

**NATIONAL MEDIUM-TERM  
DEVELOPMENT PLAN  
(NMTDP) OF MINISTRY OF FOOD  
AND AGRICULTURE (MOFA),  
2014-2017**

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## List of Acronyms

AEA	Agricultural Extension Agent
AESD	Agricultural Engineering Services Directorate
AgGDP	Agriculture Gross Domestic Product
AgSSIP	Agriculture Services Sub-sector Investment Programme
AGSWAp	Agriculture Sector Wide Approach
APD	Animal Production Directorate
ARI	Animal Research Institute
CAADP	Comprehensive African Agricultural Development Programme
CARGS	Competitive Agricultural Research Grant System
COCOBOD	Cocoa Board
CSD	Crop Services Directorate
CSIR	Council for Scientific and Industrial Research
DPs	Development Partners
ECOWAS	Economic Community for West African States
ECOWAP	ECOWAS Agricultural Policy
EPA	Environmental Protection Agency
FABS	Food and Agriculture Budget Support
FASDEP	Food and Agriculture Sector Development Policy
FAO	Food and Agriculture Organization of United Nations
FBO	Farmer Based Organization
FRI	Food Research Institute
GAPs	Good Agricultural Practises
GDP	Gross Domestic Product
GIDA	Ghana Irrigation Development Authority
GLSS V	Ghana Living Standards Survey V
GMP	Good Manufacturing Practises
GOPDC	Ghana Oil Palm Development Company
GPRS I	Ghana Poverty Reduction Strategy I
GPRS II	Growth and Poverty Reduction Strategy II
GRATIS	Ghana Regional Appropriate Technology and Industrial Service
GSS	Ghana Statistical Services
GIZ	German International Development Agency
Ha	Hectare
HACCP	Hazard Analysis Critical Control Points
HRDM	Human Resources Development & Management Directorate
ICT	Information Communication Technology
IFPRI	International Food Policy Research Institute
ITD	International Trade Desk
ITTU	Intermediate Technology Transfer Unit
Kg	Kilogram
LAP	Land Administration Project
M&E	Monitoring and Evaluation
MD2	A pineapple variety

MDAs	Ministries, Departments and Agencies
MDGs	Millennium Development Goals
MLF	Ministry of Lands Forestry
MLGRD&E	Ministry of Local Government, Rural Development and Environment
MOFA	Ministry of Food and Agriculture
MOFEP	Ministry of Finance and Economic Planning
MOTI	Ministry of Trade & Industry
MoU	Memorandum of Understanding
Mt	Metric Tonne
NDPC	National Development Planning Commission
NEPAD	New Partnership for African Development
NGO	Non-Governmental Organization
PPRSD	Plant Protection and Regulatory Services Directorate
RELCs	Research Extension Liaison Committees
SEA	Strategic Environmental Assessment
SLM	Sustainable Land Management
SRID	Statistics, Research and Information Directorate
VSD	Veterinary Services Directorate
UPA	Urban and Peri-urban Agriculture
WAAPP	West Africa Agricultural Productivity Programme
WFP	World Food Programme
WIAD	Women in Agriculture Development
WTO	World Trade Organization

### **Executive Summary**

The agriculture sector continues to play an important role in the economic growth and development of Ghana. Research and analysis indicate that significant improvements in the productivity of the agriculture sector are required to raise the average real incomes of Ghanaians for poverty reduction and contribution to the transformation required in the national economy.

A myriad of challenges contribute to the low productivity of the sector. These can best be addressed through the commodity value chain approach. Major capacities need to be provided in support areas such as irrigation, mechanization, fertilizer and agrochemicals, storage and rural infrastructure such as roads, energy, markets and institutions.

The role of the public agencies in agriculture sector is necessarily changing as the Government's approach to development evolves. Collaboration is required within MOFA and with other Ministries, Departments and Agencies (MDA's) whose policies impact on the agricultural sector. Greater involvement of the private sector is required for the growth and development of the sector and its transformation in service delivery, as well as investment and management of the sector. Various types of linkages are required to be established between smallholders and agribusiness to facilitate access to input, research, technology and product markets, as well as other essential services to increase the productivity and competitiveness of Ghanaian agriculture.

The Ministry of Food and Agriculture (MOFA) as the lead government agency responsible for the agricultural sector facilitates planning and coordination to enhance implementation of interventions in the sector. These efforts include coherence of sector activities with the national goal for agriculture and that of the ECOWAS and Africa region and the international community. The MOFA specific three-year rolling strategic plan helps to facilitate the lead role in the sector.

## Chapter 1

### 1.0 Introduction

#### 1.1 MOFA's mandate

The Ministry of Food and Agriculture (MOFA) is the lead government agency responsible for the agricultural sector.

#### 1.2 Legal instruments

MOFA was set up under the Civil Service Act (CSA) 1960. Other enactments relating to the establishment of the Ministry are;

- i. The Agriculture Act of 1961;
- ii. Civil Service (Amendment) Decree 1967 (NLCD 134);
- iii. Civil Service (Disciplinary Code Regulations), Revocation Decree 1973, (NRCD 197); 56); and
- iv. Civil Service Law 1993 (PNDC 327) Amendment Law.

#### 1.3 Vision for the Agriculture Sector

The Vision for Ghana's Agriculture Sector is "a modernised agriculture culminating in a structurally transformed economy and evident in food security, employment opportunities and reduced poverty".

#### 1.4 Scope of the sector

The agricultural sector comprises five sub-sectors namely: crops, livestock, fisheries, cocoa and forestry and logging. MoFA is responsible for crops and livestock and the newly created Ministry of Fisheries and Aquaculture Development (MoFAD) is responsible for fisheries. Cocoa is under the purview of Ministry of Finance (MoF) whereas the Ministry of Lands and Natural Resources is responsible for forestry and logging.

#### 1.5 Mission of Ministry of Food and Agriculture

The Mission of MoFA is to promote sustainable agriculture and thriving agribusiness through research and technology development, effective extension and other support services to producers, processors and distributors and consumers for improved food security, nutrition and incomes.

#### 1.6 Functions of the Ministry of Food and Agriculture

The Ministry of Food and Agriculture (MOFA) contributes to the national development agenda in the following functions:

- i. Delivery of agriculture advisory and extension services.

- ii. Generation and dissemination of agricultural technology
- iii. Monitoring and evaluation of the agricultural sector with emphasis on crops, livestock, fisheries, irrigation and mechanization of agricultural industry and other services
- iv. In the planning of, and advising of the Government based on planned programmes and projects on agricultural development policies,
- v. Administration and management of the agricultural sector of Ghana's economy,
- vi. Formulation of annual budgets based on planned programmes projects.

### 1.7 Sector policy objectives

There are six policy objectives to deliver the vision for the agriculture sector:

1. Food security and emergency preparedness
2. Improved Growth in Incomes and Reduced
3. Increased Competitiveness and Enhanced Integration into Domestic and International Markets.
4. Sustainable Management of Land and Environment.
5. Science and Technology Applied in Food and Agriculture Development.
6. Enhanced Institutional Coordination

### 1.8 Structure of the Ministry (as depicted in the organogram in Appendix ...)

#### 1.8.1 National level:

The departments of MOFA at the National Level are grouped into line Directorates and specified Technical Directorates. MoFA also administers State-Owned Enterprises (SOEs) and Subvented Organisations and also Commissions and Councils have been set up to advise the Honourable Minister on sector-wide issues affecting the development of agriculture.

The Line Directorates are Administration (AD), Financial Controller (FC), Human Resource Development Management (HRDM), Policy Planning Monitoring and Evaluation Directorate (PPMED), Statistics, Research and Information Directorate (SRID)

The Technical Directorates are Directorate of Crops Services (DCS), Plant Protection and Regulatory Services Directorate (PPRS), Animal Production Directorate (APD), Veterinary Services Directorate (VSD), Agricultural Engineering Services Directorate (AESD), Directorate of Agriculture Extension Services (DAES), Women In Agricultural Development (WIAD)

The SOEs are Ghana Irrigation Development Authority (GIDA), Irrigation Company of Upper Region (ICOUR) and National Food And Buffer Stock Company (NAFCO), Cotton Development Authority (CDA-The Governing Body and Secretariat are yet to be inaugurated)



### **1.8.2 Regional and District level:**

The Regional Food and Agricultural Departments (RFADs) are responsible for the coordination, and monitoring of agricultural projects and programs in the regions and districts. District Food and Agricultural Departments (DFADs) are in charge of managing projects and programs and implementing national agricultural policies and decisions in the districts. Under full decentralization, the district offices are departments of the District Assembly and the regional agriculture departments are to maintain technical relationships with the district level.

The Regional Agricultural Officer (RAO) and District Agricultural Officer (DAO) positions are to provide capacity to the regional and district levels and to give technical backstopping to the field service. Most of the Agricultural Extension Agents (AEAs) provide general extension to farmers in their operational areas while others provide specialized services including animal health, data collection and fisheries development services.

DAOs performing specialized services (veterinary, fisheries, MIS) supervise Technical Officers (TOs) of that specialty across the District and DAOs performing general extension duties supervise general extension activities in the operational zones. In general, DAOs provide technical support and training to AEAs across the District. In the interim, with limited staff numbers, DAOs performing specialized duties support in the general supervision of AEAs;

For efficient and effective service delivery, districts are demarcated into operational areas. A minimum of sixteen (16) and a maximum of thirty-two (32) operational areas are proposed for a district. The number of such operational areas varies from one District to the other depending on the size of the District. An operational area is an aggregation of a number of enumeration areas as defined by the Ghana Statistical Service. An operational area is manned by an extension agent while specialized duties cut across the district.

### **1.8.3 Channels of Communication at the Regional and District levels**

The channels of communication in the Regions and Districts are as follows;

The Regional Director of Food and Agriculture (RDA) is answerable in the performance of his duties to the Regional Minister and the Regional Coordinating Director. (Section 28 (2) of PNDCL 327); The RDA at the same time, reports on technical matters to the Chief Director (CD) of MOFA;

The District Director of Food and Agriculture DDA reports directly to the District Chief Executive (DCE) through the District Coordinating Director (DCD) and collaborates with the RDA on technical issues.

### **1.9 Key stakeholders**

The Ministry has a wide range of stakeholders comprising the Public and Private Sectors, Civil Society Organisations (CSOs), Development Partners (DPs), Farmer Based Organisations (FBOs) among others. Critical among these are:

- Public sector - MOFA and agriculture related government agencies and decentralised departments, the national agriculture research system –academia and scientists
- Private sector - Famers, Land owners, Input dealers, Traders, Exporters, Transporters, Service providers, Agro-processors, Financial Institutions, Marketers
- Civil Society organisations – NGOs, Think Tanks, Traditional Authorities, etc.
- Development partners –World Bank, AfDB FAO, IFAD, WFP, CIDA, USAID, GIZ, AFD, etc.

### 1.10 General trends –agriculture and the national economy

The general performance of the agricultural sector relative to other sectors since 2008 is as given in Table 1 below. Its share has however been declining since 2008 because as an economy develops and diversifies, the primary agricultural sector will lose its weight in terms of GDP contribution. In 2013, the services sector contributed the highest (49.5%), followed by industry (28.6) with the agriculture sector contribution to GDP being 22%. The general decline in agricultural GDP is attributable to the decline in cocoa. The decline in cocoa was due to the natural cyclical production pattern of tree crops. The performance of the crop is therefore expected to improve in the coming years. Another notable reason for the decline in the sector’s performance is due to the national accounting system used for the computation of the GDP where agribusiness and agro-processing businesses are captured under manufacturing sector. This shows that the decline in the agriculture’s contribution to GDP is inevitable. The agricultural sector used to be the largest contributor to GDP until it was overtaken by the services sector followed by industry. The faster growth in the service sector is not likely to drive agricultural growth significantly because of the weak linkage between the two sectors in Ghana.

**Table 1: Share of Agriculture in Gross Domestic Product: 2006-2013**

Year	Sector			GDP @ Current Market Prices (GH¢-Million)
	Agriculture	Service	Industry	
2006	30.4	48.8	20.8	18,705
2007	29.1	50.2	20.7	23,154
2008	31.0	48.6	20.4	31,235
2009	31.8	49.2	19.0	36,598
2010	29.8	51.1	19.1	46,042
2011	25.3	49.1	25.6	59,816
2012	23.0	48.4	28.6	74,959
2013	22.0	49.5	28.6	93,461

Average Sectoral shares in GDP (2006 – 2013)	27.8	49.4	22.9	
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Source: SRID, MOFA

### 1.11 AGRICULTURE GDP GROWTH RATE

The growth rate in agriculture sector GDP has generally been on the decline since 2008 with the lowest rate of 0.8% recorded in 2011 as shown in Table 2. However in 2013, there was an increase in growth of the agriculture by 5.2% from 2.3% in 2012. The agriculture sector recorded the lowest growth rate in comparison to services (8.9%) and industry (7.0%).

Table 2: Agriculture and Other Sector Real GDP Growth (%)

Year	Sector			
	Agriculture	Services	Industry	National
2008	7.4	8.0	15.1	8.4
2009	7.2	5.6	4.5	4.0
2010	5.3	9.8	6.9	8.0
2011	0.8	9.4	41.6	15.0
2012	2.3	11.0	11.0	8.8
2013*	5.2	8.9	7.0	7.1

Source: SRID, MoFA

#### Sub-sector performance

The crops sub-sector is the major contributor to the Agricultural Sector GDP. It contributed an average of 64.3% followed by forestry cocoa (10.1%) and forestry (9.9%) in 2013. In the same year, livestock and fisheries sub-sectors contributed 8.7% and 7.0% respectively to agricultural GDP.

The growth in the crops sub-sector has largely been achieved through area expansion and price increases rather than productivity improvement.

