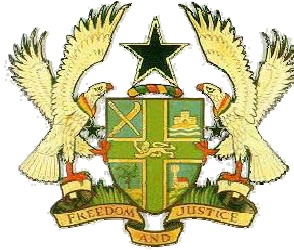


Ministry of Food and Agriculture



Republic of Ghana

Food and Agriculture Sector Development Policy (FASDEP II)

August 2007

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LIST OF ACRONYMS

AAGDS	Accelerated Agriculture Growth and Development Policy
AEA	Agricultural Extension Agent
AESD	Agricultural Engineering Services Directorate
AGOA	African Growth and Opportunity Act
AIDS	Acquired Immune Deficiency Syndrome
AT	Animal Traction
AU	African Union
CAADP	Comprehensive Africa Agriculture Development Programme
CBOs	Community Based Organisations
CEPS	Customs Excise and Preventive Services
CIF	Cost Insurance and Freight
COCOBOD	Cocoa Board
CPI	Consumer Price Index
CSIR	Council for Scientific and Industrial Research
DAs	District Assemblies
DPs	Development Partners
ECOWAP	ECOWAS Agricultural Policy
ECOWAS	Economic Community of West African States
EDF	Extension Development Fund
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EU-ACP	European Union-African Caribbean Pacific
FAO	Food and Agriculture Organisation
FASDEP	Food and Agriculture Sector Development Policy
FBO	Farmer-Based Organisation
FBODF	Farmer-Based Organisation Development Fund
GADS	Gender and Agricultural Development Strategy
GAP	Good Agricultural Practices
GDHS	Ghana Demographic and Health Survey

GDP	Gross Domestic Product
GIDA	Ghana Irrigation Development Authority
GMP	Good Manufacturing Practices
GOG	Government of Ghana
GPRS	Ghana Poverty Reduction Strategy
GPRS II	Growth and Poverty Reduction Strategy II
HACCP	Hazard Analysis and Critical Control Points
HIV	Human Immune Virus
HRD	Human Resource Development
ICT	Information Communication Technology
IFPRI	International Food Policy Research Institute
IMT	Intermediate Means of Transport
IPM	Integrated Pest Management
LACOSREP	Land Conservation and Smallholder Rehabilitation Project
M & E	Monitoring and Evaluation
MCA	Millennium Challenge Account
MDAs	Ministries, Departments and Agencies
MDBS	Multi-Donor Budget Support
MDG	Millennium Development Goals
MLGRDE	Ministry of Local Government, Rural Development and Environment
MoFA	Ministry of Food and Agriculture
MOH	Ministry of Health
NDPC	National Development Planning Commission
NEPAD	New Partnership for Africa's Development
PLWHA	People Living with HIV/AIDS
PPMED	Policy Planning Monitoring and Evaluation Directorate
PPRSD	Plant Protection and Regulatory Services Directorate
PRA	Pest Risk Analysis
PSDS	Private Sector Development Strategy
PSI	President's Special Initiative
PSIA	Poverty and Social Impact Assessment

RELC	Research Extension Liaison Committees
RTIU	Rural Technology Information Unit
SAM	Social Accounting Matrix
SEA	Strategic Environmental Assessment
SLM	Sustainable Land Management
SNRM	Sustainable Natural Resource Management
SPS	Sanitary and Phytosanitary
SRID	Statistics Research and Information Directorate
ST&D	Science Technology and Development
SWAp	Sector-Wide Approach
VAT	Value Added Tax
WIAD	Women in Agricultural Development
WTO	World Trade Organisation

FOREWORD

The first Food and Agriculture Sector Development Policy (FASDEP) was developed in 2002 as a framework for the implementation of strategies to modernisation of the agricultural sector. The strategies in that policy were based on the Accelerated Agricultural Growth and Development Strategy (prepared in 1996), and were designed to forge linkages in the value chain. After nearly four years of its implementation, and the development of sub-sector policies and strategies to guide implementation, it became necessary to revise FASDEP to reflect lessons learned and to respond to the changing needs of the sector.

This revised policy (FASDEP II) emphasises the sustainable utilization of all resources and commercialisation of activities in the sector with market-driven growth in mind. It however targets fewer commodities for food security and income diversification, especially of resource poor farmers. Enhancement of productivity of the commodity value chain, through the application of science and technology, with environmental sustainability is emphasised. Greater engagement of the private sector and collaboration with other partners will be pursued to facilitate implementation of policies.

FASDEP II is the outcome of a consultative process, which began with inputs from inter-ministerial teams working on different areas of intervention. The inputs of the thematic groups were consolidated into an initial draft which was revised on the basis of comments from the Ministry of Food and Agriculture and her development partners, and from stakeholders at a sector review workshop. The second draft was then distributed widely and consultations held at regional workshops to seek the views of a wider cross-section of stakeholders.

This policy will be complemented with a strategic framework which will specify how the policy strategies in this document will be implemented.

MoFA hopes that through effective cooperation, coordination and commitment of all stakeholders (other MDAs working in the sector, private sector, including farmers, processors, traders, NGOs and civil society in general) in the implementation of the proposed strategies, the country can 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.

Ernest A. Akubour Debrah (MP)
Minister of Food and Agriculture

CHAPTER 1

INTRODUCTION

1.1 Background

The Food and Agriculture Sector Development Policy (FASDEP) is developed as a policy of the Government of Ghana to guide development and interventions in the agriculture sector. The first Food and Agricultural Sector Development Policy (FASDEP I) was formulated in 2002 as a holistic policy, building on the key elements of Accelerated Agricultural Growth and Development Strategy (AAGDS), and with a focus on strengthening the private sector as the engine of growth.

FASDEP I was meant to provide a framework for modernising the agricultural sector and making it a catalyst for rural transformation, in line with the goal set for the sector in the Ghana Poverty Reduction Strategy (GPRS I). A poverty and social impact analysis (PSIA) of FASDEP I, however, concluded that the policies would not be able to achieve the desired impact on poverty for a number of reasons, including the following:

- The expectation of modernising poor smallholder agriculture was unachievable because of improper targeting of the poor within an environment where the drivers of modernisation, access to credit and technology, good infrastructure, and markets are very limited.
- Problem analysis was weak and did not sufficiently reflect client perspectives on their needs and priorities; and
- The process by which the Ministry of Food and Agriculture (MoFA) was to stimulate response from other MDAs for interventions that fell outside the domain of MoFA was not specified.

FASDEP II seeks to enhance the environment for all categories of farmers, while targeting poor and risk prone and risk-averse producers. This is made possible through an extensive stakeholder consultation process which incorporates lessons learnt from implementation of FASDEP I, and sub-sector policies and strategies that have been developed since 2002. The policy also ensures consistency with national development objectives as specified in the Growth and Poverty Reduction Strategy II (GPRS II). GPRS II aims to achieve accelerated and sustainable shared growth, poverty reduction, gender equity, protection and empowerment of the vulnerable and excluded within a decentralised and democratic environment.

1.2 The FASDEP Review Process

The revision of FASDEP started with a review of past interventions in the food and agriculture sector and the preparation of building blocks for the policy. The building blocks were based on the following seven thematic areas based on FASDEP I.

- Human resource development
- Technology development and dissemination
- Infrastructure development
- Promotion of specific commodities for markets
- Improved financial services
- Cross-cutting issues (e.g. gender, land, etc)
- Implementation framework

Seven working groups, based on the thematic areas, and with members drawn from MoFA, Development Partners (DPs) and other Ministries, Departments and Agencies (MDAs), produced initial inputs, which were used to produce a zero draft for discussion within MoFA and comments from DPs. The draft was also presented to stakeholders at a MoFA performance review meeting.

Consultations were held with stakeholders in one district in each of the ten regions, to seek their views on the agriculture sector constraints and how they could better be addressed. In addition, stakeholders in agricultural input supply, based in Accra, were consulted for their input. The views from the consultations and comments on the zero draft informed the preparation of the First Draft, which was again circulated to stakeholders for comment and used for regional consultation workshops. Separate consultation was held with MDAs, the banks and the Parliamentary Select Committee on Agriculture.

CHAPTER 2

THE FOOD AND AGRICULTURAL SECTOR

2.1 Roles of Agriculture

The traditional roles of agriculture include provision of food security, supply of raw materials for industry, creation of employment and generation of foreign exchange earnings. Beyond these, agriculture is also recognised to have a greater impact on poverty reduction than other sectors. Other roles are social stabilisation, buffer during economic shocks, support to environmental sustainability, and cultural values associated with farming.

The other roles of agriculture, beyond food production, have been assessed in Ghana through the Food and Agriculture Organisation (FAO) cross-country project, 'Roles of Agriculture'. Analyses of the Ghana Living Standards Surveys of 1991/92 and 1998/99 showed that growth in the agricultural sector stimulated 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 as a result of spending of incomes earned from all these productive activities. Poverty reduction was, however, limited by a widening inequality. High labour absorption by the sector, as an employment avenue, is confirmed by recent estimates of an economy-wide multi-market model, which show that the agricultural sector is the most labour-intensive sector of the economy.

These results are consistent with results of a study by the Ghana Strategy Support Programme (GSSP) of the International Food Policy Research Institute (IFPRI), which show that growth led by the agricultural sector will be more effective in reducing poverty both at the national level and in the poor regions because of strong income and consumption linkages. Also, although past growth and poverty reduction was stimulated through support for export crops, support to increase productivity in staple crops, by virtue of the broad-based nature of their production, can generate faster growth and poverty reduction.

Agriculture enhances social viability through movements of the population between agriculture and other sectors, and through rural-urban migration. In Ghana, the contribution of agriculture to national social viability has been low because the structural transformation of the sector has been slow. The social viability role has manifested primarily in agricultural population re-distribution as farmers chase emerging

opportunities across ecological zones. The role of agriculture as a buffer during economic shocks has been demonstrated with population movements during labour retrenchment and displacement from Nigeria in the early 1980s, as agriculture became the main source of alternative livelihoods for the displaced. At the macro level, the recovery of the Ghanaian economy, following the crises of the early 1980s, was hinged on the sector's capacity to increase exports, government tax revenue, domestic food supply and to raise per capita incomes.

Agriculture also influences considerably the management of natural resources, including land, forest, water and genetic biodiversity. Land degradation through poor agricultural practices reduces land productivity and limits poverty reduction. An effective agricultural policy would enhance the positive influences through carbon sequestration, contribution of tree cover for conservation and improved quality of soil, protection of watersheds, and enhancement of the beauty of natural landscapes.

The cultural value of agriculture in Ghana has been examined through the eyes of farming and fishing communities, who note that farming feeds the family and the nation, and it can be relied upon as a means of livelihood because 'it is always there', and ensures the values of self-reliance, independence and responsibility towards the family.

These roles of agriculture in the national economy make agricultural policy an intricate part of the broader national policy, the effective implementation of which can lead to sustainable growth in incomes and poverty reduction.

2.2 Food and Agriculture in Ghana

Agriculture is predominantly practised on smallholder, family-operated farms using rudimentary technology to produce about 80% of Ghana's total agricultural output. It is estimated that about 2.74 million households operate a farm or keep livestock. According to the 2000 census, 50.6% of the labour force, or 4.2 million people, are directly engaged in agriculture. About 90% of farm holdings are less than 2 hectares in size. Larger scale farms and plantations produce mainly oil palm, rubber and coconut and to a lesser extent, maize, rice and pineapples. Agricultural production is generally dependent on rainfall, although an estimated 6,000 farm enterprises nation-wide were using some means of irrigation in 1999. In 2002, the total area under formal irrigation was around 11,000 hectares whereas the potential area – including inland valleys – that could be

developed for irrigation is estimated at 500,000 ha. The Ghana Irrigation Development Authority (GIDA) in 2000 identified 32,000 hectares of under-developed inland valleys throughout the country that could benefit from moisture improvement technologies for food production.

Ghana produces 51% of its cereal needs, 60% of fish requirements, 50% of meat and less than 30% of the raw materials needed for agro-based industries. Production of roots, tubers and vegetables such as tomatoes and onions, the most widely used staple food crops, is rather erratic and vacillates between scarcity, sufficiency and glut, depending on the vagaries of the weather.

Agriculture continues to contribute the largest share to the Gross Domestic Product (GDP), even though the share of the sector in national output declined from 44% in 1990 to 37% in 2005. Since 2000, the contribution of agriculture to total GDP has varied between 35.8% and 37%; Agricultural growth increased from about 4% in 2000 to 6% in 2005 but much of the recent growth has been stimulated by the cocoa industry.

2.3 Agricultural Sector Constraints

The slow growth of agriculture is due to a combination of factors that reduce farmers' incentives to invest and produce, which include lack of technological change and poor basic infrastructure. Annual rainfall varies between 800 and 2400 mm, generally decreasing from south to north and from west to east. A significant proportion of arable land has soils with poor physical properties and low content of organic matter. As a result, productivity in both crops and livestock is very low.

Constraints of the sector are classified under:

- Human resource and managerial skills;
- Natural resource management;
- Technology development and dissemination;
- Infrastructure;
- Market access;
- Food insecurity and
- Irrigation development and management.

The cross-cutting constraints include gender inequality and discrimination against women, access to land and finance, and energy availability and costs. There are also commodity specific constraints all of which are linked to one or the other of the above constraints.

The challenges of the agriculture sector have the added dimension of diversity in agro-ecology from the south to the north of the country. The recognised agro-ecological zones in Ghana are coastal savannah, rain-forest, semi-deciduous forest, forest-savannah transition, Guinea savannah and Sudan savannah, These zones define the physical production environment and therefore the comparative advantage for production of different commodities. A successful agriculture sector policy must, therefore, recognise the comparative advantage and specific needs of different areas of the country.

Human Resource and Managerial Skills

The largest constituent of the human resource of the agricultural sector is the over 60 per cent of the population, including farmers, traders and processors that make a living from the sector. Agriculture is also a critical sector for women. About half (48.7%) of the total female population is self –employed in agriculture, with the majority being engaged in food production.

There is an aging farmer population yet the sector is unable to attract the youth. High illiteracy among producers means a constant need for facilitating their access to information on new approaches, opportunities and policies. High incidence of poverty among farmers limits their ability to respond to opportunities either because of lack of capacity or because of their risk-aversion strategies. Changes in global trade environment are widening the gap between the skills needs of the private agribusiness and the skills of existing manpower of service providers. Livestock specialists, e.g. veterinarians, breeders, and meat scientists are especially limited in the country.

