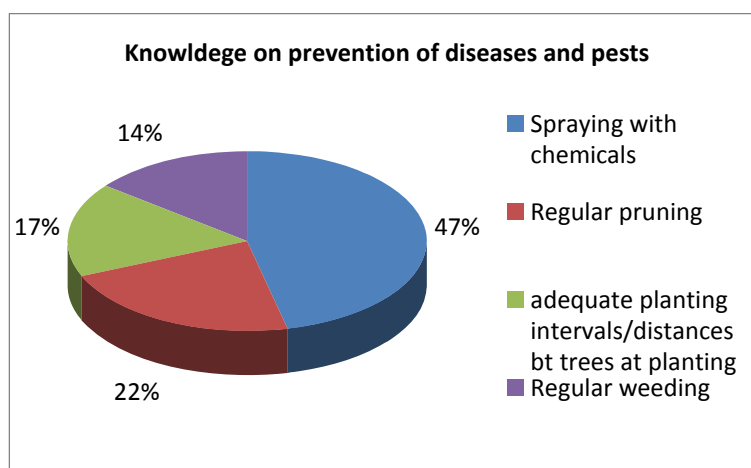
Table 9: Prevalence of diseases and pests experienced by farmers

District	Percentage (responses) on Prevalent diseases occurring in cocoa farms				Total
	Black-pod disease	Swollen shoot diseases	Both black pod and swollen shoot disease	None	
Adansi South	40.0	25.0	25.0	10.0	100.0
Asunafo North	40.0	30.0	23.3	6.7	100.0
Birim South	38.7	29.0	22.6	9.7	100.0
Hohoe	36.7	30.0	23.3	10.0	100.0
Suhum Kraboa Coalta	41.4	20.7	24.1	13.8	100.0
Twifo-Hemang Lower Denkyirah	41.4	20.7	27.6	10.3	100.0
Wassa Amenfi West	43.5	21.7	26.1	8.7	100.0
Total	40.1	25.5	24.5	9.9	100.0

Farmers demonstrated knowledge on diseases and pests as well as some control measures. In indicating diseases and pests prevention, farmers noted four key mechanisms including spraying with chemicals, regular pruning, ensuring adequate intervals/planting distance during tree planting and regular weeding. According to the responses, some farmers practice a combination of these mechanisms. Spraying with chemicals appears to be the most known method, and in many cases was the only option employed by farmers. About 1 in 4 of the respondents (25 percent) know that diseases and pests infestation can be reduced through regular pruning and even a lower percentage of 16 percent knew that regular weeding could help prevent diseases and pests. This shows a general low awareness level about diseases and pest control through agronomic measures. Figure 5 shows these measures.

¹⁰ This may occur on new farms and with few farmers who are very conscious and have the ability to follow good agronomic practices

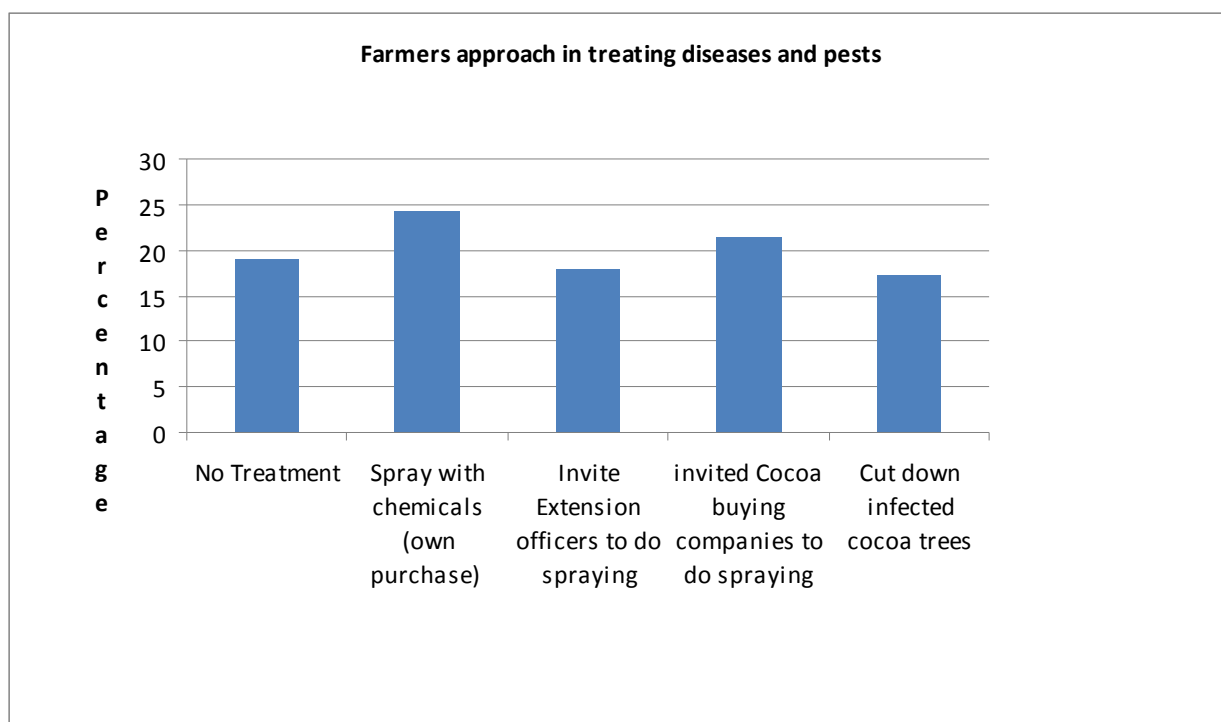
Figure 5: Knowledge on prevention of diseases



Besides knowledge on disease prevention mechanisms, it was important to ascertain knowledge about the sources of chemicals giving that availability, cost and usage have significant bearing on cocoa productivity. About 19 percent of farmers said they do not do anything to treat the diseases, 17 percent resort to cutting down the affected trees, 24 percent spray cocoa with chemicals they purchase by themselves, 18 percent call agricultural extension officers to come and spray their farms and 21 percent call the cocoa buying companies to come and spray the cocoa at a cost they pay later through cocoa bean deductions at point of sale.

Farmers' general knowledge on preventive control measures is quite commendable. However, more education is needed in relation to good agronomic practices which are paramount to disease prevention and control in cocoa production. There is also the need to research into biological control measures which can reduce the use of chemicals in spraying thereby preventing environmental pollution and reducing greenhouse emissions.

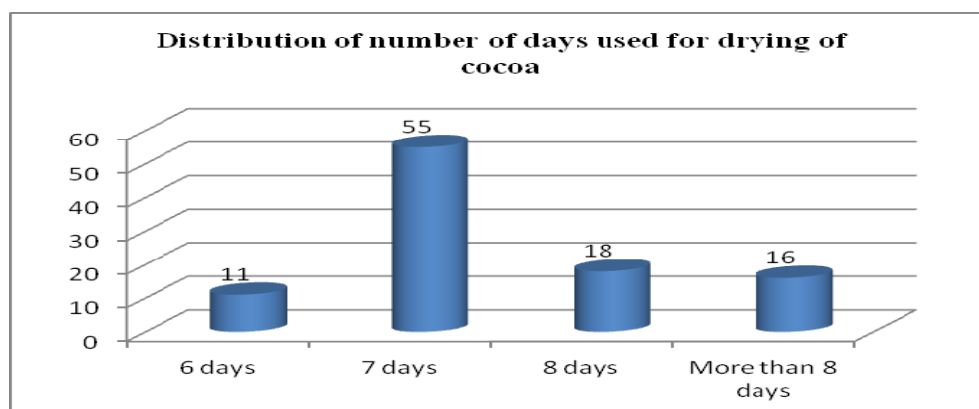
Figure 6: Farmers approach in treating diseases and pests



1.4.1.8 Cocoa fermentation, drying and value addition

Farmers indicated that fermentation normally done on farms improves quality; taste and colour. The mode of fermentation without placenta also improves quality, taste and colour but is more labour demanding and costly than with placenta fermentation. Fermentation period is between 4 and 7 days. In the case of drying, 55 percent of farmers indicated they dry cocoa beans for 7 days. Other responses show that cocoa drying is between 6 and 8 days with a limited percentage indicating they dry over 8 days. Farmers were however quick to admit the importance of proper fermentation and drying of cocoa beans in improving cocoa productivity. Figure 7 show cocoa drying periods.

Figure 7: Cocoa drying days



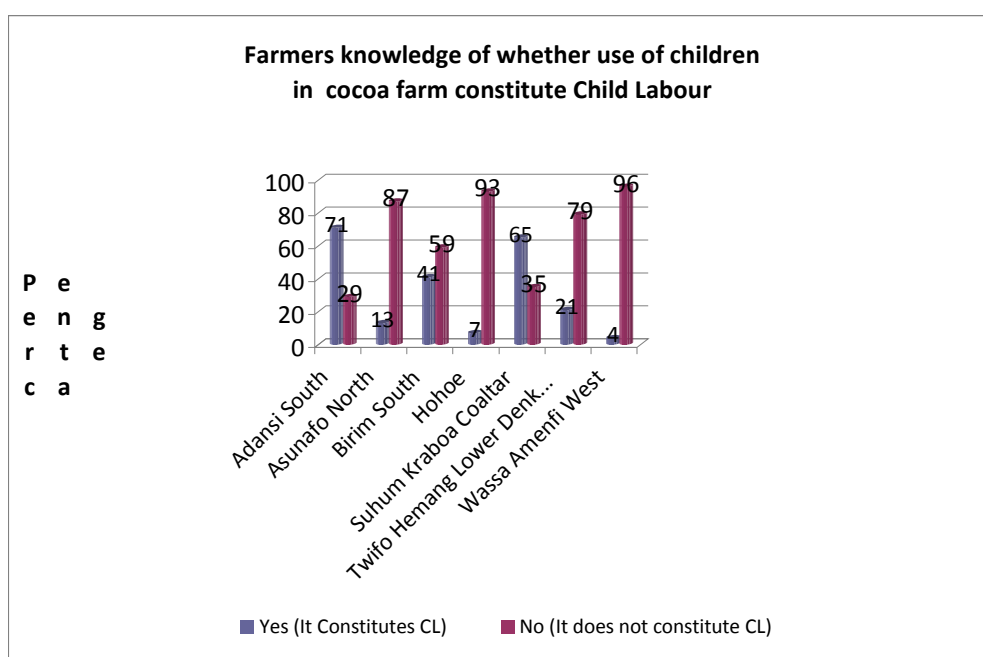
On the methods of improving cocoa drying, farmers illustrated clear understanding. Respondents believe that using improved netting and solar powered driers would help speed up the drying time and thus allow them more time for other activities. Others also suggested that using electric driers would make drying of cocoa beans in the night possible to help speed up the time. Also, the solar or electric powered driers would make it possible for the drying to be done in an enclosed space and thus save the excessive use of labour when drying is done in the open in which case they would have to be opening and covering the cocoa beans against the rain or dew at night. This would in effect enhance productivity since they would use the same amount of time to achieve more output.

On the issue of value addition, farmers indicated that at their level, no value is added to the cocoa except for few instances when by-products are used for purposes like soap making, manufacture of liquors etc.

1.4.1.9 Use of children in cocoa farms

Investigations into the use and/or involvement of children in cocoa farming was necessary not only because it remains the crux of the research but equally so because child labour has in recent times taken centre-stage in discourse around cocoa production in Ghana and Côte d'Ivoire. Many of the farmer respondents indicated that their children do help on the farms, but on a limited basis. Normally, the children join them on the farms only on weekends when the children are not in school. They emphasised however that children help with tasks such as running errands, gathering harvested pods, and carrying fermented seeds to the place of drying. To many of them, roles played by the children on their farms have no detrimental effect on the education, health or self-esteem, and therefore does not constitute child labour. In ascertaining their knowledge on whether or not children engagement in farms constitute child labour, about 30 percent of them admitted knowing that it really constitute child labour while 70 percent do not think it constitute child labour but rather see it in the light of children's learning a decent trade that their parents would eventually pass on to them. However, there are differentials by district with the Adansi South and Suhum Kraboa Coaltar districts recording high acceptance that the use of children on cocoa farms is a normal practice in their communities. Figure 8 shows use of children in cocoa farms.

Figure 8: Use of children in cocoa farms: knowledge and perceptions



One positive thing, though, was that farmers put forward suggestions on ways to stop the use of children on cocoa farms including the use of Community Task Forces to check and effect arrest of perpetrators; government assistance to enable them hire labour, and continuous education about the benefits of sending their children to school instead of having them help on the cocoa farms.

Box 9: Suggestions on new methods that can be employed to improve productivity

Cultivation

- Improved access to the high yield seedlings
- Supply of nursed seeds instead of direct bean planting
- Education on the right planting distance

Farm Management

- Education on pruning and recommended weeding practices
- Access to fertilizers and other chemicals to improve soil fertility
- Access to regular spraying for the control of pests and diseases
- Access to improved/adapted technology. Mechanisation etc.

Sales

- Increase in producer purchase prices

Direct access to government buying agencies instead of private middle men who cheat by adjusting their weighing scales.

Sampled views of farmers at the community level.

1.4.2 Overview of farmer and institutional perspectives on cocoa productivity

Farmers are with the view that cocoa productivity is determined by hybrid performance and relates to the soil type, prevailing pest and disease infestation levels, socio

economic issues and agronomic practices. The decline in Ghana's cocoa productivity could be attributed to clear institutional factors in which measures to help farmers were poorly undertaken. These include inadequate input supply, low producer prices, high cost of inputs all of which are issues that could have been averted if efforts have been made to critically address them. Other agronomic factors identified include decline in soil fertility as a result of continuous planting on the same farm for decades; over aged trees as a result of poor replanting measures, inability to adhere to the routine spraying schedules and weeding rounds. Biological factors mainly pest and diseases constitute a major hindrance to productivity.

Box 10: Opinions expressed by farmers on reasons for low cocoa productivity

- Frequent plague by insects, parasites, diseases(including the black pod disease);
- Occurrence of disasters such as bush fires and floods;
- Lack of adequate investment in fertilizer and chemicals;
- Poor farming practices including short planting distance and lack of regular pruning;
- Low grade// poor yielding seedlings;
- Declining land fertility which has resulted in noticeable decline in recent harvest as compared to the past; and
- Changing rainfall patterns that has affected the duration of the major season patterns (issue of climate change).

1.4.3 Government-led measures to enhance cocoa productivity

1.4.3.1 Pests and diseases control measures

The mass spraying exercise of Blackpod and Capsid disease under the CODAPEC Project

The Government of Ghana through COCOBOD introduced the National Cocoa Diseases and Pest Control (CODAPEC) programme, popularly known as “Mass Spraying” to assist all cocoa farmers in the country to combat the Capsid/Mirids and the Black Pod diseases. Pesticides provided were against the infestations of Mirids and other field disease pest. The practical way of implementing the programme is the formation of District Task Forces (DTF) and Local Task Forces (LTF) which have been formed in each operational district and unit centre, respectively. The DTF oversees the Project Management at the District level and is in charge of Gang recruitment, storage and distribution of inputs and logistics to the Gang Areas, and general supervision whilst the LTF on the other hand, handles the Project Management at the Society level and is responsible for the planning and implementation of the programme. Training were conducted for gangs supervisors and mechanics on pesticide application with emphasis on the dosages of the various pesticides, dangers of exposure to pesticides, importance of the use of protective clothing, handling and minor repairs of spraying machines, observance of personal hygiene, environmental safety issues. Among the pesticides and fungicides introduced are Nordox 75 WG (Cuprous oxide), Funguran-OH WP (Cupric Hydroxide), Fungikill WP (Cupric hydroxide + metalaxyl) and Agro-Comet WP (Cuprous oxide + metalaxyl) which are recommended for spraying against the blackpod diseases. Similarly, three insecticide types, Confidor (Imidacloprid), Akate Master (Bifenthrin) and Actara (Thiamethoxam) were recommended.

The enthusiastic nature of farmers following the CODAPEC programme has rejuvenated the establishment of new cocoa farms and rehabilitation of old ones. According

to the Seed Production Unit of COCOBOD, the demand for planting materials has gone up substantially since the programme begun some nine years ago.

Challenges from implementation of CODAPEC

Farmers and institutional surveys confirmed significant challenges to the implementation of the CODAPEC as follows:

1. There is lack of adequate cooperation from farmers. To achieve optimum benefits from the spraying programme, farmers are advised to do additional spraying against the Blackpod and the Mirid menace, but most of them ignored the advice. There are sometimes inadequate spraying gangs in communities that become a major problem and consequently full coverage of farms has not been possible. Lack of reliable statistical data on cocoa farmers and their farm sizes is also a major constraint, since majority of farm sizes, as submitted by the Gang Supervisors, are inaccurate.
2. Farmers report that some Spraying Gangs charge them fees before farms are sprayed. This practice is illegal and unacceptable and seriously undermines the spraying exercise since the chemicals and other inputs are procured by the Government of Ghana and the spraying is to be done free of charge.
3. Pilfering and diversion of inputs remain the biggest challenge to the programme. These malpractices occur in spite of the fact that all the pesticides have the inscription “PACKED FOR CODAPEC, NOT FOR SALE” boldly printed on them.

Remedial measures

CODAPEC has instituted the following measures to address the challenges:

- Proper documentation of members of District Task Force for easy crosschecks by District Coordinators.
- Good records keeping procedures to be followed by The District Task Forces, Sprayers, Gang Supervisors, Mechanics and Watchmen. The District Coordinators have been tasked to compile the list of all Gang Members and Gang Supervisors for audit inspection. A Photo Album of all workers is to be provided.
- Review of the Local and District Task Forces compositions.
- Direct inputs distribution to farmers. A pilot scheme was successfully tested in 2009 in the Central and Western South Regions. All farmers within an area of approximately 10ha will be put into one group. The 10ha is the target area *per* Gang *per* day and it also corresponds to 60 Tank Fillings which is also the target of each Gang. Pesticides will be allocated directly to the farmer Groups through the Local Task Forces.

- The Police and other security agencies are collaborating in checking and controlling the pilfering and illegal sale of the inputs at the agro-chemical shops throughout the country.

The cutting out of cocoa swollen shoot disease, under the Cocoa Swollen Shoot Control Unit of COCOBOD (CSSVD)

The menace created by the CSSVD has been of concern to sector players including Governments. For instance former President John Agyekum Kuffour is reported to have added his voice on the call for countries and international organisations to assist in the fight. The solution has been on cutting of every infested cocoa tree and their 'contacts'. Records gathered by the CSSVDCU indicate that between October 2006 and September 2010, 28,486,309 visibly infested and 'contact' trees were removed countrywide. Out of this number, 18,332,234 trees, representing 64.4 percent were removed from Western North region alone while Western south accounted for 6.1 percent. The Central region accounted for 8.8 percent while the Ashanti region recorded 6.6 percent. The Volta and Brong Ahafo regions recorded the lowest tree removals of 1.7 and 2.3 percent respectively. The Eastern region recorded 10 percent of tree removal. Farmers whose trees are cut are compensated with GHc552.00 for every hectare destroyed. Additionally, a hybrid cocoa seedlings 'Abirewabedzeb' is supplied. Evidence exists to buttress the assertion that these measures resulted in some successes. Number of farms treated increased from 693 the previous year to 3,500 in the 2007/2008 cocoa seasons (CSSVDCU, 2007/2008 unpublished).