Taking into consideration the fact that crop and livestock production is the mainstay of most rural dwellers, there is the need to intensify efforts at increasing productivity of the crop and livestock sub-sectors if poverty is to be reduced among the rural poor.

Table 3: Contribution of Various Sub-sectors to Agricultural GDP (@2006 Prices).

	Contribution to
--	-----------------

Sub-sector	Agric. GDP (%)							
	2006	2007	2008	2009	2010	2011	2012	2013
1. Crops (excl. cocoa)	60.1	61.1	62.2	64.4	62.4	63.1	63.7	64.2
2. Cocoa	9.9	9.3	8.9	8.7	10.5	11.8	10.6	10.1
3. Livestock	8.1	8.6	8.4	8.2	8.2	8.5	8.8	8.7
4. Forestry	13.6	13.3	11.9	11.2	11.7	10.0	10.5	9.9
5. Fisheries	8.3	7.8	8.5	7.5	7.2	6.6	6.5	7.0

Source: Ghana Statistical Service, Derived from the Gross Domestic Product, April 2014 bulletin

### 1.12 GROWTH RATES OF AGRICULTURE SUB-SECTORS (%)

Table 4 shows the growth rates in agricultural sub-sectors for the period 2008 to 2013. The table shows a general inconsistency in the growth rates of the various sub-sectors over the period. On the average for 2013, the crops sub-sector had the highest growth rate of 5.9% followed by fisheries sub-sector with 5.8% and then livestock sub-sector with 5.3%. The cocoa sub-sector grew at 1.7% with forestry/logging increasing at 0.0%. The case for the forestry/logging is due to the ban placed on logging of timber.

Table 4: Growth Rates in Agricultural Sub-Sectors (%)

Year	Sub-sector					National Agric. Real GDP Growth Rate
	Crops	Livestock	Cocoa	Fisheries	Forestry/ Logging	
2008	8.6	5.1	3.2	17.4	-3.3	7.4
2009	10.2	4.4	5.0	-5.7	0.7	7.2
2010	5.0	4.6	26.6	1.5	10.1	5.3
2011	3.7	5.1	14.0	-8.7	-14.0	0.8
2012	0.8	5.2	-9.5	9.1	6.8	2.3
2013	5.9	5.3	1.7	5.8	0.0	5.2

Source: SRID, MOFA.

### 1.13 Crops sub-sector

#### Principal Agricultural Produce

The crop sub-sector is made up of three (3) main categories of agricultural commodities namely:

- **Industrial Crops:** Cocoa, Oil Palm, Coconut, Coffee, Cotton, Kola, Rubber, Cashew, Shea.

- **Starchy and Cereal Staples:** Cassava, Cocoyam, Yam, Maize, Rice, Millet, Sorghum, Plantain.
- **Fruits and Vegetables:** Pineapple, Citrus, Banana, Pawpaw, Mango, Tomato, Pepper, Okro, Egg Plant, Onion, Asian Vegetables.

Table 5 shows the production of selected food crops between the periods 2008 to 2013. Maize, cassava and rice had a consistent growth in production over the period. Cocoyam on the other hand had a consistent decrease in production over the period. For the other commodities, there was a general increase in production between 2008 and 2009. On the other hand, there was a general decrease in production of the other commodities between 2010 and 2013 save for plantain and yam which increased in 2013.

**Table 5: Production of Selected Food Crops ('000 Mt)**

Crop	2008	2009	2010	2011	2012	2013
Maize	1,470	1,620	1,872	1,683	1,950	1,764
Millet	194	246	219	183	180	155
Rice (paddy)	302	391	492	463	481	570
Rice (milled)	208	270	3395	319	332	393
Sorghum	331	351	324	287	280	257
Cassava	11,351	12,231	13,504	14,240	14,547	15,990
Cocoyam	1,688	1,504	1,355	1,299	1,270	1,261
Plantain	3,338	3,563	3,538	3,619	3,556	3,675
Yam	4,895	5,778	5,960	5,855	6,639	7,075
<b>Total</b>	<b>23,750</b>	<b>25,919</b>	<b>27,559</b>	<b>27,907</b>	<b>29,192</b>	<b>31,140</b>

Source: SRID, MOFA

Note: Milled rice is estimated to be 60% of paddy.

## INDUSTRIAL CROP PRODUCTION

Ghana's industrial crops include cocoa, oil palm, cotton, sheanut, coffee and rubber. Table 6 clearly indicates the dominant role of cocoa and oil palm among the industrial crops. Cocoa production experienced phenomenal growth between 2008/09 and 2010/11. However, it has been declining since then.

Oil palm on the other hand recorded a decrease in production between 2008/09 and 2009/10 and has since been increasing.

**Table 6: Production of Industrial Crops (Mt)**

Year	Cocoa <sup>1</sup>	Coffee <sup>1</sup>	Rubber <sup>4</sup>	Shea nut	Oil Palm <sup>3</sup>
2008/09	710,638	516	19,134	31,386	2,103,600
2009/10	800,000	n.a.	n.a.	n.a.	2,004,300
2010/11	1,024,600	n.a.	n.a.	n.a.	2,125,645
2011/12	879,348	n.a.	n.a.	n.a.	2,196,098

*2012/13	835,000	n.a	n.a	n.a	2,326,922
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Sources: SRID, MOFA.

#### 1.14 Livestock sub-sector

There has been a steady increase in domestic meat production from 2008 to 2013. Total domestic meat production increased from 100,935 MT in 2008 to 135,412 MT in 2013 representing a percentage increase of about 34.16% during the period. The share of poultry production has been the highest with an average percentage contribution of 37.65% in 2013, followed by cattle production with an average percentage contribution of 16.15%.

**Table 7: Domestic Meat Production (MT): 2008-2013**

Type of Livestock	Domestic Meat Production (MT)						%age by Type (2013)
	2008	2009	2010	2011	2012	2013	
Cattle/Beef	19,553	19,773	19,993	20,592	21,221	21,863	16.15%
Sheep/Mutton	15,881	16,389	16,916	17,491	18,087	18,703	13.81%
Goats/Chevon	17,444	18,315	19,226	20,341	21,198	22,429	16.56%
Pigs/Pork	17,002	17,506	18,010	19,072	20,224	21,432	15.83%
Poultry/Chicken	31,056	33,790	37,247	41,008	46,308	50,985	37.65%
<b>Total</b>	<b>100,935</b>	<b>105,772</b>	<b>111,390</b>	<b>118,504</b>	<b>127,038</b>	<b>135,412</b>	<b>100.00%</b>

Source: SRID, MoFA (2013)

#### IMPORTS OF LIVESTOCK AND POULTRY PRODUCTS

Beef and chicken were the most imported meat products in 2013. The import of beef decreased from 13,135.10 MT in 2008 to 11,175.90 MT in 2010. It however recorded an increase since then rising to 21,250.80 MT. The percentage increase for beef imports from 2012 to 2013 is 27.2%.

Poultry imports however has been declining since 2011 from 86,372.50 MT to 58,999.30 MT in 2013. The reduction in imports between 2012 and 2013 for the commodity is 20%.

In general, there has been an increase of 3.3% in importation of livestock and poultry products from 2012 to 2013.

**Table 8: Imports of livestock and poultry products**

CATEGORY	2008	2009	2010	2011	2012	2013	% Change (2013/2012)
<b>BOVINE:</b>							
BEEF	13,135.10	12,338.40	11,175.90	14,823.20	16,703.50	21,250.80	27.2
BUFFALO	7,366.80	4,454.50	2,563.90	2,025.00	1,495.00	905	-39.5
<b>SUB-TOTAL</b>	<b>20,501.90</b>	<b>16,792.90</b>	<b>13,739.80</b>	<b>16,848.20</b>	<b>18,198.50</b>	<b>22,155.80</b>	<b>21.7</b>
<b>POULTRY:</b>							

CHICKEN	89,889.00	67,068.60	69,810.80	86,372.50	73,788.40	58,999.30	-20
TURKEY	3,352.80	1,980.20	1,351.70	1,033.00	1,293.70	1,787.00	38.1
DUCK	16	30.8	0	4	78.3	0	-
<b>SUB-TOTAL</b>	<b>93,257.80</b>	<b>69,079.60</b>	<b>71,162.50</b>	<b>87,409.50</b>	<b>75,160.40</b>	<b>60,786.30</b>	<b>19.1</b>
<b>OTHER</b>							
MUTTON	5,961.30	6,153.10	4,285.20	4,520.00	2,574.80	3,251.10	26.3
PORK	5,487.40	3,150.20	2,716.60	2,507	1,785.80	2,064.60	15.6
PROCESSED MEAT	0	0	0	0	0	0	-
<b>SUB-TOTAL</b>	<b>11,448.70</b>	<b>9,303.30</b>	<b>7,001.90</b>	<b>7,027.00</b>	<b>4,360.60</b>	<b>5,315.70</b>	<b>21.9</b>
MILK	2,718.90	11,406.40	27,323.00	27,619.00	24,727.50	38,187.50	54.8
<b>GRAND TOTAL</b>	<b>127,927.30</b>	<b>106,582.20</b>	<b>119,227.20</b>	<b>138,903.70</b>	<b>122,447.00</b>	<b>126,445.30</b>	<b>3.3</b>

Source: Veterinary Services Directorate (VSD)

### 1.15 Fisheries sub-sector

Fish is recognized as the most important source of animal protein and it is expected to provide 60 percent of animal protein needs of consumers in all regions of the country. National per person fish consumption is estimated to average at 23 kg, much higher than the global average of 13 kg.

The country's total annual fish requirement is estimated at 880,000 MT while annual national fish production for 2013 averaged only 401,609 MT. This left a deficit of leaving an annual deficit of 478,391 MT.

Part of this deficit is made up for, through fish imports which in 2007 was 212,945 tonnes and valued at US\$262 million (DOF, 2007). Aquaculture production is now the focal point to make up for the deficit in fish requirement which is evident in increase in production levels over the period.

Table 9: Annual Fish Production by Source, MT

Source	2008	2009	2010	2011	2012	2013	%age by Source
<b>Marine</b>	343,868	326,111	309,558	326,545	333,697	314,868	78.4%
<b>Inland</b>	72,590	70,898	83,127	95,353	95,000	86,741	21.6%
<b>Total</b>	<b>416,552</b>	<b>389,198</b>	<b>402,458</b>	<b>421,898</b>	<b>428,697</b>	<b>401,609</b>	<b>100.0%</b>

Source: MoFAD.





### 1.16 Consumption and nutrition trends

Among the cereals, the most highly consumed in terms of tonnage is maize followed by rice. In 2013, the estimated national consumption of maize is 1,195,000 MT and that for rice is 637,000 MT. The country has been self-sufficient in maize production from 2010 to 2013 with surpluses in each of these years. It is worth noting, however, that the volume of surpluses has been declining since 2011.

Domestic rice production has not been able to satisfy domestic demand and the deficit has been met through rice imports. The deficit in 2013 is 305,000 MT but the total consumption for the same year is 637,000 MT. Thus the deficit was 47.88% of total domestic demand for rice for 2013. The deficit however decreased from 350,000 MT in 2012 to 305,000 MT in 2013.

The country is self-sufficient in cassava production with a surpluses in each of the years from 2010 to 2013. The surpluses have been increasing throughout this period. There have been surpluses in yam production and consumption as well and the surpluses have also been on the increase.

**Table 10: Food Balance Sheet**

Commodity	Total Domestic Production ('000Mt)				Production Available for Human Consumption ('000Mt)				Estimated National Consumption ('000Mt)				Deficit/Surplus ('000Mt)			
	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013	2010	2011	2012	2013
<b>Maize</b>	1,872	1,684	1,950	1,817	1,310	1,179	1,426	1,336	1,061	1,088	1,135	1,195	339	500	291	141
<b>Rice(milled)**</b>	320	278	289	382	257	242	272	332	581	596	622	637	(42)	(210)	(350)	(305)
<b>Millet</b>	219	184	180	179	190	160	156	156	24	124	130	133	173	(19)	27	23
<b>Sorghum</b>	324	287	280	277	282	250	244	241	24	124	130	133	258	52	114	109
<b>Cassava</b>	13,504	14,241	14,547	16,116	9,453	9,969	10,183	11,281	3,704	3,800	3,961	4,089	5,749	6,169	6,222	7,192
<b>Yam</b>	5,960	5,855	6,639	7,260	4,768	5,036	5,311	5,808	3,028	3,106	1,086	1,328	1,732	1,928	4,226	4,481
<b>Plantain</b>	3,538	3,620	3,557	1,268	3,007	3,077	1,016	1,015	2,054	2,107	1,036	1,009	953	970	(20)	5
<b>Cocoyam</b>	1,355	1,300	1,270	3,565	1,287	1,235	2,845	2,852	969	994	2,197	2,257	318	241	648	594
<b>Groundnut</b>	531	465	475	475	478	431	428	427	291	298	311	319	187	133	117	109

<b>Cowpea</b>	219	237	223	206	186	203	190	175	121	124	130	133	69	79	60	42
<b>Soyabean</b>	146	165	152	153	124	140	129	130	48	50	52	53	76	90	77	77

### **1.17 Nutrition**

Nutrition and health are important factors to consider when assessing the food security status of a country. A report by World Food Programme (2012) indicate that insufficient or inappropriate care and hygiene practices, poor infant and young child feeding practices, use of unsafe water, inadequacy or absence of sanitation systems and inadequate access to maternal and child health services can all lead to ill-health, which affects a person's ability to absorb the required nutrients from available foods, leading to malnutrition.