Sustainable Natural Resource Management

Ghana's agriculture is natural resource-based, with extensive crop and livestock production systems, hunting, rain-fed agriculture, and fish from natural water bodies. Traditional practices such as bush burning, and the improper use of technologies such as irrigation and agro-chemicals do not engender sustainability of resource use. For example, 69% of the total land surface of Ghana is considered prone to severe

erosion coming at a cost of 2% of GDP. Although the problem is in all the agro-ecological zones, the savannah regions are affected the most.

Land degradation, desertification and soil erosion hit hardest at the local level and those most affected are the poor women and men who depend on natural resources for their survival. 'Women's work', particularly work performed by poor women, is strongly affected by environmental degradation. Communal ownership of land and absence of demarcated grazing lands result in over-grazing and conflicts between livestock-keeping and crop farming. The practice of bush burning for crop production is a source of loss of fodder for livestock during the critical dry season period.

Unfortunately, however, most farmers in Ghana are not aware of the linkage between inappropriate tillage and water management practices on one hand, and environmental degradation on the other. With an estimated 64 per cent of the natural wealth of Ghana locked up in crop lands, there is the need for more focused attention to address poor agricultural land management. The prudent management of agrochemicals and drainage is crucial in sustaining the natural resource base.

In spite of the existence of rules and regulations on environmental management for agricultural land use activities, major stakeholders are unaware of these and enforcement is weak. Past efforts by the Government and its partners have yielded some positive results; however, scaling up of these SLM practices has been faced with a number of barriers, including cost and limited access to relevant inputs within an environment of limited credit, and land tenure systems that do not favour investments in improvements to land.

Technology Development and Dissemination

The underlying causes of low productivity in Ghanaian agriculture are poor soil conditions, low and poor distribution of rainfall, diseases and pests, limited access to planting materials, seed and livestock breeds. There is also low adoption of existing technologies due to poor market incentives and inaccessibility to relevant inputs. Livestock, especially rural poultry, is characterised by high mortality rates because of diseases and poor management practices. There are limited appropriate technologies for processing, transporting, handling and storage of crop produce, fish, and livestock products. Also, limited knowledge in post-harvest management, particularly of perishable produce have resulted in high post-harvest losses of

about 20%-50% for fruits, vegetables, roots and tubers, and about 20%-30% for cereals and legumes. The use of traditional processing technologies, mostly by women, is prevalent but they have low yields and are arduous and, in some cases, result in poor product quality. Limited availability of appropriate 'women-friendly' and labour-saving technologies and imbalances in the delivery of extension services to disseminate information have had negative impacts on the productivity of women farmers and producers.

Livestock breeds are of low quality and there are no interventions that effectively address problems of lack of feed and water, particularly in the dry season. Overall, there is little adoption of improved livestock management systems, including proper housing, feeding and health care.

Low application of technologies to alleviate these problems is also attributed to supply driven approach to technology generation and dissemination (top-down planning) that does not favour adoption of technology by users.

Infrastructure

Road and transport infrastructure for the movement of agricultural commodities and inputs are inadequate. This constraint is particularly limiting the development of agriculture in high potential areas such as the Afram Plains and Western Region. More broadly, poor infrastructural facilities aggravate women's time constraints and hinder their productive work. For instance, lack of good feeder roads linking farms to villages means that produce has to be head-loaded and this is mainly undertaken by women. Poor road infrastructure is also affecting cost of important inputs such as fertiliser.

The rate of expansion of irrigation infrastructure has been slow largely because of the high capital cost in irrigation development. Private sector investment has been limited due to lack of incentives.

The infrastructure for landing and hygienic handling of fish and pre-shipment storage of fish and other fresh produce at the ports is inadequate. In addition, supply of hatcheries, ponds and cages for aquaculture is limited.

Physical markets for farm produce are characterized by decrepit infrastructure, lack of suitable commodity-specific storage facilities, unhygienic premises and over-crowding. In addition, most stakeholders, including

District Assemblies and traders, lack the capacity to effectively manage established markets. There are no well developed livestock markets; abattoir facilities are also limited.

Market Access Constraints

Other constraints limiting market access besides poor infrastructure are lack of marketing skills, inadequate product development for effective utilisation of farm produce, and generally weak commodity value chains. The value chain refers to the string of actors working together to satisfy market demand for a particular product. It includes input dealers involved in backward linkage activities in the production system, and transporters, traders, processors etc involved in forward linkage activities. Increasing levels and multiplicity of standards (food safety and phytosanitary) in international trade present a growing challenge to market access, especially of high value agricultural export commodities. In the domestic front, a low consciousness of majority of consumers and producers about food safety does not engender a culture of following good agricultural or manufacturing practices (GAP/GMP) among farmers, processors and traders. There is generally a lack of market orientation among producers and processors.

Despite Ghana's comparative advantage in the production of horticultural crops, Ghana has lower competitiveness compared to Latin America, East Asia, and neighbouring West African countries because of poor infrastructure, high cost of capital, lack of irrigation, poor skills of producers in meeting external quality standards, poor logistic management and insufficient research capacity for horticultural sub-sector.

Nature of Food Insecurity and Emergency Preparedness

Ghana faces the challenge of making substantial progress in food security because average yields have remained stagnant. Commercial food imports and food aid have constituted about 4.7% of food needs in the last 15 years.

Food production fluctuates from year to year due to frequent variations in the magnitude of rains during and between growing seasons. This recurrence of climatic stress destroys crops and livestock. Rainfall is a major determinant in the annual fluctuations of household and national food output. This creates food insecurity at household levels, which can be transitory in poor communities and chronic in distressed areas. In high population density areas such as the Upper East Region, the situation is cyclical and severe for

three to five months each year. There are therefore regional disparities in food insecurity due to seasonal food deficits in the three northern regions.

A significant proportion of food-insecure Ghanaian households in rural, as well as, urban localities produce some of the food they consume. For most households, hunger is frequently associated with poor harvests resulting from environmental degradation, poor weather, natural disasters, or conflict. Almost all families supplement their food requirements with significant amounts of purchased staple crops. Gender is also an important dimension of poverty, especially in northern Ghana where there is a sharp disparity between the income-earning opportunities of women and men.

While Ghana can be classified as generally food secure, pockets of food-insecure populations exist in all regions because of acute resource limitations and lack of alternative livelihood opportunities for some individuals and households to meet their dietary needs with purchased food. Malnutrition is a serious problem among children, adolescents and pregnant women due to insufficient levels of food intake and or diets not providing an adequate nutritional intake. Results from the 2003 Ghana Demographic Health Survey (GDHS) indicate that malnutrition contributes 40% to mortality among children less than 5 years. In that survey, 29% of this group of children were chronically malnourished, an increase of 3 percentage points over the 1998 rate. Seven per cent of children were wasted (through acute malnutrition) and this reflected a 2-percentage point decline from the 1998 level. Twenty-two per cent were underweight (with 5% severely under-weight) in 2003, a decline of 3-percentage points from 1998. However, in spite of the improvements in proportion of children wasted and underweight, the rate of wasting is 3.5 times that expected in a healthy population while the proportion of under-weight children is 11 times the level expected in a well nourished population.

The availability of food varies considerably from year to year, depending on the level of production. Adverse weather conditions often exacerbate drought-related crop failures, especially through bush fires that have a disproportionately severe impact on smallholder farm enterprises. Food insecurity is more prevalent in high population density zones, where women and children have specific dietary needs but are at higher risk of hunger than adult males in the household.

Climatic changes and other natural hazards expose Ghana to various types of natural and manmade

hazards, which have occurred with increasing frequency in the last twenty years. Natural phenomena, especially floods and drought, regularly result in disasters that cause severe food insecurity, and disruption of livelihoods. These disasters disproportionately impact on enterprises of poor smallholders and increase their vulnerability to food insecurity. Furthermore, the land degradation aggravates the impact of these disasters.

Urban agriculture is a major component of the livelihood strategies of the urban poor, particularly migrant populations. Practitioners are confronted with problems of access to land and irrigation water, and access to extension services, particularly on the safe use of agrochemicals. Since the commodities are mainly vegetables that are in most cases consumed fresh, the lack of access to quality extension services also has food safety implications for consumers.

HIV/AIDS and Agriculture

HIV/AIDS has dramatic consequences on household and community food security because of loss of labour, and creation of high dependency rates on care givers. Nutritional care and support are important for both the infected and affected.

Irrigation Development and Management

Less than 1 per cent of arable land is under irrigation and the poor management of existing systems further limits their effectiveness. Formal public irrigation schemes are operating at approximately a third of their design capacity with low yield and low cropping intensity because of poor operation and maintenance of irrigation facilities, the latter being partly due to inadequate cost recovery. Formal irrigation development has been very much supply-driven, and over-reliance on the formal system is limiting the area under irrigation. The informal sector, on the other hand, is not serviced sufficiently to realise its potential. Irrigation support services, especially for the private sector, have been inadequate due to unclear institutional mandates.

Women and Access to Resources

Majority of women in agriculture have limited access to land, labour and capital due to cultural and institutional factors. Access to land is often restricted to usufruct rights only; women cannot provide collateral for credit because they may not have legal ownership of tangible assets. Agricultural produce

traders are mostly women; yet official credit programmes do not usually cover trading activities. Their reproductive roles, which are usually defined by culture, interfere with their productive roles in terms of time for the latter. Yet women lack financial capability to hire labour to supplement their own. In some cultural settings, they are also likely to be missed by public extension services because they are not visible as farmers. Due to inadequate gender mainstreaming, extension planning, delivery and content may not address their needs and conditions.

Access to Land

Available agricultural land is declining due to population pressure and urbanisation. This is increasingly limiting access to land and causing changes in the spatial distribution of crops such as the shift in cocoa production from the Ashanti, Eastern and Brong Ahafo Regions to the Western Region and replacement of yam by cassava in the transitional zone. Insecurity of tenure is widespread, largely because of customary land tenure systems in which there are no legal titles. Boundaries are unclear, and communal ownership invests rights in all but gives responsibility for management to none. Insecurity of land rights could limit investment, and is a threat to livelihoods of migrant populations in farming communities and sustainable use of land through intensification.

Financial service delivery

Lack of credit is one of the key constraints in agricultural production. The internal factors limiting credit access are lack of collateral due to lack of or poor quality of farm assets, lack of ownership of assets for women farmers, poor financial management, and risky nature of farming and inability of clients to prepare viable project proposals. External factors are high interest rates; high cost of service delivery to the sector, and perception of financial services providers about farming as being high risk.

Following the liberalisation of the financial sector in the early 1990s, the share of agricultural credit in total bank lending initially fell from the mandatory 25% to about 10% before recovering to 12% in 1998.

According to the Bank of Ghana Statistical Bulletin, share of agriculture and forestry in the outstanding credit balance of money deposit banks (MDBs) in December 2005 and 2006 were 7% and 5% respectively. This is an indication of a low and deteriorating level of credit supply to the agricultural sector.

The Agricultural Development Bank (ADB) has the mandate for financing production and investments in the agricultural sector. The share of ADB's agricultural loans in its loans and advances portfolio was about 70% in 2005. The areas of financing are agricultural production, export financing, agro-processing and marketing, and cocoa financing with more focus on production and marketing and very little on agro-processing. Most of the Bank's term lending is targeted to big traders, large farmers, and processing units.

The ADB met about 28% of the total demand for credit in the agricultural sector up to the year 2006.

The main supply side challenges to financing agricultural investments are finding measures to reduce risk and cost of lending to the sector, and improving response of formal service providers to particularly the medium to long-term credit needs of operators in the sector. Inputs of ADB in stakeholder discussions for the policy review reveal that inadequacy of long-term funds for medium to long-term lending is a major constraint that the Bank faces. Although smallholders rely more on informal sources of financing, the funding from these sources are limited and interest borrowing costs are high. The demand side challenges are reducing the high default rate, improving the financial management ability of operators, and finding more effective social collateral as alternatives to the more traditional forms of collateral that financial institutions prefer.

Energy

The cost and demand for energy (fossil fuel, electricity) in all sectors of the economy is growing rapidly (growth in demand for electricity estimated at 7% per annum), with dire consequences for agricultural production and processing. There is widespread use of energy inefficient agricultural machinery and equipment. Potential of alternative energy sources (renewable energy) in the sector is largely unexplored due to inadequate research and knowledge. In the case of electric power, the single-phase electricity supply system in rural areas is not suitable for agro-processing and related industries, which should be equipped by three-phase powered machines.

2.4 Strengths and Opportunities of the Sector

Despite the challenges discussed above, the agricultural sector has strengths and opportunities, which have been taken into consideration in adopting strategies for developing the sector.

The major strengths of the sector are:

- Diversity of commodities due to diverse agro-ecological zones. This allows for easy diversification of farm production systems.
- Well-endowed network of water bodies which can be tapped for irrigation.
- Comparative advantage in the production of roots and tubers can be built on to enhance food security and increase agricultural trade.
- A well established agricultural research system, which has been successful in crop improvement (e.g. cassava, maize, cowpea).
- Relative proximity to Europe as an export destination compared to competitors in Southern Africa and Central and South America.
- A flourishing horticultural sector with a knowledgeable private sector.

Opportunities mainly for expanding agricultural trade are:

- New foreign direct investment in horticultural and industrial crop production.
- Expanding international trade in high value horticulture commodities, in which the country has comparative advantage.
- Initiatives to open up ECOWAS sub-regional market.
- Preferential access to international markets through bi-lateral agreements such as the African Growth and Opportunity Act (AGOA) of the United States and EU-ACP countries' economic partnership agreements.

2.5 Previous Approaches to Sector Development and Lessons Learnt

The Government has applied a number of instruments to address the constraints in the sector. The thrust of the approach has been public-led service delivery, complemented with stand-alone projects funded by donors. A multi-donor budget support within a sector-wide approach is in the offing to improve coordination among donor support and consistency of the latter with sector policies. Project activities and impact are seldom sustained because of inadequate plans for phasing out and mainstreaming project activities with budgetary support from the government.