Farmers indicated that the CSSVD continue to plague cocoa farms in spite of the long battle to reduce its infestation. The disease is prevalent in all the Cocoa Regions, thus acknowledging the magnitude of the spread in Ghana.

Challenges to the cutting of infested tree Measure

The challenges posed are of two fold. First the recent detection of CSSDV in some parts of Ghana (e.g Goaso area) shows that there is a huge backlog of disease trees awaiting treatment. For instance the Western North region has become the new epicentre of the CSSDV in Ghana. Secondly, whereas the intervention by government aimed at halting the spread of the CSSVD, it is not acceptable to farmers who put up fierce resistance to the exercise. There were thus reported open clashes and a number of farmers have continued to oppose the CSSVD control measure up to date.

Remedial measures

In spite of farmers' opposition, government continue to introduce other measures to overcome the farmer's opposition to the eradication method of controlling the spread of the CSSVD. These include:

- A compensation scheme was put in place in 1948 and by 1957, grants to farmers were increased.
- Replanting and maintenance of the farms for three years after which it is returned to the farmers.

- Extension services under which farmers were visited by technical advisors have been in existence for a really long time. Education of farmers has been a feature of this programme from inception.
- Farmers' rallies, radio programmes and cinema vans are some of the measures currently put in place to help obtain the needed cooperation from the farmers in the control of the spread of CSSVD.
- The urgent need to institute rigid implementation of recommendations such as barrier cropping, use of recommended planting materials elimination of all CSSV alternative host plants.
- To enhance adoption of the recommendations, demonstration farms incorporating the new innovations should be established in farmers' farms.
- The need to intensify farmer education on dangers of ineffective treatment or complete neglect of the disease.

1.4.3.2 Soil declining control measures

The hi-tech programme

The Cocoa Hi-Tech Programme is one key measure put in place by Government to reverse the declining soil fertility. Three forms of fertilizers are recommended for cocoa under the Hi-Tech Programme namely (i) Inorganic fertilizers such as *Asaase Wura*, *Cocofeed*, (ii) Triple super phosphate, Muriate of potash and (iii) Ammonium sulphate which are applied once a year, through broadcasting or ring method. Best time of application is the beginning of April and May. Organic fertilizers such as Poultry manure, Cocoa pod husk ash, Foliar fertilizers from Sidalco; *Sidalco* liquid fertilizer: N:P:K 10:10:10 (Balanced) N:P:K 20:2:4 (Nitrogen-rich) and N:P:K 6:0:20 (Potassium-rich).

Challenges to implementation of cocoa hi-tech programme

Notable challenges that came to be associated with the Programme include:

- Delay and often times supply fertilisers.
- Inadequate fertilizer application.
- Failure to repay for fertilizer cost at end of harvest season.
- Difficulty in applying the right dosage of fertilisers at correct periods and seasons.

Farmers are being encouraged by Extension Agents and other stakeholders through education to apply correct dosage of fertilizers to cover their entire land holdings. The emerging development suggests farmers are responding to official calls to apply fertilizers and other inputs.

Cocoa rehabilitation

As part of the strategy to attain 1 million tonnes per year by 2012/2013, the Government of Ghana through COCOBOD established a scheme in 2010 called “The Cocoa Rehabilitation Scheme”. Rehabilitation seeks to address the following constraints: pests and diseases, bad husbandry practices, neglect of cocoa farms, improper location of cocoa farms and drought rehabilitation (involving the rejuvenation of cocoa farms through improved cocoa technology with the aim of correcting the decline in yield of cocoa). It comprises strategies to increase yield without increasing total area occupied by the crop. The yield of Cocoa, like all perennial crops, follows the normal distribution curve. The objective of the rehabilitation is to arrest the decline phase and return the yield of the farm to the stability phase.

Three models were used by the government in the process; Under-Planting or Replanting in stages, complete replanting and Rejuvenation or Regeneration

1. ***Under-planting of cocoa:*** where there is no CSSVD and cocoa stock trees are old, new seedlings are replanted and old ones serve as shade. Gradually as the new trees mature the old tree are removed to reduce shade. This model allows farmers to maintain a certain level of income from the old tree stock while the young seedlings mature.

The practical way of achieving this model is dividing the field based on one-hectare size, then sub dividing again into 2, 3 or 4 blocks based on tree productivity. The number of blocks required is determined by the farmer’s ability to accomplish the tasks required. The assumption is that the famer will complete renewal plan as the number of blocks he has. For instance, if the hectare is divided into 4 blocks, then the completion will be within four year period. Empirically, one hectare will require 1100 trees; therefore one hectare divided into two blocks is 550 trees, three blocks is 336 trees and four blocks is 275 trees. The farmer should therefore plant about 275 trees each year over a period of four years. In a four- block renewal planting system, twill take approximately 6-7 years to fully replant and bring all the new trees into production. The result is one hectare of new cocoa capable of producing a minimum of 1100 kg/year for the next 20-40 years.

2. ***Complete replanting of cocoa:*** This is carried out where there is total CSSVD infected field. All cocoa trees are cut down then the stumps are treated with arboricide and replanted with hybrids seedlings. Economic crops are planted to provide shade. This model involves setting up a nursery, grafting and all other cultural practises to maintain field. Once the graft is well established, after about 6 months, the old trees are cut down for the graft to take over. The graft can be expected to start producing cocoa pods as early as 18 months after grafting.

To ensure sustainability, the scheme supplies economic crops, (mainly plantain) that will at the same time serve as shade. The plantain suckers (*apantu and apem*) are multiplied by tissue culture technology (Bio- Tech) and distributed to farmers. The project offers technical advice to farmers to ensure that optimum plant density of 1100 suckers per ha is attained.

3. **Rejuvenation or Regeneration:** This model involves activating old cocoa plants to increase productivity. It is carried out where there is a decline in production in not too old trees. Agronomic practices such as Fertilizer application and **Mistletoes** removal are systematically done to revive productivity. This will enhance good vegetative growth of young plants and enhance yield.

Challenges to the cocoa rehabilitation models

- a) Inadequate logistic for effective implementation ; delay in procurement and delivery of required inputs;
- b) Resistance from farmers who may demand compensation ;
- c) Inadequate funds and delays in release of funds ;
- d) Uncertainties of the weather
- e) Possibility of re-infection by disease and pests
- f) Competition for nutrients with old trees.
- g) Farmer loses income until new farm reaches it bearing stage.

In addressing the gap in the rehabilitation program, measures include strengthening institutions to improve logistics for effective implementation and timely delivery of inputs to farmers, intensification of education on programme to prevent and reduce farmers' resistance during implantation and increase alternative livelihoods for farmers even before programme is implemented.

1.4.3.3 General agronomic and socioeconomic measures

Farmers noted the effects of the routine agronomic practices they follow from nursery through transplanting to pod harvesting. These include fertilizer applications, spraying of various pesticides, pruning and maintaining good general farm sanitation. In most cases farmers are unable to follow proper practices which lead to low productivity. For instance a poor pruning practice causes fungus infection on plants, leading to low productivity.

According to farmers, the socio economic issues have effects on cocoa productivity and this defer from district to district or even from family to family. While 45.3 percent of families think they may have to increase cocoa land holding to increase yield, as much as 54.7 percent think they may have to keep reducing land under cocoa cultivation due to economic issues. Sustainable cocoa productivity may change for families. For example, the death of a family head which may lead to splits in land size; when resource needs to be put into other uses (e.g. education, healthcare, etc.).

Cocoa production entails several practises which may be mechanised or manual; and span over range of technological activities as - farm establishment, farm maintenance, harvesting, pod breaking, fermentation and drying of cocoa beans. Tools and methods used depend on level of technology adopted by the farmer. As part of the cocoa production process, fermentation requires various labour types and cost (family labour, hired labour and "Nnobia") which constitute significant items among other input costs.

Farmers also indicated recent developments of theft of cocoa during drying of beans as a key cause of low productivity. Other factors that reduce productivity include cheating by licensed produce buying companies (mainly pilferage) as buyers adjust weighing scales. Another perspective of low productivity is that farmers are not given equitable awards during Agriculture Farmers Day Celebrations as the deserving farmers are sometimes are not selected.

1.4.3.4 National programmes for the elimination of the worst forms of child labour in cocoa (NPECLC)

The NPECLC seeks to eliminate all forms of child labour in cocoa growing communities, reduce drudgery on cocoa production, provide basic needs for the vulnerable and improve living conditions for cocoa farmers. The project has produced a manual on occupational safety and health which is used to educate farmers on permissible and non-permissible work for children according to age. Labour saving tools are being produced for farmers to reduce drudgery. Recognising that child labour is endemic, the project encourages Communities to form Community Child Protection Committees to serve as watch dogs in their various communities. Basic school needs (sandals, school bags and books) are being provided to vulnerable farm families. Other aspects of the intervention involve training of community teachers to improve staff needs. In efforts to improve livelihoods, the project trains mothers from vulnerable families on entrepreneurial skills to help them generate income to improve their living conditions as well as vocational training and financial support to begin their own vocation. In meeting societal needs, the project provides boreholes for communities.

1.4.4 NGOs and private sector-led measures to enhancing cocoa productivity

1.4.4.1 Cadbury cocoa partnership project and Nestle healthy kids programme

The decline in cocoa productivity presented a great limitation for Cocoa processing companies such as Cadbury as Ghanaian cocoa is a key ingredient in chocolate production. This led to the formation of Cadbury Cocoa Partnership which sought to address the root cause of the low productivity and help to attract the next generation to cocoa farmers. The partnership has helped to increase cocoa farmers' income by increasing yields and cocoa quality, with additional benefits of introducing new income streams in rural cocoa growing areas, and investing in cocoa growing communities through provision of opportunities for education and infrastructure improvement. Government, NGOs, International organizations and farmers collaborate on Cadbury Cocoa Partnership to ensure interventions in cocoa growing communities are appropriate and address key barriers to growth. The partnership works to provide technical assistance towards increasing productivity. It facilitates financial support for farmers and their enterprises; improve community infrastructure (schools and furniture) and enhances opportunities for new business ventures. The partnership is collaborating with fair Trade Foundation to help cocoa farmers benefit from fair trade certification. This guarantees a fair price for their beans.

Over the past three years, the partnership has worked with over 100 cocoa farming communities, and 17 community officers have been hired to offer training to farmers on farming practices and is expected to yield significant increase in production. Fair trade

certified cocoa farmers will receive additional premium for community development. There is increased awareness on child labour and gender issues through education and empowerment programs

Nestle has instituted a comprehensive training programme with the ministry of education dubbed Healthy Kids Programme in the cocoa growing communities. This programme is organised for primary 1-5 children. It forms part of the school curriculum.

1.4.4.2 Cocoa Abrabopa Association (CAA) by Technoserve Ghana and Wienco Ghana

The Cocoa Abrabopa Association (CAA) provides a bundle of inputs to farmers based on the Hi-Tech package developed by CRIG. Organizations that are involved in this measure include TechnoServe Ghana, and WIENCO Ghana Ltd. The Cocoa Abrabopa Association - an initiative of Wienco Ghana limited was established to complement ongoing interventions and minimize the existing credit gap. It offers input package on revolving credit terms and education to its members. Inputs are given on credit to groups of farmers, who are jointly liable for their repayment. In the first year of membership, farmers are given inputs applicable to a total of 2 acres of cocoa farm land; this quantity may be increased for the group in subsequent years. In addition, farmers in the first year group will receive training on input application methods, bookkeeping skills and other aspects of business training. The CAA has seen rapid expansion in membership from an initial membership of 1,440 in the 2006/07 season, to 6,300 in 2007/08 to 10,923 in 2008/09 (Cocoa Abrabopa Association 2009).

There is evidence of large agronomic and economic returns to participation in the program. The preferred estimates suggest that members' output increased by 638.5 kg relative to what has been estimated to have been their output levels if they had not participated in the program. WIENCO collaborates with TechnoServe (NGO) to educate the members to treat cocoa farming as a business.

1.4.4.3 Kuapa Kokoo

The Kuapa Kokoo Ltd, founded in 1993, was in response to the partial liberalisation of the cocoa industry in Ghana in which the structure was changed from a single government-controlled cocoa purchasing to a system in which private companies could be licensed as cocoa buyers. The farmers saw this as an opportunity to protect their interests and take on the internal cocoa marketing function by setting up their own company to sell cocoa to the Cocoa Marketing Company Ltd.

Box 11: Quotes of a cocoa farmer

Through Fairtrade, Kuapa now have good drinking water, toilet facilities and schools. Kuapa pay the farmers on time and there is no cheating when the cocoa is weighted. They also undertake alternative livelihood venture like soap making and palm oil making schemes that help us through the lean months. There is Kuapa Credit Union that gives us loans and enables us all to benefit. "Kuapa have assisted women, they ensure that women have a voice and that we are heard. I have learnt a lot from Kuapa. I grew up in cocoa and I see many differences between Kuapa and the other buying companies". *Assertion by a Cocoa Farmer in Suhum Kraboa Coalta District.*

1.4.4.4 Interventions as by produce buyers

Some cocoa produce buyers have been concerned with productivity levels and hence sought to implement measures towards increased productivity. Package introduced include pre-finance of the farming operations, provision of credit and market access. These buyers include OLAM, Akwafo Adamfo, among others. Regarding the pre-financing scheme, farmers are given production inputs; fertilizers and pesticides that are used during the farming season. A buying agent sometimes supports the education of farmer groups on good agronomic practices. Credit is also given to cocoa framers to acquire hybrid seedlings, and for farm maintenance.

1.4.5 Relationship between child labour in cocoa production and productivity

Many secondary information (surveys and analysis) points to the use of child labour in cocoa production especially at the community and farm level. This has been corroborated by this study. The issue that requires further understanding is the relationship, if any, between child labour in cocoa production and productivity. In Ghana children's engagement in cocoa production do not necessary indicate child labour in a typical sense. In the FGDs and KIIs, respondents indicated that cocoa farming has been a long standing family tradition and like any normal enterprise, it is passed on to family relations from one generation to another. Future beneficiaries (who are obviously children today) must learn the trade in order to be able to do and sustain the farming operations overtime (i.e. when they become adults tomorrow). However, at country level, there are activities in cocoa farming classified as hazardous and that must be appropriate to the age and physique of the child and should of course not be hazardous. It therefore calls for proper supervision by parents whilst children use tools and chemicals on farm.

This study sought to establish whether or not there is any relationship between child labour in cocoa production and productivity levels achieved in cocoa production at the farm level. Farmers indicated that besides offering opportunity for children to learn cocoa production, use of children leads to substantial reduction in direct cost to labour. In situations where the children are not family members, farmers benefit because they pay less for work done (in most cases far less than 50 percent of what an adult would charge). For family members, farmers pay virtually nothing for a work. So in terms of cost, the farmer is able to apply the reserves to the farmer (e.g. to buy chemicals or tools, equipment, seedlings etc.). It thus may seem as though the farmer gains by his/her ability to invest in the farm. As disturbing as this can be for advocates against child labour, farmers were quick to indicate that the use of children do not always yield any substantial returns on productivity or even any returns at all. Following engagement of children, both family and society suffer in the long run as children fall ill as a result to exposure to chemicals and harmful conditions, and education is compromised depriving society from gaining the full potential of future generations.

Table 10: General recommendations for child participation in cocoa farming

<ul style="list-style-type: none"> All children of school going age should be in school and should not go to the farm during school hours or go to distant farms before or after school or be withdrawn to do farm work in peak seasons. Children from the age 12 can work but not for more than 2 hours and preferably after school.
<ul style="list-style-type: none"> All children who accompany their parents to the farm should be provided with basic protective clothing; at least foot and adequate body protection.
<ul style="list-style-type: none"> Ideally provide bite-proof protective boots with non-skid soles to prevent snake bites, slips and falls e.g. children's Wellington boots. In the absence of this, 'Afro Mosses', canvas or any boot is recommended. Going to farm barefoot is hazardous and in bathroom slippers and not acceptable.
<ul style="list-style-type: none"> Body protection in the form of trousers, long sleeves and long dresses is recommended.
<ul style="list-style-type: none"> Sun hat is recommended on hot and sunny days
<ul style="list-style-type: none"> Incorporate at least 10 minutes break hourly for a working child and he/she should not work for more than 3 hours a day
<ul style="list-style-type: none"> Adults must sufficiently train a child (or be present whilst child is undertaking task) on any farm work for even the basic ones before assigning duties
<ul style="list-style-type: none"> Ensure adequate intake of drinking water hourly to prevent heat stress.
<ul style="list-style-type: none"> Carrying loads should not exceed 30% body weight if farm is far (>2 miles or 3 Km). If the farm is farther, reduce carrying weight and have rest stops.
<ul style="list-style-type: none"> Lifting/handling/carrying loads over short distance (500m) should not exceed 50% of body weight.
<ul style="list-style-type: none"> In assigning permissible load to a child, adequate adjustment is required if the terrain is unfriendly. This is particularly the case in hilly and slippery terrains when it rains. It also applies when crossing a river with a load.
<ul style="list-style-type: none"> Stop children below 18 years from working with pesticides, even if Personal Protective Equipment is provided.
<ul style="list-style-type: none"> Children should stay at distances where they do not smell pesticides (It is better if water is provided a day before the spraying). Fetching water for sprayers during day of spraying when sprayers run out of water is unacceptable.
<ul style="list-style-type: none"> Sick children should not be made to work under any circumstance.
<ul style="list-style-type: none"> Attaining 18 years is no license to engage in all cocoa activities. Persons undertaking potentially hazardous tasks must be trained, use the appropriate tools and preferably do it under supervision. Persons 18-24 years should be well protected and engagement in any hazardous farm work should be graded until maturity, experience and training permits.