Anthropometric measurements provide one of the most important indicators of a child's nutritional status. Three conventional indices of physical growth used in describing children's nutritional status are height-for-age (stunting), weight-for-age (underweight) and weight-for-height (wasting). The 2008 Ghana Demographic and Health Survey indicate that about 28% of Ghanaian children are stunted, 8.5% are wasted and 13.9% are underweight. Figures however show that the Northern, Upper East, Upper West and Central Regions continue to be the areas of high malnutrition. Stunting and underweight values are very high in these regions compared to the others.

The 2003 Demographic and Health Survey results show that 83.4% rural and 56.3% of urban Ghanaian households do not consume adequate iodine. The Northern, Upper East and Upper West Regions of Ghana have the highest incidence of iodine deficiency. Similarly, over 80% of children and about 48% of women are anaemic in rural Ghana. The figures for urban Ghana are 67.8% for children and 41.6% for women. The regions of the country that are most iron deficient include the Northern (82.5% for children), Western (80.1%), Upper East (79.1%), Ashanti (79.0%), Upper West (78.3%) and Central (76.8%). These figures indicate that children born grow with a lot of nutritional inadequacies with regards to brain and body development and that has significant negative impact on human capital development and future growth of the economy.

### **1.19 Analysed current situation or baseline/profile of the MDA**

#### **Constraints to sector development**

Agriculture is predominantly on a smallholder basis in Ghana. About 90% of farm holdings are less than 2 hectares in size, although there are some large farms and plantations, particularly for rubber, oil palm and coconut and to a lesser extent, rice, maize and pineapples. The main system of farming is traditional with hoe and cutlass as the main farming tools. There is little mechanized farming, but bullock farming is practiced in some places, especially in the northern parts of the country. Agricultural production varies with the amount and distribution of rainfall, as well as soil factors. Most food crop farms are intercropped whilst mono cropping is mostly associated with larger-scale commercial farms. The agricultural sector is also characterized by low use of fertilizers which has led to lower achievable yields by most crop farmers. On the average, crop producers in Ghana are considered resource-poor and therefore use little inputs such as fertilizer, insecticides, high yielding varieties or irrigation-based cultivation. Fertilizer use in crop production is expensive due to their high prices, hence the inability of farmers to access the product.

Fertilizer use in the country is about 5kg/ha, which is only half of the rate in the Sub-Saharan Africa which is also far less than in other developing countries.

**Agro-ecological zones:** There are 5 main agro-ecological zones defined on the basis of climate, reflected by the natural vegetation and influenced by the soils. These are Rain Forest, Deciduous Forest, Transitional Zone, Coastal Savanna and Northern Savanna (Guinea and Sudan Savanna).

### 1.20 A summary of key development problems/issues/gaps identified from the situation analysis

#### Situational analysis

Ghana has traditionally been reliant on its agricultural sector as the primary source of economic activity and employment in the country. Recent economic growth, however, has been driven largely by gains in the services and industry sectors. There is also the recent discovery of oil and the subsequent development of Ghana's petroleum industry. Nonetheless, agriculture remains a key component of the economy and an important contributor to national employment. Challenges including institutional and structural inefficiencies have resulted in a slow rate of transformation of the agriculture sector with persistent low productivity and competitiveness in international markets. Strategies to improve agricultural performance focus on investment to address sector constraints on productivity, market access, sustainable production and institutional coordination.

#### OVERALL PERFORMANCE ON SECTOR OBJECTIVES

Table 11 below summarizes the overall performance of the agriculture sector in Ghana.

**Table 11: Performance on sector objectives**

Goals	Objective	Indicator/target	Progress on implementation/challenges/recommendations
1. Food security and emergency preparedness	Reducing vulnerabilities and sustained productivity improvement	<ul style="list-style-type: none"> <li>• 20% - 50% increase in productivity of major commodities</li> <li>• 20% reduction in food insecure households</li> <li>• 50% reduction in underweight and stunting in children under 5 years</li> </ul>	<p>There has been marginal increase in productivity due to the challenge in financing inputs as well as putting in place basic infrastructure such as irrigation, mechanization, storage facilities and distribution systems.</p> <p>Financing of educational programmes to transform food habits is a challenge as well as the production of the relevant foods in the adequate quantities.</p>
2. Increased growth in incomes	Poverty reduction and wealth creation	25%-60% increase in incomes in cash crop, livestock and fish culture	<p>Cost of credit and lack of basic infrastructure is a challenge to commercial agriculture.</p> <p>Development of agro-ecological zones for specific commodities is necessary to address regional disparities.</p> <p>There is a growing supply gap in both raw materials and processed foods: while Ghana is currently self-sufficient in key staple crops, growth in demand for many agriculture products is outpacing local production, necessitating the</p>

			<p>import of these goods.</p> <p>The economic impacts of the recent discovery of oil in Ghana will likely be disproportionately concentrated in cities linked to "oil windfalls"; as a consequence, rising demand for high-value and processed foods is expected to be particularly acute in these cities. Nonetheless, such demand is also present and rising in other urban areas. Climate change calls for attention to promotion of indigenous commodities.</p>
3. Increased competitiveness and access to markets	Increased marketed output	50% increase in marketed output	<p>Ghana's commercial food market is poised for steady growth in the coming years. As the country urbanizes and consumer incomes rise, investment opportunities across agricultural value chains will both increase and expand. Consumer tastes are shifting not only to food of a higher standard and quality but to a more sophisticated shopping experience, giving formal retail outlets a more important role in the economy. As such, new structures that organize importers, distributors, and wholesalers in order to support the growing retail sector are being put into place.</p>
4. Sustainable management of land and environment	Maintenance of natural resource and ecosystem integrity	100% of stakeholders reached	<p>There are a number of on-going projects but they need to be up-scaled to make reasonable impact. Also there are pending legislation to be reviewed.</p>
5. Applied science and technology in food and agriculture	Sustainable modernization of food and agriculture	<ul style="list-style-type: none"> <li>• 25% increase in technologies adopted in value chains.</li> <li>• 15% increase in new technologies developed</li> </ul>	<p>It has been noted that research institutions' funding only cover administrative costs and salaries but there are no funds for actual research work except for small grants from international institutions. Any significant research work has been funded under MOFA projects. Ghana's agricultural sector enjoys a number of ecological and climatic advantages that are well suited for the production of a wide range of food and industrial crops. The value chain approach adopted in the FASDEP II recommends promotion of selected commodities in specific agro-ecological zones. This impact on income and poverty levels and can address the disparity in growth across the country.</p>
6. Enhanced institutional coordination	Effective partnering of institutions in the agriculture sector	<ul style="list-style-type: none"> <li>• Joint planning and reviews organised annually.</li> <li>• Training needs assessment and management processes implemented</li> </ul>	<p>Joint efforts for agriculture growth and development for economic transformation should be practiced at all levels, from Cabinet, Parliament, MOFEP, RCC, DAs and Private Sector bodies, financial institutions etc.</p> <p>Capacity building of the actors in agriculture is still a challenge for effective participation in growth and development.</p> <p>Conscious efforts are being made in resource mobilisation and soliciting political commitment to meet the Maputo Declaration of allocating at least 10.0 percent of Government total expenditure allocation to agricultural development to achieve a minimum of 6.0 percent target set for annual agricultural growth rate. However government plans to exit subsidy programmes by 2017.</p>

### 1.21 SUMMARY OF KEY DEVELOPMENT ISSUES

- Low productivity of selected commodities (for food security and income growth) due to inadequate quality/certified seed and planting material; low fertility levels of soils; unknown fertility status of soils;
- Inadequate production of tree crop seedlings and planting materials (oil palm, coconut, cashew)
- Limited linkages in the cotton sector
- Low processing of cashew locally
- Deficit in domestic production of some cereals (rice) and legumes (soybean)
- Weak pesticide industry and phytosanitary system,
- Weak research extension linkage;
- Erratic rainfall
- High post-harvest losses due to poor harvesting practices and poor handling of produce;
- Inadequate processing and storage facilities,
- Low value addition
- Limited usage of greenhouse technology for vegetable production
- Inefficient commodity distribution systems contributing significantly to the issue of price variation
- Limited storage space and warehousing facilities for NAFCO
- Inadequate laboratory infrastructure for veterinary disease control and need for rehabilitation of existing ones
- Upsurge of Newcastle, PPR and Mange and their implications for health of livestock and productivity
- Inadequate and untimely supply of animal vaccines, budgeted funds and logistics. This affects operations of the livestock sector negatively.
- Continuous prevalence of Tsetsefly and trypanosomiasis reported in some parts of the country
- Huge imports of livestock/poultry products some of which are suspected to be illegal and not approved by veterinary authorities
- Inadequate staff and low veterinary coverage for efficient animal health care delivery
- High morbidity and mortality rates in cattle.
- Huge deficit between production of livestock and consumption levels.
- Low productivity and coverage, low maintenance and misapplication of irrigation equipment.

## Chapter 2

### 2.0 Prioritisation of Development issues

#### 2.1 Strategic direction

In the medium-term, the strategic direction will be to lay the foundation for the structural transformation of the economy through industrialisation especially manufacturing, based on modernised agriculture and sustainable exploitation of Ghana's natural resources, particularly minerals, oil and gas.

The process will be underpinned by rapid infrastructural and human development as well as the application of science, technology and innovation. This will enhance:

- creation of employment and income earning opportunities for rapid and sustained poverty reduction
- improved enabling environment to empower the private sector;
- active collaboration between the public and private sectors, including public-private partnerships and civil society organizations;
- active Government interventions where appropriate;
- transparent and accountable governance and efficiency in public service delivery at all levels; and
- effective decentralisation for local economic development.

**Table 12: Strategic Direction**

THEMATIC AREAS OF NMTDP	POLICY OBJECTIVES	IDENTIFIED ISSUES
Job Creation	Increase private sector investment in agriculture	Creation of employment and income earning opportunities for rapid and sustained poverty reduction
Agriculture Productivity	Promote Agriculture Mechanisation	Improved enabling environment to empower the private sector
Job Creation	Increase private sector investment in agriculture	Active collaboration between the public and private sectors, including public-private partnerships and civil society organizations
Agriculture Competitiveness and Integration into Domestic and International Markets	Improve post-production management	Active Government interventions where appropriate
Agriculture Productivity	Improve institutional coordination for agriculture development	Transparent and accountable governance and efficiency in public service delivery at all levels
Agriculture Productivity	Improve institutional coordination for agriculture development	Effective decentralisation for local economic development

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**The NMTDPF contains Policy Objectives that are relevant to the Ministry of Food and Agriculture.**

**These are as follows:**

- Promote Agriculture Mechanisation
- Improve science, technology and innovation application
- Promote seed and planting material development
- Increase access to extension services and re-orientation of agriculture education
- Improve institutional coordination for agriculture development
- Increase private sector investments in agriculture
- Improve post- production management
- Develop an effective domestic market
- Expand agriculture exports
- Promote irrigation development
- Improve Agriculture Financing
- Promote sustainable environment, land and water management
- Promote the development of selected staple and horticultural crops
- Promote the development of selected cash crops
- Promote livestock and poultry development for food security and income generation

**2.2 MOFA Priorities for 2014-2017**

Focal GSGDA thematic area - Accelerated Agricultural Modernisation and Sustainable Natural Resource Management

The situational analysis makes it possible to identify various priority development issues. These development issues have been categorised into various programmes, in consonance with FASDEP II strategic objectives. Based on the development issues and challenges in the sector, the following strategies and priorities identified under the six programme areas will be pursued.

**2.2.1 Programme 1: Food Security And Emergency Preparedness:**

**Crops subsector:** Selected commodities for food security are maize, rice, cowpea, cassava, and yam. The following strategies will be pursued for 2014 to 2017.

- Improving seed availability and accessibility
- Determining soil nutrient requirement for each of the commodities in the different growing areas
- Improving fertilizer use, accessibility and availability
- Strengthening the pesticide industry
- Strengthening the phytosanitary system



- Promoting water conservation technologies
- Reducing post-harvest losses through improved harvesting and handling practices; Increased value addition; efficient marketing, storage and distribution system
- Providing storage and warehouse facilities for NAFCO
- Review implementation strategy for the fertilizer subsidy programme and develop exit strategy.

### **2.2.2 Programme 2: Improved Growth In Incomes:**

Key commodities selected under this programme are:

- Horticultural crops –vegetables and fruits
- Tree crops – cotton, cashew, oil palm
- Cereals -sorghum, millet, groundnut, rice
- Sweet potatoes, plantain

The following strategies will be pursued for 2014 to 2017.

#### **Crops subsector:**

- Increasing usage of greenhouse technology for vegetable production
- Yield improvements for fruit crops
- Increasing production of tree crop seedlings and planting materials
- Designing business enterprise packages e.g. in vegetable production (indicating financial analysis and returns on investment).
- Increasing availability and use of improved planting materials
- Determining the nutrient requirement for each of the commodities in the different growing areas
- Promoting water conservation technologies for root and tubers, plantain.
- Strengthening the phytosanitary system for roots and tubers
- Reducing post-harvest losses through improved harvesting and handling practices; increasing value addition; efficient marketing storage and distribution system
- Promoting nucleus outgrower schemes
- FBO development – evolve from grass roots to apex.
- Strengthening linkages in the cotton sub-sector
- Facilitating increase in production and value addition of cashew
- Improving commodity distribution systems to reduce price variability

#### **Disease control:**

- Rehabilitate existing veterinary laboratory infrastructure
- Reduce morbidity and mortality rates in cattle
- Eradicate tsetsefly and trypanosomiasis in the country

#### **Animal production:**

- Increase livestock production to close demand and supply gap
- Promote feed production to reduce cost of poultry production
- Develop and enforce standards for feed production, hatcheries operation and drugs

- Provide processing infrastructure for livestock (e.g. slaughter houses)
- Take measures to prevent conflict between cattle herdsman and crop farmers

#### **Irrigation Development**

- Increase productivity of large irrigation schemes through capacity building for farmers and water user associations
- Map out existing and potential areas for irrigation development
- Rehabilitation of existing irrigation schemes and construction of new ones.