Reforms in the research and extension systems in the 1990s suffered similar fate after funding from the World Bank ended. Although the institutional arrangements under the National Agricultural Extension Project and the National Agricultural Research Project were maintained, they remained ineffective until a

new line of funding was provided by another project, the Agricultural Services Sub-sector Investment Project. Experiences of the Research Extension Liaison Committees (RELCs) show that bottom-up and participatory approaches are workable if well funded. Therefore the variability in project funds for research calls for greater commitment by the government to funding of research, and for widening sources of funding.

Public service delivery, e.g. research and extension, has come under scrutiny with concerns over sustainability. This led to attempts to introduce private sector participation in the delivery of veterinary services in the 1990s, and more recently, the piloting of pluralism in extension services. The response of private sector for the provision of veterinary services to livestock farmers has been low. In the case of the general extension services, there is lack of awareness about the policy of extension pluralism. Also, the few pilots on the ground show that private sector service providers have their strengths in group development and business related services rather than in the delivery of technical information. Engagement of private sector service providers for the promotion of private sector participation in extension service delivery should therefore be based on their specific competences as well as cost effectiveness.

The use of contact farmers for dissemination of extension messages has worked but tends to limit access of poor risk prone farmers to extension services, because extension agents prefer to work with farmers who are outgoing and can demonstrate ability to utilise technologies. While farmer-based organisations (FBOs) are being developed as part of the strategy for improved access of smallholders to services, the efforts of pilots have tended to focus on helping them access the FBO Development Fund for the purchase of equipment, to the neglect of building their capacity to access services.

The passage of local government Law (Act 462) requires implementation of policies at the district level but this is not working well because of lack of capacity in the districts, inadequate flow of funds to the districts, and divided attention from implementation of parallel projects. The institutional capacity to implement policies in a decentralised framework is still weak. The project approach has not benefited districts fairly; in districts that have benefited from a multiplicity of projects, coordination between the projects has been lacking. The impact of policies and projects has not been well documented because monitoring reports have tended to focus on activities and outputs.

The need to diversify exports from traditional commodities was realised in the mid 1990s under the Medium Term Agricultural Development Programme but the focus was on creating price incentives and using fiscal instruments to boost trade in non-traditional agricultural exports. However, the incentives were not enough as structural and capacity problems have been a major drawback. The government has introduced major initiatives to enhance competitiveness of the non-traditional export sub-sector, and the horticulture sector in particular has become the country's focus for agricultural export diversification. Interventions in this area plus higher price incentives for the cocoa sub-sector have impacted positively on poverty reduction among the export crop producers. Therefore, favourable incentive environment and institutions for coordinating productive activities can engender growth of other sub-sectors, particularly the food crop sub-sector.

Recent shock to the pineapple industry from the introduction of MD2 exposed the country's lack of preparedness to respond to changes in international markets. Market information, market intelligence, and continued innovation are necessary for success in international markets. The growing importance of private standards of GAP on the international market is also challenging participation of smallholders in high value commodity systems, especially for export. Skills of the human resource serving the sector are also challenged. Therefore, product and cluster development, and innovative linkage arrangements between agribusinesses and smallholders are necessary for improving competitiveness in international agricultural trade.

Irrigation is seen as a necessary instrument for the modernisation of agriculture, and in particular, for reducing vulnerability of smallholders to rainfall variability. However, the expansion in irrigation is slow and the productivity of public systems is low due to poor management. Yet not much attention is given to informal systems largely patronised by smallholders. The use of small individual water lifting devices has contributed to increased food production in the Upper East Region and can be replicated in other parts of the country. Water Users' Associations can contribute substantially to the management of irrigation schemes but governance systems need to improve to include women.

Land productivity has increased more than labour productivity in agriculture and this is inimical to growth in incomes. Weak links in commodity value chains limit income growth. Interventions in the cocoa sector that have enabled cocoa farmers to use more fertiliser, improved varieties and better agronomic practices have increased productivity in the sector and together with price incentives, have contributed to poverty reduction. High costs of inputs, low liquidity of farmers and lack of credit facilities constrain demand for

agro-inputs e.g. technologies for sustainable management of land and the environment. Also, liberalisation of input markets has not increased competition substantially but has introduced quality challenges because of insufficient regulation.

The instrument for encouraging private sector investment into the sector is tax exemptions. However, these tax incentives have not been effective because of other constraints such as high cost of energy and poor infrastructure.

Gender inequality in the agriculture sector has undermined the achievements of sustainable agricultural development because programmes and projects are not systematically formulated around different needs, interests, roles, responsibilities, status and influence in society of women and men. Female representation is very low in MoFA, with women making up just 16% of the total workforce, and 9.5% located at a high enough status to participate in decision making. Dissemination of new and improved technologies through extension services is highly unbalanced between women and men farmers, with as little as 20% of services reaching women. RELC's do not focus much on gender issues nor on women in agricultural development (WIAD) activities during prioritization activities. Gender sensitization and training programmes held for various categories of staff are impacting in individual awareness, but has not yet translated into practice. Lack of gender disaggregated statistical data seriously hampers gender sensitive planning for sustainable agricultural development. The establishment of a desk, staffed by someone with senior rank, to coordinate gender mainstreaming, in particular the 8 strategies of the GADS, into the work of MoFA is necessary for tackling gender inequality in the sector and for creating conditions to encourage and improve upon the productivity of women farmers and producers.

2.4 The New Direction

The Government of Ghana now wants to have a focus in its efforts for greater effectiveness, sustainability and equity in impacts. In particular, a few commodities will be targeted for support. A value chain approach to agricultural development will be adopted with value addition and market access given more attention. Efforts will be intensified to build capacity towards meeting challenges of quality standards in the international market, with focus on increasing productivity along the value chain. While imports will not be controlled by quotas and tariffs, the use of standards to control imports of poor quality produce will be pursued. Attention will be given to improving standards in local markets and for food safety.

In the short term to medium term, selected commodities will be targeted for food security and for income diversification, based on comparative and competitive advantage, and sustainable land management and environmental practices. A major research effort will be pursued to promote the commercialisation and linkage to industry of selected indigenous agricultural commodities as a strategy for poverty reduction.

A stronger partnership between all MDAs and the private sector for improved response to the sector policies will be pursued. For this reason, 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.

In recognition of the need for harmonisation of interventions to improve coordination among donor funded projects, and consistency of the projects within the sector, the Government and her Development Partners have committed to a new partnership framework as embodied in the sector approach (SWAp). Some Development Partners have moved far in adopting new instruments such as budget support, for providing assistance to the sector. It is imperative that all donor support to the sector is fully consistent with the SWAp, if the efforts for harmonisation of sector activities are to succeed.

The new thrust will aim to integrate elements on sustainable natural resource use. Specific policy, investment and best practice options will be addressed in ensuring adequate support in the scaling up of appropriate sustainable land and water management practices in the various farming systems in the country.

Smallholder versus Large Commercial Agriculture

Agriculture in Ghana is characterised by a large smallholder sector, and a very small large commercial sector. The Poverty and Social Impact Analysis (PSIA) identified five categories of farmers as follows: (1) Large Scale Commercial (LSC); (2) Small Commercial (SC); (3) Semi-Commercial (S-C); (4) Non-Poor Complex Diverse Risk Prone (NPCDR), and (5) Poor Complex Diverse Risk Prone Farmers (PCDR). The weakness of FASDEP I, in terms of targeting, was that it failed to recognise the different categories of farmers and that smallholders are not a homogenous group. The pursuit of a modernised agriculture in FASDEP II will target different categories of farmers according to their needs. Thus, risk-prone, largely subsistence farmers, will be targeted with interventions to reduce their vulnerability and help them improve

productivity. Smallholder commercial and semi-commercial farmers will also be supported to improve productivity and to integrate them into markets competitively.

Ongoing efforts to develop FBOs as part of the strategy for improved access of smallholders to services will continue. The aim is to encourage the evolution of FBOs at the grass roots, and networking them through a hierarchy of local, district and regional groupings to a national apex. It is expected that this will give the FBOs power to bargain.

The needs of the existing commercial farmers (both large and small) will also be addressed by the policy. Support to the commercial sector is particularly relevant because the strategy is to forge links between commercial and smallholder sector for their mutual benefit. The modernisation efforts will target all categories of farmers according to their needs.

CHAPTER 3
FOOD AND AGRICULTURE SECTOR POLICY FRAMEWORK
(THE NEW FASDEP II)

3.1 Vision for Food and Agriculture Sector

The national vision for the food and agriculture sector is a modernised agriculture culminating in a structurally transformed economy and evident in food security, employment opportunities and reduced poverty.

3.2 Links to Global, Regional, Sub-regional and National Development Programmes

The vision for the food and agriculture sector is linked to the national vision in the Growth and Poverty Reduction Strategy (GPRS II), the Comprehensive Africa Agriculture Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD).

Declarations from the various international conferences, since 1992, identified food security as one of the underlying and cross-cutting issues that require concerted action in order to ensure the sustainable reduction of absolute poverty in all countries. This realization culminated in the elaboration of the Millennium Development Goals (MDGs) to prompt all countries to work towards achieving the following internationally agreed targets, now known as the MDGs, by 2015:

- Eradicate extreme poverty and hunger
- Achieve universal basic education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, tuberculosis, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

The food and agriculture sector has direct impact on at least five of the MDGs. Therefore, policies for developing the sector are crucial in the attainment of these global goals. The African Union (AU) has

translated the agreed targets for poverty elimination into a region-wide strategy that takes into consideration local issues specific to its member countries. Under the AU's New Partnership for Africa's Development (NEPAD), the Comprehensive African Agriculture Development Programme (CAADP) has been developed to accelerate food security in sub-Saharan Africa. The five pillars of the CAADP framework are:

- Sustainable land development and reliable water control systems;
- Improvement of rural infrastructure and trade-related capacities for improved market access;
- Enhancement of food supply and reduction of hunger;
- Development of agricultural research, technology dissemination and adoption;
- Sustainable development of livestock, fisheries and forestry resources.

CAADP's seven-part vision for agriculture in Africa includes food security, improved productivity of agriculture to attain annual growth rate of 6%, with particular attention to small-scale farmers and women, as well as, dynamic agricultural markets, and sustainable use of the natural resource base. In 2002, member countries of the African Union (AU) pledged to allocate at least 10% of national budgetary resources for implementation of CAADP.

The Economic Community of West African States (ECOWAS) has, in turn, developed an ECOWAS Agricultural Policy (ECOWAP) to address food security in the sub-region in conformity with existing regional and international commitments. ECOWAP is expected to have a significant impact on the ecological, economic, institutional and social environment. Programme objectives include increased food production and income generation, increased inter-country trade, strengthened producers' organisations and greater involvement of women in socio-economic decisions that affect household livelihood opportunities. The objectives for agricultural development in Ghana, as outlined below, are consistent with these regional and sub-regional development initiatives, especially in relation to food security.

Ghana's medium-term development plan is the GPRS II. In this plan, agriculture is expected to lead the growth and structural transformation of the economy. Given the high incidence of poverty in the sector, such a growth path is expected to maximise the benefits of accelerated growth. Intervention areas for modernising agriculture as specified in the GPRS II are:

- Reform of land acquisition and property rights

- Accelerating provision of irrigation infrastructure
- Enhancing access to credit and inputs for agriculture
- Promoting selective crop development
- Improving access to mechanised agriculture
- Increasing access to extension services
- Provision of infrastructure for aquaculture
- Restoration of degraded environment

The strategies in FASDEP II encompass all of these interventions and demonstrate consistency with GPRS

II. The performance targets for the agriculture sector, based on achievements between 2001 and 2006, are:

- Agricultural growth rate of 6-8% per annum over the next 4 years
- Crops and livestock leading the growth at an average annual growth rate of 6%
- Forestry and logging, and fisheries, each growing at 5% per annum.
- Cocoa will remain robust in support of other sectors.

3.3 Agricultural Policy Objectives

Based on the role of agriculture in the national development framework, the objectives for the food and agriculture sector policy are as follows:

- Food security and emergency preparedness
- Improved growth in incomes
- Increased competitiveness and enhanced integration into domestic and international markets
- Sustainable management of land and environment
- Science and Technology Applied in food and agriculture development
- Improved Institutional Coordination

3.4 Broad Policy Principles

The following principles are policy statements intended to determine the direction of the policy as well as guide and foster implementation. Therefore, all future activities will be justified against these principles.

- The Government of Ghana (GoG) shall strive to achieve the Maputo Declaration of allocating at least 10% of annual government expenditure to the agricultural sector.

- There shall be targeting of the poor in appropriate aspects of policy and programmes.
- The Government shall pursue regional balance in agricultural development, building on regional comparative advantage.
- All policies and programmes will be designed from a gender perspective, enabling the government to work towards greater gender equality in the agriculture sector.
- Investments in the sector will be scientifically based and environmentally sustainable and considered on the basis of economic feasibility and social viability/sustainability.
- Policy and programmes will be implemented within the framework of decentralisation and all agricultural structures of decentralisation will be strengthened.
- Inter-sectoral collaboration will be pursued in the implementation of policies and programmes.
- The Government shall partner private sector and civil society in policy implementation, and review.
- The Government shall continue to pursue pluralism in service delivery for increased access
- The Government shall foster an enabling environment for the provision of key infrastructure (irrigation, roads, storage, and energy) and information, by the private sector and where necessary provide such infrastructure.
- The Government shall foster an enabling environment for the enforcement of laws and regulations.
- All sector policies and plans will be subjected to Strategic Environmental Assessment (SEA) while all projects are subjected to Environmental Impact Assessment (EIA).
- DPs will work in ways consistent with the sector policy and the Government in turn will engage DPs in ways consistent with the policy.

CHAPTER 4

POLICY STRATEGIES

4.1 Introduction

This chapter states the policy strategies that will be adopted to achieve the six policy objectives. These objectives and the strategies for achieving them are complementary and reinforce each other. Also, the policy objectives embrace the sub-sectors and require effectiveness of service delivery. Therefore strategies in existing sub-sector policies and those for delivery of services have been analysed for their consistency with the FASDEP II objectives and accepted as the framework for implementing FASDEP II. The existing sub-sector and service policy strategies, therefore, also reinforce those specified for achieving the principal objectives of FASDEP II.

4.2 Food Security and Emergency Preparedness

MoFA defines food security as good quality nutritious food, hygienically packaged and attractively presented, available in sufficient quantities all year round and located at the appropriate places at affordable prices. The key elements of the definition, as is the case with other definitions, are nutritive quality of food, self-sufficiency and physical and financial availability. For example, FAO defines food security as a situation where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. The element of food safety will be a concern in Ghana's pursuit of food security. Although the objective of attaining food security is national, it is the poor that are most vulnerable to food insecurity.