Adapted from Francis Baah, Vincent Anchirinah et al: Cocoa Research Institute of Ghana, (Ghana Cocoa Board), 2009

Table 11: Summary of identified practical measures to enhance productivity in cocoa growing communities

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
Agronomic Measures			
Planting	<ul style="list-style-type: none"> Agronomic measures on site selection, land preparation, improved seed handling and field planting with recommended intervals between plants have been part of farmers education and training covering site selection, land preparation, improved seedling acquisition, safe handling and field planting COCOBOD Rehabilitation programme that cuts down 	<ul style="list-style-type: none"> Incorrect spacing of plants by farmers Untimely and inadequate supply of required hybrids Low knowledge and skills on planting distances Poor seed handling Misuse and poor site selection 	<ul style="list-style-type: none"> Intensive education of farmers on planting spacing using improved cocoa varieties Institutions (e.g. Seed Production Unit) to procure and distribute seedlings timely Targeted education of farmers on nursery and transplanting Improved procurement and timely distribution of seedlings and pods

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
	<ul style="list-style-type: none"> aged, diseased and low yielding cocoa trees and replant hybrids COCOBOD-Bunso and CSSVDCU Extension programs on nursing, spacing and planting new seedlings for cocoa farmers 		<ul style="list-style-type: none"> Improved distribution outlets
Farm Weeding	<ul style="list-style-type: none"> Periodic (precisely 4 times a year) weeding and clearing of bushes around cocoa plants till canopy forms which could be manual with cutlass or chemical with herbicides Private input supply companies provide herbicides on sales The cocoa Abrabopa provides inputs including herbicides to farmers which are paid back after harvest 	<ul style="list-style-type: none"> Over grown weeds on farm due to inadequate weeding Low use, fake and inferior herbicides Non recovery of herbicide cost Misuse and/or poor handling of Agro chemicals 	<ul style="list-style-type: none"> Targeted education of farmers on identification and acquisition of genuine herbicides and need for regular weeding Develop effective mechanism for supply and recovery of cost of herbicides Institute measures to check fake chemicals (Dealers to partake) Training on use and handling of Agro Chemicals Conduct of intensive monitoring of agro inputs
Pruning of coca trees and shade management	<ul style="list-style-type: none"> Agronomic practices on cocoa trees to take off all unwanted dead branches from plant stem and removal of mistletoes enhances aeration COCOBOD and CSSVDCU Extension education and training on pruning Shade management through the rehabilitation programme with BIO-TECH of planting plantain to provide shade at early stages of the cocoa trees and removal of too many shades 	<ul style="list-style-type: none"> Reduced shade due to improper pruning Provision of limited economic tree crop Non removal of mistletoes Big trees resulting in over-shading 	<ul style="list-style-type: none"> Targeted education of farmers on pruning and removal of mistletoes Institutional arrangements and research on more economic tree crops e.gs, use of bio –tech to produce pawpaw, banana etc. Education on pruning procedures Education on number of big trees per hectare of land
Cropping Systems			
Improved cropping systems (share cropping, “Nnoboaa” system)	<ul style="list-style-type: none"> A system where cocoa farm owners jointly perform field task on each other's farm or where land owners share proceeds with tenants who work on the land 	<ul style="list-style-type: none"> High level of mistrust among farmers with respect to the “nnoboaa system” Other farmers may not be available at times where labour is needed most e.g. for task as pod harvesting and breaking 	<ul style="list-style-type: none"> Education and sensitisation of farmers on the “nnoboaa system” as a model to reduce labour cost and labour shortage Formal and written contract for type of cropping system Formation of farm gangs
Cocoa Rehabilitation	<ul style="list-style-type: none"> Cocoa Rehabilitation Scheme involves having practical agronomic measures to bring back the productivity of an old unproductive cocoa farm 	<ul style="list-style-type: none"> Possible infestation of diseases and pests Competition for nutrients with old trees Loss of income until 	<ul style="list-style-type: none"> Institutions to be strengthened to procure and deliver required inputs promptly Soil treatment to prevent

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
	<p>infected with pests and diseases.</p> <ul style="list-style-type: none"> Under-planting/replanting, complete replanting, regeneration 	<p>new farm reaches it bearing stage</p> <ul style="list-style-type: none"> Inadequate logistics for effective implementation Delay in procurement and delivery of required inputs Some level of resistance from farmers who may demand compensation Inadequate funds and delayed release of funds Uncertainties of the weather 	<p>re-infestation of diseases and pests</p> <ul style="list-style-type: none"> Targeted education of farmers on good records keeping, and on adequate data Intensification of farmer education on the rehabilitation program Provision of alternative off farm livelihoods for family income before new farm reaches it bearing stage
Biotechnology and Production Technique Measures			
Mass Spraying of cocoa	<ul style="list-style-type: none"> CODAPEC is a National Disease and Pest Control programme called "Mass Spraying" of cocoa farms. It operates in 72 political districts to cover 21 districts of blackpod disease; 35 districts from mirids only and 16 from both. Gangs were recruited to do the spraying; thus offering employment to rural communities. Some LBCs assist in the spraying of cocoa farms 	<ul style="list-style-type: none"> Inadequate spraying of farms Unavailability of insecticides on the open market to enable individual farmers buy to spray their farms Alleged illegal charge of local farmers by spraying Gangs. Spraying is free but farmers reported of illegal charging by gangs and diversion of inputs 	<ul style="list-style-type: none"> Institutions support farmers to acquire specified (prescribed) insecticides for spraying as required Form community watch gangs to monitor and report on illegal charges. Education of farmers on need to adequately spray farms
Diseases and Pests Control	<ul style="list-style-type: none"> The Cocoa Rehabilitation project seeks to eradicate diseases and pests in infested cocoa farms including the cutting of cocoa swollen shoot diseases under the CSSVD Programme of COCOBOD COCOBOD assists cocoa farmers to remove mistletoes 	<ul style="list-style-type: none"> Fierce resistance from cocoa farmers who would not agree to destruction of infested cocoa farms Late payment of compensation and/or sometimes inadequate (or lack) of compensations paid to farmers 	<ul style="list-style-type: none"> Strengthening government's compensation scheme with increase in grants Replanting and maintenance of farms for 3 years prior to handing over to farmers Intensification of extension services
Improving Soil fertility	<ul style="list-style-type: none"> COCOA Hi-Tech is Government-COCOBOD initiative and involves distribution of fertilizers on credit and at subsidised rate to farmers who pay back through kilo deductions at point of sale of cocoa beans The cocoa Abrabopa provides bundle of inputs to farmers based on the Hi-Tech package developed by CRIG 	<ul style="list-style-type: none"> Delays in procurement and distribution of fertilizers and hence fertilizers do not get to farms at the right time Inadequate fertilizer application Failure of farmers to repay cost of fertilizers at end of the harvest season Difficulty in applying the 	<ul style="list-style-type: none"> Institutional arrangements to ensure prompt procurement and distribution of fertilisers Targeted education on fertilizer application – right doses, right application periods and seasons Sensitisation on benefits of the credit arrangements and on adhering to credit

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
		doses of fertilizers at correct periods and seasons	repayment schedules <ul style="list-style-type: none"> Regular soil fertility test to establish nutrient requirements for all farms
Supply of farm inputs (as remedy for use of rudimentary tools)	<ul style="list-style-type: none"> COCOBOD and other key stakeholders are providing inputs including equipment/tools, seedlings (hybrid type) to farmers COCOBOD procures inputs from input dealers and distributes to cocoa farmers 	<ul style="list-style-type: none"> Farm inputs (equipment/tools) are still rudimentary and labour intensive High cost of inputs relative to farmers' incomes 	<ul style="list-style-type: none"> Subsidy on farm inputs Study and production of labour saving equipment/tools as is being done by NPECLC
Distribution of cocoa hybrids	<ul style="list-style-type: none"> COCOBOD has been collaborating with CRIG to research and recommend high yielding hybrids to farmers to improve productivity The rehabilitation programme provides hybrid seedlings for replanting 	<ul style="list-style-type: none"> Untimely supply of hybrids causing delays in planting Mass production for all locations may not be suitable Some farmers are unable to procure their suppliers early enough due to transport arrangements 	<ul style="list-style-type: none"> Need for introduction of location-specific production Institutions to arrange for transport for farmers to have their suppliers on time
Technology Transfer Measures			
Transfer of CRIG Agricultural research recommendations	<ul style="list-style-type: none"> Agricultural extension is the process of informal education of scientific research, technologies and new knowledge to farmers through a wider range of communication and learning activities organized by professionals 	<ul style="list-style-type: none"> Inadequate technologies and knowledge Recommendations are not reasonably focussed on specific needs of farmers Limited qualified extension staff and other trainers Low Extension Agent-Farmer ratio 	<ul style="list-style-type: none"> Make extension systems farmer driven and farmer accountable by way of new institutional arrangements for technology dissemination Regular interaction between Extension Officers and Farmers to ascertain the specific technology needs Frequent refresher courses for trainers and staff (up-grading staff knowledge and skills) Increase number of extension staff Develop feedback mechanisms to enable farmers report back after usage of technology Farmer-to-Farmer diffusion i.e. train farmers to assist Extension Officers in informing and training farmers (this is enhanced when farmers are in groups) Improved mobility

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
Ghana Cocoa Farmers Newspaper Project	<ul style="list-style-type: none"> CRIG is implementing the Cocoa Farmers Newspaper in collaboration with Cadbury International and it is expected to address issues of agronomy, pest and diseases control, soil fertility, varietal and socioeconomic problems of farmers and cocoa farming communities 	<ul style="list-style-type: none"> Limited circulation of the Newspaper in relation to the extent of cocoa farming coverage High illiteracy rate among farmers that hamper reading, understanding and appreciation of issues in the Newspaper 	<ul style="list-style-type: none"> Greater and intense use of pictorial presentations/ Reproduce information on posters Information to be packaged well for presentation on local FM and in local languages. Programme to collaborate with local leaders to translate and educate farmers on newspaper information Information Service vans to assist with the dissemination of information
Farmer Education and Training	<ul style="list-style-type: none"> Bunso Cocoa College: 6 weeks training ran to equip farmers Video Viewing clubs is an educational approach employed by STCP to create comfortable learning environment for women and meant to educate farmers while ensuring that farmers share the knowledge with two or more cocoa farmers and for lessons to reach greater number of farmers Farmer Field Schools (FFS) are intensive, season-long programmes that enable farmers to learn and experiment given topics with greater impact on knowledge and empowerment of rural communities. FFS approach has been employed by ICI, CRIG, Kuapa Cocoa, STCP and many organisations as a platform for information exchanges and interactive communication between farmers, researchers, extensionists etc. 	<ul style="list-style-type: none"> Inadequate time for viewing videos Negative suspicions and beliefs prevent some farmers from joining the FFS Resources limitations 	<ul style="list-style-type: none"> Present pictorial information on posters Intensify education and field research for FFSs Strengthening COCOBOD's demonstration farms Organise farmer study tours Use of demonstration farming
Production of labour saving farming tools	<ul style="list-style-type: none"> Provision of labour saving equipment/tools (e.g. standard pruners, spraying machines, handheld mower, power tillers etc.) Adoption of mechanised methods of farming to improve on productivity 	<ul style="list-style-type: none"> Lack of interaction between Extension Officers and farmers regarding appropriate tools for farming Limited current opportunity for production of labour saving farm tools 	<ul style="list-style-type: none"> As NPECLC is arranging for production of labour saving tools, other projects/institutions must consider following suit Transfer of techniques from CRIG to the private sector Demonstration and education including

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
			usage, benefits of tools on farmlands to achieve maximum utilisation
Support for cocoa purchasing	<ul style="list-style-type: none"> Purchasing of cocoa beans is done by private agencies 	<ul style="list-style-type: none"> Sales in small quantities encourage theft of beans on dryers Adjustment of weighing scales in favour of sales agents. Poor feeder roads hampering conveyance of cocoa 	<ul style="list-style-type: none"> Target education for both farmers and purchasing agents on conscious scale reading Improve access roads
Livelihood Improvement Measures			
Livelihood empowerment initiatives	<ul style="list-style-type: none"> The ECHOES Project aims at strengthening cocoa growing communities through expansion of opportunities for youth that involves provision of family support scholarship programme to assist mothers keep their children in school (through payment of school fees etc.) NPECLC livelihoods empowerment aims at providing support to farm families to generate additional incomes during lean season LEAP project is a social protection strategy that provides support to vulnerable persons in target communities 	<ul style="list-style-type: none"> Inadequate modern tools Inadequate knowledge of modern method of technology on for example use of cocoa by-product Poor facilities to promote and sustain rural SMEs LEAP support is barely adequate Lack of markets for produce in communities 	<ul style="list-style-type: none"> More support to be provided to increase income generating opportunities in communities Train community women and support them to generate extra income linked to markets in cities Provision of credit facilities for the youth as start-up capital Training of farmers on the use of cocoa by-product Institutions like Opportunities Industrialisation Centre (OIC) to come out with modern appropriate tools
Provision of solar lanterns, Solar pumps/boreholes and access roads	<ul style="list-style-type: none"> COCOBOD is supporting farm families with solar street lamps, solar water pumps Cadbury Partnership is supporting about 180 farm families with solar lanterns 	<ul style="list-style-type: none"> Inadequate coverage Sustainability of the initiative 	<ul style="list-style-type: none"> Support from other institutions to raise the coverage Subsidise cost of items such as lanterns
Social-Ethics Measures			
Formation of Farmer Associations	<ul style="list-style-type: none"> Farmer Associations (cooperatives, societies, and associations) support extension services delivery to farmers; serving as effective conduit for dissemination of technological information 	<ul style="list-style-type: none"> Lack of collateral leading to Low capital No warehouses to safe keep inputs for distribution Threats posed by failed Farmer Associations Weak leadership Lack of accountability Inadequate extension services 	<ul style="list-style-type: none"> Need for a stronger capital based Support to farmer Associations to increase credibility to enable Associations raise capital from financial markets Education and empowerment to apply cooperative principles in their Associations
Good Land Tenure arrangements	<ul style="list-style-type: none"> Land Tenure practices create problems for cocoa farming. Farmers attribute neglect and poor maintenance of farms to problems of inheritance and 	<ul style="list-style-type: none"> Small farm sizes Limited number of new farms Traditional and Socio-cultural systems have 	<ul style="list-style-type: none"> Government should work through District Assemblies and Traditional Authorities to come out with laws and

Practical measures identified/introduced	Description	Identified gaps/challenges	Recommended remedial measures
	pledging of farms	not considered the effects of land tenure on cocoa farm maintenance and hence on productivity	regulations for implementing good land tenure in cocoa; and caretaker schemes <ul style="list-style-type: none"> • Sensitisation for farmers to register their farmlands • Extension of credit facilities to reduce the incidence of pledging of farms
Formation of Community Child Protection Committees (CCPCs)	<ul style="list-style-type: none"> • NPECLC empowers members of their working communities form Child Protection Committees (CCPCs) that aims at education and serves as an advocacy group to prevent Child Labour. They also monitor child labour in their communities 	<ul style="list-style-type: none"> • Inadequacy of education programmes on child labour to create awareness • Limited coverage 	<ul style="list-style-type: none"> • Intensification of educational programs designed to drastically reduce Child Labour by stakeholders • Support by other partners to increase coverage
School Feeding Programme	<ul style="list-style-type: none"> • Government initiative to provide balance meal each day for children at basic school level. This aims at keeping most children in schools so as to reduce child labour on cocoa farms 	<ul style="list-style-type: none"> • Lack of food at home in day time is the driving force behind children following parents to farms • Limited coverage of the school feeding programme • Reported cases of feeding problems in school (poor catering services etc.) 	<ul style="list-style-type: none"> • Initiate and intensify the extension of the school feeding programme to all cocoa growing communities

1.5 Farmer needs assessment, livelihood opportunities and coping strategies

The research sought to conduct a brief Needs Assessment of cocoa farmers in relation to measures to improve cocoa productivity in target communities. This is tied in to livelihood opportunities available to them and which they engage in as well as an examination of the coping strategies of farmers. The Needs Assessment formed a critical component of the FGDs which were conducted as part of the research process.

1.5.1 Farmers needs assessment (farm and non-farm based needs)

a) Access to land (land tenure arrangements)

There is no gainsaying that access to land remains one of the critical constraints to cocoa farm expansion and cultivation of new farms. This is blamed on the current land tenure system which seem not to favour investments in the agricultural sector in general and cocoa industry in particular. Farmers, corroborating the assertion from secondary source information on access to land indicated that large tracks of land are still within the domain of traditional land owning authorities (basically stool chiefs, skins and clan heads) and that outright ownership for new entrants into cocoa farms is almost impossible. In the current dispensation, leases and rentals of land have been the other of the day. In nearly all parts of

the cocoa growing regions (particularly districts and communities apart from the Western Region), available suitable lands have been used up. The Western Region then became the last frontier for the expansion of cocoa as migrant farmers from other cocoa growing regions moved into the region in search of cultivable forest land resulting in excessive pressure on the remaining land.

Recent studies and researches (e.g. Mapping National Policies conducted for the Cadbury Cocoa Partnership) admits that evidence abounds to show a significant population increase in some cocoa growing communities of the region and a disproportionate and somewhat unprecedented increase in land holdings under cocoa in the Western Region relative to other cocoa growing regions of Ghana. In the recent times, the Region has been over-stretched and now joins the other regions on lack of available land for possible cocoa expansion and cultivation of new farms.

b) Access to inputs, tools and equipment

It is acknowledged that in rural economies financial support is crucial to securing income generating activities as key measure of livelihood support. However there is practical certainty that ready access and appropriate usage of the production implements, improved tools and chemicals increase yield and thereof capacity as well. Farmers indicated the urgent need for production resources (inputs, tools and equipment) as about 90 percent of livelihood activities depend on use and application of traditional and rather crude type of tools and implements. Farming activities in all target districts is still based on use of simple tools like cutlasses, hoes, axes. The only modern implement that farmers could cite was spraying machines and chainsaw (of which even some farmers still use axes to fell trees through manual labour). In spite of constant education and extension services, the preference for and acquisition of improved seedlings, agro-chemicals are limited to few farmers.