#### **Mechanisation**

- Improving efficiencies of AMSEC operations
- Improving national coverage of AMSEC's
- Developing a model for sustainability of AMSEC's
- Capacity building on appropriate tillage practices

#### **2.2.3 Programme 3: Increased Competitiveness and Enhanced Integration into Domestic and International Markets**

- Increase production of tree crop seedlings and planting materials
- Strengthen linkages in the cotton sub-sector
- Facilitate increased production and value addition of cashew
- Increase production of cereals (rice) and legumes (soybean)
- Improve commodity distribution systems to reduce price variability

#### **2.2.4 Programme 4: Sustainable Management of Land and Environment**

- Awareness creation on use of best SLM technologies

#### **2.2.5 Programme 5: Science and Technology Applied in Food and Agriculture Development**

- Strengthen the Research Extension Farmer linkages
- Strengthen the uptake of technology along the Value Chain and application of Biotechnology in Agriculture

#### **2.2.6 Programme 6: Enhanced Institutional Coordination**

- Address human resource constraints in MOFA
- Reduce number of M&E indicators
- Use relevant set of key indicators to monitor progress and report on impact of interventions
- Use results based monitoring for decision making and programme design
- Map out on-going projects to METASIP to identify gaps for new investment and develop a clear strategy for filling gaps within value chains and geographical/agro-ecological zones

- Intensify joint planning, coordination and implementation to include all stakeholders (state and non-state)
- Conduct annual expenditure reviews and budget tracking

## Chapter 3

### 3.0 ADOPTED GOALS OF THE MEDIUM-TERM DEVELOPMENT POLICY FRAMEWORK (2014-2017)

1. Agriculture productivity
2. Job creation
3. Agriculture competitiveness and integration into domestic and international markets
4. Production risks/bottlenecks in agriculture industry
5. Crops development for food security, exports and industry
6. Livestock and poultry development

### NATIONAL DEVELOPMENT PROJECTIONS FOR 2014-2017 (NATIONAL INDICATORS AND TARGETS)

Table 13: National Development Projections for 2014-2017 (National Indicators and Targets)

Programme Development Objective	Outcome Indicators	Baseline (2008)	Target (2011-2015)	Frequency of Data Collection
<i>Modernized agriculture, structurally transformed economy, food security, employment and reduced poverty attained.</i>	% agricultural sector GDP growth rate	5.1%	At least 6% annual growth rate	Annual
	Change in food self-sufficiency levels		Achieve at least 85% food self sufficiency	Annual
	% Value of non-traditional agricultural exports	196.5 million dollars	50% increase over baseline	Annual
<b>Intermediate Results</b>	<b>Results Indicator for each component</b>	<b>Baseline (2008)</b>	<b>Target</b>	<b>Frequency of data collection</b>

<b>Programme 1: Food Security and Emergency Preparedness</b>				
Increased yields of smallholder farmers	Quantity of produce per ha:			
	Maize	1.7mt/ha	50% increase over baseline	Annual
	Sorghum	1.2mt/ha	50% increase over baseline	Annual
	Cassava	13.5 mt/ha	50% increase over baseline	Annual
	Yam	14.1mt/ha	5% increase over baseline	Annual
	Cowpea	1.1mt/ha	25% increase over baseline	Annual
Production of poultry increased	Quantity of poultry produced	31,853mt	20% increase over baseline	Annual
Production of small ruminants and pigs increased	Quantity of small ruminants and pigs produced.			
	Pig	17,002mt	25% increase over baseline	
	Sheep	15,831mt	25% increase over baseline	
	goats	17,180mt	25% increase over baseline	
Production of cultured fish increased	Quantity of cultured fish produced	10,000mt	50% increase over baseline	Annual
Reduced levels of underweight and stunting in children	% decrease in levels of underweight and stunting in children under five years		Underweight and stunting reduced by 50%	Annual
	Stunted	28%		
	Severely stunted	10%		
	Under weight	14%		
	Severely underweight	3%		
Increased number of people below the poverty line engaged in off-farm livelihood	% increase in number of people below poverty line engaged in off-farm livelihood activities	GLSS 5 indicator as baseline	5% of people below the poverty line supported to engage in off-	Annual

activities			farm livelihood activities.	
<b>Intermediate results</b>	<b>Results Indicator for each component</b>	<b>Baseline (2008)</b>	<b>Target</b>	<b>Frequency of data collection</b>
Reduced post harvest losses along the maize, rice, sorghum, cassava, yam and fish value chains	% reduction in post harvest losses along the value chain:			
	Maize	35.1%	30% decrease from baseline	Annual
	Rice	6.9%	35% decrease from baseline	Annual
	Sorghum		20 % decrease from baseline	Annual
	Cassava	34.6%	40% decrease from baseline	
	Yam	24.4%	50% decrease from baseline	Annual
	Fish		30% decrease from baseline	
Private sector capacity developed for grain storage	Quantity of grains stored by private sector		50,000 Mt of grains stored annually  25,000 Mt of grains processed annually	Half Yearly  Half yearly
<b>Intermediate results</b>	<b>Results Indicator for each component</b>	<b>Baseline (2008)</b>	<b>Target</b>	<b>Frequency of data collection</b>
Reduced number of food insecure households	% reduction in food insecure households	GLSS 5 indicator as baseline	20% decrease over baseline	Half Yearly
Improved water management systems developed	<ul style="list-style-type: none"> <li>Area of small/micro-scale irrigation systems developed</li> <li>Area of sustainable water</li> </ul>	27,702.5ha	Develop additional 22,590ha by 2011	Annual
				Annual
			62,000ha	Annual

	harvesting schemes developed in Ghana <ul style="list-style-type: none"> <li>Number of feasibility studies for large scale irrigation schemes developed</li> </ul>	13	developed by 2011	
Mechanisation centers established and functional in each administrative district	Number of mechanization centers established	69	170	Half Yearly
A system of incentives for agro-processing industries developed	Number of incentive packages developed for agro-processing industries			Half Yearly
<b>Programme 2: Increased Growth In Incomes</b>				
Increased income from cash crop production	% increase in incomes from crop production		30% increase over baseline	Annually
Increased income from livestock rearing	% increase in incomes from livestock		25% increase over baseline	Annually
Increased income from fish culture	% increase in incomes from fish culture	10,000Mt	60% increase over baseline	Annually
Reduced post harvest losses of mango, plantain pineapples, tomatoes, papaya and citrus	% reduction in post harvest losses of selected horticultural crops and plantain		25% to 50% decrease over baseline	Annually
Increased production from bee keeping, mushroom and snail farming	Number of products developed from bee keeping, mushroom and snail farming		20% to 50% increase over baseline	Annually
New commercially viable products developed from staple,	Number of new products developed from agricultural products		8 new products developed ( 2 each from staple crops, horticultural	Annually

horticultural, livestock and fish products			crops, livestock and fisheries)	
Pilot value chains developed	Number of pilot value chains developed in each ecological zone		2 selected commodities in each agro-ecological zone	Annual
Outgrower schemes developed and FBOs strengthened	Number and output of outgrower schemes developed  Number of FBOs strengthened and access services – financial services, market information, etc			Annual
Fish farmers Associations developed and Community based fisheries management committees established	Number of fish farmers Associations developed  Number of Community based fisheries management committees established			Annual
Reduced cost of transportation of agricultural produce	% reduction in cost of transportation of agricultural produce		5% reduction over baseline situation	Annual
Increased industrial processing of agricultural produce	% increase in industrial processing of agricultural produce:  <ul style="list-style-type: none"> <li>• cassava</li> <li>• oil</li> <li>• sheanuts</li> <li>• cashew</li> <li>• soybeans</li> <li>• Groundnut</li> </ul>		<ul style="list-style-type: none"> <li>• 20%</li> <li>• 20%</li> <li>• 40%</li> <li>• 30%</li> <li>• 30%</li> <li>• 30%</li> <li>• 20%</li> </ul>	Annual



	<ul style="list-style-type: none"> <li>• Livestock</li> <li>• Fish</li> </ul>		<ul style="list-style-type: none"> <li>• 30%</li> </ul>	
Increased output from peri-urban agriculture	% increase in output from peri urban agriculture		20% increase over baseline	Annual
<b>Programme 3 : Increased Competitiveness and Enhanced Integration into Domestic and International Markets</b>				
Increased product marketing of staple crops by smallholders	% increase in marketed output of staple crops		50% increase over baseline situation	Annual
Increased export of non-traditional export crops	% increase in export of non-traditional export crops		50 % increase of (all exports)over baseline situation	Annual
	Pineapple	35,134mt		
	yam	20,842mt		
	Mango	858mt		
	Pawpaw	968mt		
	Banana	69,779mt		
	Fish and sea food	40,025mt		
Grading and standardization systems of agricultural commodities made functional	Number of grading and standardization systems made functional		3 for crop sub-sector 1 for fisheries sub-sector 2 for livestock sub-sector	Annual
<b>Programme 4: Sustainable Management of Land and Environment</b>				
Enabling environment for sustainable land management created	Number of policies, laws and regulations reviewed.		All existing laws, policies and regulations reviewed	By end of 2011
Institutional capacity developed for SLM at all levels	Number of staff trained for SLM Number of people to whom technologies have		All district staff  100% increase over baseline	Half Yearly

	been disseminated in respect of SLM		situation	
<b>Programme 5: Science and Technology Applied in Food and Agriculture Development</b>				
Increased adoption of technologies along the value chain	% increase in technology adoption along the value chain		25% increase over baseline situation	Annual
Laws and regulations to enhance the application of biotechnology passed	Number of laws enacted to enhance application of biotechnology	Nil	2	Annual
Increased number of agricultural technologies developed	Number of agricultural technologies developed		15	Annual
<b>Programme 6: Improved Institutional coordination</b>				
Capacities of staff developed at national, district levels for planning, policy analysis implementation, monitoring and evaluation	Number of staff trained in policy analysis, planning and M&E.		All district MOFA technical staff  All Regional MOFA technical staff  All technical staff of MOFA National Directorates	Half Yearly
Capacities of staff developed in financial and procurement management processes.	Number of staff trained in financial and procurement management processes		All financial management staff  All Directors at District, Regional and National levels.	Half Yearly
Communications strategy developed and implemented	Number of messages packaged for dissemination by the communications Unit		Number per month	Half Yearly
Joint platform for collaboration between MOFA and other MDAs established	Number of joint planning sessions organised		Number per quarter	Half Yearly

A platform for collaboration between MDAs and civil society created	Number of joint planning sessions organised between MDAs and civil society		One per quarter	Half Yearly
MOFA – Development Partner collaboration strengthened	Number of joint planning and decision making sessions organised		One per quarter	Half Yearly

#### DEVELOPMENT PROJECTION FOR 2014-2017 OF MoFA

**Table 14: Development Projection for 2014-2017 OF MoFA**

<b>1: FOOD SECURITY AND EMERGENCY PREPAREDNESS</b>		
<b>COMPONENTS</b>	<b>OUTPUTS</b>	<b>Remarks</b>
PRODUCTIVITY IMPROVEMENT	1.1.1: Improved technologies adopted by smallholder farmers and yields of maize, rice, sorghum, cassava and yam increased by 50% and cowpea by 25% by 2015	Continue production intervention Programmes such as Block farms, Fertilizer subsidy, Extension delivery
		Strengthening of RELCs and CARGS
	1.1.2 Production of poultry (including guinea fowl) increased by 20% and small ruminants and pigs by 25% by 2015 through adoption of improved technologies	Improvement of animal health, animal breeds.
		Institutional of improved transhumans Pastoral systems
1.1.3 Productivity of cultured fish increased by 50% from 10,000mt in 2009 to 15,000 by 2013		Complete the negotiation for Award of Contract for the establishment of Turnkey fish processing plant at Elmina with funds from India Exim Bank.
		Development of Harbours and landing sites with funds secured from China by Government.
		Complete establishment of cold stores at various fishing sites funded by Spanish Government
		Construction of Fisheries College