Emergency preparedness is an assessment of the country's readiness to respond to the needs of victims of natural hazards and other calamities. In the case of food and agriculture, it is the ability to provide food to affected persons in times of disaster. As noted above, it is the poor risk prone smallholders who are most ill-equipped to cope with disasters.

Issues

- Low productivity in staple crop production

- Seasonal variability in food supply and prices due to climatic changes and other natural occurrences make it difficult for Ghana to meet its food demands all year round, especially in the three northern regions
- Farmers who are vulnerable to food and nutrition insecurity have limited capacity to respond to agricultural programmes
- Poor rural road infrastructure limits the effective distribution of food and lowers producer prices
- Weak systems for disaster prevention, preparedness and response (gaps in legal and policy frameworks)
- Malnutrition is a serious problem among children, adolescents and women, especially in rural areas and urban slums

Strategies

The broad strategy for the attainment of food security is to focus at the national and agro-ecological levels on the development of at most five staple crops (maize, rice, yam, cassava and cowpea). MoFA's support to districts for food security will focus on at most two of the crops. Choice of crops will be based on comparative advantage, importance of the crops to people in the zone and availability of markets. The commodities will receive support in terms of irrigation and sustainable management of land, improved planting materials, and appropriate mechanisation, to enhance productivity along the whole value chain. Targets for productivity and production growth of selected commodities will be set annually. Strategies for food security and emergency preparedness will target the poor to enhance their capacity to cope with production and food insecurity risk.

The specific strategies for the attainment of food security and emergency preparedness are:

- Develop appropriate irrigation schemes for different categories of farmers to ensure production throughout the year.
- Introduce high-yielding and short-duration crops varieties.
- Develop effective post-harvest management strategies, particularly storage facilities, at individual and community levels.
- Liaise with the Ministry of Transportation for road transport and the Ministry of Harbours and Railways to improve accessibility and facilitate the distribution of crops.

- Target the vulnerable in agriculture, with special programmes that will enhance their diversification opportunities, reduce risk and enhance their access to productive resources.
- Enhance nutrition through coordination of programmes and institutions for food security, dissemination of nutrition and health information, and advocacy for food fortification.
- Strengthen early warning systems and put in place emergency preparedness and disaster management scheme, including contingency planning to ensure access of the poor to food during disasters.
- Establish strategic stocks to support emergency preparedness.
- Advocate for improved legal and policy frameworks for collaboration between institutions responsible for disaster management.

4.3 Increased Growth in Incomes

The purpose of interventions for enhancing growth in incomes in the sector is to provide opportunities for diversification into cash crops and livestock, and for value addition on all commodities. Enhanced incomes will also reinforce food security through financial access to food. Diversification will be pursued by introduction of new commodities and creation of opportunities for value addition to primary commodities.

Issues

- Earnings in the agricultural sector are generally lower in comparison to other sectors.
- Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to the export crops, as living standards surveys continue to record highest incidence of poverty among food crop farmers.
- High income variability due to seasonality in production and prices.
- Inadequate attention to value chain development, as evidenced by insufficient grading and standardisation for most agricultural commodities, and low levels of product development.
- Inadequate expertise in post-harvest and stock management contributes to post-harvest losses and losses in incomes.
- Triple workload of women farmers and producers undermines their productivity and earnings.
- Limited access of poor farmers (female and male) to key productive resources (land, credit, information, and technology).

Strategies

Crops such as mango, cashew, oil palm, rubber, plantain and citrus, as well as, small ruminants (sheep and goats), poultry and vegetables will be promoted on the basis of comparative and competitive advantage of agro-ecological zones and availability of markets. Indigenous staple crops and livestock species produced by the poor can be commercialised through linkages to industry. Research on these crops and livestock species to identify genetic material with desired qualities and to improve productivity along the value chain will contribute to poverty reduction. Urban agriculture will be promoted as a sustainable alternative means of livelihood for poor migrants engaged in it. The needs and capabilities of different categories of farmers for diversification will be identified for appropriate targeting. Cost recovery in delivery of services to commercial operators will be pursued.

Specific strategies are:

- Support diversification by farmers into tree crops, vegetables, small ruminants and poultry, based on their comparative and needs. Such diversification will also create employment in the dry season.
- Promote primary grading, processing and storage to increase value addition and stabilise farm prices
- Collaborate with MoTI PSD&PSI to develop institutional capacity to support commercial scale agro-processing and stock management
- Develop standards and promote good agricultural practices along the value chain (including hygiene, proper use of pesticides, grading, packaging, standardisation), to enhance quality and incomes
- Promote linkage of smallholder production (including indigenous and industrial crops, livestock, and fisheries) to industry
- Improve accessibility from farm to market centres
- Promote formation of viable farmer groups and Farmer-Based Organisations with gender equity, to enhance their knowledge, skills, and access to resources along the value chain, and for stronger bargaining power in marketing
- Advocate improved rural infrastructure (transport and communication), and appropriate regulatory environment to enhance private sector investments and participation in delivery of services, including extension.
- Advocate the enactment and enforcement of laws on good agricultural practices.

4.4 Increased Competitiveness and Enhanced Integration into Domestic and International Markets

Ghana has pursued a demand-led growth based on exports since the mid-1990s as part of the strategy to diversify the country's export base. New opportunities are emerging in the international market and the country has to position itself to compete. The aim is to enhance Ghana's comparative advantage and translate it into competitive advantage in producing the needed volumes of commodity and quality on a timely basis. The potential for expanding domestic markets also exists as the economy expands and incomes grow. The capacity of semi-commercial and commercial smallholders can be enhanced for them to produce for the international and expanding domestic markets, including agro-industry.

Issues in development of domestic market

- Poor nature of roads to production centres, inadequate market information, leading to weak market integration between local, district, regional markets
- Low standardisation and product differentiation in domestic markets (weights and measures; grades and standards)
- Uncongenial environment for trading in local markets
- Limited marketing extension for producers, traders and exporters

Issues in development of agricultural exports

- Majority of agricultural operators do not have the skills and knowledge in the requirements of external markets, contributing to high rate of rejection of exports
- Inadequate access to market information and lack of capacity to access market intelligence
- Limited capacity of exporters to meet export volumes
- Inadequate and poor management of logistics in commodity marketing
- Weak legal environment does not encourage contract relationships in production and marketing

Issues in post-production management

- Inadequate product and cluster development
- Low, poor quality and irregular supplies of raw materials to agro-processing enterprises
- Inadequate institutional arrangement to support commercial scale agro-processing
- Low patronage of locally processed products

Strategies

The Government will partner with the private sector to increase investments in the sector and build capacity of operators to compete competitively in the global market. Priority commodities will be selected on the basis of regional comparative and competitive advantage in target markets and, where appropriate, cost-sharing and cost-recovery will be pursued in delivery of services and provision of infrastructure to commercial sector. The productivity and market-related strategies developed above for enhancing incomes will also apply here.

Strategies for domestic marketing

- Encourage partnership between private sector and District Assemblies to develop trade in local and regional markets with improved market infrastructure and sanitary conditions, and enforce standards of good agricultural practices.
- Encourage the development of commodity brokerage services to support marketing of agricultural produce.
- Create awareness of processors on GAP/HACCP.
- Build capacity within MoFA to provide marketing extension.

Strategies for exports

- Provide comprehensive support of improved access of operators to market information and intelligence, technology, relevant market infrastructure, and financing to enable operators to respond to the changing needs of markets. Operators will also be encouraged to identify market niches for new products.
- Promote good agricultural practices, particularly for meeting sanitary and phytosanitary requirements of importing countries.
- Advocate a legal environment that supports agricultural production and trade contracts.
- Collaborate with relevant MDAs to improve road access to link production centres to air and sea ports.

Strategies for post-production management in general

- Improve supply chain management with emphasis on developing clusters of small to medium-scale farmers and processors to enhance access to technical advice and logistics.

- Promote the utilisation of locally processed products and the production of quality and well packaged products to enhance demand.
- Strengthen linkages between public and private sector institutions to support agro-processing.
- Provide improved and targeted tax relief for agro-processors.
- Promote cottage level agro-processing industries with interventions to enhance access to machinery and quality of products.
- Develop standards to be at par with those of competing imports, and advocate for their enforcement.

4.5 Sustainable Management of Land and Environment

The Government will aim at mainstreaming and supporting the scaling up of sustainable land management (SLM) practices in addressing objectives around both environmental resilience and agricultural productivity in the country's overall development agenda. In addition to addressing issues (barriers or opportunities) of productivity in both agriculture and in environmental services, this objective will serve as entry point in addressing the interactions between agriculture and climate change and biodiversity loss. Strategic Environmental Assessment of FASDEP II will ensure that the policy is consistent with all regional and sub-regional conventions on natural resource management. Inclusiveness and cross-sector interactions will guide the implementation of strategies designed to achieve this objective.

Issues

- Sustainable land and water management are not adequately integrated as part of agricultural extension services.
- High environmental degradation and abuse due to inadequate understanding of environmental issues related to agriculture.
- Lack of national agricultural land use policy.
- Ineffective framework for collaboration with appropriate agencies to address environmental issues related to agriculture.

Strategies

- Mainstream sustainable land and environmental management practices in agricultural sector planning and implementation.

- Create awareness about environmental issues among all stakeholders and develop an effective and efficient framework for collaboration with appropriate agencies to ensure environmental compliance.
- Adopt an integrated approach in dealing with environmental issues, including an inclusive partnership-based coordinated approach with active and mutual involvement of NGOs and civic organisations, the private sector and the development partners.
- Improve incentive and compulsion measures to encourage users of the environment to adopt less exploitative and non-degrading practices in agriculture.
- Promote joint planning and implementation of programmes with relevant institutions to address environmental issues in food and agriculture.
- Promote the development of community land use plans and enforce their use, particularly in urban and peri-urban agriculture.
- Improve access of operators in urban agriculture to sustainable land and environmental management practices.
- Stimulate, support and facilitate adaptation and widespread adoption of farming and land use practices which, while in harmony with natural resource resilience, also underpin viable and sustainable production levels.

4.6 Science and Technology Applied in Food and Agriculture Development

The vision is for a modernised food and agriculture in which productivity and production improvements are based on science and technology. Prioritisation of research on the basis of commodities targeted in FASDEP and public funding of basic research will guide the promotion of science and technology in agriculture development. Demand-driven research implies the activity is motivated from the desires of final users (in the case of information) or beneficiaries (in the case of research).

Issues

- Low uptake of research findings by stakeholders.
- Often there is duplication of research efforts.
- Inadequate funding and commitment to agricultural research.
- Limited application of biotechnology and its benefits.
- Limited agricultural policy research.

- limited research on industrial uses of indigenous crops and livestock.
- Absence of up-to-date data /statistics on women farmers, particularly poor women farmers, to inform policy making and programming.
- Most agricultural research is not designed from a gender perspective.

Strategies

High priority will be given to “applied research” with more research initiatives being redirected towards supporting on-farm and off-farm innovations for improved production systems, higher productivity and small/large scale industrialisation/processing. MoFA will partner with the national agriculture research system to ensure that research focuses on the development of value chains of commodities targeted for food security, income growth and diversification, external markets, and linkage with industry. Principles of best practices of land and environmental management will be applied.

Specific measures are:

- The Government will endeavour to improve the uptake of technologies by improving relevance of technologies to users and their access to the technologies.
- Promote demand-driven research.
- Improve the effectiveness of Research-Extension-Farmer Linkages (RELCs) and integrate the concept into the agricultural research system to increase participation of end users in technology development.
- Gender considerations will be integrated in research design.
- Promote coordination and collaboration between research institutions, locally and abroad, to improve cost-effectiveness of research.
- Ensure sustained funding of research by partnering with the private sector (including farmer groups) and NGOs to identify and adopt innovative approaches to agricultural research funding and commercialisation.
- Facilitate the passage of the bio-safety bill, to improve food safety and to pave the way for use of biotechnology tools in crop and livestock improvement research.
- Intensify agricultural policy research and advocate increased capacity for socioeconomic research in research organisations.
- Promote research in the development and industrial use of indigenous staples and livestock.

4.7 Improved Institutional Coordination

The public sector has been dominant in the delivery of services in the sector. However, expansion of the sector and its transformation requires greater involvement of the private sector in service delivery, and investment and management of the sector as a whole.

Issues

- There is very limited public-private engagement in the sector.
- The framework for collaboration within MoFA and across MDAs, as stated in FASDEP I, is not functioning.
- The project approach adopted previously by DPs was associated with weak coordination among projects, and inoperative exit strategies for the project.
- Limited public-private sector engagement in agricultural sector.
- No well defined exit strategies for dono-funded projects to ensure sustainability.

Strategies

MoFA will lead the improvement of the coordination and harmonisation of activities of MDAs and Development Partners in the sector. Specific strategies are:

- Strengthen the intra-sectoral and inter-ministerial coordination through a platform for joint planning as elaborated in Chapter 5 on implementation.
- Develop and implement a communication strategy to improve coordination.
- Create framework for synergy among projects.
- Strengthen framework for coordinating activities among diverse stakeholders in the sector.
- MoFA will ensure synergy among projects and mainstream activities of projects into general MOFA activities through the budget process, before projects close.
- Coordinate MOFA's policies, programmes, projects and activities with those of water, health and research.
- MoFA will ensure that its advocacy, collaboration and coordination roles are carried out within the laws and regulations of the country.

4.8 Sub-sector Policies

The agricultural sector consists of crops and livestock, cocoa, fisheries and forestry. However, the management of cocoa, fisheries and forestry is outside the mandate of MoFA. There exist policies or strategies for livestock, fisheries, cocoa and forestry. Key strategies for developing the crop sub-sector have also been developed. The strategies for crop and livestock sub-sectors will be implemented by MoFA under the umbrella of FASDEP II while the cocoa, fisheries and forestry policies will complement FASDEP II. The specific strategies in the sub-sector policies and interventions will support the realisation of the development objectives of FASDEP II.

As part of its coordination responsibility, MoFA will identify the relevant sections of policies for the cocoa, fisheries and forestry sub-sectors that require action from MoFA and incorporate them in the strategic plan for the implementation of FASDEP II.