In undertaking alternative livelihoods, there is high dependence on less productive equipment. For instance, processors (distillers, oil extractors, wood workers, food processors, artisans etc.) continue to use aluminium frying pans, drums, containers, distillery pipes, saw, crude masonry tools in their work leading to low capacity to produce, poor quality output and high wastage. In the Eastern Region (Birim South and Suhum Kraboa Coal Tar Districts) wood carvers were frank to indicate that by using chisels, cutlasses, they are to produce an average of one stool in two days whiles with the introduction of drilling, drying and smoothing machines one carver has the potential to produce a minimum of eight stools per day. The single most hindrance of access to tools and equipment is the high cost of implements.

c) Access to extension services and technology

Access to extension services and technology is crucial to promote productivity in cocoa and other livelihoods. The analysis has so far shown limited extension services to cocoa farmers. For cocoa, the Extension Agents need to step up extension services to enable farmers adopt research recommendations, improve agronomic practices and reduce biological factors influencing poor productivity. Farmers indicated that cocoa extension services are provided by the Cocoa Extension Agents under the MoFA but in many cocoa farming communities, the presence is minimally felt. For farmers engaged in other farm-

based livelihoods, general extension services are sometimes provided but their services are woefully inadequate. For industrial livelihood activities, extension support could be provided by the Intermediate Technology Transfer Unit (ITTU), Ghana Regional Appropriate Technology Institute (GRATIS), the National Board for Small Scale Industries (NBSSI) and Empretec. Given the low level of extension services in the target communities, introduction of appropriate technology for improved technology to improve productivity will be severely hampered. Farmers therefore expressed the need to urgently beef up extension services support.

d) Access to financial support (micro-credits and financial assistance)

The survey has revealed that financing from own sources constitute over 77 percent of initial working capital and 73 percent of working capital resulting in difficulty to expansion of enterprises. Following the low level of savings due to low surplus, adoption of improved technology, business expansion and marketing is a major constraint. Credit becomes the obvious remedy to improved productivity for both farm and non-farm based livelihoods. Cocoa farmers, like many of their counterpart in farming and other livelihoods, have no collateral to enable them secure credit from banking institutions and the non-bank financial institutions find their businesses too risky to advance credits. Therefore, the need for institutional support (Government, NGO/CSO, Private Sector) targeted at providing opportunities to create opportunities for cocoa farmers in particular as well as other farm and non-farm based operators to access credits is required.

e) Processing and storage

Processing and storage does not constitute a major problem to cocoa farmers regarding the specific needs of cocoa production as this is taken care of in the production and marketing chain. The only storage problem that confronts cocoa farmers relates to theft of cocoa beans during fermentation and drying periods. Farmers therefore expressed the urgent need for COCOBOD and related agencies to help find solutions. For other farm and non-farm based livelihoods, processing and storage constitute a huge problem and without adequate facilities for these activities, value addition tends to be minimal, related jobs are not created and their bargaining power (against the exploits of itinerant traders) is severely hampered.

f) Improved road network and transportation

The nature of road networks and transport systems affects both cocoa production and other livelihoods. However, the degree of the effects differs between cocoa and other enterprises. Usually, apart farm to home transportation of cocoa beans (normally done by head portorage) and to some extent conveyance from home to purchasing centres, cocoa transportation from thence is the responsibility of Buying Companies and COCOBOD. While vehicles do not constitute a major problem, the nature of the road is a serious setback. Roads to cocoa growing communities are largely untarred and in deplorable state.

In spite of these constraints to cocoa sector, farmers expressed needs regarding road network and transportation relates more to transportation of other products to market centres to improve their income and thereby enable them help their children go and remain in school. In most rural communities, farmers convey their wares by head portorage to

marketing centres. The need for improved roads and transportation systems for communities is urgent.

g) Market channels and outlets

In the face of the poor road network and transportation systems, limited storage facilities and postharvest infrastructure, requires that ready marketing outlets for products of farmers other than cocoa should be available. The subsistence nature of their livelihoods against the activities of itinerant traders demands market channels. Farmers indicated that marketing of produce is done in the communities and on market days. Beyond the marketing outlets, the survey also assessed the market channels as a means of disposing of products. The following marketing channels were identified: self-marketing on working site, self-marketing on local market, self-marketing on other markets, marketing through cooperative, marketing through traders.

1.5.2 Training needs

For maximization of production in the cocoa growing communities, training is paramount. To determine the training needs and capacity of farmers, the research investigated into training received in last couple of years. According to the research conducted, 65 percent of farmers have ever received one form of training or the other.

Table 12: Type of training received

Area of training	Percentage of respondents
Pests and disease control	41.7
Cropping	28.1
Farm management practices	33.3
Value addition	10.4
Marketing and distribution	16.1
Knowledge on international cocoa trade	1.6
Child labour and decent work	47.9
Empowerment through alternative livelihood skills training	24.5
Total	100.0

** Total represents multiple responses.*

Training received also has district connotations. All respondents from the Hohoe district have received at least one form of training compared to 38 percent of respondents from the Suhum-Krabo-Coaltar District and 40 percent from Adansi South. The survey also reveals that the three districts of Wassa Amenfi West, Adansi South and Hohoe Districts have more farmers receiving training of at least over 70 percent. Obviously Hohoe, may have 100 percent coverage of respondents since the cocoa farming communities may be less compared to others.

Table 13: District split of training

	Training Received	
	Received Training	Have not received Training
Adansi South	40.0	60.0
Asunafo North	80.0	20.0
Birim South	64.5	35.5
Hohoe	100.0	0.0
Suhum Kraboa Coalta	37.5	62.5
Twifo-Hemang Lower Denkyirah	58.6	41.4
Wassa Amenfi West	73.9	26.1
Total	66.8	33.2

Profile of the specific types of training received is shown in the [Table 14](#). Up to 47.9 percent have received training on child labour and decent work, 41.7 percent have received training on pests and disease control and 33.3 percent have received training on farm management practices.

There are practical evidence that shows that the results of training received on Child labour and decent work issues, may have contributed to reduction of the incidence of child labour. However, farmers' knowledge on international cocoa trade is very low and calls for training in that area. Empowerment through alternative livelihood skills training has gain a lot of popularity in cocoa communities but results still shows a low of 24.5 percent. Thus, more work needs to be done to increase farmers' capacity in various agricultural activities to increase productivity and generate income.

On training providers and specific areas of training, the survey indicates that most of their needs are on agronomic practices such as pests and disease control and farm management practices and these were given by MOFA Extension Services in all the Regions. Knowledge on international cocoa trade has been provided by a private purchasing Agent. Empowerment through alternative livelihood skills trainings were provided by NGO and Agricultural extension officers. COCOBOD provided knowledge on only Marketing and distribution.

Table 14: Summary of specific training and training providers

Area of training	Specific type of training	Training provider
Pests and disease control	<ul style="list-style-type: none"> Spraying and pruning 	<ul style="list-style-type: none"> Agricultural extension officers
Cropping	<ul style="list-style-type: none"> Pegging and lining 	<ul style="list-style-type: none"> Agricultural extension officers
Farm management practices	<ul style="list-style-type: none"> Fertilizer application Mixed cropping 	<ul style="list-style-type: none"> Agricultural extension officers
Value addition	<ul style="list-style-type: none"> - 	<ul style="list-style-type: none"> -
Marketing and distribution	<ul style="list-style-type: none"> Storage of cocoa beans 	<ul style="list-style-type: none"> Private purchasing agency COCOABOD
Knowledge on international cocoa trade	<ul style="list-style-type: none"> International cocoa pricing 	<ul style="list-style-type: none"> Private purchasing agency

Area of training	Specific type of training	Training provider
Child labour and decent work	<ul style="list-style-type: none"> • Rights of the child • Benefits of child education • Regulations on the use of children for intensive labour activities 	<ul style="list-style-type: none"> • NGO • Community task force on the prevention of child labour
Empowerment through alternative livelihood skills training	<ul style="list-style-type: none"> • Livestock rearing 	<ul style="list-style-type: none"> • NGO • Agricultural extension officers

1.5.3 Farmers needs in relation to social utilities

Much as it is well known that people migrate from villages to urban communities in search of greener pastures, which in the cocoa communities, could be attributable to unattractiveness of cocoa farming to the youth, lack of modern infrastructure and social amenities in rural and cocoa growing areas is a main push factor to out-migration of the youth to urban areas. Farmers expressed the need for the following infrastructure and social utilities: This is one of the key components of the Cocoa Communities Project using the strategy of community mobilisation and action planning for the extension such basic social services to such cocoa communities.

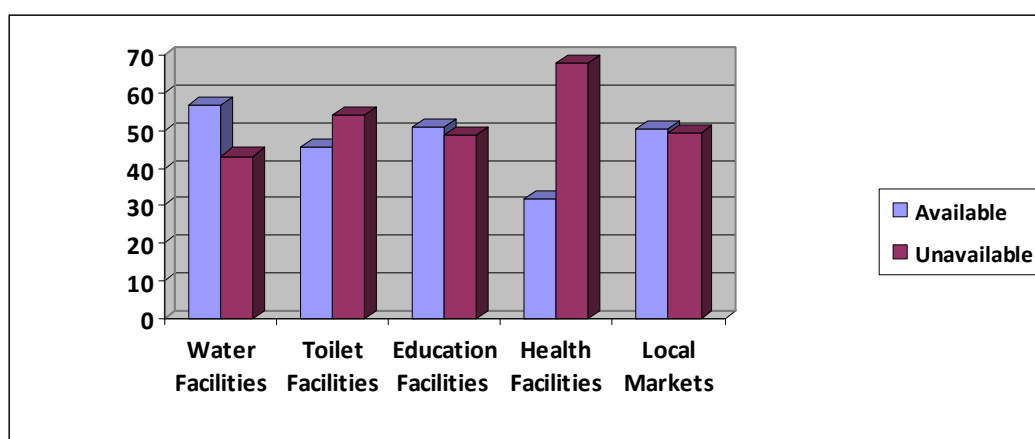
Improved housing

Cocoa growing communities have poor housing conditions both in terms of the state of buildings and adequacy of rooms. This is especially true for the communities where the research was carried out. Given the relatively large family sizes vis-a-vis the meagre incomes, many cocoa farmers and general population in communities are unable to rehabilitate existing houses or put up new ones. The implications are that families own fewer rooms, have dilapidated houses and poor household facilities. Families are therefore deprived of comfortable accommodation. This could be one of the key areas to be captured in the Community Action Plans for improved housing facilities for cocoa families.

Provision of sanitation facilities (water and toilet facilities)

Water and sanitation is a general problem in rural communities but in recent times efforts by Government, NGOs and Private Sector have helped improve the situation marginally. About 43 percent have no access to potable water with 54 percent have no access to toilet facilities. The situation contribute to poor sanitary conditions in many of the communities, occurrence of water-borne diseases with dire consequences on farmers health and hence productivity. Farmers were quick to point to the adverse effects of water and sanitation (mainly toilet facilities) on communities and therefore called for urgent response to remedy the situation. Provisions of sanitation facilities are key areas to be considered by the communities in the development of their community action plan under the CCP for the mobilisation of resources and advocacy to address the challenge.

Figure 9: Access to water and sanitation (toilet) services/facilities



Improved educational system

In most cocoa growing communities, as in many other communities, educational infrastructure and services leaves much to be desired. In typical villages, children have to walk over an average of 1km to attend schools whiles in about 50 percent of the communities with school infrastructure; some tend to be dilapidated with buildings posing danger to school children. Inadequate infrastructure also makes schooling unattractive to teachers who refuse to be posted to those communities. The implication is that children find school unattractive and therefore find themselves in cocoa farming, galamsey activities or other livelihood options. Farmers expressed the need for rehabilitation and/or reconstruction of schools, provision of incentives for teachers posted to rural areas to help retain them and educational assistance in the form of scholarships and school supplies (pupil's desk and chairs, exercise books, pens etc.), making COCOBOD Scholarships accessible to the real farmers

Improved healthcare systems

Provision of basic healthcare is a human right issue and for rural communities where cocoa is produced, healthcare is paramount. About 68 percent of communities reported on lack of basic health facilities or inaccessible healthcare service. Farmers expressed the dismay that common plagues, diseases and emergencies like snakebites, delivery of babies and malaria patients will have to travel an average of 3kms to access healthcare resulting in frequent loss of lives and complications. The urgent need to improve healthcare delivery in many of those communities is therefore paramount.

Provision of electricity and promotion of alternative sources of energy

Energy sources in general (including electricity, fuel sources for cooking, etc.) is a problem for many communities. Farmers admitted that Government's rural electrification project helped to extend electricity to some communities, there are still many of them that do not have access to electricity and as well as fuel sources like LPG etc. They are thus forced to rely on kerosene and wood fuel for their energy needs. The lack of electricity in some communities affects not only household purposes but importantly affects learning by school

pupils as they use lanterns. Lack of appropriate energy for cooking (i.e. LPG) forced farmers to rely heavily of fuel wood with its environmental consequences. Some institutions/projects including the Cocoa Partnership Project and COCOBOD are providing Solar Lanterns, Solar Street lights and Solar Pumps (Solar Powered Boreholes) to some target communities. These are however woefully inadequate to meet energy needs of cocoa farmers and communities at large.

1.5.4 Assessment of livelihood options and coping strategies in target communities

Livelihoods have come to be used in Ghana to connect to people's way of life; make a living and cover a range of activities. For purposes of this research, livelihood refers to any economic activity undertaken by an individual, a household or any group of people with the view to derive a means of sustenance. Income generating activity on the other hand is used here synonymous with enterprise, livelihood and industry, farm, trading and to any activity that is meant to raise income. The research identifies a range of livelihood options in target communities defined as follows:

- a) *Farm-based natural resource livelihood*: Farm-based livelihood as an activity which is strictly agricultural or farm related with strong dependence on the natural resources and includes activities as crop farming, animal farming, agro-processing that use direct farm produce.
- b) *Non-farm based natural resource livelihood*: Non-farm based livelihood is an activity which is indirectly and/or unrelated to agriculture or farm but which is largely dependent on the natural resources including carvings, weaving, collection of NTFPs, distillation etc.
- c) *Alternative livelihood*: Alternative livelihood refers to all other economic activities which is not agricultural or farm related and which does not depend on the natural resource base and includes activities like dress/garment making, batik and dye, petty trading, milling, hair dressing/beautician etc.

On the basis of the above, the assessment of the livelihoods options and opportunities that target communities present does not include cocoa production which is the key economic parameter of this research. The research identified various forms of livelihoods in target communities as indicated in Box 12.

Box 12: Broad livelihoods identified

- Agro-based and related activities
- Government employment services (office work)
- Administration and diversified service sector activities
- Clothing and textile making
- Diversified manufacturing industrial and repair activities
- Retailing and other petty trading activities
- Wood-based industrial activities
- Small Scale Mining/Galamsey, Quarrying, construction and building industrial activities

The research sought to investigate into sources and programmes that promote livelihoods (and for that matter alternative livelihoods) in target communities. Findings indicate that several institutions and projects have sought to contribute to improving livelihood opportunities in communities. For instance the NPECLC provides training for

women in cocoa producing communities in vocational and entrepreneurial skills to help them generate extra income. Kuapa has assisted women in livelihood activities to ensure that women have a voice and are heard. The broad range of livelihoods identified in target communities is as indicated in Table 15 below:

Table 15: Classes of livelihoods identified in target communities

Classification of livelihood	Type of business	Major products
Farm-Based Livelihoods	Palm Oil extraction	Palm oil, Palm nuts
	Chop Bar Operation	Cooked food
	Snail Rearing	Snails
	Grass cutter rearing	Grass cutter
	Agro-processing	Gari, cassava dough, corn dough, fish smoking
	Beekeeping	Honey
	Poultry	Chicken and eggs??
	Palm Kernel extraction	Palm kernel oil,
	Pottery	Pots,
Non-Farm Based Livelihoods	Carpentry	Furniture
	Carvings	Crafts (e.g. stool, mortar, pestle, drums)
	Weaving	Mats, bags, hats, cloth
	Basketry	Baskets
	Charcoal burning	Charcoal
	Soap making	Local soap
	Distillation/Brewing	Akpeteshie, Pito, Brokutu
	Construction	Block making, buildings, drains, plumbing works
	NTFPs Collection	Herbs, ropes, twines, game,
Alternative Livelihood	Hair Dressing/Barbering	Hairdo
	Dress Making	Clothes/garments, upholstery
	Auto mechanics	Vehicle/Motor repairs
	Welding/metal work	Repairs, coal pot, iron gate,
	Petty Trading	Selling of various items
	Photography	Photos
	Administration/Services	Government employees, Business services, communication centre, hospitality services,
	Chemical Selling	Orthodox Drugs and Traditional Medicines
	Sachet Water Production	Sachet water
	Baking	Pastries, Bread
	Batik/Tye & dye	Textiles
	Milling	Milling of grains, cassava
	Mining	Small Scale Mining/Galamsey (for gold mining), Small Quarry activities (for stones)

Analysis of responses show that 17 percent of farmers indicated they do not engage in any activity with the reason that given the hybrid and high yielding varieties of cocoa introduced by CRIG (under the sponsorship of COCOBOD), cocoa production is now all year round and that there is no off-season. For those engaged in one form of livelihood or the

other, 19.3 percent admitted they do that in the lean season and activities they engage in include food crop farming, cash cropping, livestock keeping. For the same category of farmers, 53 percent do not find alternative livelihoods available to them as inadequate. Specific type of alternative livelihood/income generating activities is shown in Table 16.

Table 16: Identified income generating activities in target communities

Sector	Type of activity	Geographical location (Districts)	Sources of raw materials	Market outlets
Wood	Carvings (drum, mortar/pestle, crafts)	Suhum Kraboa Coaltar, Wassa Amenfi West, Birim South, Asunafo North, Adansi South	Local forests, Chain Saw Operators	Sale within and outside the District, Sale of carvings to bulk purchasers for export
	Wood manufacturing (wood mills, carpentry, lathe turning)	All districts	Local forests, Chain Saw Operators	Local Artisans, Clients other regions mainly Kumasi and Accra
Forest-Based	Collection of NTFPs	Wassa Amenfi West, Birim South, Asunafo, Adansi South	Forest products mainly by forest fringe communities	Local markets
Poultry/ Livestock Rearing	Poultry/Chicken rearing	Chicken rearing in all Districts, Poultry some urban communities	Large scale Poultry farms in regional capitals	Local market
	Sheep and goats rearing	All District	Within the districts and local communities	Local markets
	Grass cutter rearing	All Districts	District and Regional Agric depts.	Local market
	Snail rearing	All Districts	District and Regional Agric depts.	Local market
	Beekeeping	All Districts	District and Regional Agric depts.	Local market
Food Processing	Fish Processing/ Smoking	Major centres	Cold stores in urban towns	Local Market
	Milling (cassava -gari and cassava dough, grain milling)	All Districts	Local farmers/markets	Sale within and outside the district
	Palm Oil/Palm Kernel Oil Extraction	All Districts	Local farmers	Sale within and outside the district
	Bakery	All Districts	Flour from urban centres	Local market
Tobacco and Alcoholic beverages	Distillation (Akpateshie, pito, brokutu)	All Districts	Local palm wine tappers, Sugar & yeast urban centres	Local market
Pottery and local ceramics	Pots, Ceramic wares	Hohoe	Clay	Local markets
Soap making	Soap industry	All Districts	Cocoa husk from cocoa farmers, other raw materials supplied both from within and outside communities	General Public
Fishing	Fishing gears	Hohoe, smaller scale in community rivers	Volta and small rivers	Local markets
Mining and Quarrying	Small scale gold mining, stone quarry and clay	Wassa Amenfi West, Adansi South, Asunafo	Local natural resources	Gold dealers from outside the districts

Sector	Type of activity	Geographical location (Districts)	Sources of raw materials	Market outlets
North				
Fabricated Metal Products	Blacksmithing/Gold and Silver smithing	All Districts	Blacksmithing – local scrap dealers Gold/Silver smithing – Galamsey operators, PMMB (Accra), Old trinkets dealers	Blacksmith – local markets Gold/Silver smith – local market,
Service	Mechanics/Electronics sale and repairs	Mainly towns in all Districts	Imported but sold in local market; repairs done in towns	General Public
	Photography/Video coverage	Bigger communities	Imported but sold in local market	General Public
	Hairdressing/Beauticians	Bigger communities	Assorted products purchased from urban centres	General Public
Textile and Dress making	Batik, Tye and Dye	Few communities	Sourced from local markets	Local Market
	Garments/Dress making	All communities	Local markets	General Public
Leather works	Cobbler/shoe making	All Districts	Local markets	General Public
Weaving	Baskets, hats, mats	All communities	Local vegetation	General Public, Tourist, Exported Overseas

1.6 Summary of findings, identified practical measures and recommended actions

The research has focused on cocoa farming communities and specifically on identifying very practical measures in the area of techniques and technologies introduced, agronomic measures, integrated pests and diseases management, post harvesting processing and transfer of technology programmes. The foregoing secondary information review, analysis and discussions have revealed many findings for which recommendations have been offered. In Table 11, a summary of the identified practical measures to enhance cocoa productivity has been present with gaps/challenges and recommended actions. It constitutes a reference for the follow-up actions to improve cocoa production. This Chapter presents summary of key findings specific cocoa production. Recommended actions have also been proposed to complement the issues indicated in the table.