1.2: SUPPORT FOR NUTRITION IMPROVEMENT	1.2.1: Stunting and underweight (in children) as well as Vitamin A, iron and iodine deficiencies (in children and women of reproductive age) reduced by 50% by 2015.	Scale-up the production and consumption of High Quality Protein Maize, Orange-flesh sweet potato (for vitamin A) as well as moringa and other leafy vegetables.
1.3: SUPPORT FOR OFF-FARM (ALTERNATIVE) LIVELIHOOD ACTIVITIES	1.3.1: Five percent of people falling below extreme poverty line supported to engage in off-farm livelihood alternatives by 2015 (use the <i>GLSS 5 of 2005/06 as the basis</i> )	
1.4: FOOD STORAGE AND DISTRIBUTION	1.4.1: Post-harvest losses along the maize, rice, sorghum, cassava, yam, and fish value chains reduced by 30%, 35%, 20%, 40%, 50% and 30% respectively by 2015 (based on baseline in MOFA 2007 post-harvest study).	Improve storage facilities along the value chain
	1.4.2: Private sector capacity (including FBOs) developed to store 50,000 tonnes of grain annually and to process (mill and/or package) 25,000 tonnes of maize, cassava, yam, sorghum and cowpea products annually.	
1.5: EARLY WARNING SYSTEM AND EMERGENCY PREPAREDNESS	Numbers of food insecure (vulnerable) households reduced by 20% by 2015 ( <i>GLSS 5 2005/06 as the basis</i> )	
1.6: IRRIGATION AND WATER MANAGEMENT	1.6.1: Irrigation schemes' productivity increased by 25% and intensification by 50% by 2012	Continue the rehabilitation of flood damaged dams in the Northern, Upper East and Upper West Regions.
	1.6.2: 22,590 ha of micro irrigation schemes developed by 2015 and 2,385 ha of small scale irrigation schemes developed by 2010 to benefit 50,000 households.	
	1.6.3: 62,000ha of sustainable water harvesting and agricultural water management schemes in Northern and Southern Savannah zones identified and developed to benefit to benefit 10,000 households.	
	1.6.4: Private sector	

	facilitated to establish mechanisation service centres (for production and processing) in specific areas where rain water harvest is major source of water for farming (e.g. Fumbisi, Katanga, Nasia, Nabogu and Soo valleys).	
	<b>1.6.5:</b> Feasibility studies for large scale irrigation projects in the country updated by 2012 and funds for implementation sourced by 2012	
1.7: MECHANIZATION	<b>1.7.1:</b> At least one (private sector led) mechanisation centre established in each district by 2015 to provide diversified services to all types of farmers and agro-processors (small, medium and large, ).	Continue the establishment of AMSECs
	<b>1.7.2:</b> A system of incentives for agro-processing industries to adopt food grade processing technologies established and enforced.	
<b>2: INCREASED GROWTH IN INCOMES</b>		
2.1: PROMOTION OF CASH CROP, LIVESTOCK AND FISHERIES PRODUCTION FOR INCOME IN ALL ECOLOGICAL ZONES	<b>2.1.1:</b> Income from cash crop production by men and women increased by 20% and 30% respectively by 2015	Commence implementation of Oil palm master plan and tree crops policy
	<b>2.1.2:</b> Income from livestock rearing by men and women increased by 10% and 25% respectively by 2015	
	<b>2.1.3:</b> Production of culture fisheries by men and women increased by at least 60% by 2013 ( <i>from 10,000mt in 2009 to 16,000mt in 2013</i> )	
	<b>2.1.4:</b> Post harvest losses of mango, plantain, tomatoes, pineapples, papayas and citrus reduced by between 25 and 50% by 2015	
	<b>2.1.5:</b> Products from bee keeping, mushroom and snail	

	farming and production of small stocks increased by 20 to 50% by 2015	
2.2: DEVELOPMENT OF NEW PRODUCTS	<b>2.2.1:</b> At least two new commercially viable products developed from each of staple crops, horticultural crops, livestock (including poultry) and fisheries by 2015	
2.3: DEVELOPMENT OF PILOT VALUE CHAINS FOR TWO SELECTED COMMODITIES IN EACH AGRO-ECOLOGICAL ZONE	<b>2.3.1:</b> Efficient pilot value chains developed for two selected commodities in each agro-ecological zone (pineapple and chillies in Coastal Savanna, commercial poultry and pig in Forest, maize and tomato in Derived Savanna and guinea fowl and tomato in Guinea/Sudan Savanna)	Commence implementation of Ghana Maize Strategic Plan
2.4: INTENSIFICATION OF FBOS AND OUT-GROWER CONCEPT.	2.4.1: Development of out-grower schemes and FBOs intensified and three-tier FBO structure achieved in all districts by 2015.	
2.5: DEVELOPMENT OF RURAL INFRASTRUCTURE	<b>2.5.1:</b> Cost of transportation of agriculture produce in rural areas reduced by at least 5% in areas where infrastructure has been improved	
2.6: SUPPORT TO URBAN AND PERI-URBAN AGRICULTURE	<b>2.6.1:</b> Output from peri-urban agriculture increased by 20%	
<b>3: INCREASED COMPETITIVENESS AND ENHANCED INTEGRATION INTO DOMESTIC AND INTERNATIONAL MARKETS</b>		
3.1: MARKETING OF GHANAIAN PRODUCE IN DOMESTIC AND INTERNATIONAL MARKETS	<b>3.1.1:</b> Marketed output of staple crops by smallholders increased by 50% by 2015	
	<b>3.1.2:</b> Export of non-traditional agricultural commodities by men and women smallholders increased by 50% by 2015	
	<b>3.1.3:</b> Grading and standardization systems of agricultural commodities (crops, livestock and fish) made functional and effective by 2012.	
<b>4: SUSTAINABLE MANAGEMENT OF LAND AND ENVIRONMENT</b>		

	<b>4.1.1:</b> Policies and regulations to support SLM/SFM at all levels reviewed and strengthened by 2010	
	<b>4.1.2:</b> Institutional capacity at all levels within the food and agriculture sector built to support the promotion of SLM.	
	<b>4.1.3:</b> Technology dissemination and adoption for scaling-up of SLM commences at the beginning of 2009	
	<b>4.1.4:</b> Technical capacity at all levels built to support promotion and dissemination of SLM technologies	
	<b>4.1.5:</b> SLM knowledge to support policy and investment decision making generated and adequately managed	
	<b>4.1.6:</b> An effective, efficient and motivating incentive system for SLM established by 2010	
<b>5: SCIENCE AND TECHNOLOGY APPLIED IN FOOD AND AGRICULTURE</b>		
	<b>5.1.1:</b> Adoption of improved technologies by men and women along the value chain increased by 25%	
	<b>5.1.2:</b> Laws and regulations to enhance the application of biotechnology in agriculture in place by 2010 and assessment of the country's biotechnology research potential by 2011.	
	<b>5.2.2:</b> A sustainable funding mechanism for RELCs established and operational by end 2012.	
	<b>5.2.3:</b> A well resourced MOFA Unit to liaise with CSIR to coordinate research output is made functional by 2015.	
<b>6: IMPROVED INSTITUTIONAL COORDINATION</b>		
6.1: INSTITUTIONAL STRENGTHENING AND INTRA-MINISTERIAL COORDINATION	<b>6.1.1:</b> Capacity for planning, policy analysis and M&E at national, regional and district	
	<b>6.1.2</b> A communications	Implementation of MoFA

	strategy within MOFA is developed and implemented by 2012	communication strategy
	<b>6.1.3:</b> All cost centres within MOFA and relevant MDAs are adequately resourced and capacities for electronic financial data capture and reporting and asset management are built by 2009	
	<b>6.1.5:</b> Capacity of the HRDM Directorate in human resource management strengthened.	
	<b>6.1.6:</b> The human, material, logistics, and skills resource capacity of all directorates of MOFA are built by 2010.	
	<b>6.1.7:</b> Different training programmes facilitated, coordinated, monitored and evaluated by HRDM Directorate	
	<b>6.1.8:</b> Staff welfare issues streamlined and implemented	
6.2: INTER-MINISTERIAL COORDINATION	<b>6.2.1:</b> A joint platform for collaboration between MOFA and other MDAs established by end of 2010	Continue the annual JSR
6.3: PARTNERSHIP WITH PRIVATE SECTOR AND CIVIL SOCIETY ORGANIZATIONS	<b>6.3.1:</b> A platform for private sector and civil society engagement with MDAs established by end of 2010	Support GAWU platform for private sector and civil society engagement with MDAs
	<b>6.4.1:</b> MOFA-DPs coordination and collaboration strengthened and DPs and MDAs fund a common agriculture strategy	

ADOPTED POLICY OBJECTIVES AND STRATEGIES FROM THE NMTDP FRAMEWORK (2014-2017) TO ACHIEVE MDA GOALS RESPECTIVELY IN RELATION TO THE APPROPRIATE THEME OF THE NMTDP.

ISSUES	POLICY OBJECTIVE	STRATEGIES





## Chapter 4

### 4.0 Development Programmes and sub-programmes of the MDA for 2014-2017

**Table 15: Development Programmes and sub-programmes of the MDA for 2014-2017**

<b>PROGRAM</b>	<b>SUB-PROGRAM</b>	<b>IMPLEMENTATION STRATEGIES</b>
1. Human Resource Development and Management	Policy, Planning, Budgeting, Monitoring and Evaluation (PPBME)	
	Research, Statistic, Information, Communication and Public Relations	
2. Food Security and Emergency Preparedness	Productivity Improvement	
	Mechanization, Irrigation and Water Management	
	Food Storage, Distribution and Improved Nutrition	
	Diversification of Livelihood Options	
	Early Warning Systems and Emergency Preparedness	
3. Increased Growth in Incomes	Promotion of Cash Crop, Livestock and Fish Production	
	Strengthening of FBOs and Out-Grower Schemes	
	Rural Infrastructure Development	
	Urban and Peri - Urban Agricultural Support	
4. Marketing of Agricultural Produce/ Products		
5. Management of Land and Environment		
6. Application of Science and Technology in Food and Agricultural Development		

***Development Programmes/sub-programmes of Action of the MDA for 2014-2017***

**Indicative Financial Plan**

## Chapter 5

### 5.0 Annual Action Plan of the MDA (Refer to Step13)

#### 5.1 Annual Action developed as a basis of the MDA Budget

Conceptual framework for MOFA lead activities.

The METASIP is a sector-wide investment plan and includes all agriculture-related activities of all identified MDAs and MMDAs for its implementation. It also anticipates the activities of the private sector and civil society and takes into account on-going agriculture-related projects. The implementation therefore appears to be complex.

In view of this, there is the need to develop a common framework that will address, policy planning and reviews, budget execution, tracking of expenditure in the Agricultural sector and more effective intra and inter sectoral coordination as envisaged in the METASIP. This approach will also stimulate larger resource allocation from GoG, Foreign Direct Investments (FDI), Private sector and donors, and enhance harmonisation and alignment of resources for the implementation of strategies in the METASIP.

As part of governments' effort to restructure the public financial management system, the Ministry of Finance and Economic Planning during the fourth quarter of 2011 trained officers from five key Ministries ( MoFA, MEST, MoTI, MoE and MoH) to pilot Programme-Based Budgeting (PBB)

The PBB will enable MDAs and MMDAs which are agriculture-related to know how much funds are allocated to the identified programmes for the implementation of the METASIP, among others. This will in-turn enable the tracking of budgetary allocation and spending by government to the sector. It will also enable the sector to measure the estimated 6% annual growth rate due to its results-oriented approach to budgeting.

#### 5.2 Sector coordination

The National Development Planning Commission (NDPC) which is the oversight institution responsible for implementation of the GSGDA would organize annual policy fora for MDAs, MMDAs, and other key stakeholders in the agricultural sector to ensure overall alignment and harmonisation for effective implementation and coordination of the GSGDA policy objectives for national development.

MoFA however has the lead responsibility for the achievement of the FASDEP II objectives. To this end, the different Technical Directorates of the MoFA are assigned lead roles in implementing the METASIP based on their technical expertise. The Idea is to realign and coordinate projects and programmes of the directorates towards the efficient employment of resources in the implementation of programmes in pursuance of FASDEP II objectives.

### **5.3 Regional cooperation**

#### **5.3.1 Planning and Budgeting**

The METASIP implementation requires joint planning by stakeholders in developing a 3-year PBB which is in conformity with the MTEF. The Budget Cycle of MOFEP (Annex 1), which guides government annual budget preparation, requires that all identified stakeholders in the Agricultural sector should meet either in April or May each year to review policies and prepare a 3-year Strategic Plan for the Agricultural sector using the PBB approach.

The preparation of the sectors entire budget is informed by the Policy Objectives of the GSGDA as well as the Medium Term Plans of the MDAs (using Annex 2). From the strategies of the GSGDA and that of their Medium Term Plans, MDAs in the agricultural sector develop activities of the ensuing years and cost them (Annex 3). The public sector budget for the agricultural sector therefore will be obtained using Appendix 1.

#### **5.3.2 Performance Measurement**

Base on the strategic plan developed an annual performance plan for the agricultural sector as a whole has to be developed to measure its performance. This plan should feed into the main M&E framework for the Agricultural sector. Using the PBB, outcomes, indicators and targets will be defined during the annual planning sessions for the key activities in the METASIP identified by the MDAs and MMDAs. These targets will serve as benchmarks for performance measurement during Joint Sector Performance Review in ensuing year.

## Chapter 6

### 6.0 Monitoring and Evaluation Plan:-

## Chapter 7

### 7.0 Communication Plan

The broad goal being advanced in the communication strategy is to promote nationwide knowledge about, and ownership of, as well as participation in the Food and Agricultural Sector Development Policy (FASDEP)

Key communication objectives include:

- To develop and implement a holistic communication strategy for the implementation of the FASDEP.
- To promote appreciation of the need for a coordinated approach to the implementation of agricultural development interventions.
- To promote effective use of communication as a tool for facilitating accelerated growth in Agriculture.
- To promote coordination among MOFA and its partners.
- To ensure consistency of message among MOFA staff and partners.
- To identify, develop and utilize appropriate communication channels, tools and activities to support MOFA.
- To promote and sustain goodwill and ownership from the general public for the FASDEP.

#### **Analysis:**

Lessons learnt from a 2006 survey on impact of agricultural interventions on stakeholders and their level of engagement with programme objectives are built into the communication strategy. The analysis pointed out that a comprehensive communication strategy was needed on sector interventions. This will involve internal MOFA at all levels and other levels of stakeholders.

Some issues for which communication packages will be prepared include:

- Selection of commodities based on scientific analysis and stakeholder demand.
- Addressing seasonal constraints of the three northern regions
- Capacity building for competitiveness in marketing and trade standards, GAPs/GMPs.
- Environmental mitigation measures, productivity measures including use of technology and irrigation.

#### **Audiences:**

The audience of the FASDEP are the following:

- The State/Government,
- MOFA Staff,
- Private Sector and Farmers/Farmer-Based Organisations,
- Development Partners/International Institutions,
- Researchers,
- Financial Institutions,
- Input Suppliers,
- Landowners,

- Non-Governmental Organisations, and
- Ministries, Departments and Agencies (MDAs).
- District Assemblies
- RCCs

Dissemination activities and channels of communication will vary depending on the target group and level. The following activities at the different levels have been identified.