4.8.1 Crop Development Policy

The goals of the crop sub-sector development are to:

- i. Enhance an integrated promotion of food, horticultural and industrial crop;
- ii. Enhance the competitiveness and profitability of crops through access to improved technological packages for increased productivity;
- iii. Ensure sustainable management of environment in crop production systems.

The guiding principle is to ensure an integrated and sustainable exploitation and use of natural resources for increased production and productivity of the crop sub-sector in partnership with the appropriate government and non-governmental agencies.

Issues

- Limited availability of improved technological packages, especially planting materials and certified seeds by farmers.
- Low productivity at farm level.
- Inadequate infrastructure for post-harvest management of food security crops.
- Inadequate knowledge in sustainable land management practices.

- Inadequate infrastructure to support the development of horticultural crops for both domestic market and export.

Strategies

- Support production of certified seeds/planting materials and increased farmer usage through intensification of awareness campaigns.
- Intensify dissemination of updated crop production technological packages.
- Facilitate the development of high-yielding, disease and pest-resistant varieties and increase supply of certified planting material.
- Ensure that operators of urban agriculture are reached with the needed information technology and inputs.

These strategies complement those already outlined under the six policy objectives for:

- Productivity enhancement;
- Sustainable land management;
- Expansion of production and market/trade infrastructure;
- Promotion and enforcement of standards; and
- Engagement of the private sector.

Industrial Crops

The major industrial crops such as cashew, citrus, cotton, coconut, oil palm, and rubber, share similar constraints, which include unavailability of high-yielding planting material, poor agronomic practices, and cultivation of smallholdings. The objectives in the medium term are to increase the availability of improved planting material, improve adoption of improved agronomic practices and expand average farm size per holder.

MoFA will collaborate with the Ministry of Industry, Private Sector Development and PSI to attract private sector investments in these industrial crops (e.g. in nurseries for improved seedlings). The outgrower-nucleus farmer linkage will be strongly promoted as a way of improving smallholders' access to credit, improved planting material, extension on improved agronomic practices, and capacity to expand farm size

per holder. Collaboration with external research institutions will be encouraged to build research capacity for the industrial crops.

4.8.2 Cocoa Strategy

Despite efforts to diversify agricultural exports, cocoa remains the largest export commodity and remains the driving force of agricultural growth in the country. The key strategy for the development of the cocoa has been the promotion of high technology package of improved hybrid seed, a set of fertiliser, pesticide and fungicide recommendations and improved husbandry practices. This is backed by improvements in producer prices, which have increased almost three-fold since 2001. In addition, since 2001, farmers have been supported with credit for the acquisition of fertiliser, and there is a cocoa disease and pest control programme funded from cocoa tax.

Although yields have been enhanced, the sustainability of these interventions is in question because of low commitment of farmers to repay loans and the poor quality work of spraying gangs. Land degradation in the cocoa fields is another factor increasingly threatening the viability, hence the sustainability of cocoa farming and related industry.

Strategies

The policy of a comprehensive development of the cocoa value chain is in place and special incentives are available for local and foreign entrepreneurs willing to invest in the processing of cocoa. The objective is to increase the proportion of cocoa processed locally from 20% in 2002 to 40%, and revised to 50% in the 2007 budget statement. Specific strategies currently being applied in the cocoa sub-sector are:

- Promotion of commercialisation of research on the utilisation of substandard cocoa and cocoa wastes to enhance value addition.
- Improvement in internal and external marketing of cocoa through competition and equal access to COCOBOD's warehousing and crop financing facilities.
- Rehabilitation of roads in cocoa-growing areas to facilitate the evacuation of the crop.
- Maintaining the quality control responsibility within the public institution.

MoFA will collaborate with the COCOBOD in the implementation of these policies.

4.8.3 Livestock Development Policy

The goals of the livestock policy are increasing the supply of meat, animal and dairy products from domestic production at the current aggregate level of 30% to 80% by the year 2015; and contributing to the reduction of the incidence of poverty among farmers (who are also livestock keepers) from 59% to 30% by the year 2015.

Issues

- Low genetic material of livestock species.
- Poor management practices (feeding and health care) and low productivity.
- Inadequate availability of quality feed.
- Low application of good agricultural practices in the production, handling and transportation of livestock/livestock products.
- Low awareness of food safety leading to practices such as use of inappropriate transport in conveying livestock and livestock products.
- Poor quality of data and monitoring system.

Strategies

Development of the livestock sub-sector under FASDEP II will be based on the set of strategies specified in the livestock development policy developed in 2003. The livestock development strategies are consistent with the objectives of FASDEP II because they target the different categories of livestock producers/owners in the sub-sector, and address issues of breed improvement, production management, health, processing, and marketing.

Some of the key strategies are:

- Focus on improving animal health (using community animal health workers).
- Improve access to quality feed and water.
- Enhance performance of indigenous breeds through a programme of selection.
- Develop commercial poultry as the priority for improving meat supply in the short term, while measures are implemented to transform smallholder production into profitable enterprises.
- Improve access of operators to technology and appropriate financial instruments to enhance their competitiveness with imports.

- Advocate fair trade.
- Interventions will be designed to address processing and marketing of livestock, and increase the awareness on food safety and public health.
- Advocate an enabling environment for intensive urban and peri-urban livestock farming.
- Create awareness among livestock farmers, traders and processors on the Road Traffic Regulations, 2006 (Reg. 122 (6)) on the transportation of livestock.
- Facilitate the development of a livestock statistics and monitoring system.

4.8.4 Fisheries Policy

The Ministry of Fisheries has developed an inland fisheries policy and an aquaculture development strategic framework. The inland fisheries policy targets inland water bodies with the following strategies to increase fish production, increase incomes and employment, protect the fisheries resource and environment and build capacity of relevant institutions. Some of the specific strategies are to:

- Improve management of declining fish resources.
- Develop under-exploited fisheries resources.
- Improve product utilisation and marketing.
- Improve socio-economic infrastructure and opportunities.
- Promote an integrated development of artisanal fisheries.
- Promote inter-sectoral cooperation.

The aquaculture strategy covers issues on inputs, institutions and production systems. Inputs are to be delivered as a private sector activity. The institutional strategies also cover greater engagement of the private sector, training, extension and formalisation of links among public sector institutions for aquaculture development. MoFA will collaborate with the Ministry of Fisheries to appropriately integrate fish farming in cropping systems.

4.9 Policies for Service Delivery

The development of the sub-sectors of the food and agriculture requires delivery of extension, irrigation, mechanisation and crop protection. The strategies designed to improve the delivery of these services are consistent with FASDEP objectives. The key aspects of these policies are listed below while the specific activities specified in the relevant policy documents are maintained for implementation under FASDEP II.

4.9.1 Extension Services Strategies

The vision of the extension policy is to have established in the medium term an efficient and demand-driven extension service in a decentralised system, through partnership between the government and the private sector.

Issues

- Limited participation of clients in extension programme planning and implementation.
- Under-funding of Research Extension Liaison Committees (RELCs).
- Limited access to extension services, especially by female agricultural operators.
- Undeveloped capacity of FBOs to access or deliver services.
- Limited funding of public sector extension.
- Poor accessibility limits extension service delivery.
- Advocate the use of light aviation in mass spraying exercises.

Strategies

- Pluralism in extension service delivery will continue to be promoted to increase access of different farmer groups.
- In addition to the RELCs, identify other participatory methods of extension programming and delivery.
- Intergrate gender in extension programming to ensure relevance of information to men and women and equitable access to services.
- Use of mass extension methods will be emphasised e.g. farmer field schools, nucleus-farmer-outgrowers, extension fields in districts, mass communication through radio, TV, communication vans, dissemination through farmer groups.
- Build capacity of FBOs and Community-Based Organisations (CBOs) to facilitate delivery of extension services to its members.
- Enhance quality of extension to operators in urban agriculture, especially in application of good agricultural practices to ensure the safety of produce from the sub-sector.
- Improve allocation of resources to districts for extension delivery backed by enhanced efficiency and cost-effectiveness.

4.9.2 Irrigation Development Strategies

The policy objective for irrigation development is to enhance production potential of existing schemes by raising productivity of irrigation water from 30% to 80% in the next 10 years.

Issues

- Low levels of irrigation infrastructure and services.
- High cost of irrigation development and low capacity of local contractors in the construction of irrigation facilities.
- Inefficient use of water at formal irrigation facilities.
- Most irrigation schemes are designed and operated with little consideration for land and water degradation and energy efficiency.
- Limited knowledge and skills in irrigation farming.
- Limited stakeholder participation in the design and implementation of public irrigation schemes, leading to conflicts between ownership and rights of irrigators, particularly of women, to land.

The policy thrusts are to:

- Realise the productive capacity of existing assets and respond to new demands for irrigated production through a mix of well coordinated public and private initiatives.
- Remove constraints to a balanced socio-economic engagement with land and water resources.
- Raise the environmental performance of all types of irrigation and related agricultural practice.
- Extend cost-effective, demand-driven irrigation services to public and private irrigators.

Strategies

Principles of sustainability in operation and maintenance of public irrigation facilities, and use of natural resources, equitable access of men and women to benefits of irrigation, and rights to participate in irrigation management. However, only partial capital cost-recovery may be achieved, especially for services to the rural poor. Finally, the principle of subsidiarity will be followed in the management of infrastructure but with public sector participation in decision making at all levels.

Specific strategies are to:

- Promote the design of a programme for harnessing large water bodies, including rainwater harvesting and enhanced capacity for in-soil water retention.

- Develop cost-effective, demand-driven irrigation infrastructure and support services to both public and private irrigators.
- Promote the use of small scale pumps along perennial water bodies by small scale farmers.
- Encourage public private partnership in irrigation development in general, including the management of formal schemes.
- Facilitate the improvement of user rights to land at irrigation sites.
- Develop alternative ways of water delivery for irrigation schemes to reduce operational cost associated with energy.
- Facilitate access of urban farmers to quality irrigation water.
- Ensure irrigation plans, integrate sustainable management in both the water and land resources, and facilitate adoption of SLM practices in irrigation farming.

4.9.3 Plant Protection Strategies

The goal of the national plant protection strategies is to achieve an efficient system that ensures that crop losses caused by biological, environmental and ecological factors are contained in a sustainable and economical manner. MoFA aims to reduce crop losses caused by crop pests from 30-50% to 10-15%.

Issues

- High prevalence of plant pests in the country compounded by introduction of exotic pests.
- High rate of interception of Ghanaian non-traditional agricultural exports for non-compliance with phytosanitary requirements of importing countries.
- Low rate of adoption of improved certified planting materials and plant protection technologies by farmers, especially the food crop farmers.
- Gross misuse, abuse and misapplication of pesticides for crop production.
- High post-harvest losses of cereals and legumes resulting from storage pests and diseases.
- Stringent and continually changing SPS requirements of importing countries.
- Low capacity of regulatory bodies.
- Outdated plant protection legislation.
- Weak enforcement of regulations.

The strategies and principles specified in the Guidelines for the National Plant Protection Policy will continue to be pursued as part of FASDEP II. The strategies are supported by the Prevention and Control of Pests and Diseases of Plants Act (Act 307, 1965), NRCD 100 of 1972, Seed Inspection and Certification Decree and the Pesticides Controls and Management Act (Act 528, 1996). Act 307 is the legal framework for the Ministry of Food and Agriculture to regulate crop protection activities. All pesticides are free from import duties, either in line with customs tariff or through the waiver approved by the Minister of Food and Agriculture.

Strategies

- Promote integrated crop pest management.
- Strengthen plant pests and disease surveillance, including pest risk analysis, and improve plant quarantine systems at entry points.
- Strengthen the collaboration among PPRSD, CEPS, Ghana Immigration Service at all entry points.
- Strengthen the regulatory and protection services and field surveillance of pesticides sales
- Update all laws on plant protection to international standard and enforce them.

The promotion of certified planting materials and pesticides, good agricultural practice, particularly in the use of pesticides proposed under the market access objectives of FASDEP II will complement these plant protection strategies.

4.9.4 Agricultural Mechanisation

The objective is to facilitate access of farmers and agro-processors to mechanised services at affordable cost. The Rural Technology Information Unit (RTIU) of Agricultural Engineering Services Directorate (AESD) will continue to source appropriate mechanised technologies to address the needs of farmers and processors.

Issues

- Low level of mechanisation due to limited availability and access to appropriate agricultural machinery, equipment and mechanised services.
- High cost of agricultural machinery and equipment.
- Inadequate human resource in agricultural mechanisation.

- Inadequate post-production infrastructure (i.e. storage, processing, transport etc).

Strategies

- Collaboration with the private sector to build capacity of individuals and companies to produce and or assemble appropriate agricultural machinery, tools, and other equipment locally.
- Promote small-scale multi-purpose machinery along the value chain, including farm level storage facilities, appropriate agro-processing machinery/equipment and Intermediate Means of Transport (IMTs).
- Intensify use of animal traction through establishment of AT centres.
- Facilitate the establishment of mechanisation services provision centres, and machinery hire-purchase and lease schemes that also have adequate backup of spare parts for all machinery and equipment.
- Promote local assembly of tractors and encourage adaptation and local fabrication of processing equipment.
- Develop human capacity in agricultural machinery management, operation and maintenance within the public and private sectors.

4.9.5 Access to Agricultural Inputs

To improve access to inputs and profitability of their use, principles of competitiveness and cost-reduction in input markets will be promoted. Regular revision of laws and regulations on agro-inputs will be pursued to create an enabling environment for the private sector.

Issues

- Absence/Inappropriate policy and regulatory framework for input marketing.
- Low demand for agro-inputs.

Strategies

- Advocate the passage and enforcement of laws and regulations and foster an enabling environment to enhance trade in and use of inputs.
- Facilitate the creation of the enabling environment for the establishment of input shops in the districts.

- Strengthen surveillance of agriculture input trade and use.
- Create awareness on usefulness and benefits of agricultural inputs.
- Encourage local production and re-packaging of agricultural inputs to reduce cost.

4.9.6 Human Resource Development

The goal for enhanced human resource development is to develop the resource to operate efficiently in a competitive environment with the view to promoting sustainable livelihoods, boosting growth and reducing poverty. The key guiding principles for human resource development are enhanced private sector participation, cost effectiveness, and gender mainstreaming and equity in training and capacity building,

Issues

- Limited specialist manpower to address emerging issues in the sector, including value addition, and production of high value commodities.
- Aging farmer population with low technical knowledge yet youth trained in agriculture are not attracted to agriculture.