1.6.1 Summary of key findings

a) Agronomic and biotechnology issues

1. Ghana's cocoa farming is still dominated by aging cocoa farmers. Given the labour intensiveness of cocoa farming and cultural practices involved, the aged farmers are continually finding it difficult to undertake the heavy task associated with farming. The implication is that less and less work goes into cocoa farming contributing to the decline in cocoa productivity and farming in general.
2. The Cocoa Hi-Tech programme aims to, among things, reverse the decline in soil fertility. The programme provides fertilisers on credit to farmers who pay

back during the cocoa harvest season through ‘kilo deductions’. The key challenges have been delays in procurement and delivery of fertilisers, inadequate fertiliser application, failure of farmers to pay back the cost of fertilisers and problems posed to application of right doses. These potentially affect production levels and productivity per unit of land.

3. The high cost of agro-chemicals, equipment and labour contribute significantly to low productivity. A CRIG’s 2006 survey revealed that in controlling Capsids and Blackpod diseases, farmers were spraying farms twice a year instead of 4 times and 9 times per annum respectively. The situation exists in some pockets in like manner even in the face of Government assisted programmes of CODAPEC, etc.
4. Poor farm practices involving nearly every stage of cocoa production process (farm establishment, farm maintenance, harvesting, pod breaking, fermentation and drying of beans) is not of the desired standards and thus have adverse effects on productivity.

b) Production techniques

1. The problem of land tenure is heavily weighing the efforts to increase cocoa production. Farmers expressed the worry that large tracks of land continues to remain within the absolute control of traditional land owning authorities (including stool chiefs, skins and clan heads). The lack of clear National Policy for land tenure arrangements in Ghana leading to insecurity of farmers and their cocoa farms and possible abandonment; low investment by farmers in their cocoa farms and hence low productivity.
2. Ghana’s cocoa farming is still a smallholding enterprise with farm sizes averaging 3.9ha. This in itself could only marginally add to overall production levels.
3. Productivity levels of Ghana’s cocoa are generally low and require enormous agronomic, production and technological measures to achieve the potential per unit of land in Ghana’s cocoa production.
4. The Cocoa Rehabilitation Programme instituted by Government sought to cut out cocoa trees (and sometimes farms) infested with diseases including the CSSVD. The affected farmers are compensated. However, farmers indicate that not only is the compensation inadequate, it takes unacceptably long a time for compensations to be paid to farmers. The situation only leads to deepening the poverty levels of cocoa farmers.

c) Integrated pests and diseases management issues

1. The CODAPEC programme (popularly called Mass Spraying) has been operating in 72 political districts including all cocoa districts of Ghana: 21 districts from the blackpod disease only; 35 districts from mirids only and 16 from both. Following the implementation of CODAPEC, cocoa production has increased from 380,000mt at the inception of the programme to almost 740,458mt in the 2005/2006 cocoa season. The programme also provided employment to over 60,000 people as sprayers, supervisors, mechanics as well as involvement of haulers and distributors. Challenges noted for the

Mass spraying programme include inadequate cooperation from farmers, technical difficulties posed by inadequate insecticides, spraying machines and spraying gangs and alleged fee charging by spraying gangs.

2. Pests and diseases including Epiphytes and parasitic plants are important causes of low yield in cocoa production in Ghana. Biological factors include CSSVD, Blackpod diseases and Mirids, termites, stem borers, stink bugs, weeds and parasitic mistletoes. For the CSSVD programme which seeks to cut out cocoa trees infested with swollen shoot disease under the CSSVD has met some fierce resistance from farmers as open clashes have ever been reported in some parts of its operational areas.

d) Technology transfer issues

1. Inadequate extension services in target communities pose a great hindrance to productivity. The merger of the Cocoa Services Division which used to carry out extension services in 1990 with the extension component of the Extension Directorate of the MOFA culminated in the separation of extension and research. Extension services then tended to be performed by the general agricultural extension practitioners who may have limited specialised cocoa extension skills as of trained cocoa extension agent. Again, the separation led to reduction in the Farmer-Extension Agent ratio leading to non-existence of the extension services in some target cocoa growing communities.
2. There is less adoption of research recommendations (supposedly from CRIG) and influence on productivity. This shows that farmers understand, appreciate and thus adopt research recommendations better when they are involved from conceptualisation through information gathering, analysis and results. On the contrary, research by CRIG and related research institution largely involves farmers at the results adoption stage which would have taken farmers out of the research. This often leads to less adoption of the recommendations and hence compromising productivity.

e) Post harvesting, value addition and marketing issues

1. Fermentation and drying are important stages of the cocoa production process. Fermentation and drying process are still rudimentary and labour intensive. There were varying responses regarding the number of days for drying but the general assessment points to less days for drying, affecting quality and taste.

f) Socioeconomic and ethics issues

1. Many institutions (Governmental, Non-Governmental and Private Sector) are seeking ways of improving productivity. The Cadbury Cocoa Partnership Project has so far worked with over 100 cocoa farming communities in addressing the root causes of low productivity so as to attract new generation of cocoa farmers. It helps to increase cocoa farmers' income streams and provide opportunities for education and infrastructure improvement. The Cocoa Abrabopa project being implemented by Technoserve Ghana and Wienco Ghana provides farm inputs based on the Hi-Tech package developed by CRIG and offers an input package of revolving credit terms as it offers

credit to groups of farmers who are jointly liable for their repayment. These and many other interventions are contributing to enhancing cocoa productivity in a number of ways.

2. Children continue to be engaged in cocoa farming as family hands and support parents in running errands while in the farm. This confirms to a large extent the media reports and literature information on child labour in cocoa. However, there is a sharp contrast between child labour in cocoa as generally reported by the media and perceived by international community and that from the perspective of cocoa farmers. Assessment of knowledge and perceptions of farmers on children in cocoa (equated to child labour) present issues of differential perspective. Farmers indicated that they are joined by children on the farm during weekends when they are not in school and they think that as they run errand the task assigned to them is not detrimental to their education, health or self-esteem, it does not constitute child labour. As much as 70 percent of farmers do not admit that the manner in which they engage children in cocoa farming does not constitute child labour.

1.6.2 Remedial measures to address negative findings

a) Agronomic and biotechnology issues

1. Attracting the next generation of youthful cocoa farmers is an important issue that should be everybody's preoccupation. Government policies should first create an environment capable of retaining the youth in rural and cocoa growing areas and to consciously cover provision of basic social services so that the rural-urban drift of youthful population will be halted. Agriculture and for that matter cocoa farming should be made attractive to the youth as they are retained in cocoa growing areas. Producer price which appears better currently than before should further be increased as to improve the profitability of cocoa farming.
2. Key actors to be involved in this endeavour include Government, COCOBOD, Ministries, Departments and Agencies (MDAs), Specific Cocoa intervention Projects.
3. Sustaining cocoa production and for that matter improving productivity in cocoa requires increasing soil fertility primarily and that is why the Cocoa Hi-Tech Programme is an important policy action to be continued. Sustaining the programme requires replenishing stock through payment of cost involved in procurement and distribution of fertilisers. There should be an intensive targeted sensitisation, awareness creation and education of cocoa farmers on the policy of "pay-back" of fertilisers credited to them through the "kilo deductions". Fortunately, nearly all cocoa growing communities have community radios which provides ready channel for community engagement. The farmer group or cooperative system of input supply system could be adopted in fertiliser distribution under the Cocoa Hi-Tech. Thus, Farmer Associations/groups or cooperatives should be formed (or strengthened) so fertilisers are given to members who may individually and severally be held liable for payment of the cost of fertilisers. Intensification of farmer education

to cover fertiliser application in terms of dosage, application periods and other associated challenges is necessary. The Cocoa Extension Agents should become key professionals to carry out education. However given the grave inadequacy of their numbers, skills should be created in that field where people with requisite capacity are trained to deliver training to Cocoa Farmers on farms. Ultimately, stakeholders involved in the Hi-Tech should ensure continuous availability and prompt delivery of fertilisers to farmers.

4. Key actors to implement this proposal should include Government, COCOBOD, LBCs, the Private Sector, relevant MDAs, Farmer Associations, GAWU.
5. While cost of inputs are addressed through provision of subsidies for which government and stakeholders must consider in order to offer cocoa farmers the opportunity to procure and use appropriate inputs, access to credit remains another important factor to address the availability and financial accessibility to high cost input. Farmers indicated that financial institutions often require collateral security as conditions to provide credits, a situation that puts many cocoa farmers outside the arena of obtaining credits. This calls for the need to target financial support to cocoa farmers through negotiations with financial institutions, design of interventions to provide credits (most probably at less interest rates to farmers).
6. Key actors to involve could include Government of Ghana, Financial Institutions (Banks, Micro-Finance Institutions, Financial NGOs), COCOBOD, NPECLC, Poverty Reduction Projects and ILO-IPEC Cocoa Project.
7. A major contributor to low productivity has been poor farm husbandry and other poor agronomic practices by farmers from planting through to harvesting. To improve productivity, CRIG's researches have recommended agronomic measures including, planting materials, planting distances between cocoa trees, rounds of weeding per year, disease and pest control using spraying, pruning, harvesting of cocoa pods, pod breaking, fermentation and drying. Some farmers find it difficult to practice these measures resulting in poor yield and low productivity. The use of demonstration farms and audio visuals to demonstrate to farmers the appropriate recommendation measures and their applications is paramount.
8. Key actors to involve include CRIG, Bunso Cocoa College, COCODOB and all its subsidiary Units.
9. Farmers demonstrated considerable knowledge on preventive control measures. However, it is important to deepen their appreciation of good agronomic practices. It is recommended that education is provided in agronomic practices which are paramount to disease prevention and control in cocoa production. There is also the need to research into biological control measures which can reduce the use of chemicals in spraying thereby preventing environmental pollution and reducing greenhouse emissions.

10. Key actors to execute this could be the ILO-IPEC Cocoa Project, Non-Formal Education Division, MOFA, COCOBOD and its subsidiary Units like Quality Control Division, Seed Production Unit etc.

b) Production techniques

1. The urgent need to deal with the land tenure arrangements of Ghana cannot be overemphasised. In recent times Government has sought to tackle the problem through the restructuring of the land tenure system within the ambient of the National Land Policy of 1999. The off-shoot programme, the Land Administration Project (LAP) meant to harmonise land tenure legislations in Ghana (including titling and registration) has so far achieved a modest gain. Any efforts at enhancing cocoa productivity must work with the LAP and other same-purpose projects to address the land tenure system of Ghana.
2. Key actors should include Government of Ghana, LAP, Administrator of Stool Lands, Traditional Authorities, COCOBOD and ILO-IPEC Cocoa Project
3. Small farm holdings may be attributable to many factors including land tenure systems and looks pretty difficult to deal with in the short term. However, programmes to engage traditional authority and land owners to re-organise land tenure arrangements in the various communities should be vigorously pursued. Any efforts should, besides the Traditional Authority and Land Owners, include the Administrator of Stool Lands, Lands Department, Survey Department, MoFA and the Ministry of Lands and Natural Resources.
4. Existing cocoa farms and ongoing cocoa farming activities are still smallholding to a larger degree. Acknowledging that this is a strong contributor to low production and hence productivity levels, efforts to whip up interest of the youth in cocoa farming should necessarily encourage large-scale cocoa farming. Three critical issues that need consideration include (i) the urgent need to assist cocoa farmers' access credit independent of collateral (ii) the review of land tenure arrangement in favour of large scale cocoa farming and (iii) sustaining programmes to improve soil fertility (for instance the Cocoa Hi-Tech Programme).
5. Key actors to involve in these activities include Government of Ghana, LAP, Administrator of Stool Lands, Traditional Authorities, COCOBOD, Financial Institutions, Poverty Reduction Project interventions and ILO-IPEC Cocoa Project.

c) Integrated pests and diseases management issues

1. The CODAPEC programme has chalked substantial successes in terms of control of diseases and pests leading to improved productivity on one hand and creation of employment for people on the other. This indeed needs to be sustained. Having also recognised few challenges associated with CODAPEC, education of farmers on all aspects of the programme is important to increase cooperation. Since the programme was designed for farmers, it is extremely important to have them accept the programme in totality. Agric Extension officers need to be re-equipped with knowledge on the CODAPEC programme

to enable them meaningfully engage farmers to deepen their understanding and appreciation of the programme. Secondly, the CODAPEC programme could be more effective if resources for its implementation are made available and at the right time. Insecticides, spraying machines and spraying gangs are supposed to be available. The Government of Ghana, COCOBOD and other organisations (including NGOs and Cocoa Projects) should collaborate to provide resources in adequate quantities. Thirdly, the alleged fee charging of gangs is a great disincentive to farmer's patronage of the programme. It has the potential to reduce interest and hence prevent farmers from cooperating with the programme. Therefore investigations must be instituted and culprits brought to book. Gangs should be sensitised on the dangers associated with their actions and specific punitive measures instituted to curb the practice.

2. The Cocoa Rehabilitation Programme and CSSVD control programme are important to control the infestation and spread of diseases. The fears of farmers have been on the late payment of compensations, non-payment of commensurable compensation and length of time one has to wait between the period when infested trees are cut and when farms are handed over to farmers. The strategy is to bring farmers on board during the design of the programme so that their suspicions and fears are adequately captured and addressed. As the programme has already been designed, there is the need for constant interaction with farmers to sensitise them on the programme package so as to help reorganise the system. The Farmer Field School is a key approach but the scope could be increased to include farmers themselves as well as their leadership.

Key actors to involve should include Government of Ghana, COCOBOD, Non-Formal Education Division, Ministry of Finance, MOFA.

d) Technology transfer issues

1. Agricultural Extension (and for that matter Cocoa Extension Services) is crucial in cocoa production and has the potential to improve productivity. The key challenges to the merger of Cocoa Services Division with the Extension Directorate of MoFA have to do with limited capacity of general Extensionist to provide services in cocoa production and reduced Farmer-Extension Officer ratio. Whiles capacity in cocoa extension is being built, what is critical is conscious efforts to raise the Farmer-Extension ratio to facilitate the delivery of enhanced and adequate extension services to cocoa farmers. The increase in the ratio will enable farmers, irrespective of their location, to access and benefit from extension services.

Key actors should include MOFA, COCOBOD, Private Sector agencies involved in cocoa affairs, ILO-IPEC Cocoa Project and LBCs.

2. The CRIG has since its establishment been the key research institution in cocoa production and remains the pivot for provision of recommended practices to improve cocoa production in Ghana. Researches have focused on enhanced agronomic practices (including farm management, proper farm husbandry, shade management etc.), improved cocoa varieties, diseases and

pests control, harvesting, fermentation and drying etc. To large extent research findings relating to cocoa farms have enhanced cocoa productivity and improved production in general. The research show that CRIG does not involve farmers in the conduct of research and thus farmers seem to be introduced to recommended measures without adequate understanding and appreciation of the practices and arrangements involved. To remedy the situation, CRIG researches must seek to involve farmers in the entire process even from research conceptualisation stages through to recommendations. By so doing user-friendly environments will be created and farmers will be in position to adopt the recommended measures with relative ease.

Key actors should include GRIG, Bunso Cocoa College, Research departments in the various Universities.

e) Post harvesting, value addition and marketing issues

1. Ghana's cocoa is highly priced because of its high quality, flavour and taste and this is attributable to excellent fermentation and drying practices. Taste and flavour are important ingredients to chocolate manufacturing making Ghana's cocoa a preferred choice for producers of confectioneries. Unlike other producing countries where for instance smoke is used to dry cocoa beans giving the beans black colour, Ghana's cocoa is sun dried. The challenges noted include the labour intensive nature of both fermentation and drying of cocoa beans and as beans are left to ferment and to drying they are prone to theft. In fact farmers expressed grave concern about the rate of cocoa beans theft and pilferage in many communities in recent times. Suggestions put forward including the introduction of a netting system in which nets are used to dry as against the current practice of using mats. This has the advantage of speeding up the drying duration. It has also be suggested that the use of solar systems for drying in which drying of beans could be done indoors will help to reduce theft and pilferage of beans. Whiles these are potential advantages, research and investigations into their feasible should be undertaken by appropriate research institutions.
2. Key actors to involve are CRIG, Bunso Cocoa College, Research departments of the various Universities, COCOBOD, NPECLC and ILO-IPEC Cocoa Project.

f) Socioeconomic and ethics issues

1. A number of interventions that border on socioeconomic issues and aimed at enhancing cocoa productivity in cocoa growing target communities have been identified. They include programmes on direct cocoa production issues (soil fertility, disease and pests control, farm management etc.), improvements in education, health, living conditions, livelihoods, credit and other social lives. These interventions have complemented each other to enhance productivity in target communities and improve social live for children, women and the general populace. Whiles their contribution is remarkable and highly acknowledged the enormity of the socioeconomic challenges are huge and require more of these interventions to provide enhanced cocoa production, improved livelihoods and social wellbeing in target communities. The current ILO Cocoa Project must as a matter of necessity design and implement a

consultative package which should seek to engage all key stakeholders (Government, COCOBOD, Government-led Cocoa intervention projects, international and local NGOs, Private sector organisations and private sector-led intervention projects) in discourse around consolidating specific packages to area-based and integrated cocoa enhancement in cocoa growing regions in Ghana.