### 7.2 National Level

- Printing and distribution of the FASDEP II and sector investment plan documents
- Preparation, printing and dissemination of shorter/simplified versions
- Official launching of the FASDEP II at national level
- Exhibitions of FASDEP II performance (in its second year)
- Seminars and workshops for various national level target groups
- TV and Radio Discussion programmes
- Development of a website on MOFA and FASDEP II
- Information posters for publicizing FASDEP II events

### 7.3 Regional/District level

- Dissemination of simplified versions
- Demonstration workshops, sensitization and advocacy seminars and workshops for various regional/district level groups, including non-technical groups
- TV & radio discussion programme in local languages
- Seminar and workshops for Area/Town Councils members and staff
- Documentary/drama (on its essence) in major local languages
- Exhibitions at regional and district levels
- Information posters for publicizing events
- Community interaction
- News bulletin
- Regular and personal interactions
- Information centres
- Electronic networking
- Media
- Video and film shows
- Internet connectivity at the district level

**Table 16: Main institutions that the policy will impact on**

	<b>Institution</b>	<b>Area of collaboration/impact</b>
	<b>Intra-ministerial communication level</b>	
1	MOFA	Provision of extension services, dissemination of information, provision of technical advice, inputs, appropriate technology development, crop selection, irrigation facilities, planning and M&E.
	<b>Inter-ministerial communication level</b>	
2	MOFEP	Sources of funding, cost of the solution, whether it can be contained in the Annual Budget of MOFA and the related MDAs.

3	MOTI/PSI/PSD	To encourage small-scale processing and packaging of food. Distribution and marketing of food in domestic and international markets including cold chain facilities.
4	MLGRDE	Issues of environment, tree crop selection, support to extension officers of MOFA and district level activities, sensitisation and advocacy.
5	MOFAD	Optimised use of water bodies and the development of aquaculture.
6	Ministry of Transportation	Access roads and bridges in food growing areas and markets.
7	MOESS	Agricultural science and research and agricultural education.
<b>Other levels</b>		
14	NGOs	Provision of boreholes, advocacy, technology dissemination, training, advocacy, funding, distribution of emergency supplies.
17	FBOs	Marketing, education,
	Private Sector (input dealers, agribusiness etc)	Distribution of agricultural inputs and training in agribusiness practices.

**Positioning:**

The FASDEP II is a response to the GPRS II objectives on the role of agriculture in national economic development to spur growth, reduce poverty and bring about rural development.

**7.4 Expected Impacts and Issues Management**

***Expected impacts:***

The aim of the policy is for Ghana to overcome most of the challenges facing the food and agriculture sector with a view to increasing its growth thereby creating employment, increasing income, reducing poverty and achieving food security for its people. Growth in the agricultural sector will stimulate higher rates of growth in the economy through forward linkage activities such as processing and transportation, and backward linkages to the provision of services to the sector with further growth spurred from spending of incomes earned from all these productive activities.

***Management of issues***

***Technical approach***

A stronger partnership between all Development partners, MDAs and private sector for improved response to the sector policies will be pursued beginning with consultations on the policies suggested in FASDEP II. For this reason, the coordination role of MoFA as the lead agency for the development of the sector will be central in the implementation of policies. Greater devolution of responsibilities to the regional and district levels will also be pursued. MoFA shall regularly assess the consistency of the policies with agriculture sector objectives and strategies and analyse the impact of policies on the agricultural sector. MoFA will ensure that the monitoring data is disaggregated by sub-sector and by stakeholder/farmer category (poor risk-averse smallholders with complex and diverse livelihood strategies and the rest) and by gender. The outcome of the periodic M&E will form the basis of proposals for policy review. This will be linked to the analysis of the impact of macro and other sector policies.



A number of regulatory and legal requirements are implied in the policy and the passage of legal instruments has been stalled for some time. MoFA will proactively pursue the development of regulations and passage of necessary legal instruments and advocate for their enforcement.

#### *Communications approach*

Broad strategies include outreach and behaviour development and behaviour change, skills development and social mobilization as well as advocacy and showcasing. These strategies will be used to inform (cognitive), encourage people to take action (motivational) and move them to carry out required actions in a sustained manner (Behavioural). The choice of communication tool to be employed will be informed both by the approach being used as well as the particular audience.

**Sustained impacts in communication would be supported by cumulative use of communication approaches, building on what is achieved with the other approaches. After the approaches are set out, a communications matrix would be developed that elaborates how identified gaps and issues will be systematically addressed.**

#### **The Announcement:**

There will be a wide dissemination of the document. Series of seminars and advocacy sessions and materials will be used to educate different levels of stakeholders on the policy and its expectations.

#### **Budget:**

The sector investment plan to be developed for the FASDEP II will spell out the specific communication activities and the cost.

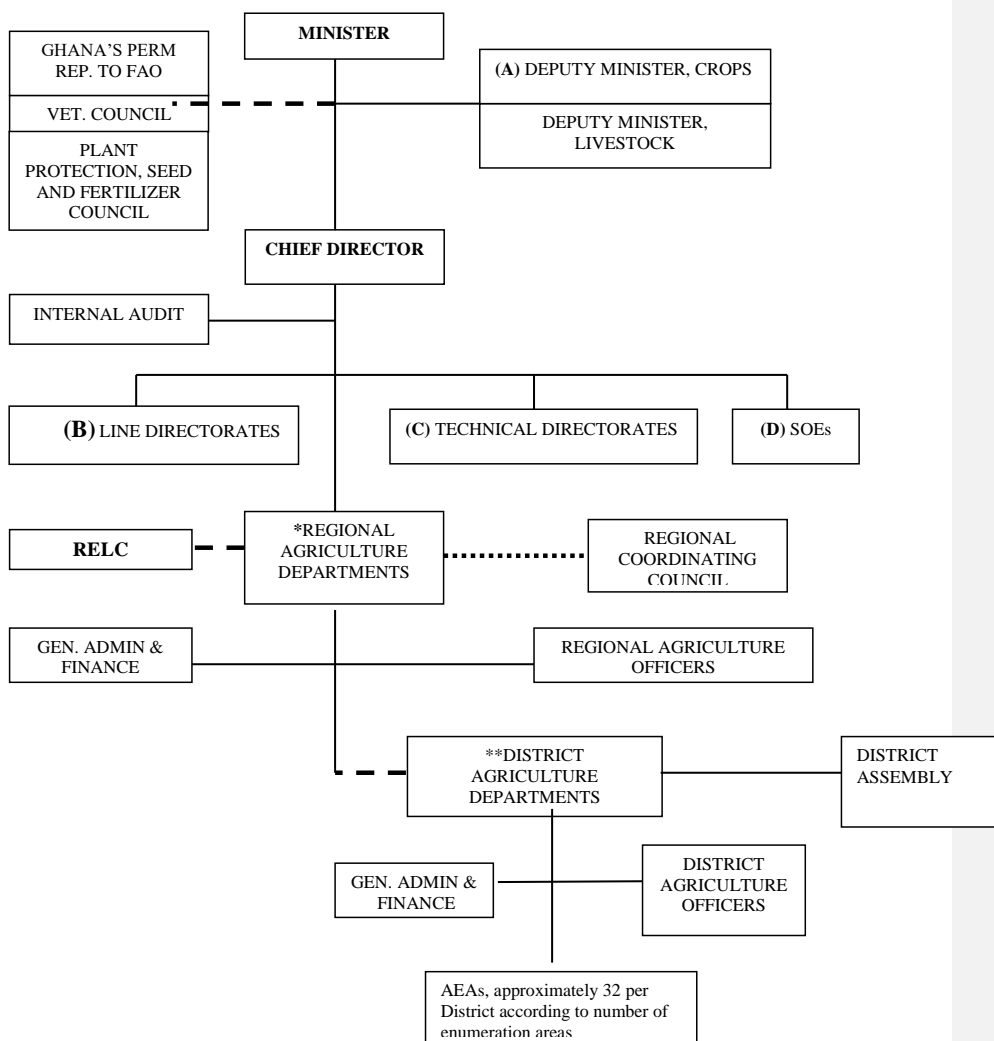
#### **7.5 Monitoring and Evaluation**

Monitoring and Evaluation reporting will be institutionalised, using a harmonised reporting format and indicators. Data collected will include sub-sector performance monitoring and monitoring of outcome and impact indicators. The Policy Planning Monitoring and Evaluation Directorate (PPMED) and Statistics Research and Information Directorate (SRID) will collaborate and coordinate data collection and analysis aimed at policy review in a decentralised environment. In this respect, MoFA will,

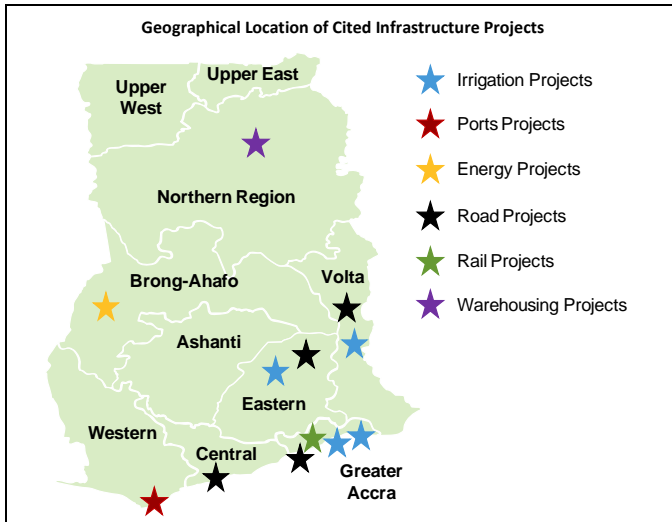
- Carry out an annual performance review of the sector in consultation with private sector and civil society organisations;
- Publish an annual report on the performance of the sector;
- Carry out an implementation review of FASDEP II after three years.

## ANNEXES

**ANNEX 1: Organogram of MOFA and link to decentralised levels**



- Administrative and technical reporting
- - - Technical reporting only
- ..... Administrative reporting only
- \*10 Regional offices
- \*\* 170 District offices and 42 more to be established





**APPENDIX 2: POTENTIAL, OPPORTUNITIES, CONSTRAINTS AND CHALLENGES (POCC) ANALYSES**

**PROGRAMME 1: FOOD SECURITY AND EMERGENCY PREPAREDNESS  
Component 1.1: Productivity Improvement**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. Low use of improved tech and practices in crops, livestock and fisheries by men and women farmers	<ul style="list-style-type: none"> <li>- There are existing improved and appropriate technologies</li> <li>- Agriculture research systems exist</li> <li>- Innovative farmers exist.</li> </ul>	<ul style="list-style-type: none"> <li>- Donor funds available</li> <li>- WAAPP to be implemented</li> <li>- Appropriate technologies from CGIAR systems exist.</li> <li>- Availability of print and electronic media for dissemination.</li> </ul>	<ul style="list-style-type: none"> <li>- Limited knowledge of the existence of some technologies by researchers, AEAs and farmers</li> <li>- Low priority for agriculture research by government</li> <li>- Inadequate budgetary provision and resourcing</li> <li>- Weak research-extension-farmer linkages</li> <li>- Limited knowledge and skills of farmers in use of technologies</li> <li>- Negative attitudes towards new technologies</li> <li>- Limited numbers of gender-sensitive technologies</li> </ul>	<ul style="list-style-type: none"> <li>- High cost of technological packages</li> <li>- Low funding of agriculture research</li> <li>-- Brain drain from research institutions</li> <li>- Growing use of intellectual property rights</li> </ul>
2. Low access (in quantity and quality) to agricultural extension services by men and women farmers	<ul style="list-style-type: none"> <li>- There are some public and private agriculture training institutes</li> <li>- In-service training opportunities exist</li> <li>- NGOs and FBOs can support MOFA extension</li> </ul>	<ul style="list-style-type: none"> <li>- Several Faculties of Agriculture</li> <li>- CGIAR systems available for extension information</li> <li>- FBOs are being developed</li> <li>- There are alternative mass communication channels</li> </ul>	<ul style="list-style-type: none"> <li>- Agriculture extension agents: farmer ratio very low (1:1500)</li> <li>- Very few numbers of women agriculture extension agents</li> <li>- Limited in-service training of AEAs</li> <li>- Lack of innovative extension delivery (methods)</li> <li>- Low morale of AEAs due to poor working conditions (remuneration, logistics etc)</li> </ul>	<ul style="list-style-type: none"> <li>- Civil service recruitment ceilings</li> <li>- MOFA does not have to engage products of agriculture training institutes</li> <li>- Poor remuneration</li> <li>- Poor communication and transportation infrastructure in rural areas</li> <li>- High attrition of women extension officers</li> </ul>

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
3. Low use of	- There are	- Current govt	- High costs of inputs	- Limited input

inputs by smallholder men and women farmers (5-10% fertilizers, 30% purchased seed – GLSS V)	alternative low cost inputs (through SLM technologies) - Gender-sensitive SLM technologies exist. - Vibrant seed growers' association	fertilizer subsidy policy -Microfinance institutions and NGOs are willing to give credit, especially to women FBOs	- Limited access to inputs (poor distribution network) - Low access to credit facilities for purchase of inputs - Limited knowledge and doubts of value of inputs - Low quality of inputs - Low capacity in seed production	distribution system - Rising prices of petroleum - Adulterated agriculture inputs are in the market and they are difficult to detect by farmers
Conclusion: The existence of appropriate technologies, the potential to generate others and the possibility of addressing the various constraints make it possible to improve use of improved technologies in crops, livestock and fisheries.				