Strategies

- Facilitate the review of education and training programmes to tailor them more closely to changing needs of the sector.
- Establish veterinary medical school and strengthen existing veterinary technical colleges.
- Conduct human resource audit to inform recruitment, training and education.
- Encourage training and recruitment and retention of females into the agriculture sector.
- Train women leaders in the communities to complement extension service delivery.
- Intensify formation of women's groups to improve their access to extension services.
- Design and implement special interventions for the resource poor, including the women.

4.9.7 Youth in Agriculture

The human resource in the agricultural production and post-production activities can be upgraded through the attraction of the youth who have received technical training in agriculture. Such youth and others interested in gaining employment in the sector will be attracted through increased access to financial and

mechanised services, technology, and land. The Government will facilitate the mentoring of the youth by established agribusinesses, especially those engaged in high value markets.

4.9.8 Gender Mainstreaming

The main issue is inadequate mainstreaming of gender in food and agriculture policies and programmes.

The Gender and Agricultural Development Strategy (GADS) has eight key strategies which are being used as the basis for mainstreaming gender into the policies and programmes of the agricultural sector. To date, competencies in Gender Trainer of Trainers and analysis have been developed; gender awareness among MoFA staff and agricultural stakeholders, particularly MoFA directors, has increased and the roles of personnel (focal points) within mainstreaming process has been clarified. In spite of these, however, there has been a rather slow implementation of strategies in the GADS by MoFA Directorates and stakeholders. The focus has also been narrow with only two out of the eight (8) strategies being implemented. In addition, coordination and collaboration with stakeholders has been weak. These factors are made possible by the absence of a monitoring framework that would hold stakeholders accountable for implementing the GADS. Finally, there has been no review process on the implementation of the GADS to date.

Strategies

- Strengthen institutional capacity for effective gender mainstreaming.
- Advocate affirmative action in recruitment and training in MOFA.
- Ensure gender disaggregation of data in MOFA.
- Ensure collection, use and maintenance of gender disaggregated data at all levels.
- Prioritise a key gender mainstreaming strategy annually for implementation.
- Promote systematic and regular gender analysis of agricultural programmes to ensure they do not increase the workload of poor women and men farmers.

4.9.9 Improved Financial Services

Financial services are outside the control of MoFA, yet lack of access to financing is a major constraint to the growth of the agriculture sector. The diverse operators in the sector, including input dealers/suppliers, primary producers, processors, transporters, storage/inventory warehousing operators and distributors

have needs for financial services. Resource-poor operators will be targeted with group lending approaches, and sustainability principles pursued in all credit programmes.

Issues

- Low loan recovery.
- Untimely delivery of agricultural credit.
- Limited access to agricultural financing.
- Limited access to medium to long-term agricultural loans.

Strategies

- Strengthen capacity of operators in credit management.
- Strengthen loan monitoring.
- Streamline loan application procedures.
- Intensify education of farmers on loan procedures.
- Promote linkage between formal and informal financial services for delivery and recovery of loans.
- Promote flexibility in types of collateral demanded by financial institutions.
- Strengthen informal and micro-financial institutions in rural area.
- Resource poor operators will be targeted with group lending approaches.
- Strengthen capacity of FBOs to facilitate delivery of financial services to their members.
- Advocate an Agriculture Development Fund to serve as a core source of medium to long-term funding.
- Enhance rural women's access to financial services.

4.10 Cross-cutting Policies

Exiting national policies which have direct impact on the food and agriculture sector are:

- Decentralisation Policy;
- Macroeconomic policy and its implications on prices and incentives;
- Private Sector Development and Trade Policies;
- National Transport Policy;
- Land Policy;

- National Water Policy; and
- HIV/AIDS.

All of these policies are part of the context in which FASDEP II will be implemented and can influence the effectiveness of FASDEP. Key aspects of these policies, especially those affecting agriculture, are presented in the appendix.

CHAPTER 5

IMPLEMENTATION PROCEDURES

5.1 Introduction

Performance of the food and agriculture sector depends on other MDAs outside of MoFA. Successful implementation of FASDEP II requires a concerted action on the part of the Government of Ghana as a whole. The key considerations in the implementation of FASDEP II will be efficient allocation of resources, strengthening linkages between different stakeholders and coordinating their activities. The Ministry of Food and Agriculture will play the leading role in the implementation and, in most cases, lead in the coordination of sector activities.

The specific roles of different stakeholders in policy implementation are outlined below.

5.2 Roles of Key Stakeholders

5.2.1 Roles of Ministry of Food and Agriculture

FASDEP II is a Government of Ghana policy and all Government agencies have important roles to play in its implementation to ensure its success. However, MoFA has the lead responsibility within the context of a coordinated Government Programme.

The Mission of MoFA is to promote sustainable agriculture and thriving agribusiness through research and technology development, effective extension and other support services to farmers, processors and traders for improved livelihood. In line with this mission and as the lead ministry, the roles of MoFA are:

- Policy analysis and formulation.
- Monitoring and evaluation of policy implementation.
- Advising Cabinet on laws required to regulate agricultural activities in order to protect all stakeholders and the environment.
- Coordination and harmonisation of policies and sector activities with other MDAs.
- Facilitation of public-private dialogue and partnerships.
- Advocacy of sector interests locally and in international agreements.
- Facilitation of capacity building of the sector's human resources.
- Facilitation of research and technology development.

- Facilitation of the linkage between agriculture and industry.
- Facilitation of the integration of cross-cutting issues such as gender equality into the work of the Ministry.
- Facilitation of international trade and domestic marketing of agricultural commodities.
- Provision and facilitation agricultural service delivery.
- Coordination of enforcement of regulations.
- Coordination of Development Partners' development policies and activities with the sector policies and activities.

5.2.2 Expected Roles of Private Sector and Civil Society Organisations

- Participate in policy dialogue to ensure that their interests are reflected.
- Invest in productive activities in the sector.
- Ensure that commercialisation is balanced with social responsibility and environmental sustainability.
- Support training and skills improvement of the sector's manpower.
- Participate in research and utilise results.
- Disseminate good agricultural practices.
- Comply with laws and regulations.
- Partner the government in sector development.

5.2.3 Role of Development Partners

- Contribute financial and technical resources to support the achievement of sector objectives within the parameters of the prevailing policy framework.
- Continue to seek new opportunities to harmonise and align their assistance according to the Government's Harmonisation Action Plan.
- Engage constructively in on-going policy dialogue on all policies relevant to agriculture and related sectors.
- Participate in and support sector monitoring and evaluation efforts.
- Facilitate government management of financial and technical assistance.
- Participate in and support sector monitoring and evaluation efforts.

5.2.4 Role of other MDAs

MDAs are expected to ensure that their policies and programmes are consistent with FASDEPII. MDAs will partner with MoFA in sector development through:

- Participation in sector policy development, planning and review.
- Research.
- Human resource development.
- Implementation of cross-sectoral activities.
- Monitoring and evaluating relevant development indicators and providing information to MoFA.

5.3 Framework for Engagement and Coordination

MoFA requires favourable response from all MDAs, as well as stakeholders in civil society, in the implementation of FASDEP. MoFA will engage partners through a platform on which all parties specify:

- Shared objectives;
- Common prioritisation of objectives and, where necessary, joint planning;
- Roles to leverage skills and build on synergies of parties. (Agreed roles and responsibilities will determine funding responsibilities of respective partners).
- Mechanisms to assess success and make adjustments.

This platform will be applied at the national level for inter-ministerial coordination, through to the regional and district levels where agriculture directorates will partner with the private sector and civil society organisations to address various issues. At the national level, the National Development Planning Commission (NDPC) shall play an oversight role, with MoFA playing a strong advocacy and monitoring role. The Regional Coordinating Councils and MoFA directorates in the regions and districts will play similar roles at the regional and district levels.

The opportunity for this framework to work lies in the fact that all related MDAs recognise the need for collaboration and have included this as a strategy for implementing their sector policies. Yet none of the policy documents has a proposal on how the engagement will be operationalised.

5.4 The Coordination Function of Ministry of Food and Agriculture

The implementation of the policy rests with both the public sector (led by MoFA) and the private sector. MoFA is responsible for the coordination and development of the implementation framework for FASDEP II

Examples of areas requiring MoFA's Coordination and advocacy are:

- Development of cold chains for perishables with the Ministries of Trade and Industry and Private Sector Development and PSI.
- Phytosanitary inspection services for exports.
- Identification of agricultural commodities affected by unfair trade practices.
- Lobbying for protection of strategic commodities identified in the policy.
- Facilitating access of stakeholders in the sector to special investment credit by lobbying for the establishment of the Agricultural Development Fund.
- Developing proposals to extend the benefits incentives directed at the commercial sector in the trade policy to smallholders.
- Advocating mainstreaming concerns of the private sector in agriculture into macroeconomic policy, financial sector development strategy and infrastructure development.
- Coordinating activities on SLM and environmental health within the sector.

The coordination functions are as follows:

1. The Human Resource Development and Management Directorate will conduct a human resource audit within MoFA, training institutions and the National Agriculture Research System in general by establishing a comprehensive database on required and available skills.
2. MoFA will coordinate public-private partnerships beginning with consultations on the policies suggested in FASDEP II.
3. Inter-ministerial coordination – road sector, financial sector, local government, and trade policies all impact on agriculture. 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. This will include the analyses of the impact of macro policies on the competitiveness of key agricultural exports, and the effect of imports on domestic production.
4. MoFA will coordinate the harmonisation of actions of the government and her development partners.

5. MoFA is responsible for the monitoring and evaluation of the policies and their implementation. MoFA will ensure that the data is disaggregated by sector and by 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 as suggested in item 3 above.
6. A number of regulatory and legal requirements are implied in the policy and the passage of the legal instruments has been stalled for a long time. MoFA will proactively pursue the development of regulations and passage of necessary legal instruments and advocate their enforcement.

5.5 Implementation of FASDEP II at the District Level

District plans will be guided by the objectives of FASDEP and their implementation will be achieved as follows:

- FASDEP objectives will be adopted by districts but prioritised according to the needs of the district.
- District will select 2 crops or livestock annually to focus on for effective use of resources but not neglecting other crops or livestock from normal course of development.
- Plans at the district level will be developed in consultation with the private sector, FBOs and NGOs operating in the district.
- The final district plan should show partnership and contribution in implementation between private sector and other stakeholders.
- Activities under each objective and expected output should be grouped to indicate whether they are investments or recurrent services.
- Districts will use the new MoFA matrix of indicators to measure achievements and progress under each objective of the district plan and process the data.
- Districts may also develop additional indicators to measure achievements which are not covered by MoFA indicators.

As MoFA retains the responsibility for the design of national development policies and programmes for the sector, staff at the regional and headquarters level will backstop the districts in performing their technical functions. The district planning is the framework for coordination of activities of MDAs in the districts. The major limitation to the effectiveness of the framework is the lack of composite budgeting. In addition, consultations with stakeholders in the regions reveal that officers prefer to 'work individually'. Financial

devolution and further sensitisation of staff in the regions and districts are required to enhance implementation of policies at the district level. Joint planning at the district level also implies composite budgeting, which MoFA will advocate.

5.6 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. Key development indicators of the harmonised monitoring system are presented in Appendix 2. 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; and
- Carry out an implementation review of FASDEP II after three years.

5.7 Sources of Funding and Fund Management Mechanisms

Funding sources will include GoG, contributions of Development Partners, Private Sector and Civil Society. Specific mechanisms will include:

- Budget support from Development Partners.
- Co-financing with the private sector.
- Beneficiary contribution.
- Internally Generated Funds/non-tax revenue.
- Loans and grants received from international financial institutions.
- Bilateral agreements.

The challenges of managing funds from these diverse sources, particularly in meeting specific conditions of the funding sources, are acknowledged. To overcome these challenges and improve the effective coordination and use of resources, the sectorswide approach (SWAp) will be adopted in the implementation of FASDEP II. Some of the key elements of the approach include:

- Providing overall leadership and direction in the food and agriculture sector.
- Establishing an institutional set-up that will enable MoFA to provide its services efficiently.

- Developing coherent sector plans through joint planning, programming, reviews and information sharing with stakeholders.

In line with the adoption of the SWAp, the Government and her development partners agreed to adopt multi-donor budgetary support (MDBS) in 2003. The process has advanced further with the signing of a memorandum of understanding that commits the Government and her Development Partners to work together according to harmonisation and aid effectiveness principles.

MoFA's plans and budgets will be prepared in line with the planning procedures of the Medium Term Expenditure Framework which include:

- Preparation of 3-year strategic plan;
- Annual review of strategic plan;
- Annual reviews of the policy and expenditure priorities based on monitoring and evaluation results;
- Participation in cross-sectoral meeting and policy hearings; and
- Yearly review and updates of budgets.

MoFA will promote planning and budgeting in the agricultural sector that is informed by expenditure review as well as monitoring and evaluation that informs future policy strategies, targets and allocation of resources.

5.8 Risks to Successful Implementation of FASDEP

- Inadequate allocation of funds by GoG and untimely release of funds by Ministry of Finance and Economic Planning.
- Low prioritisation of the food and agriculture sector by District Assemblies.
- Inadequate response of other MDAs to Agriculture Sector policy initiatives.
- Inadequate response of private sector to policy initiatives.
- Inadequate response of producers (farmers, processors, traders) to policy initiatives.

Additional risks associated with international and natural environment are as follows:

- Adverse dynamics in international trade regimes for agricultural commodities.

- Down-turns in world prices of key agricultural export commodities.
- Poor rainfall patterns and outbreak of pests and diseases.
- Low commodity prices on domestic market.

APPENDIX 1

Cross-cutting Policies Affecting Agriculture

Decentralisation Policy

The decentralisation policy, backed by the Local Government Act (Act 462), devolves central administration authority to the district level, fuses government agencies in any given region, district or local area into one administrative unit, through the process of institutional integration, manpower absorption, composite budgeting and provision of funds for the decentralised services; and devolves implementation responsibilities to the districts. There is a 3-tier structure that includes Regional Coordinating Councils, District/Municipal Assemblies, and Unit Committee/Area Councils.