2. The research confirms that children are engaged in cocoa production, mainly in cocoa farms, during fermentation and drying and occasionally during loading. While it is agreed that child labour in any form is unacceptable and should be eliminated at all cost, Ghana's socio-cultural practices in which cocoa farming is seen as a family business and therefore is handed over to family members from one generation to another generation, farmers believe that children involvement is important as part of the learning process and cannot just be whisked away. In dealing with the challenge of child labour, the general consensus is that children can be (and sometimes need to be) involved in cocoa farming to perform task in accordance with employment provisions of the Children's Act. The District and Community Child Protection Committees of the various DAs and target communities must endeavour to ensure that farmers abide by the minimum age provisions of the Act as well as ensuring that children's education, health, safety, morals and self-esteem are not compromised. The project must embark on intensive education of farmers on child labour and associated laws and regulations.

Chapter 2. Practical guide/training the trainers toolkits for introducing productivity enhancement measures

2.1 Introduction

2.1.1 Background

Measures of productivity constitute core indicators not only in satisfying the national quantum of cocoa for processing and for export but equally so for improving the incomes of cocoa farmers and thereby assisting them to secure better living for their households and cocoa communities. This research, as in many other researches carried out in Ghana's cocoa sector clearly reveals that there is currently low productivity in cocoa production in Ghana and the effects are adequately discussed in the research report. The challenges and gaps identified and discussed in the research report call for remedial actions and these have also be adequately discussed. To help improve cocoa productivity, these measures need to be taken to farmers and be supported to implement them.

This Guide is prepared as part of the research to identify practical measures towards enhancing cocoa productivity in cocoa growing areas in Ghana. The guide serves as instrument for taken the practical measures introduced by Government, NGOs and the Private Sector towards enhancing cocoa productivity to farmers and provides specific practical approaches through which trainers can reached out and/or engage farmers and communities.

2.1.2 Purpose and objectives of the guide

The research combines secondary source information and primary data with specific focus on cocoa sector institutions and farmers perspectives. The key issues anchor around practicality of the measures which are based on farmers' assessment and suggestions to fill in the gaps and remedy the challenges.

The purpose of this Guide/Toolkit is to serves as a technical background material to facilitate a process that transfers knowledge on cocoa enhancing measures to target farmers in cocoa growing communities.

The specific objectives are as follows:

- To provide a framework within which the project will operate along the path of contributing to improving productivity in cocoa growing communities.
- To provide a snapshot guide for training of trainers to serve as standard toolkits for project implementers.
- To generally guide the process for introducing the identified measures to farmers and communities.

2.1.3 Structure of the guide/toolkit

The Guide/Toolkit is structured to ensure that there is harmony among the two chapters. Section 2.1 focuses on the background, purpose and objectives of the Guide; and the structure of the guide/toolkit. Section 2.2 presents the principles for farmer engagement and proposes adult learning approaches as the key principle. Section 2.3 highlights on recommended approaches for training the facilitators. The approaches including FFS, video viewing and farmer learning approaches have been proposed as effective mechanisms for facilitator-farmer engagement. In Section 2.4, the framework for training the trainers have been presented. This provides specific issues and methods for engaging target beneficiaries towards imparting knowledge.

2.2 Approaches for introducing measures to farmers

2.2.1 Adult learning as a key principle for farmer training

The research identified that cocoa farming is unattractive to the youth and further implies that nearly all farmers are adult. This presents challenges in terms of imparting knowledge to the adult farmers. In addressing this challenge, Adult Learning is made the key principle of the Guide and that its provisions must be known and applied by facilitators and educators. The key principles of Adult Learning are given as follows:

Box 13: Principles of adult learning

What is learning and how does it take place?

Principle 1: Learning is an experience that occurs inside the learner and is activated by the learner

Principle 2: Learning is the discovery of the personal meaning and relevance of ideas

Principle 3: Learning (behavioural change) is a consequence of experience

Principle 4: Learning is a co-operative and collaborative process

Principle 5: Learning is an evolutionary process

Principle 6: Learning is sometimes a painful process

Principle 7: One of the richest resources for learning is the learner him/herself

Principle 8: The process of learning is emotional as well as intellectual

Principle 9: The process of problem solving and learning is highly unique and Adults face specific difficulties when learning. These include the following:

- Their knowledge may not be systematic.
- They have little time.
- Their awareness may be slow and they may be afraid of learning theory.
- Their listening and observation skills may be weak.
- They may be shy in group situations.
- They may be highly conservative and often disregard the views of others.
- They may lack self-confidence and want to avoid making mistakes.
- Their attitude toward learning is affected by their past experiences, positively or negatively.

Adult Learning Principles

- Adults like to learn in a self-conscious way. By contrast, children learn something as requested by adults, even if the subject is not interesting. Adults decide what they want to learn for themselves.
- Adults learn best if the subject meets their needs.
- Adults learn best by doing. This idea is expressed in the proverb: "What I hear is what I forget; what I see is what I remember; what I do is what I understand".
- Adults learn through experiences. When learning, adults bring along their own experiences. It is therefore necessary to

respect and incorporate their experiences in the learning process.

- Adults bring their own opinions to the learning environment. Those opinions affect their learning and awareness.
- Adults learn best in a non-formal atmosphere where they can feel accepted and supported by the trainers and other trainees.
- Adults learn by solving the problems relevant to their lives. Solutions must be based on their practical understanding and analysis drawing on in their experiences.
- Adults can easily adapt to different teaching methods. They prefer not to receive grades.

2.2.2 Training methods for training the trainers

Given the background of trainees who learn best in a non-threatening and informal environment coupled with roles related training, participatory methodologies to create the required adult learning environment should be created. The following flexible participatory methods that seek to ensure that all participants participate fully in the sessions should be employed:

Interactive lectures

Adults are not particularly interested in the academic nature of training, rather they are more interested in knowing whether the training will help them play their roles and solve problems in real life situations. Whilst some modules might be simple to understand, some others could be academic in nature. To reduce the difficulty in appreciating the modules however, the trainers presents modules in lectures but these are made more practical and easier for adults to absorb the skill and knowledge. The trainers facilitate a learning process that enables participants to share valuable experiences on all modules.

Discussions and questions and answers

Discussions help participants gain a better understanding of issues and assist in bringing out peoples experiences, ideas and opinions. Experience shows that discussions enable everyone to participate freely, enable participants gain self-confidence and keep interest high whilst overcoming shyness. Questions and Answers are also the most direct ways of getting information. Trainers employ Discussions and Questions and Answers in the conduct of the training. It must however be emphasised that the purpose of questions are meant to encourage learning and not to test trainees/participants.

Brainstorming sessions

In this approach, participants are allowed to talk much about their ideas on a topic without other trainees making judgments as to whether they are right or wrong. The Trainer lists these ideas, following which discussions are be held on the listed ideas and final decisions made.

Case studies

Case Studies present good scenarios for trainee's appreciation of a likely event in their normal day-to-day activities. In employing Case Studies as a participatory training technique, the trainer writes short descriptions of problem situations and task trainees/participants to come up with solutions bearing in mind the contents of the modules.

Group work and group discussions

Experience shows that a well organised group work gives learners the opportunity to share ideas and experiences. Breaking participants into small groups with each group working on specific practical task enables them grasp lessons and apply them appropriately. The Trainer therefore breaks participants into small groups to discuss a topic and share ideas. Participants may be grouped according to interest to facilitate unhindered discussions. In other to avoid the tendency where one or two members of a group dominate the discussions whilst others sit to watch, the Trainer monitors the groups whenever they are formed to work. The Trainer also shows interest in capturing the relative perceptions of trainees in the shortest possible time. Thus, in addition to the Group work, the Trainer uses **Buzz Groups** which assists him/her to get learners views or thoughts about a topic in a very short time.

Role plays

Role plays involve acting out experiences or situations with trainees/participants playing assigned roles and is followed by discussions so that participants reflect on what they saw and felt during the role-play. Role plays help learners to increase their understanding of an issue leading to changes in attitudes. It is very participatory and really increases the interest levels of trainees. Role plays also help learners take a second look at their own behaviours, attitudes and conditions. Given the advantages associated with this approach, the trainer employs role plays as a participatory technique with the view to engender participant's active involvement, interest and understanding.

Warm-ups/wake up games and songs

Participants are called at time intervals to perform songs/play games to create a wake-up environment that energizes and loosen them up to move on.

2.3 Training the trainers toolkits

2.3.1 Learning principles for trainers

Adult Learning is most effective when it is based on experiences, reflection, addressing immediate needs, self-responsibility, participation, feedback, empathy and takes place in a safe and comfortable environment.

Box 14: Adult learning principles	
Principles	Description
Experiences	The most effective learning is from shared experience, either by discussing participants' past experiences or by developing new experiences through practical exercises in the field. Participants learn from each other and the facilitator often learns from the participants.
Reflection	Maximum learning from a particular experience occurs when a person takes the time to reflect back upon it, draws conclusions and derives principles for applying to similar experiences in the future.
Immediate needs	Motivation to learn is highest when the subject meets the immediate needs of the learner. FFS is a needs-oriented or learner centred training approach.
Self-responsibility	Adults are independent learners. They interpret information according to their personal values

Box 14: Adult learning principles

Principles	Description
	and experiences. They may appear to agree with something in order to complete training activity successfully, but the ultimate test of the training is whether they apply it in their life or work. Adults share full responsibility for their own learning. They know best what they need and want to learn.
Participation	Participation in the learning process is active not passive. Full participation and discussion among participants increases the dynamics and learning effects of a training activity.
Feedback	Effective learning requires feedback that is corrective but supportive.
Empathy	Mutual respect and trust between trainer and learner is essential for the learning process.
A safe atmosphere	A cheerful, relaxed person learns more easily than one who is fearful, embarrassed, nervous, or angry.

2.3.2 Competencies of good practical measures enhancement facilitators (PMEF)

Group moderation. The main task of a Practical Measures Enhancement Facilitator (PMEF) is to guide a farmer group to exchange ideas and experiences in order to come up with a decision, joint results or conclusions. Good facilitation requires paying attention to group dynamics (how members of a group interact with each other) and integrating non-active group members into the discussion and activities.

Communication. Group moderation builds upon communication skills. The most important skills are asking questions properly and listening actively.

Technical knowledge. The PMEF should contribute technical knowledge but should do so in a way that respects farmers' knowledge and interests. He/she should never impose solutions in a top-down manner.

Personal attitude. A respectful and positive attitude towards farmers is the most important requirement for good Facilitation. A person who thinks that farmers are ignorant can never be a good PMEF.

Box 15: Types of non-formal education methods for PMEF

Several non-formal education methods are employed by trainers especially by Farmer field School (FFS) Facilitators including the following:

- Sharing
- Case studies
- Role play
- Problem solving exercises
- Group dynamic exercises
- Small group discussion
- Brainstorming
- Discovery learning exercises
- Field exercises

It is important for Facilitators and Trainers to understand and appreciate issues of cocoa productivity and its relationship to income of farmers. The essence is to convince farmers to participate and show enormous interest in activities that will be implemented to introduce cocoa productivity enhancement measures to them.

There should be a serious interactive session complemented with field exercises. The trainer collects information on age of cocoa trees, production per tree (hectares or acres) and yield.

2.4 Recommended approaches for training farmers facilitators

2.4.1 Farmer field schools (FFSs) and video viewing clubs (VVCs)

Description of approach

The Farmer Field School (FFS) is basically school without walls. The FFS is a tool for cultivating farming learning and empowerment and helping farmers to develop their critical thinking. FFS is employed to transfer cocoa production technologies to farmers to help increase their incomes. The approach is delivered to a wide range of cocoa farmers in target communities. For reasons of resource constraints, farmers may be selected based on proximity to communities and ability to transfer knowledge to colleague farmers in their communities.

Learning objectives

- As a season-long, field-based and experiential-learning activity, FFS provides an arena for farmers to acquire or enhance experimental skills.
- To empower farmers to make their own locally-specific decisions about crop management practices.

Procedure

- Design training curriculum for farmer training based on FFS teaching methodology.
- Deliver training modules on agronomic measures (planting distances, planting material propagation, food crop integration); Train farmers on agrochemical hazards.
- Intersperse training with field exercises in selected cocoa farmers or demonstration farmers.
- Gather discussion issues and further expatiate on the issues for deeper understanding and appreciation of all farmers.
- Create avenues by which farmers can impart knowledge, share lessons learnt and assist other farmers to embrace productivity enhancement measures.

The FFS process

Steps in Establishing FFS (classical approach)

9. Farmer-Run FFS
8. Graduation
7. Field days
6. Follow ups by TOT graduands
5. Establishment of FFS
4. Training of Trainers (TOT)
3. Identification of the FFS site
2. Identification of FFS participants
1. Ground working

2.4.2 Video viewing clubs (VVCs)

Description of approach

The Video Viewing Club (VVC) is a group-based method of training cocoa farmers to increase their yield through improving farmer's access to technical information on sustainable cocoa production. The VVC follows application of Farmer Field Schools (FFSs). The methodology employs participatory videos, guided discussions and field activities

Learning objectives

- To provide platform for training and educating farmers with low educational levels.
- To present to farmers visual shows on new techniques and practices in a short period of time.
- To standardize cocoa production information so that it can be transmitted accurately from technical sources to farmers.
- To assist farmers gain knowledge on common cocoa production problems.
- To help increase farmers understanding and appreciation of cocoa farming employing modern technologies.

Procedure

- Design videos on integrated crop and pest management separately for women farmers and men farmers. View episodes.
- Show specific videos to help farmers learn on removal of non –productive shoots, spraying fungicide.
- Show videos on intercropping and income diversification.
- Allocate time for discussion of the video.

2.4.3 Farmer learning group

Description of approach

The Farmer Learning Approach (FLG) is a structured group based approach designed to teach farmers specific skills and practices on planting, replanting and diversification in cocoa establishment employing demonstrations, field observations, field exercises and discussions as key training and learning tools.

Learning objectives

- To improve information service provision to farmers
- To create an innovative information platform that empowers farmers to become better educators
- To improve farmer associations – Extension Agents leading to adoption of improved technologies

Procedure

- Select farmers for training and constitute learning groups in each district with farmer representatives from each community.
- Select one appropriate site in each district for field work and exercises.
- Obtain and produce quality materials for field exercises.
- Prepare fields.
- Conduct sessions to introduce farmers to cocoa diversification.

Box 16: Developing farmer learning groups

Key Farmers

- Farmers will listen to peers they respect.
- Shy farmers respond positively to personal invitations from key farmers.
- Member organisations know who the best key farmers are.
- Key farmers like being asked to help.
- Key farmers like to meet other key farmers.

Quick access

- An issue arises, a steering group forms.
- That group invites key farmers to meet.
- That meeting asks the farmers to go back and invite neighbours to a local meeting.
- Results of the local meeting are fed back to the steering group.
- Local groups continue to meet as long as the issue is live.

2.5 Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers					
Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
Agronomic measures					
<p>Enhancing productivity through planting, replanting and adopting recommended planting spacing</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Promoting nursery with recommended spacing • Adopting appropriate planting spacing for cocoa trees • Cutting down over-aged cocoa trees; cocoa infested trees • Replanting hybrids to reduce years of maturity 	<ul style="list-style-type: none"> • Incorrect spacing of plants • Untimely and inadequate supply of required hybrids • Low knowledge and skills on planting distances 	<ul style="list-style-type: none"> • Targeted education farmers contribution of proper planting methods to improved productivity • Educating farmers on planting spacing, • Institutions to procure and distribute seedlings timely 	<ul style="list-style-type: none"> • Incorrect planting distances leads to overcrowding of trees • Spread of diseases too rapid • Sources of hybrids 	<ul style="list-style-type: none"> • Planting the right trees in the cocoa fields can provide environmental and economic benefits to the farmers • Adhering to prescribed planting distances improves productivity (Adherence to definite planting distances) • Improved planting materials are obtainable from nurseries, CRIG, Seed Production Units (SPUs) 	<ul style="list-style-type: none"> • Interactive discussions • Field visits to selected cocoa farms that show cases of right planting arrangements/materials • Demonstrations • Documentation to show good agric practices in cocoa using audio-visuals (i.e by joint collaboration between MOFA and COCOBOD)
<ul style="list-style-type: none"> • Periodic weeding and clearing of bushes around cocoa plants till canopy forms, this could be manually done with cutlass or mechanically with herbicides • Private input supply companies provide herbicides on sales • The cocoa Abrabopa provides inputs including herbicides to farmers. They pay back after harvest 	<ul style="list-style-type: none"> • Low yields due to un-adherence to weeding cycle in cocoa farms • Over grown weeds on farm due to inadequate weeding leading to plants sharing nutrients with cocoa trees • Low use, fake and inferior herbicides • Non recovery of herbicide cost 	<ul style="list-style-type: none"> • Targeted education of farmers on identification and acquisition of genuine herbicides and need for regular weeding • Develop effective mechanism for supply and recovery of cost on herbicides • Encourage the Nnobua system • Formation of farm gangs by the youth to provide labour to interested farmers 	<ul style="list-style-type: none"> • Weeds compete for water and nutrients from the soil • Weeds increases humidity in the farm • Too many weeds in farm obstruct performing other important farm activities (e.g. pruning and harvesting) 	<ul style="list-style-type: none"> • Weeds growth differ from one farm to the other (farms close to river beds have fast weeds growth) and thus need for regular weeding that elsewhere • Most farms needs about 3-4 underbrushing per year • Underbrushing needs to be done just before harvesting and beginning of dry season • Safe use and handling of agro chemicals 	<ul style="list-style-type: none"> • FFS • Interactive discussions • Questions and Answers sessions • Showing of videos on best farm practices • Demonstrations • Documentations using audio-visuals
<p>Improving productivity through regular and timely pruning practices</p>	<ul style="list-style-type: none"> • Reduced shade due to improper pruning • Provision of 	<ul style="list-style-type: none"> • Targeted education of farmers on pruning 	<ul style="list-style-type: none"> • Too many branches compete with pods for 	<ul style="list-style-type: none"> • Effects of too much shade: cocoa grows higher and thinner and more blackpod 	<ul style="list-style-type: none"> • FFS • Interactive discussions • Video viewing