#### Component 1.2: Support for Nutrition Improvement

Issue to be addressed	Potentials	Opportunities	Constraints	Challenges
High levels of stunting and high deficiency levels of vitamin A, iron and iodine in many parts of the country	- WIAD undertakes training in adequate feeding and nutrition	- Food processing industries ready to fortify processed foods - Fortified foods are being promoted - Food fairs used for advocacy	- Low quality of staple foodstuffs - Consumption of inadequate (in quantity and quality) diets - Limited knowledge on appropriate diets	- Limited fortification of staple foodstuffs either through breeding or processing - High poverty levels in rural areas
Conclusion: There are several nutrient-rich foodstuffs whose production and consumption can be promoted and fortification technologies are known but widely used.				

#### Component 1.3: Support for Off-Farm (Alternative) Livelihood Activities

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Limited capacity of the poor to engage in income generating activities (the vulnerable will invest in non-farm activities rather than farming)	WIAD activities support income generating activities	- Non-farm activities require low investment - Turnover is more rapid in non-farm activities - NGOs give loans for income generating activities	- Farmers' experience has been that there are very low returns in farming - High risks in farming - High illiteracy levels and limited skills	- Limited profitability of most off-farm activities in rural areas - Low demand for products - Poor infrastructural facilities in rural areas
Conclusion: Off-farm livelihood activities have the potential to reduce poverty and they can be promoted given the knowledge available.				

#### Component 1.4: Food Storage and Distribution

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. High post-harvest losses along the value chain	- Improved post-harvest handling technologies exist. - Some storage facilities exist	- Post-harvest technologies exist in CGIAR centres - There are donor interests in post-harvest activities	-Inadequate knowledge and skills in post-harvest handling of produce -Inappropriate storage facilities along the value chain -Inappropriate transportation facilities and handling skills - Poor market infrastructure (stalls, cold storage, hygienic environments etc) - High cost of post-harvest technologies	High levels of mycotoxins in stored produce.
2. Low integration of commodity markets	- There is growing recognition of value chain development	-There is demand for commodities in deficit areas	-Undeveloped systems of commodity trade between surplus and deficit areas -Inadequate warehousing facilities -Insufficient market information - Limited access to transportation facilities	- Poor road network
Conclusion: Improved marketing and processing can drastically reduce post-harvest losses				

#### Component 1.5: Early Warning System and Emergency Preparedness

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. Non existence of a holistic early warning system	- Information is being collected by various directorates. -Existence of institution for disaster mitigation. Trainable staff	- Prevalence of disasters resulting in increased awareness - Donor interest in early warning - Existence of Meteorological Services Department	- Lack of coordination and use of information for effective early warning system - No system for dissemination of information (from Vet, PPRSD, WFP etc) - Activities for early warning system are largely project based - Inadequate monitoring and reporting system.	
2. Lack of systems at household, community and national levels to respond to emergencies	- MOFA taking steps to establish strategic stocks - AESD promotes community storage systems - PPRSD encourages reporting	NGOs willing to assist in cases of emergency	- Poor household storage systems - Lack of capacity of food insecure populations to respond to emergencies - No appropriate systems for distributing emergency food (communities and NGOs must be involved). - Undeveloped community	- Limited capacities of households and communities to respond to emergencies



	information on pests		storage systems - Strategic stocks system not yet well established (levels, who, time period, triggers for release etc. not yet in place)	
3. Susceptibility of livestock and crops to diseases	- Strong veterinary department	- Strong support from donors - Support from CGIAR system can be obtained	- Weak livestock and crop disease surveillance, prevention and control systems - Lack of regular vaccination of livestock - Untimely acquisition of vaccines	- Porous international borders - Difficulties in control of movement of livestock, plants and products
Conclusion: Increasing the resilience of vulnerable members of society in times of emergencies is the best way to tackle the problem				

### Component 1.6: Irrigation and Water Management

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. Dependence of agriculture on poor and erratic rainfall	- Availability of competent irrigation personnel	- Technical knowledge from CGIAR system (IWMI) exist - Untapped potential of weirs along roads	- About 0.5% of Ghana's arable land irrigated - Poor rain water management knowledge and skills	- No irrigation culture among many farmers - Irrigated agriculture is labour intensive
2. Inefficient use of available irrigation systems	- Capacity building of extension personnel and farmers possible	- Can obtain skills from more experienced irrigation systems outside the country	- Limited knowledge and skills in irrigation farming - Limited stakeholder participation in formal irrigation schemes - Poor management of formal irrigation schemes - Limited management skills of relevant staff	- Poor/inadequate logistics for irrigation extension staff - Limited number of irrigation extension staff - Inadequate training of staff and farmers
3. High development and running costs of irrigation	- Reasons for high costs are known	- Examples of less costly systems exist in other African	- Limited skills of contractors in dam construction - Problems of fund disbursement by donors and governments	- Large scale irrigation systems unattractive to donors

		countries. - Differential tariffs at night for pump schemes		- High electricity tariffs
4. Low productivity on existing irrigation schemes	- Canals are being rehabilitated	- Good market for irrigated produce during dry season.	- Wastage of irrigation water (broken down canals – being rehabilitated). - Limited access to inputs and services (fertilizers, credit, mechanization etc) in irrigation schemes - Limited skills of input suppliers (mechanization etc). - Limited marketing infrastructure	- Inadequate cost recovery for maintenance of irrigation systems. - Poor water saving techniques and farming systems of irrigation farmers. - Poor management techniques of staff and farmers. - Obsolete infrastructure and equipment
5. Delay in completion of design and implementation of some large irrigation schemes	- Capacity building of contractors and consultants in construction of irrigation systems	- Desire of government to promote irrigated agriculture	- Delayed feasibility studies of schemes in Accra Plains, Afram Plains and northern savanna - Lack of funding for completed designs (Accra Plains) and for studies (northern savanna).	- Large scale irrigation systems unattractive to donors
6. Low capacity of extension staff in irrigated agriculture			- Lack of irrigation extension knowledge and skills - Limited number of skilled staff - Limited logistical support (vehicles, motor cycles, ICT equipment etc.) - Limited management skills of relevant staff	
Conclusion: Both small and large scale irrigation systems as well as efficient water harvesting and management systems are required to reduce reliance on rain-fed agriculture				

### Component 1.7: Mechanization

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. Low access to mechanization services along the value chain (production, processing and value addition)	- AESD exists to support mechanization	- Engineering Depts. in Univ and Polytechnics exist - ITTU are in all regions - Can obtain support from CGIAR centres	- Poor management of mechanization services in the past. (private sector led mechanization centres being proposed) - High cost of mechanization machinery and agro-industrial equipment (major limitation to private sector participation) - Limited production of agriculture tools and agro-industrial equipment by ITTU and other organizations (partly due to problems of availability of raw materials) - Inadequate human resource in agriculture mechanization (limited knowledge and skills) - Limited access to adequate long term credit facilities	- Forest nature of parts of the country - Small holdings of farmers - Shallow soils in parts of the country
2. Low use of intermediate technology (animal traction)	- Technologies exist - Animal traction centres exist	- There is capacity to produce other technologies	- Few numbers of traction centres - Dilapidated traction centres - Very inadequate personnel	- Preference for tractors by farmers - Animal rustling
3. Inadequate production (in quality and quantity) of processing equipment		- ITTU exist in all regions - Private sector manufacturers exist (Suame)	- Poor quality of material used in fabrication of equipment (not food grade) - Poor fabrication and lack of spare parts for equipment	- Lack of support for commercial production of prototypes
4. Inadequate skills training in agro-processing technologies	- Capacity for training exist in WIAD, AESD, APD and MOFI		- Insufficient skills of extension staff in processing technologies - Unhygienic waste disposal methods leading to poor environments	
5. Limited information on demand for agro-industrial machinery and equipment in Ghana and the West African sub-region		- There is capacity to generate the information	- No market research information - No economic analysis to assist in assessing the economic viability of agro-processing equipment manufacturing (fabrication).	
Conclusion: Mechanisation does not necessarily mean tractorisation even though well-informed				

tractorialisation is useful. Very diversified mechanisation services are required

**PROGRAMME 2: INCREASED INCOME GROWTH AND REDUCED INCOME VARIABILITY**

**Component 2.1: Promotion of Cash Crop, Livestock and Fisheries Production for Income in all Ecological Zones**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Low levels of income from cash crop production by men and women smallholder farmers	A variety of cash crops available in each agro-ecological zone	<ul style="list-style-type: none"> <li>- Growing domestic demand</li> <li>- External markets available</li> </ul>	<ul style="list-style-type: none"> <li>- Areas under cash crops are small</li> <li>- Yields (productivity) of cash crops by smallholders are low</li> <li>- Poor linkage to markets for inputs and outputs</li> <li>- Poorly developed agro-industries for the cash crops</li> </ul>	<ul style="list-style-type: none"> <li>- Land tenure system</li> <li>- Limited input distribution network</li> <li>- Competition from imports</li> <li>- Stiff competition in international markets</li> <li>- High standards in international markets</li> </ul>
Low productivity of animal breeds and low production of improved breeds to meet demand	<ul style="list-style-type: none"> <li>- Disease resistant genetic strains of local breeds</li> <li>- Breeding stations and university research stations</li> </ul>		<ul style="list-style-type: none"> <li>- Lack of genetic characterisation of livestock species (research)</li> <li>- Poorly resourced breeding stations (funds, infrastructure and personnel)</li> <li>- Poor management of improved breeds (cross-breeds)</li> <li>- Conventional breeding is long term and expensive</li> </ul>	<ul style="list-style-type: none"> <li>- High management requirement of improved breeds.</li> </ul>
High levels of animal diseases, and lack of feed and water for animals	<ul style="list-style-type: none"> <li>- APD, VSD, and ARI exist</li> </ul>	<ul style="list-style-type: none"> <li>- Donors have interest</li> <li>- CGIAR centres exist to provide assistance</li> </ul>	<ul style="list-style-type: none"> <li>- High costs of animal health care</li> <li>- Poor access to veterinary services</li> <li>- Limited use of appropriate technologies for livestock management particularly nutrition and housing</li> <li>- Limited numbers of livestock watering points especially in the dry season</li> </ul>	<ul style="list-style-type: none"> <li>- Porous borders</li> <li>- Difficult to control movement of animals</li> </ul>
Limited market linkages for livestock and livestock products			<ul style="list-style-type: none"> <li>- Undeveloped systems of livestock trade</li> <li>- Poorly developed abattoirs, slaughter houses and milk processing units</li> <li>- Inappropriate and unhygienic meat retailing points</li> <li>- Inadequate cold storage facilities</li> <li>- Insufficient market information</li> <li>- Poor road network</li> </ul>	<ul style="list-style-type: none"> <li>- Some District Assemblies do not put any priority on provision of slaughter houses and slabs for livestock processing</li> </ul>

			- Limited access to appropriate transportation facilities	
Low production of culture fish to meet the increasing demand	- Private culture fish producers exist	- High demand	- Limited supply of fingerlings - High cost of pond construction - Limited knowledge of fish culture - High mortality rate - Low productivity fish breeds - High post harvest losses - Limited processing facilities	- High risk in production
Limited exploitation of potential income generating production systems		- NGOs have interests in supporting these activities	- Limited uptake of technologies for bee keeping, mushroom, snail farming and production of small stocks - Undeveloped marketing system of produce - Poor value addition	
Conclusion: Opportunities exist for farmers to diversify out of staple crop production. Support with improved technologies and enhanced access to markets will enable them to diversify.				

### Component 2.2: Development of New Products

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Many agricultural products are sold in their raw form and are thus bulky, with short shelf lives and inconvenient to use		- Commercial production and promotion of convenience foods is incentive for more private sector interest - Consumers prefer convenience foods	- Limited uptake of value addition technologies - Some value addition developed technologies are not demand driven (researchers' perspectives) - Lack of resources to produce prototypes in commercial quantities - Inadequate knowledge of demand for technology - Appropriate value addition technologies are yet to be developed for some commodities - Limited funds for research into new value addition technologies	
Conclusion: Technical capacity in research for the development of value added products can be translated into additional commercially viable products if funding is made available.				

**Component 2.3: Development of Pilot Value Chains for Two Selected Commodities in Each Ecological Zone.**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
There are disjointed value chains with regards to most agriculture commodities.	- There is local knowledge on value chains	- Knowledge on value chains exists - There are programmes supporting value chains development	- Lack of capacity in MOFA and other MDAs to undertake extension in value chains - Undeveloped markets for produce (e.g. market for guinea fowls) - Lack of information on actors and functions along the value chain - Imbalance of influence of actors along the value chain (e.g. traders vrs farmers) - Contractual arrangements between actors in the value chain are yet to be common (e.g. producers and marketers/processors; marketers and processors) - Actors along most value chains are yet to understand and appreciate standards (GAPs, GMPs and HACCPs)	- Mistrust between actors along the value chain
Conclusion: Growing awareness of the importance of building strong value chains at the policy level should be translated to action through capacity building of public agencies and sensitisation of value chain actors.				

**Component 2.4: Intensification of FBOs and Out-Grower Concept.**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Many scattered small producers and therefore access to input (chemical inputs; extension, credit and mechanization services etc.) and output markets difficult.			- Lack of and underdeveloped FBOs (lack of cohesiveness, business skills, value chain concept etc) - Produce bulking is costly - Extension and credit delivery as well as loan recovery is expensive - Difficult to establish contractual arrangements with marketers/processors - Limited application of outgrower schemes to link farmers to services and markets/industry	
Conclusion: Well-functioning FBOs and the out-grower systems reduce transactions costs and can improve access to inputs and services.				

### Component 2.5: Development of Rural Infrastructure

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
-Poor rural infrastructure (poor road network, limited rural industries, lack of energy, water etc.)			- Transporting produce to markets difficult/costly - Lack of facilities/services for establishing rural industries	- High cost of infrastructure development
Conclusion: Rural infrastructure development should be a priority to provide an incentive for investors in rural areas and to reduce the cost of doing business.				