Under the Act, District Assemblies are primarily responsible for the implementation of development policies and programmes coordinated by the National Development Planning Commission (NDPC). Regional Coordinating Councils (RCCs) and their respective regional Planning Coordinating Units coordinate to ensure consistency, compatibility and coherence of district level development. They facilitate joint ventures among districts and monitor the activities of the District Assemblies within the regions. Central Government/MDAs undertake policy planning, monitoring and evaluation of policies and programmes.

District Assemblies are comprised of decentralised departments and organisations that perform functions previously carried out by the Central Government. The District Directorate of Agriculture is one of the decentralised departments of the District Assembly. Therefore, all MoFA staff in the district are expected to become staff of the District Assemblies and for that matter the Local Government Service.

MoFA was restructured with the creation of Regional Agricultural Development Units (RADU) and District Agricultural Development Units (DADU) in line with the decentralised governance structure. RADUs are responsible for the coordination and management and implementation of agricultural projects and programmes in the regions and districts, while DADUs are in charge of managing projects and programmes and implementing policies in the districts. In addition, Subject Matter Specialists have been created to give technical support to Agricultural Extension Agents (AEAs), with backstopping from the national directorates.

As of 2006, financial decentralisation had not happened and joint planning and composite budgeting was yet to take place. These are the challenges that districts will face in their implementation of policies.

Macroeconomic Policy

The performance of the agricultural sector is affected by macroeconomic policies, including trade (exchange rates, quota's and tariffs); fiscal (public expenditure management, tax); and monetary (interest rates) policies. Although the objective of macroeconomic policy is to create a stable macroeconomic environment that provides incentives for investment, the management of macro policy instruments may not all favour the agricultural sector.

High interest rate is a key constraint to investment in agriculture. Although interest rates are falling, the lending rates for agriculture and forestry are still high, falling in the range of 20%-33.5% in 2006, according to the Bank of Ghana Statistical Bulletin. The perception among formal financial institutions that the agricultural sector is a high risk and costly sector for financial services delivery continues to adversely affect credit supply to the sector. Besides, producers in the agricultural sector, with their low productivity, cannot compete with the commercial sector for funds.

Exchange rate is an important macro price in an economy and its level directly affects trade balance. The depreciation of the Cedi to the US Dollar exchange rate, from 49.8% in 2000 to 2.2% in 2004, resulted in mixed responses in the economy. The export volumes of non-traditional agricultural commodities increased threefold from 1996 to 2004 (cocoa beans and pineapples included). At the same time surges in imports of import substitutes such as rice, poultry products and tomato paste have occurred. The explanation to the latter is that *CIF* prices of the imported commodities are lower than their domestic prices and so are still able to compete with the domestic production in spite of the depreciation. Indeed, the effective real exchange rate has been appreciating. For example in 2005, while the cedi depreciated by 0.3%, the real effective exchange rate appreciated by about 19%. Appreciation in real exchange rate reduces competitiveness of exports.

Government tax policy has been supportive of agriculture where tax holidays of close to 10 years are given, depending on the type of investment. Unfortunately tax exemptions have not been an effective instrument for supporting agriculture as other constraints such as high cost of energy and poor infrastructure have

been inimical to investments in the sector. MoFA will advocate shifts in government budget or debt relief funds towards improving the physical environment for agricultural investments. In addition it is proposed that the government shall remove corporate tax for producers and processors in the sector.

Overall, macroeconomic policy management does not appear to have a systematic process in place where effects of exchange rate on key agricultural commodities are factored into the economic policy management. Such a process will help determine the levels of exchange rate and tariff that provide sufficient incentives to expand exports and reduce imports.

Private Sector Development and Trade Policy

The Government of Ghana has developed a medium term Private Sector Development Strategy (PSD) that clarifies the respective roles of the State and of the private sector in achieving the Golden Age of Business. Based on the recognition that the private sector is about the operation of markets for inputs and for products, PSD Strategy aims to enhance Ghana's competitiveness by removing physical and regulatory constraints on the operation of markets, complemented in the short-term with direct, targeted state support to specific export industries under the Presidential Special Initiatives (PSI) programme. The strategy is designed to address constraints faced by micro and small enterprises, which encompass most agribusinesses. The agricultural sector is expected to benefit from the broad-based pro-market reforms of the PSD strategy and particularly because the constraints related to agribusiness that the PSD Strategy seeks to address are consistent with those identified in FASDEP II.

The instruments for improving the environment of private sector development are specified in the trade policy. Tariffs and quotas will be used to ensure fairness in pricing, but not to discourage competition. Tariffs will also be used as a short-term measure, to counteract unfair trade practices and to encourage domestic production of strategic commodities. The tariffs will then be replaced with long-term concessionary investment finance. Fiscal incentives and other forms of direct and indirect support will also be introduced for capital investments in technology upgrades, and research and development.

Export duties will be levied on selected commodities on the basis of such social costs as damage to the environment and use of national resources. For now, these taxes apply to the extractive sector, such as

mining. The sub-sector likely to be affected is forestry for lumber. Export credit, tax rebates, subsidies, and VAT exemptions are additional instruments to be used along with enhancement of infrastructure at the ports.

The trade policy explicitly recognises the infrastructure and regulatory needs of agricultural produce exports, including cold chains for perishables and phytosanitary inspection services for all produce. However, the policy instruments focus on the commercial or agribusiness sector, thereby bypassing the majority of operators in the sector. MoFA will promote linkages between agri-business and smallholders to enable the latter benefit from the incentives.

The limitation in the application of the various trade instruments for protection of industries is Ghana's obligation to trade protocols of ECOWAS, which limit the use of tariffs to protect domestic producers. The extent to which this is hurting import substituting industries such as rice and chicken has not been established. The Government will support the building of the capacity of trade experts at MoFA and other relevant MDAs in trade policy analysis and negotiation skills. As part of its policy monitoring and coordinating role, MoFA will support the establishment of a systematic process that will regularly analyse effects of exchange rate management and taxes and other trade instruments on agriculture to inform Government macro policy decisions. It is stated in the Private Sector Development Strategy that in respect of macroeconomic environment, financial sector and infrastructure development, the government will take measures to integrate private sector concerns into their implementation, monitoring and evaluation. This provision creates the opportunity for MoFA to monitor those aspects of macroeconomic policy that affect the private sector in agriculture.

Land Policy

The land policy consists of a comprehensive set of proposals for improving access to land, ensuring security of tenure and protection of land rights, and ensuring planned land use. Policy strategies are the establishment of land banks to enhance access, enforcing title registration to assure tenure security, and development and implementation of land use plans at the district, regional and national levels. Customary land secretariats are being established to facilitate traditional land administration. Security of land tenure is a constraint to agricultural investment (particularly to poor agricultural producers and women). Whilst the

land policy supports land access and security, the agricultural land policy will play a complementary role by promoting SLM practices within the sector.

Discrimination against women in the land allocation processes is widely reported. Fewer women obtain land, and when they do they often have smaller and less fertile pieces of land, which they tend to hold on less secure terms than those of men. Less than one third (31%) of households headed by women own land. The strategy is to facilitate the development and dissemination of information on land tenure issues for men and women producers, particularly the resource poor and women.

National Water Policy

Ghana has a national water policy that aims to achieve an efficient and effective management system for the sustainable development of water resources. The policy focuses on water resource management, urban water supply and community water and sanitation and recognises the important role of agricultural water management and irrigation in the country. Some of the underlying principles of the policy, of most relevance to agriculture are:

- Minimising activities that have the potential to negatively affect the integrity of water resources
- Coordinating water resource planning with land use planning
- Ensuring participatory decision making at the lowest appropriate level,

The issues related to water resource management in agriculture are:

Farming in catchment areas and along banks of water bodies and discharge of effluents from agro-industries into water bodies. The absence of geo-political demarcation of water resources for ownership to traditional areas compound the problems of common property.

FASDEP II recognises the need for collaboration between relevant agencies for awareness creation, and advocacy of development and enforcement of regulations and guidelines for efficient and sustainable exploitation, utilisation and management of water resource.

National Transport Policy

The policies of the transport sector aim to foster collaboration and facilitate activities of other sectors such as food and agriculture.

Based on this, the following policy principles are espoused:

- Transport planning will be fully integrated with development planning and service provision
- Transport infrastructure investments will be targeted to better serve population, production and tourist centres aiming to reduce overall transport costs to the government and users
- A bulk goods transportation strategy will be developed based on specific user needs, identifying critical investments in the rehabilitation of railways and inland waterways infrastructure.

Strategies of relevance to FASDEP II are:

- Establish consultation mechanisms between transport sector MDAs and other Sector Ministries.
- Improve accessibility by determining key centres of population, production and tourism, identifying strategic areas of development and necessary expansion.
- Re-instate labour-based methods of road construction and maintenance to improve rural roads and maximise employment opportunities.
- Develop, rehabilitate and maintain existing railway infrastructure to ensure services are sustained to move freight and passengers more efficiently.
- Remove obstacles that impede the free movement of bulk goods in the Volta Lake and provide adequate infrastructure such as landing stages and warehouses for bulk goods transportation on the Lake.

MoFA will take advantage of these strategies and liaise with the relevant ministries in the transport sector to ensure that the transport needs of the agricultural operators are met.

HIV/AIDS

An important vulnerable group is HIV/AIDS-infected persons and their caregivers. The impact of the disease includes loss of household labour and high dependency in households. For the infected, their low immune system requires proper and adequate nutrition. Existing policy on HIV/AIDS recognises the need to train Agricultural Extension staff on HIV/AIDS prevention to enable them provide basic information to clients, who are mostly in the rural areas. This policy will be broadened to include the workplace awareness creation, which would commit the Directorates of MoFA to consider HIV/AIDS issues as an integral part of job functions, and to plan and allocate resources for HIV/AIDS programmes for the staff within the directorates.

Other important ailments that have a debilitating effect on farm households are malaria and guinea worm. MoFA will collaborate with the Ministry of Health to facilitate dissemination of information on the control of these ailments.

Considerations for these diseases will be systematically incorporated in food and agriculture interventions, while at the same time incorporating agriculture considerations in AIDS programmes. Specific strategies are to:

- Collaborate with relevant agencies to implement programmes to mitigate the impact of HIV/AIDS on people living with HIV/AIDS (PLWHA) and their families in the agricultural sector.
- Promote non-discrimination against PLWHA and affected individuals and households among the agricultural sector workers and in communities.
- Facilitate equal access of PLWHA in agricultural sector to social protection (including food security) programmes.
- Apply instruments, consistent with international best practice in workplace HIV/AIDS control.

APPENDIX 2

Matrix of Harmonised Monitoring and Evaluation Indicators

Sector contribution to MDG objectives		Reduce by half, between 1990 and 2015, the proportion of population suffering from hunger (Objective 1, target 2) Integrate the principles of sustainable development in the national policies and reverse the current trend of natural resources degradation (objective 7, target 9).	
Sector contribution to GPRS objectives		Increased capital and labour productivity of agriculture production and agro-processing as propeller of economic growth and poverty reduction to attain middle income status by the year 2015 within a decentralised and democratic environment, and within sustainable natural resource management.	
Sector objectives		Agricultural growth rate of 6-8% per annum over the next 4 years; crops and livestock leading the growth at an average annual growth rate of 6%; Forestry and logging, and fisheries, each growing at 5% per annum; Cocoa will remain robust in support of other sectors. 1. Food security and emergency preparedness 2. Improved growth in incomes 3. Sustainable management of land and environment 4. Increased competitiveness and enhanced integration into domestic and international markets 5. Application of science and technology in food and agriculture development 6. Effective institutional coordination	
Supporting policies and strategies		1. Crop Development Policy; 2. Cocoa Strategy; 3. Livestock Development Policy; 4. Fisheries Policy; 5. Extension Service Strategies; 6. Irrigation Development Strategies; 7. Plant Protection Strategies.	
Cross-cutting interventions and Policies		1. Human Resource Development and Gender Equity; 2. Agricultural Mechanization; 3. Access to Agricultural Inputs; 4. Development of Output Markets and Processing; 5. Improved Financial Services; 6. Macroeconomic Policy; 7. Land Policy; 8 Water Resource Policy; 9 Private Sector Development Policy; 10. Trade Policy; 11. Gender Mainstreaming; 12. HIV/AIDS.	
Indicator number	Indicators	Monitoring method/Activities	Corresponding Issues and Strategies.
Objective 1. Food security, emergency preparedness, and reduced income variability			
1	Per capita production of key staple foods (crops, livestock and fish) in kg/annum, except for live animal/annum. <u>(Quantitative & Outcome indicator)</u>	Area, yield and production measurement for maize, rice, cassava, yam, cocoyam, cowpea, soybean, plantain, sorghum, groundnut, millet, poultry, sheep/goat, pig, cattle and fish	Focus at the national and agro-ecological levels on the development of key staple crops.
2	Number of districts and households benefiting from food aid. <u>(Quantitative & Input indicator)</u>	Record food aid data from national and international food providers in Ghana;	Focus at the national and agro-ecological levels on the development of key staple crops. Emergency preparedness and disaster management.
3	Percentage change of households with seasonal migrants during lean period in Sudan and Guinea savannah. <u>Quantitative & Outcome indicator</u>	Percentage of households with seasonal migrants during lean period in Sudan and Guinea savannah. Regular monitoring of sample communities.	Develop small-scale irrigation scheme to ensure production throughout the year. Implementation of special programmes for the vulnerable Promote farmer's capacity to respond to agric programmes.