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
<p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Taking off all unwanted dead branches from plant stem enhances aeration • Shade management through the rehabilitation programme with Bio-Tech of planting plantain to provide shade at early stages of the cocoa trees. Cutting of too many big trees will also prevent over-shading 	<ul style="list-style-type: none"> • limited economic tree crop • Over-shading 	<ul style="list-style-type: none"> • Institutional arrangements and research on more economic tree crops e.g. use of Bio –Tech to produce pawpaw, banana etc. • Constant underbrushing, pruning of trees, removing too much shade and removing all disease and pest-infested pods and mistletoes • Cleaning out clogged drainage ditches and adding organic matter to renew soil nutrients 	<ul style="list-style-type: none"> • nutrients and water • Shade pruning allows for better development of canopy: better light distribution and easier harvest • Better aeration controls diseases 	<ul style="list-style-type: none"> • diseases • Effects of too little shade: capsids and trees dry out in dry season • Identify and remove undesirable trees • Pruning cocoa trees on a regular schedule improves tree health, controls growth, enhances flowering and appearance • Choose crop varieties that provide maximum shade (Farmers to plant recommended food crops (plantain, cassava, cocoyam, maize etc.) to provide initial shade for newly planted cocoa seedlings and as source of income) 	<ul style="list-style-type: none"> • sessions to demonstrate pruning practices • Visits to demonstration farms
<p>Improve cocoa productivity through cocoa rehabilitation</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Cocoa Rehabilitation to bring back the productivity of an old unproductive cocoa farm infected with pests and diseases (Under-planting/replanting, complete replanting, regeneration) 	<ul style="list-style-type: none"> • Possible infestation of diseases and pests • Competition for nutrients with old trees • Loss of income until new farm reaches it bearing stage • Inadequate logistic for effective implementation • Delay in procurement and delivery of required inputs • Some level of resistance from farmers who may demand compensation • Inadequate funds and delayed release 	<ul style="list-style-type: none"> • Institutional arrangement to procure and deliver required inputs promptly • Soil treatment to prevent re-infestation of diseases and pests • Targeted education of farmers on good records keeping • Intensification of farmer education on the rehabilitation program • Provision of alternative off farm livelihood for family income before new farm reaches it bearing stage 	<ul style="list-style-type: none"> • Important factors determining productivity of a farm (i.e. age of trees, number of productive trees per land area and yield per tree) • Application of decision tree to decide whether to replant or rehabilitate 	<ul style="list-style-type: none"> • Series of decisions based on systematic observations of farms to improve productivity • Setting an average income goal for 1-hectare/acre of farm 	<ul style="list-style-type: none"> • Interactive session • Field exercise (i.e. to collect information on age of trees, production per area and yield; and to demonstrate how rehabilitation is carried out) • Demonstrations • Do economic analysis on benefits (i.e cost benefits analysis) to be derived from cutting over-aged cocoa farms • Use of audio-visuals and • Testimonials

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
<p>of funds</p> <ul style="list-style-type: none"> • Uncertainties of the weather 					
Biotechnology and production technique measures					
<p>Improving cocoa productivity through diseases and pests control</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Cocoa Mass Spraying (also called CODAPEC) is implemented to control Blackpod and Mirids • Programme offered employment to rural people • The Cocoa Rehabilitation project seeks to eradicate diseases and pests in infested cocoa farms. The cutting of cocoa swollen shoot diseases under the CSSVD of COCOBOD • COCOBOD assists cocoa farmers to remove mistletoes 	<ul style="list-style-type: none"> • Inadequate spraying of farms • Unavailability of insecticides on the open market to enable individual farmers buy to spray their farms • Alleged illegal charge of local farmers by spraying Gangs. Spraying is free but farmers reported of illegal charging by gangs • Fierce resistance from cocoa farmers who would not agree to destruction of infested cocoa farms • Late payment of compensation and/or sometimes inadequate (or lack) of compensations paid to farmers 	<ul style="list-style-type: none"> • Supply of adequate spraying materials (spraying machines, insecticides etc.) • Expansion of CODAPEC Programme • Form community watch gangs to prevent illegal charges. • Educate farmers on need to adequately spray farms • Strengthening government's compensation scheme with increase in grants • Replanting and maintenance of farms for 3 years prior to handing over to farmers • Intensification of extension services 	<ul style="list-style-type: none"> • Education of farmers to appreciate the benefits of CODAPEC programme • Processes of maintaining general farm hygiene • Application of termiticides 	<ul style="list-style-type: none"> • Farmers to protect young trees from Mirids damage by spraying with recommended insecticides at the right time (e.g. spray in August, September, October and December) • Train farmers on adopting cultural practices to control Mirids (capsids) and Termites • Application of fertilizers (e.g. Nitrogen-based fertilizers on used soils; Sulphate of Ammonia fertilizers etc.) • Provision of adequate shade on very young cocoa trees to reduce mirids damage 	<ul style="list-style-type: none"> • Interactive discussions • Field visits to demonstration farms • Video viewing as extension of FFS • Draw in the Non-Formal Education Division
<p>Cocoa productivity improvement through improved soil fertility.</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Initiative to supply fertilizers to farmers on credit and at subsidized rate (deductible through kilo deductions at 	<ul style="list-style-type: none"> • Delays in procurement and distribution of fertilizers • Inadequate fertilizer application • Failure of farmers to repay cost of fertilizers at end 	<ul style="list-style-type: none"> • Institutional arrangement to ensure prompt procurement and distribution of fertilisers • Targeted education on fertilizer application – right doses, right 	<ul style="list-style-type: none"> • Soil types and those that support cocoa production • The Hi-Tech programme and what it seeks to achieve • Correct application of fertilisers 	<ul style="list-style-type: none"> • Cocoa is suited for forest soils and that not all soils support cocoa cultivation • Farmers to look for earthworms as sign of good quality soil to grow cocoa • The need to pay back fertilisers credited to them (i.e. 	<ul style="list-style-type: none"> • FFS • FLGs • Video viewing sessions

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
<p>point of sale of cocoa beans)</p> <ul style="list-style-type: none"> • Provision of Hi-Tech packages developed by CRIG (Cocoa Abrabopa) 	<p>of the harvest season</p> <ul style="list-style-type: none"> • Irrational application of right dosage of fertilizers at correct periods and seasons 	<p>application periods and seasons</p> <ul style="list-style-type: none"> • Sensitisation on benefits of the credit arrangement and thus need to adhere to period schedules • Regular soil fertility test to establish nutrient requirement for all farms 	<ul style="list-style-type: none"> • Application of appropriate modalities for recovery of cost of fertilisers from farmers 	farmers)	
<p>Cocoa productivity improvement through use of improved farm inputs (cocoa varieties, labour-saving tools, chemicals etc.).</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • COCOBOD and other key stakeholders are providing inputs including equipment/tools, seedlings (hybrid type) to farmers • COCOBOD procures inputs from input dealers and distributes to cocoa farmers 	<ul style="list-style-type: none"> • Farm inputs (equipment/tools) are still rudimentary and labour intensive • High cost of inputs relative farmers' incomes 	<ul style="list-style-type: none"> • Subsidy on farm inputs • Study and production of labour saving equipment/tools as is being done by NPECLC 	<ul style="list-style-type: none"> • Type and sources of subsidies for cocoa production • Sources of cost-effective farm inputs • Sources and use of labour-saving farm inputs 	<ul style="list-style-type: none"> • Sources of improved farm inputs (including hybrid cocoa varieties) • Agronomic and technology for cultivating improved hybrid varieties • Types, uses and sources labour-saving farm equipment 	<ul style="list-style-type: none"> • FFS • FLGs • Interactive discussions, questions and answer sessions
Technology transfer measures					
<p>Cocoa productivity improvement through transfer of research findings and recommendations to farmers</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> • Transfer of GRIG research recommendations to farmers through <ul style="list-style-type: none"> - Agricultural extension services - Use of 	<ul style="list-style-type: none"> • Exclusion of farmers in research process leading to low adoption of research recommendations • Mass recommendations often unrelated to specific situations on the ground 	<ul style="list-style-type: none"> • Make extension systems farmer driven and farmer accountable by way of new institutional arrangements for technology dissemination • Provision of improved curriculum for trainers and staff (up grading staff 	<ul style="list-style-type: none"> • Approaches for farmer involvement in research work • Medium for reaching farmers with research recommendations • The role of Cocoa Extension Agents in assisting farmer improve productivity 	<ul style="list-style-type: none"> • Creating understanding and appreciation among farmers on "farmer involvement in research" • Support for adoption of research recommendations to improve cocoa productivity 	<ul style="list-style-type: none"> • FLGs • Video viewing sessions

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
communication channels (mass communication e.g. radio programmes, video viewing, FFS etc.	<ul style="list-style-type: none"> Limited qualified extension staff and other trainers Low extension farmer ratio 	<p>knowledge and skills)</p> <ul style="list-style-type: none"> Increase number of extension staff and improve mobility to reduce extension agent-farmer ratio 			
<p>Improving farmer education of cocoa production technologies</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> Use of Cocoa Farmers Newspaper to address issues of agronomy, pest and diseases control, soil fertility, varietal and socioeconomic problems of farmers and cocoa farming communities Video Viewing clubs create comfortable learning environment to educate farmers CocoLink by COCOBOD & WFC to provide information on cocoa and child labour to farmers Media Farmer Education Programme by COCOBOD 	<ul style="list-style-type: none"> Limited circulation of the Newspaper in relation to the extent of cocoa farming coverage High illiteracy rate among farmers that will hamper reading, understanding and appreciation of issues in the Newspaper Inadequate time for viewing videos Negative suspicions and beliefs prevent farmers from joining the FFS 	<ul style="list-style-type: none"> Information could be packaged well for presentation on local FM and in local languages. Programme to collaborate with local leaders to translate and educate farmers on newspaper information Reproduce information on posters Present pictorial information on posters Intensify education and field research for FFSs Establishment or use of village resource centres where newspaper contents will be read and translated in local dialect to illiterate farmers 	<ul style="list-style-type: none"> Factors to consider before planting (Climate, soil fertility, moisture stress, type of vegetation, weed growth, wind breaks, air circulation, branch shedding, host of diseases and pests, sources of improved planting material) Agronomic practices to improve productivity Farm husbandry for improved cocoa productivity Translation of Newspaper content to farmers in local dialect 	<ul style="list-style-type: none"> Knowledge on factors worth considering prior to planting of cocoa Agronomic practices and good farm husbandry to achieve improved productivity Translated newspaper information 	<ul style="list-style-type: none"> Video episodes on best cocoa farming practices, new and recommended technologies for improved productivity Translated scripts and translators to inform farmers in local dialect
Livelihood improvement measures					
<p>Productivity improvement through livelihood empowerment initiatives</p> <p><i>Specific highlights:</i></p> <ul style="list-style-type: none"> Livelihood empowerment for 	<ul style="list-style-type: none"> The youth continue to migrate to urban areas for non-existing jobs Most rural youth prefer to work in urban areas 	<ul style="list-style-type: none"> More support needs to be provided to increase income generating opportunities in communities Trained community 	<ul style="list-style-type: none"> Livelihood empowerment programmes being implemented by NPECLC, LEAP etc. Training of target farmers on 	<ul style="list-style-type: none"> Existence of livelihood options that farmers can take advantage of Application of empowerment benefits to their lives 	<ul style="list-style-type: none"> Community for a (durbars, sensitization sessions etc.)

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers

Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
<p>family support</p> <ul style="list-style-type: none"> - The ECHOES Project (e.g. scholarship programmes) - NPECLC livelihoods empowerment (supporting families to generate additional incomes during lean season) - LEAP (as part of social protection measure) - Provision of solar lanterns, solar boreholes/pumps (COCOBOD, Cadbury Cocoa Partnership Project) 	<ul style="list-style-type: none"> • Poor facilities to promote and sustain rural SMEs • LEAP support is barely adequate • Lack of markets for produce from communities • 	<ul style="list-style-type: none"> women and support to generate extra income • Support target farmers to access market for other products • 	<ul style="list-style-type: none"> alternative livelihood options to generate extra income • Sensitization skills to enable target beneficiaries appreciate the importance of support provided by government, NGOs and private sector to the local economy 		
Social-ethics measures					
<ul style="list-style-type: none"> • Farmer Associations (cooperatives, societies, and associations) support extension services delivery to farmers; serving as effective conduit for dissemination of technological information. 	<ul style="list-style-type: none"> • Low capital • Usually have no warehouses to safe keep inputs for distribution • Threats posed by failed Farmer Associations 	<ul style="list-style-type: none"> • Need for a stronger capital based • Support to farmer Associations to increase credibility to enable Associations raise capital from financial markets • Education and empowerment to apply cooperative principles in their Associations 	<ul style="list-style-type: none"> • The importance of Farmer Associations and the Best Practices involved in cocoa farmer associations/cooperative movement • Farmer Association as conduit for farmer training and capacity building • Capacity to strengthen existing Farmer Associations and creation of new Associations or cooperatives 	<ul style="list-style-type: none"> • The importance of Farmer Association and its role in enhancing cocoa productivity • Existence of Associations or Cooperatives in target communities to districts • Educate farmers on benefits of joining Farmer Associations 	<ul style="list-style-type: none"> • Interactive lectures • Role Plays • Case Studies
<ul style="list-style-type: none"> • Land Tenure practices create problems for cocoa farming. Farmers attribute neglect and 	<ul style="list-style-type: none"> • Traditional and Socio-cultural systems have not considered the effects of 	<ul style="list-style-type: none"> • Government should work through District Assemblies and Traditional 	<ul style="list-style-type: none"> • Existing land tenure arrangements • Approaches for engaging 	<ul style="list-style-type: none"> • Land tenure arrangements • Ways of rectifying land tenure constraints that 	<ul style="list-style-type: none"> • Community (Fora, durbars)

Box 17: Learning sessions: Introducing cocoa productivity enhancement measures to target farmers					
Description of practical measure	Identified gaps/challenges	Recommended remedial measures	What trainers need to know	What farmers need to know (or what trainers must impact to farmers)	Method of trainer-farmer engagement
poor maintenance of farms to problems of inheritance and pledging of farms	land tenure on cocoa farm maintenance and on productivity	<p>Authorities to come out with laws and regulations for implementing good land tenure in cocoa; and caretaker scheme</p> <ul style="list-style-type: none"> • Extension of credit facilities could reduce the incidence of pledging of farms 	Traditional Authorities on land tenure issues	contribute to small farm holdings	

Conclusion and further work

The research has examined Ghana's cocoa productivity and the measures in place or to be instituted to enhance productivity in cocoa growing communities in seven districts (in six regions) in Ghana. Two key issues underlying the study is integrating child labour, decent work and universal education to promote systematic change and sustainable progress and anchoring interventions around Area Based Approach which should recognise deficits in decent work and poverty as among the primary cause of child labour.

Through secondary and primary source information, the research establishes that there is low productivity in cocoa in spite of recent recorded increases in cocoa production. It further establishes that there is child labour in cocoa production in Ghana orchestrated partly by ignorance, share irresponsibility of the part of some parents, labour intensity of cocoa production and cost of input (including high cost of labour) often requiring additional family labour including children. The Government of Ghana, acknowledging child labour in general has initiated and implemented programmes that respects rights of children, bring perpetrators of this obnoxious practice to book and to eliminate the canker altogether. These programmes include review of legislative frameworks, reforms in institutional systems and structures, institution of pro-poor policies and specific programme interventions. Though these have not eliminated child labour in Ghana, they have indeed gone a long way to put the practice in check.

In addressing issues of cocoa production and enhancing productivity, some programmes have been put in place by Government, NGOs and Private Sector aimed at improving production and productivity in cocoa as well as assisting farmers and communities to live decent lives. These programmes have also contributed in no small measure to reported cocoa production levels in Ghana.

In line with the Government, NGOs and Private Sector led programmes, the research investigated through institutional and community/farmer surveys, the extent to which these measures or any others hold potential to enhance cocoa productivity and ways of pursuing the measures to achieve higher results. Specific measures were identified to hold prospects and these have been indicated. The analysis also covered livelihood options and needs assessment.

The research identifies specific findings and recommended remedial measures which should be carried forward to farmers in a bid to enhance cocoa productivity and promote thriving cocoa growing communities. To do that, a Guide and Toolkit for Training the Trainers have been designed as part of the research report. However, further work needs to be done in developing a Trainers Manual that will guide the delivery of modules and sessions to farmers based on the toolkits.

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Annex: Field protocols (Questionnaires)

1. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

Under the project entitled “Towards child labour free cocoa growing communities through an integrated area based approach in Côte d’Ivoire and Ghana”, ILO-IPEC

The ILO-IPEC is implementing the above named project aimed at eliminating child labour in cocoa production in Ghana and Côte d’Ivoire. The objective of the project is to promote thriving cocoa growing communities in which all children are at school and through a family livelihoods approach promote education, decent work, family empowerment and ultimately poverty reduction. To obtain independent outcomes based on field investigations, the ILO Ghana office has contracted a National Ex-collaborator to research into identification of practical measures to enhance productivity in cocoa growing communities in Ghana. We therefore entreat you to respond to the questionnaire and other inputs we humbly ask of you. Such invaluable contributions will help enrich the research and we assure you that your response/inputs will be treated with the confidentiality it deserves.

COCOBOD AND RELATED DEPARTMENTS/AGENCIES

Institution / Organisation.....

Name of respondent and designation

Date of interview.....:

Name of interviewer.....:

1. What conditions underlie the purchase of cocoa beans from Purchasing Agencies?
2. What mechanisms are there for COCOBOD to trace the purchasing source of cocoa beans?
3. What standards are employed for grading the beans you buy and how does it work? *(explain)*
4. What specific factors account for low productivity in cocoa in Ghana?

Area	Factors <i>(List them)</i>	High	Medium	Low
Agronomic Factors and biological Factors				
Technological Factors				
Institutional Practice and Support				
Economic Factors				
Socio-ethics Factors				

5. How do these affect Ghana, specific communities and individual farmers? *(Please explain)*

a. Effects on Ghana

- b. Effects on Cocoa growing communities
 - c. Effects on individual farmers
6. What actions will you recommend that you think can improve cocoa productivity in Ghana? *(Please be as elaborate as possible. You can continue on extra sheet)*
 7. What is COCOBOD's contribution towards enhancing cocoa productivity in relation to the following:
 - i. Research
 - ii. Purchasing
 - iii. Processors
 - iv. Input Supply Companies
 - v. Farmers
 - vi. Communities
 8. How is COCOBOD contributing to enhancing cocoa productivity through the following:
 - i. Capacity building
 - ii. Production techniques
 - iii. Value Addition
 - iv. Post-harvest processing
 - v. Technology transfer
 9. How could cocoa production be attractive to the youth?
 10. Indicate the factors that necessitate child labour in the cocoa sector?
 11. Please, indicate the various levels of production where child labour manifests?
 12. At what levels of production should children be allowed in cocoa production?
 13. What practical interventions have you introduced aimed at increasing cocoa productivity in the community over the last three years?
 14. How are these interventions being embraced by farmers?
 15. What gaps are there to be taken care of?

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COCOA PROJECTS (ICI, NPECLC, WCF)

Institution / Organisation.....

Name of respondent and designation

Date of interview.....

Name of interviewer.....

1. Please list your intervention areas (in relation to cocoa production)?
2. Who are the target groups? *(list them)*
3. How is the nature (and type) of intervention and how are they being provided?
4. How does your intervention affect the following?
 - a. Increased cocoa production
 - b. Child labour elimination
 - c. Improved socio-ethnic situations of farmer/community
 - d. Improved economic conditions
5. How do your interventions contribute to the Ghana Decent Work Programme agenda?
6. What benefits accrue to farmers?
7. What livelihood programmes are available geared towards enhancing farmers income?
8. How do you assess your interventions with farmers?*(Please explain)*
 - a. Effective:
 - b. Practical:
 - c. Innovative:
9. What practical measures aimed at enhancing cocoa productivity have you put in place in recent times?
10. How are farmers embracing these measures?