### Component 2.6: Support to Urban and Peri-Urban Agriculture

Issue to be addressed	Potential	Opportunities	Constraints	Challenges
Potential for urban and peri-urban agriculture as source of income under-exploited and threatened	-Skills in the production of fresh produce -Youthful labour force	Support groups exist to lobby International recognition of benefits of UPA	- Limited access to land. - Limited access to quality irrigation water. - Lack of skills in crop protection especially use of pesticides.	-Restrictive local government by-laws -Rapid estate development
Conclusion: Food production in urban and peri-urban areas can help alleviate food insecurity and is a very good source of income. Local authorities can assist to promote UPA				

## PROGRAMME 3: INCREASED COMPETITIVENESS AND INTEGRATION INTO DOMESTIC AND INTERNATIONAL MARKETS

### Component 3.1: Marketing of Ghanaian Produce in Domestic and International Markets

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
1. Low levels of local market penetration by smallholder men and women farmers	- District markets exist or can be constructed - Value chain approach supported by donors	- Hotels, supermarkets schools, agro-industries and other institutions exist - Donor funding for market access facilitation	-Individual farmers produce several crops in very small quantities making bulking difficult and very expensive - Farmers not organised as marketing groups/ weak farmers groups -Poor marketing infrastructure (roads, markets etc.) -Poor market information -Agro-processing industries not well developed and not linked to raw material producers	-Unfair competitions from imports - High level consumers (hotels) usually consider imported commodities to be of higher quality. - Activities of market queens.

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
2. Low levels of international market penetration by non-traditional export commodities	<ul style="list-style-type: none"> <li>- projects that offer training in grades and standards exist.</li> <li>-PRA testing and laboratories exist.</li> <li>- Producer associations undertaking group marketing</li> </ul>	<ul style="list-style-type: none"> <li>- Group certification reduces cost to producers</li> <li>- Increasing volumes of export quality produce.</li> <li>- Processing of quality produce</li> </ul>	<ul style="list-style-type: none"> <li>- Individual farmers produce small quantities making bulking difficult and very expensive</li> <li>- Contract farming and outgrower schemes not widely adopted</li> <li>-Poor marketing infrastructure (roads, markets etc.)</li> <li>-Poor market information</li> <li>-Agro-processing industries not well developed and not linked to raw material producers</li> <li>- Low capacity to enforce grades and standards</li> <li>- High cost in adopting grades and standards</li> </ul>	<ul style="list-style-type: none"> <li>- Stringent international grades and standards</li> <li>- High cost of certification</li> <li>- International competition.</li> <li>- Multiplicity of standards and certification</li> </ul>
3. Low capitalization of traders (especially those who bulk produce at the local levels)	Proposed out-grower fund scheme	<ul style="list-style-type: none"> <li>- Credit institutions exist and tend to favour traders</li> </ul>	<ul style="list-style-type: none"> <li>-Limited access to formal credit sources</li> <li>-High cost of credit</li> </ul>	Traders may not meet collateral requirements
4. Lack of functional grading and standardization system		Ghana standards Board	<ul style="list-style-type: none"> <li>-Lack of service providers in grading and standardization</li> <li>-Lack of demand for grades and standards by consumers</li> <li>-Non enforcement of regulations on standards and grades</li> <li>-Poor packaging of locally marketed products</li> </ul>	<ul style="list-style-type: none"> <li>-Consumers unwilling to demand standards and grades</li> <li>-weak enforcement agencies</li> </ul>
5. Consumer preference for imported commodities that have local substitutes	Improve the quality of local products	<ul style="list-style-type: none"> <li>Fiscal policy (taxes)</li> <li>There exists trade fairs for promotion of local produce</li> </ul>	<ul style="list-style-type: none"> <li>-Real and perceived low standards of local products</li> <li>- Imported goods may cost cheaper than local products</li> </ul>	<ul style="list-style-type: none"> <li>- Dumping of cheap products in local markets</li> <li>- Weak quality control systems for imported goods</li> <li>- WTO regulations??</li> </ul>
<p>Conclusion: Opportunities exist for Ghanaian producers to increase the level of penetration in domestic and international markets. However a lot more needs to be done to increase their competitiveness at the point of marketing.</p>				



**PROGRAMME 4: SUSTAINABLE MANAGEMENT OF LAND AND ENVIRONMENT**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Low capacity at all levels for implementation of SLM policies as they affect agriculture	- Strengthen the environment desk at MOFA, - Agriculture colleges	- Links with EPA - Donors willing to fund SLM activities	-Limited skills in mainstreaming SLM in agriculture sector (e.g. in conduction SEA etc) -Limited information, tools and skills of extension service providers to deliver SLM technologies -Absence of emphasis of SLM in Agricultural Colleges and Faculties of Agriculture	-Lack of reform in land tenure system (e.g. land certification system for effective land administration) -Weak legal framework for enforcement of SLM activities
Low adoption of SLM technologies at community level	Young and enthusiastic staff available at all levels for training as specialists	- Trained and middle level staff available. - Farmers and land users increasingly becoming aware of impacts of land degradation.	-Limited scale of understanding of SLM technologies -SLM technologies are laborious -Lack of incentives (e.g. matching grants, credit etc) to encourage adoption of SLM technologies -Many of the benefits are not immediate -Inappropriate approaches to implementation of SLM technologies	-Wrong attitudes towards SLM technologies -Externality effects difficult to control (all should be part of technologies)
Most SLM activities in communities are of pilot nature		- Experiences are available in all regions. - Availability of global payment schemes for environmental services	-Wrong attitudes towards SLM technologies -SLM technologies are laborious -Many of the benefits are not immediate -Inappropriate approaches to implementation of SLM technologies	-Lack of resources for up-scaling -Externality effects difficult to control (all should be part of technologies)
Weak collaboration of relevant agencies to ensure SLM mainstreaming	Strengthen environment desk at MOFA	EPA can provide framework for coordination	-Very low level of consultation between development agencies in implementing activities/projects that have SLM implications. -Lack of framework for collaboration to take advantage of synergies	-Some development agencies are ignorant of SLM principles
Conclusion	Despite the importance of sustainable land management in agriculture, there are still a wide range of challenges for making an impact in the adoption of the SLM practices. The challenges range from policy deficiencies to institutional weaknesses and lack of incentives for individual adoption and it will take commitment of all stakeholders to achieve of sustainable land management in agriculture.			

**PROGRAMME 5: SCIENCE AND TECHNOLOGY APPLIED IN FOOD AND AGRICULTURE**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Low uptake of agricultural technology	- AES exist - RELCs and CARGS provide framework for demand driven research	- Agriculture NGOs exists	- Some research not demand driven - Some technologies are not delivered as packages to farmers and thus optimum benefits are not realised. - Some technological packages are expensive - Limited of knowledge and skills of farmers to adopt packages - Poor distribution of input dealers - Technology dissemination is constrained by limited commercial production/ fabrication (e.g. production of components of the technology) - Underfunding of extension services - Poor research-extension linkages	- High cost of inputs
Limited funding of agricultural research	CARGS	- There is high possibility for donor funding - WAAP	- Limited priority given to agricultural research - High dependence on donor funding for agricultural research is unsustainable	
Limited application of biotechnology and its benefits		- Draft Biosafety Bill ready - CGIAR system has some expertise - There is donor interest	- Non passage of bio-safety bill - Limited capacity in research institutions and universities to conduct biotechnology research (laboratories, human resources etc) - Biotechnology research expensive	- Negative perception of biotechnology products
Poor management of agricultural research information	MOFA library  MOFA website	CSIR	- No system in place to manage agriculture research information - There is often no obligation on agriculture researchers to supply research output to MOFA or any national agriculture research unit when individual researchers source funding independently	
Poor coordination/ collaboration of institutions/ disciplines involved in research along the agriculture value chains	- Value chain committees - RELCs		- Lack of framework for coordination (e.g. MOFA and Food Research Institute) - Most research not formulated from a gender perspective	

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Conclusion: Science and technology and an effective technology delivery mechanisms is critical for improving agriculture productivity, value addition and reduction in post-harvest losses				

**PROGRAMME 6: IMPROVED INSTITUTIONAL COORDINATION AND STAKEHOLDER ENGAGEMENT**

**Component 6.1: Strengthen Intra-Ministerial Coordination**

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Lack of effective communication within and between directorates within the MOFA headquarters	Previous framework exists	A civil service code which gives detail guide to the lines of communication in MDAs exists	<ul style="list-style-type: none"> <li>- Non-functional framework for communication within and between directorates</li> <li>- Non-functional framework for information sharing</li> <li>- No regular meetings within directorates and within MOFA (Non conformity with civil service guidelines)</li> </ul>	High turnover of top management staff undermines this effort
Lack of effective communication between national, regional and districts directorates	Use district and regional directors to improve communication	Decentralization framework	<ul style="list-style-type: none"> <li>- Lack of organizational manual showing functional relationships between national, regional and district directorates</li> <li>- Weak established lines of communication</li> <li>- Non use of ICT</li> <li>- Low priority given to establishment of efficient communication systems</li> </ul>	- Uncertainty of how MOFA will operate with districts under decentralized policy
Poor management of commissioned studies	<ul style="list-style-type: none"> <li>- Library exists</li> <li>- There is a MOFA website</li> </ul>	<ul style="list-style-type: none"> <li>- Other libraries exist</li> <li>- CGIAR system exist</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of clearing house (review system) for reports of commissioned studies</li> <li>- Limited sharing of information on on-going commissioned studies with staff of directorates</li> <li>- No system for storage and retrieval of reports (commissioned, annual reports, etc.)</li> <li>- Poor dissemination of reports to stakeholders</li> </ul>	

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Weak financial and asset management and reporting	- MOFA has experience and has established an asset management system under FABS project	Donor funding  GIMPA can offer training	- Inadequate accounting staff at cost centres (46 cost centres have no accounting officers) - Use of manual data capture in reporting - Weak financial monitoring at all levels - Financial reporting not linked to use of resources - Financial disbursements not linked to timely reporting and levels of achievement - Asset management not institutionalised in MOFA	Employment ceilings on civil service  High attrition of finance staff to private sector
Weak human resource management within MOFA (quantitatively and qualitatively)	HRDM Directorate exists	Training opportunities at GIMPA  Donor funds  Civil service code exists	- Weak capacity of Human Resources Development and Management Directorates - No established central system for human resources management within MOFA - Lack of processes to feed HR information to HRDM - Lack of computerised personnel management system - Non regular annual staff assessment - Non coordination of training in MOFA by HRDM	
Conclusion: There is an urgent need for a functional and effective communication system within MOFA (Headquarters and all Directorates) and between them and creation of an effective communication linkage with regions and districts under the decentralised system				

#### Component 6.2: Inter-Ministerial Coordination

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Weak inter-agency coordination	Annual sector review provides opportunity for engagement of MDAs	- NDPC could provide a platform for coordination - Civil service framework for coordination	- No established framework for inter-agency coordination - Non participation of many MOFA Directors in joint agriculture sector reviews - Weak joint planning and review with MDAs	- Frequent changes of ministerial portfolios - Frequent changes of top management staff

		exists		
Conclusion: Agriculture sector spans a number of Ministries, Public Agencies and its development in depended on effective collaboration between MOFA and other agriculture sector MDAs.				

### Component 6.3: Partnership with Private Sector and Civil Society Organizations

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
No formal link or platform of engagement of private sector with MOFA	<ul style="list-style-type: none"> <li>- Take advantage of the MOFA service Charter</li> <li>- Annual joint sector review provides an opportunity for engaging civil society</li> </ul>	<ul style="list-style-type: none"> <li>- There exists a number of private sector associations in agriculture sector</li> <li>- MOFEP 2006 guidelines for sector collaboration includes collaboration with private sector</li> </ul>	<ul style="list-style-type: none"> <li>- No established system for private sector engagement</li> <li>- Lack of data base of private sector associations in the agriculture sector</li> <li>- Limited capacity of agriculture sector staff to engage private sector</li> </ul>	Private sector and civil service have different working styles
No formal link or platform of engagement of civil society with MOFA	<ul style="list-style-type: none"> <li>- NGOs already working with MOFA staff at the community/ district level</li> <li>- Annual joint sector review provides an opportunity for engaging civil society</li> </ul>	<ul style="list-style-type: none"> <li>- There exists a number of NGOs implementing agriculture activities in the country</li> </ul>	<ul style="list-style-type: none"> <li>- No established system for civil society engagement</li> <li>- Lack of data base of civil society organizations in the agriculture sector</li> <li>- Limited capacity of agriculture sector staff to engage civil society</li> </ul>	<ul style="list-style-type: none"> <li>NGOs implement short duration projects</li> <li>Weak farmers umbrella organization</li> </ul>
Conclusion: The private sector and civil society play an important role in the development of the agriculture sector. The Government in various policies has stated its determination to promote a private sector led agriculture development. Associations of both civil society and private sector exist which can form the basis for dialogue with MOFA and agriculture MDAs.				

### Component 4: Coordination with Development Partners

Issues to be addressed	Potentials	Opportunities	Constraints	Challenges
Agricultural SWAp not fully effective	<ul style="list-style-type: none"> <li>- Process already started</li> <li>- Framework in place (Joint sector review already initiated)</li> </ul>	Donor interest	<ul style="list-style-type: none"> <li>MOU not completed and signed</li> <li>Joint review not fully institutionalized</li> </ul>	

**Commented [L1]:** Issue too broad. Does not bring out challenges to be addressed under the component.

	- A policy document exists and sector plan is in preparation			
Conclusion: DPs have been and will continue to be very instrumental in the development process of the agriculture sector. There is need for greater collaboration and understanding between them and MDAs.				