4	Share of household incomes spent on food. (Qualitative & Impact indicator)	Household survey Poverty/wealth grouping PSIA	Enhance productivity along the value chain.
5	Percentage post-harvest loss. (Quantitative & Outcome indicator)	Special study to update data base (2007) <i>Loss in storage, transport, harvest, market for selected tubers and cereals, citrus and pineapple.</i> Number of initiatives implemented to reduce loss based on findings of the study and subsequent monitoring (2008, 2009)	Develop effective post-harvest management strategies, particularly storage facilities at individual and community levels. Promote processing, preservation and utilisation of crops, livestock and fish products.
6	% of child underweight. (Quantitative and outcome indicator)	Child malnutrition (Underweight)	Promote access to nutritious food, as well as nutrition and health information. Coordinate food security programming to address malnutrition issues with key agencies.
7	Average number of daily to weekly food market per district. (Quantitative & output indicator)	Number and repartition of daily to weekly food markets.	Facilitate the movement of staples through the existing relevant stakeholders from one area to the other.
8	Change in food commodity price (quantitative and outcome indicator)	Annual price variation for the main staple food commodities: cassava, yam, maize, sorghum, millet, rice.	Reduce variability in food prices through buffer and strategic stocks.
9	Livelihood diversity: number of livelihood groups and percentage per category. (qualitative and impact indicator)	Proportion change of Farm-based livelihood, Agric non-farm-based livelihood, non agric livelihood and natural resource-based livelihood. Target for 2007: establish baseline. Targets for 2008 & 2009: establish targets based on baseline.	Promote farmer's capacity to respond to agric programmes.
10	Level of poverty based on food security/insecurity, level of assets and vulnerabilities, and respective responsive capacity to agric development programmes. (Qualitative and impact indicator)	Beneficiary assessment Assets, vulnerabilities, change of attitude and behaviour. 2007: establish baseline based on GSS and livelihood study. 2008 & 2009: establish targets based on baseline and GPRS targets.	Promote farmer's capacity to respond to agric programmes. Design and implement special programmes which target the vulnerable groups to enhance diversification opportunities.
11	Number of coping activities and safety net mechanisms used in case of food shortage and financial asset deficit in farm households. (Qualitative & Outcome indicator)	Household assessment by the mobile M&E/trainer team (RADU/DADU) with guidance from PPMED/SRID.	Focus on the development of most staple food. Design and implement mitigation measures for household living with diseases.
Objective 2. Increased growth in incomes			
12	Increase in yield of selected crops and livestock. (Quantitative & outcome indicator)	Yield measurement of cocoa, cashew , coffee, maize, rice, cassava, yam, cocoyam, plantain, sorghum, millet, pineapple , mango , banana, citrus , oil-palm Livestock productivity: percentage in lambing, poultry, sheep , goat , pig, cattle productivity.	Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.
13	Local slaughter. (Quantitative & Outcome indicator)	Record official and non-official slaughter figures	Support sustainable diversification by staple crop farmers with tree crop, small ruminants, poultry and vegetable.

14	Number of improved breeds of animal imported/produced and distributed to farmers. <u>(Quantitative and Output indicator)</u>	Record number of improved breeds distributed by farmers (by type of livestock).	Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.
15	Total Fish Production (mt) <u>(Quantitative & Outcome indicator)</u>	- Marine - Inland Capture fisheries - Harvesting of Ponds - Import	Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.
16	Quantity of fish produced per unit area of pond per cycle. <u>(Quantitative & Output indicator)</u>	Record fish production for small and commercial water bodies	Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.
17	Total water area under fish farming. <u>(Quantitative & Output indicator)</u>	Areas to be recorded.	Limited income growth in the indigenous staple crops, livestock and fisheries sub-sectors compared to export crops.
18	Agro-Processing/Storage Equipment Distributed and sold through MOFA. <u>(Quantitative & Output indicator)</u>	Record type and number of agro-processing/storage equipment distributed at national and regional levels.	Promote storage and processing/value addition.
19	Percentage change in agro-processing and agro-business enterprises registration. <u>(Quantitative & Outcome indicator)</u>	Record annual agro-business enterprises registration and annual registered agro-business enterprises out of business.	Promote growth and development of agro-processing industries.
20	Change in export of processed agricultural products. <u>(Quantitative & Output indicator)</u>	Track volume of processed products exported	Support product development and agro-processing with appropriate technologies.
21	Number of functioning Farmers-Based Organisations (FBOs) and their access to services. <u>(Quantitative & Output indicator)</u>	Enhanced farmer- based organisations technology dissemination system and capability enhancement of staff and farmers' groups. Number of functioning FBOs. % FBOs accessing financial services. % FBOs accessing marketing information	Develop FBOs and strengthen their capacity for improved post-harvest management and marketing of products.
22	The share of credit to agriculture, forestry and fishing. <u>(Quantitative & Input indicator)</u>	The ratio of credit to agriculture, forestry and fishing	Enhance equitable access to targeted financial services to support value chain management.
23	Trend/perception in quantity and nature of agriculture seasonal and permanent self-employed and paid job (production and value chain). <u>(Qualitative & Outcome indicator)</u>	Community assessment in sample villages in each region and ecological zone. Trend of farm wage opportunity Trend of non-farm wage opportunity Trend of seasonal migration Trend of semi-permanent migration	Create opportunities for dry season employment as a diversification strategy for farm households.

24	Ratio between subsistence crop/livestock and commercial crop/livestock farming. (Quantitative & Outcome indicator)	Household farm size measurement (perennial and annual crop) in selected enumeration areas. Number of livestock per household in selected areas.	Increased growth in agricultural income.
25	Ratio of farm and non-farm household incomes. (Quantitative & Outcome indicator)	Record farm-size in enumeration area. Household assessment by the mobile M&E/trainer team (RADU/DADU) with guidance from PPMED/SRID. Agricultural census 2007	Increased growth in agricultural income.
26	Trend in labour productivity of major agricultural paid job, and comparison with productivity of non-farm unskilled paid job. (Quantitative & Outcome indicator)	Community assessment in sample villages in each region and ecological zone. Special studies on: Average value of daily wage; Labour productivity of daily farm work wage; and Labour productivity of farm contract basis.	Create opportunities for dry season employment as a diversification strategy for farm households. Enhance knowledge, skills and capacity of human resource in the agricultural sector for value chain management.
Objective 3. Sustainable Management of Land and Environment			
27	<u>Natural resource protection</u> Rural infrastructures (irrigation scheme, farm road) implemented with environmental mitigation measures. (Quantitative & output indicator)	Record number of new irrigated schemes and farm roads developed and/or started during the considered year, and number of schemes and farm roads implemented with environmental mitigation measures.	Mainstream SLM and environment protection practices in agricultural sector planning and implementation.
28	<u>Natural resources management</u> Cropping and husbandry practices.	Trend in bush fire for agriculture and livestock purposes. Trend in fallow period and proportion of fallow in agricultural land.	Improve incentive and compulsion measures to encourage users of the environment to adopt less exploitative and non-degrading practices in agriculture.
29	Effective and efficient framework of collaboration with appropriate agencies to ensure environmental compliance. (Quantitative & Output indicator)	Participatory elaboration of draft framework (December 2007). Effective and efficient framework in place (end 2008).	Ineffective framework for collaboration with appropriate agencies to address environmental issues related to agriculture
30	<u>Natural resources management</u> Number of sustainable cropping and husbandry training modules and number of environmentally friendly actions implemented. (Quantitative & output indicator)	<i>To be defined in 2008.</i>	Mainstream SLM and environment protection practices in agricultural sector planning and implementation.
Objective 4. Increased competitiveness and enhanced integration into domestic and international markets			
31	Change in export of non-traditional agriculture commodities (mt). (Quantitative & Outcome indicator)	Gather export data for: 1) roots and tubers; 2) cereals; 3) fruits; 4) vegetables; 5) fish & sea food	Product development Strengthen the capacity of exporter to meet export volumes.
32	Meat and other Livestock Products Imported (mt). (Quantitative & Outcome indicator)	Monitor import from KIA, Accra and Tema.	Support sustainable diversification by staple crop farmers with tree crop, small ruminants, poultry and vegetable.

33	Import of live animal (Heads). (Quantitative & Outcome indicator)	Track import of cattle, sheep and goats from Bawku/Mogni, Paga, Hamle.	Support sustainable diversification by staple crop farmers with tree crop, small ruminants, and poultry and vegetable.
34	Number of effective market information centres established.	Record number of market information centres established and operational.	Establish effective market information centres alongside the use of existing local radios.
Objective 5. Application of Science and Technology in food and agriculture development			
35	The extension officers to farm household ratio.	Record number of extension officers/farm household. Average extension time/extension officer. Extension coverage: rural community covered/total rural communities.	Facilitate adoption of existing viable and appropriate technologies.
	Motorbike/AEA ratio.	Record total number of motorbikes used by DADU (GoG and projects) and number of AEAs at post.	
	Disbursed T&T ratio/AEA. (Quantitative & Input indicator)	Record T&T distributed by DADU and number of AEAs at post.	
36	Number of improved technologies demonstrated to farmers. (Quantitative & Input indicator)	Record data from DADU and directorates.	Facilitate adoption of existing viable and appropriate technologies.
	Cumulated number of farmers benefiting from technology demonstrations. (Quantitative & output indicator)		
37	Number of extension information centres established and operational. (Quantitative & Input indicator)	Record data from RADU, SRID and AESD.	Facilitate adoption of existing viable and appropriate technologies.
38	Level of participation in Research extension linkage committee and gender ratio (RELCs). (Qualitative & Outcome indicator)	Record number of RELCs meetings, number and gender of participants per region and per topic.	Promote demand-driven research including support to farmer driven technology innovation chains as pursued with RELC.
39	New technology and good agriculture practices (GAPS) adoption rate in crop and livestock farming. (Qualitative & Outcome indicator)	Number and nature of technology and good agriculture practices (crop and livestock) introduced by AEAs by region. Number and gender of participants per topic. Estimation of adoption rate among participants of the rural communities covered (%).	Facilitate adoption of existing viable and appropriate technologies.
Objective 6. Effective Institutional coordination			
40	Satisfaction scoring about FASDEP revision, implementation and monitoring. (Qualitative & Outcome indicator)	Consultative evidence-based revision process coherent with national policies (2006-07). Improved data collection and analysis (2007 and 2008). Beneficiary assessment of implementation and monitoring (2009).	Strengthen the intra-sectoral and inter-ministerial coordination.

41	MOFA monitoring and Evaluation Performance. (Quantitative & Output Indicator)	% of planned activities implemented. Number of actions taken. Number of institutions participating. Number of results achieved.	Improved efficiency of agricultural programmes.
42	Satisfaction scoring about improved sector M&E process and usefulness. (Qualitative & Outcome indicator)	Annual beneficiary assessment of the M&E process (institution, organisation, data quality, timely reporting, capacity building, feedback, backstopping, dissemination, lessons learned for strategic planning).	Develop and implement a communication strategy.
43	Satisfaction scoring about intra and inter ministerial coordination and donor harmonisation for agriculture sector enhanced. (Qualitative – quantitative & Outcome – output indicator)	Intra-MOFA, inter-ministerial and MOFA/DP meetings MOFA/DP initiatives towards SWAp. Intra and inter-MOFA meetings and workshops. Annual satisfaction survey conducted among national and international partners. Joint mission exercises.	Strengthen the intra-sectoral and inter-ministerial coordination.
44	Number and proportion of new externally funded agriculture projects and programmes channelling their M&E within decentralised M&E MOFA system.	Record new projects and programmes channelling their M&E since the beginning of the MOFA M&E System.	Weak coordination between projects.
Supporting Policies and Strategies			
<u>Livestock Development Policy</u>			
45	Improved data quality and monitoring of livestock sub-sector	Target for 2007: special study on livestock to update data. Target for 2008. Incorporation of livestock data collection in agric census. Regular monitoring of livestock sub-sector within decentralised MOFA.	Poor quality data and poor monitoring of livestock sub-sector.
<u>Irrigation Development Strategies</u>			
46	Finalise implementation and review of irrigation policy.	Finalise irrigation policy document consistent with FASDEP transferring the management to WUG (2006). Implementation of policy (2007). Review of policy and incorporation of lessons learned (2008).	Realise the productive capacity of existing assets and respond to the new demands for irrigated production through a mix of well coordinated public and private initiatives.
47 a	Percentage of cultivated lands under irrigation (Area developed for formal irrigation/ha). (Quantitative & output indicator)	Measurement of total developed irrigation area.	Realise the productive capacity of existing assets and respond to new demands for irrigated production. Efficient use of water at formal irrigation facilities.
47 b	Land intensification ratio in formal developed irrigated areas. (Quantitative & output indicator)	Measurement of effective irrigated areas. Measurement of number of cropping cycle per year in irrigated areas.	

	Production of irrigated crops in irrigated land. (Quantitative & Output indicator)	Estimation of production from sample field of irrigated land.	Raising productivity of irrigation water.
48	Update record of water user groups (Process indicators)	Update the number of operational water user groups in each district and consolidate at the RADU level.	Facilitate the improvement of users rights to land at irrigation sites.
Cross-cutting interventions and policies			
	<u>Human resource development and gender equity</u>		
49	Number and position of staff participating in in service training. (Quantitative & Output indicator)	Record, at regional and national level, in-service training topics, number, positions and gender of participants	Bridge knowledge and skills gap through education and training tailored more closely to needs of the sector i.e. Human development and capacity building.
50	Percentage of funds disbursed for pro-poor interventions compared to total MOFA development budget. (Quantitative & Input indicator)	Record total annual MOFA available budget and funds disbursed for pro-poor interventions.	Design and implement special interventions for the resource poor, including the women.
	<u>Mechanisation</u>		
51	Running tractor to farmer ratio.	Record data from DADU and AESD.	Promote use of appropriate and basic farm machinery and equipment.
52	Number of acres ploughed by tractors and draft animals. (Quantitative & Input indicators)	Record data from DADU and AESD.	Promote use of appropriate and basic farm machinery and equipment.
53	Number of animal traction centres refurbished/established and operational. (Quantitative & Input indicator)	Record data from RADU and AESD.	Intensify use of animal traction through establishment at AT centre.
54	Number of farm mechanisation centres established and operational. (Quantitative & Input indicator)	Record data from RADU and AESD.	Facilitate the establishment of mechanisation services provision centres, and machine hire-purchase and lease schemes.
	<u>Access to agricultural inputs</u>		
55	Fertilizer Imports. (Quantitative & Input indicator)	Record data from Land and Water Management Unit.	Improve supply chain management.
56	Production, procurement and distribution of essential vaccines and Biologicals. (Quantitative & Input indicator)	Record data from VSD.	Improve supply chain management.
57	Satisfaction scoring of input supply and distribution system	Beneficiary assessment in selected districts of each region.	Improve supply chain management.

58	Number and distribution of input outlets and sale points. (Qualitative & Input indicator)	Record formal and informal agriculture input outlets per district and consolidate data at the regional level.	Improve supply chain management
	<u>Development of Output markets and processing</u>		
59	Selected vegetal raw material imported: cotton, sugar-cane, rubber and groundnut. (Quantitative & Outcome indicator)	Record production and import data	Develop product markets