11. What gaps exist that need to be taken care of?
12. How are these gaps being addressed?

3. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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Research Institutions

Institution / Organisation.....

Name of respondent and designation

Date of interview.....

Name of interviewer.....

1. Can you please indicate the current cocoa yield per acre per hybrid/Breed?

Hybrid/Breed	Per Acre
a.	
b.	
c.	
d.	
e.	

2. What is the adaption rate for the highest yielding hybrid?

3. What is the best hybrid that also offers high productivity?

4. What is the adaption rate for this best hybrid?

5. Which hybrid can increase productivity in Ghana?

6. To what extent does research contribute to cocoa productivity? *(Please be elaborate)*

7. How in your opinion can productivity be enhanced in the cocoa industry in Ghana?

8. How in your opinion can research enhance productivity in the cocoa industry in Ghana?

9. What capacity building interventions aimed at enhancing cocoa productivity are available in Ghana?

10. To what extent is child labour a challenge in cocoa industry in Ghana?

11. How does child labour problem affect Ghana’s rating in international cocoa affairs?
(Please explain)

12. How should the problem be dealt with?

13. What is the current recommended production technique to improve the environment?

14. How does research promote decent work especially in cocoa growing communities?

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Farmers (and farm families)

Name of respondent and position in the family.....

Date of interview.....

Name of interviewer.....

1. Please indicate the location and distance of farm from home?
 - a. Location.....
 - b. Distance (km).....
2. What is the size (in acres) of your farm?
3. Type of labour used?
4. Indicate the average age of your cocoa farm(s)?
5. What in your opinion are the reasons for low productivity in cocoa? (*Explains*)
6. What implements do you use in doing your cocoa farm? (*Please list them*)
7. Please describe how adequate or inadequate these implements are and how it affects your yield?
 - i. Implements are adequate (*explain*):
 - ii. Implements are inadequate (*explain*):
8. Please describe the production stages/processes from planting to marketing (*use extra sheet if necessary*)

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9. What type of farming practices (production techniques) do you employ in your farm?
 - i. Organic farming (*explain the method used*)
 - ii. Inorganic farming (*explain the method used*)

10. What are the prevalent diseases occurring in cocoa farms?
11. How are these treated?
12. How can the diseases and pests be prevented from affecting the farm?
13. What implements are used for the following:

Stages	Existing Implements used
Cultivation	
Harvesting	
Breaking the Pod	
Transporting/conveyance of beans	
Drying of beans	

14. Do you think the use of these implements help in achieving high cocoa productivity? *(explain in detail)*
15. What new methods do you propose to be used to improve productivity?

Stages	Proposed Implements/Methods to be used
Cultivation	
Harvesting	
Breaking the Pod	
Transporting/conveyance of beans	
Drying of beans	

16. How many days are used for drying?
17. How can the drying process be improved?
18. What value is added to the cocoa produced locally?
19. How do your children help in the farm?
20. To what extent does their help in the farm affect them in the following ways:
 - a. Schooling/education *(explain)*
 - b. Health *(explain)*
 - c. Social live *(explain)*
21. Do you think this support by the children constitute child labour? *(explain your response)*
22. Do you see the use of children in cocoa farms a normal practice in this community/village? Yes/No
23. If yes, how does this affect the social wellbeing of the children?
24. If no, what is responsible for the situation?

25. What practical steps do you think can stop the use of child labour in cocoa farming?
26. In the lean season, what other livelihoods can you rely on?
27. How sufficient and sustainable is this form of livelihood in keeping you and your family?
28. What other livelihood opportunities can you recommend within the village setting?

Needs Assessment of Farmers

29. What training have you received in the last five years in helping you do farming properly?

Area of Training	Specific Type of Training	Training Provider
Pests and Diseases Control		
Cropping		
Farm management practices		
Value Addition		
Marketing and distribution		
Knowledge on international cocoa trade		
Child labour and decent work		
Empowerment (through alternative livelihood skills training)		

30. Indicate the availability of social utilities (water, toilet facilities)
 - a. Water facilities (*availability and approximate distances*):
 - b. Toilet facilities (*availability and approximate distances*):
 - c. Educational Facilities (*availability and approximate distances*):
 - d. Local markets (*availability and approximate distances*):
31. Please indicate your current needs in respect of the following:
 - a. Credits for farming:
 - b. Micro-credits for alternative livelihoods:
 - c. Labour (including the cost):
 - d. Agric Extension Services:
32. In sum, what in your opinion should be done to increase productivity in cocoa?

5. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

Under the project entitled “Towards child labour free cocoa growing communities through an integrated area based approach in Côte d’Ivoire and Ghana”, ILO-IPEC

The ILO-IPEC is implementing the above named project aimed at eliminating child labour in cocoa production in Ghana and Côte d’Ivoire. The objective of the project is to promote thriving cocoa growing communities in which all children are at school and through a family livelihoods approach promote education, decent work, family empowerment and ultimately poverty reduction. To obtain independent outcomes based on field investigations, the ILO Ghana office has contracted a National Ex-collaborator to research into identification of practical measures to enhance productivity in cocoa growing communities in Ghana. We therefore entreat you to respond to the questionnaire and other inputs we humbly ask of you. Such invaluable contributions will help enrich the research and we assure you that your response/inputs will be treated with the confidentiality it deserves.

License Buying Companies/Purchasing Agencies

Institution / Organisation

Name of respondent and position in the family

Date of interview.....

Name of interviewer.....

1. Please list the cocoa regions and districts you operate in? *(you may use additional sheet)*
2. How many farmers do you buy produce from? *(if possible provide according to districts)*
3. How does your operation affect cocoa productivity? *(explain)*
4. Explain the conditions under which cocoa purchases are done?
5. How are you able to trace purchased produce to the community/farmer?
6. In what way is your outfit involved in helping farmers increase productivity in cocoa?
7. How do you store the produce you buy from farmers?
8. What capacity building programmes do you have for cocoa producers?
9. How long does it take for cocoa beans stored in your storage area before transporting to another warehouse?
10. To what extent does your storage culture influence productivity?
11. Is child labour prevalent among your cocoa beans suppliers and at what stages are they found?
12. Do you foresee any problems when farmers use children in cocoa production activities? *(explain in detail)*
13. How can the use of children in cocoa production be stopped?
14. In the lean season, what other livelihoods can farmers rely on?

15. How sufficient and sustainable is this form of livelihood in keeping the farmer and his/her family?
16. What other livelihood opportunities can you recommend within the village setting?
17. Are you aware of any practical measures put in place to help enhance cocoa productivity?

6. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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Cocoa Input Dealers

Institution / Organisation.....

Name of respondent and position in the family

Date of interview.....

Name of interviewer.....

1. What cocoa inputs do you deal in? *(Please list and describe them)*
2. Where do you obtain these inputs?
3. What certification is on your input (or who certify your inputs)?
4. Whom do you supply your inputs to?
5. How affordable are your inputs?
6. In what ways does your inputs contribute to cocoa productivity? *(explain in detail)*
7. To what extent do the activities of the following organisations and individuals affect your inputs? *(explain)*
 - a. COCOBOD and its departments/units:
 - b. Cocoa Research Institutes:
 - c. NGOs in the cocoa sector:
 - d. The various Cocoa Projects (e.g. NPECLC, ICI, WCF):
8. To what extent are your inputs (e.g. chemicals) hazardous?
9. Are you able to give technical advice on the use of cocoa chemicals to farmers? *(Explain how?)*

10. Please indicate the type of interventions required to increase productivity in cocoa?

Type of Intervention	Target Group/Beneficiaries

11. How do you see the use of child labour in cocoa productivity in your areas of operations?
12. What can be done to eliminate child labour in cocoa production?
13. What livelihoods are available that farmers can rely on during the off-season?
14. How sustainable are these livelihoods?

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Processors

Institution / Organisation.....

Name of respondent and position

Date of interview.....

Name of interviewer.....

1. Please indicate what your organisation engages in?
2. Where do you obtain your inputs (especially the cocoa)?
3. Under what conditions would your organisation use cocoa beans as inputs?
4. How do you transport the cocoa to your processing plant? *(explain all processes involved including intermediary actions)*
5. How do you store your raw materials prior to processing?
6. How do you store your products after processing?
7. In what ways do your activities help in improving cocoa productivity in Ghana? *(explain in detail)*
8. What specific programmes are being implemented by your organisation intended to improve cocoa productivity?
9. What direct benefits do cocoa farmers get from your organisation and how does that enhance cocoa productivity?
10. What benefits accrue to cocoa growing communities/villages and how does that affect cocoa productivity?
11. How do you deal with suppliers who engage children in their cocoa production?
12. What programmes is your organisation implementing/sponsoring to help eliminate child labour in cocoa production?

8. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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NGOs/Private Sector

Institution /Organisation.....

Name of respondent and position in the family

Date of interview.....

Name of interviewer.....

1. Please indicate your intervention areas?
2. In a specific cocoa interventions, what programmes are being implemented or supported by your organisation?
3. What specific support do you provide to the following:
 - a. Cocoa farmers (and farmer-households):
 - b. Cocoa growing communities:
 - c. Other stakeholders
4. What factors influence cocoa productivity in your area of operation?
5. To what extent are your activities enhancing cocoa productivity in your area of operation?
6. How do you perceive the use of children (otherwise referred to as child labour) in cocoa farming? (*explain*)
7. At what stages of the cocoa production chain would you recommend the involvement of children? (*Explain*)
8. In what practical ways is your organisation eliminating child labour?
9. How is your organisation promoting livelihood opportunities in support of farmers?
10. Which specific livelihoods are available and sustainable to farmers as coping strategies during the off-season?

9. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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Development Partners

Institution / Organisation.....

Name of respondent and position.....

Date of interview.....

Name of interviewer.....

1. In what ways is your organisation involved in cocoa production in Ghana? *(explain)*
2. What specific support do you provide? *(explain and indicate the recipients)*
3. Which organisations/institutions/individuals do your organisation collaborate with in providing support to cocoa production?
4. How does your support contribute to enhancing cocoa productivity in Ghana?
5. What practical measures have been introduced recently to enhance cocoa productivity in Ghana?
6. How are farmers embracing these measures?
7. What gaps still exist that need to be taken care of?
8. How can these be addressed?

10. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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Associations

Institution / Organisation

Name of respondent and position in the family

Date of interview.....

Name of interviewer.....

1. Please indicate your Association’s agenda in relation to Ghana’s cocoa industry?
2. How do your activities help the following:
 - (a) Cocoa growing communities?
 - (b) Individual cocoa farmers?
3. What in the perspective of your Association can contribute to improvement in cocoa productivity in Ghana?
4. What can your Association specifically do to improve cocoa productivity in your area of operation?
5. How does the use of child labour in cocoa production influence your engagement with :
 - i. policy makers:
 - ii. COCOBOD:
 - iii. Farmers:
6. How do you deal with the problem of child labour in cocoa production?
7. How can decent work be promoted in cocoa growing communities?
8. How can farmers be supported to earn decent incomes during off-season?
9. What sustainable livelihoods options can be promoted?
10. How is your Association contributing to this livelihoods promotion?

11. Research to identify practical measures to enhance productivity in cocoa growing communities in Ghana

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Transporters

Institution/Organisation.....

Name of respondent and position in the family

Date of interview.....

Name of interviewer.....

1. Do you operate under an umbrella organisation (say a Union or company)? Yes/No
2. If yes, name the Union/Organisation and the strength of its membership or fleet of vehicles?
3. Indicate your operational coverage (i.e. start point and end points of conveyance)?
4. What is the average travel time when transporting cocoa beans? *(Please indicate travel time in hours)*
5. How are bags of cocoa loaded onto and off-loaded from trucks? *(describe the process)*
6. What is the age group employed to load and off-load cocoa onto vehicles?
7. Are children involved in the loading and off-loading of cocoa? Yes/No
8. What relationship exists between your activity (mainly transporting cocoa) and cocoa productivity? *(explain in detail)*
9. To what extent does your activity enhance decent work?

Focus Group Discussions FGDs) and Key Informants Interviews (KIIs)

List of identified Groups for FGDs

1. Cocoa Farmers
2. All other Farmers
3. Youth (and children in separate forum)
4. Adults (men and women)
5. Petty traders (including market women)
6. Artisans
7. Interest groups (Religious leaders, Galamsey operators, fisher folk etc.)

1. Focus Group Discussions with Cocoa Farmers

- Availability of land
- Land tenure arrangements
- Food security
- Employment – nature, availability and remuneration
- Employment – by the Cocoa sector, other economic activities
- Use of children (child labour and slavery)
- Communities perception on future economic life
- Accessibility to social services (post & telecom, health, higher education, police & security, banking)
- Coping strategies
- Community prescription for alternative means of livelihood
- General community needs

2. Focus Group Discussions with Farmers

Economic Life of community

1. What is the nature of farming systems/activities that goes on in the community (i.e. is it cash crop farming or food crops farming; is it commercial farming or subsistence farming)?
2. Where are farms located?
3. What are the average distances from home to farmlands?
4. Are farmlands adequate?
5. How easy or difficult can one access land (as a native, migrant farmers)?
6. Land tenure arrangements
7. Security of land tenure and causes of land scarcity
8. Where do you access inputs for your farm (inputs like seedlings, chemicals, fertilizers, labourers etc.)
9. How do you finance your farms?
10. Do you have access to credits/funds for your farming activities (if yes indicate the source and average amount received, indicate the terms for lending, indicate how adequate it is etc.)
11. How do you transport your inputs into your farms?
12. How do you transport your farm produce to home and other market centres
13. Where markets for your produce located

14. Discuss about marketing of the farm products
15. Activities of middlemen, market queens etc.
16. Food security
17. Do you have storage facilities (if yes how adequate, if no how do you store your produce)
18. Livelihood skills and Sustainable livelihood opportunities
19. Coping strategies

3. Focus Group Discussions with Youth and Adults (separate sessions held)

Economic Life of community

1. What is the main occupation of the adults in this community (list with imagined percentages)
2. Is land available for farming?
3. Is there land available for other economic activities?
4. Security of land tenure and causes of land scarcity
5. Employment – nature, availability and remuneration
6. What is the Type and nature of economic and livelihood options available in this community
7. Are these livelihood opportunities sustainable?
8. Do people have Livelihood skills? (if yes list them)
9. Seasonality of activities
10. Coping strategies

Socio-cultural Life of community

1. Describe accessibility to social services

<u>Facility/Services</u>	<u>In town</u>	<u>Outside town</u>
Water facilities		
Toilet facilities		
Post & Telecom (including IT Services)		
Health		
Higher education		
Police & security		
Banking services		
Major Market		

4. Focus Group Discussions with Youth Groups

Economic Life of community

1. What is the main occupation of the (out-of-school) youth in this community (list with imagined percentages)
2. Is land available for farming?
3. Security of land tenure and causes of land scarcity
4. Employment – nature, availability and remuneration
5. Employment – Cocoa sector, other sectors (include child labour in cocoa production)

6. What is the Type and nature of economic and livelihood options available in the Community
7. Are these livelihood opportunities sustainable?
8. Do people have Livelihood skills? (if yes list them)
9. Seasonality of activities
10. Coping strategies

5. Focus Group Discussions with Petty Traders

Market Infrastructure

Current situation

1. What market infrastructure is available in this community?
2. List the facilities provided in the market infrastructure (i.e. water, toilet, rubbish collection facility etc.)
3. What is the average number of traders who share this facility?
4. Is there any other facility elsewhere in that you can access?
5. How adequate are these facility?
6. Let identify problems confronting the existing market infrastructure
7. What are the types and nature of wares sold by petty traders?
8. Where do you source these wares from?
9. What is the average distance you cover to source your wares?
10. How convenient or inconvenient is this distance to you?
11. Describe the cost incurred in sourcing your wares?
12. What is the peak/lean season of sales?
13. In the lean season what coping strategies do you adopt?
14. What other livelihood options would you prefer to be engaged should future developments affect your trading business?

General socioeconomic life of traders

1. Percentage of traders who depend solely on trading business?
2. Percentage of traders partly dependent on trading business?
3. Food security
4. How is situation regarding your access to social services: health, education, water and sanitation, electricity, other forms of energy etc.
5. Financing of trading activities

6. Focus Group Discussions with Artisans

Economic Life of community

1. What is the nature of your activities in the community?
2. Where are activities located?
3. What are the average distances from home to activity sites?
4. Are these adequate spaces (e.g. lands etc.)?
5. How easy or difficult can one access land
6. Where do you access inputs for your activities (inputs like raw materials, labourers etc.)?
7. What is the average price you pay a labourer per day's work?

8. How do you finance your activities?
9. Do you have access to credits for your activities (if yes, indicate the source and average amount received, indicate the terms for lending, indicate how adequate is it etc.)?
10. How do you transport your inputs into your activity sites?
11. Discuss about marketing of the products
12. Employment – nature, availability and remuneration I (include child labour in cocoa)
13. Livelihood skills and Sustainable livelihood opportunities
14. Seasonality of activities
15. Coping strategies
16. In what way do you want to be supported to improve your activities?
17. What is the level of accessibility to social services

Facility/Services

In town

Outside town

Water facilities

Toilet facilities

Post & Telecom

IT Services

Health

Higher education

Police & security

Banking services

Major Market

7. Focus Group Discussions with Interest Groups

Social and Economic Life

1. Describe the social systems (social life)?
2. What is the level of accessibility to social services (water, toilet facilities, post & telecom, health, higher education, police & security, banking)?
3. Describe the economic life of this community?
4. Cost of transportation of raw materials and its effects on production and pricing of products
5. Employment – who are employed? where are they employed? are employment avenues available? Issues about remuneration.
6. Seasonality of activities
7. Coping strategies
8. What sustainable livelihood opportunities are available?

Research on Enhancing Cocoa Productivity in Ghana
Key Informant Interviews

List of identified Groups for KIIs

1. Traditional Authority
2. Community Opinion Leaders

Questionnaire details

1.	Questionnaire number	
2.	Date of administration	
3.	Name of Interviewer	

Respondents Particulars

4.	Name of Respondent	<i>Surname:</i>	<i>First name:</i>	<i>Other names:</i>
5.	Location of house			

- i. Describe the situation as it relates to the following:
 - a. Land ownership?
 - b. Land tenure systems?
 - c. Availability of land (for farming and for other economic activities)
 - d. Is there land scarcity (if yes, what accounts for that)?
- ii. What customs, traditions and beliefs are here in this community?
 - a. Traditions
 - b. Customs
 - c. Beliefs
- iii. What cultural, traditional and customary systems have been influenced cocoa production in the past 10 years and what is it

Thank you for your time and contribution