New Partnership for
Africa's Development (NEPAD)

Comprehensive Africa Agriculture
Development Programme (CAADP)

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Investment Centre Division

GOVERNMENT OF THE REPUBLIC OF GHANA

SUPPORT TO NEPAD–CAADP IMPLEMENTATION

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Volume I of III

NATIONAL MEDIUM TERM INVESTMENT PROGRAMME (NMTIP)

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GHANA: Support to NEPAD–CAADP Implementation

Volume I: **National Medium–Term Investment Programme (NMTIP)**

Bankable Investment Project Profiles (BIPPs)

Volume II: **Small–scale/Micro–scale Irrigation and Drainage Project**

Volume III: **Post–harvest Systems and Agro–processing Support Project**

GHANA:

NEPAD–CAADP National Medium–Term Investment Programme (NMTIP)

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Currency Equivalents

(June 2005)

Local Currency	=	Cedi (¢)
US$1.00	=	¢9,000
¢1,000	=	US$0.11

Abbreviations

AAGDS	Accelerated Agricultural Growth and Development Strategy
ADF	Agricultural Development Fund
AFD	*Agence Française de Développement*
ADB	African Development Bank
AGOA	African Growth and Opportunity Act
AgSSIP	Agricultural Services Sub–Sector Investment Programme
BOG	Bank of Ghana
CAADP	Comprehensive Africa Agriculture Development Programme
CIDA	Canadian International Development Agency
COCOBOD	Ghana Cocoa Marketing Board
CSIR	Council for Scientific and Industrial Research
DANIDA	Danish International Development Agency
DFID	Department for International Development (of United Kingdom)
EDIF	Export Development Investments Fund
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FASDEP	Food and Agriculture Sector Development Policy
FBO	Farmer–Based Organisation
FRI	Food Research Institute
GDP	Gross Domestic Product
GFDC	Ghana Food Distribution Corporation
GLDB	Grains and Legumes Development Board
GNP	Gross National Product
GoG	Government of Ghana
GPRS	Ghana Poverty Reduction Strategy
GRATIS	Ghana Regional Appropriate Technology Information Service
GTZ	German Agency for Technical Cooperation
ICP	Integrated Crop Protection
IDA	International Development Association
IFAD	International Fund for Agricultural Development
ITTU	Intermediate Technology Transfer Unit
JICA	Japan International Cooperation Agency
KfW	German Bank for Reconstruction
LACOSREP	Land Conservation and Smallholder Rehabilitation Project
LSDP	Livestock Development Project
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MDBS	Multi–donor Budgetary Support
MES	Ministry of Environment and Science
MFEP	Ministry of Finance and Economic Planning
MLF	Ministry of Lands and Forestry

MLGRD	Ministry of Local Government and Rural Development
MOFA	Ministry of Food and Agriculture
MOWAC	Ministry of Children and Women Affairs
MRCN	Ministry of Regional Cooperation & NEPAD
MRT	Ministry of Roads and Transport
MTADP	Medium Term Agricultural Development Programme
MTEF	Medium Term Expenditure Framework
NAAC	National Agriculture Advisory Committee
NATC	National Agricultural Technical Committee
NEPAD	New Partnership for Africa's Development
NGO	Non–Governmental Organisation
NSBS	National Strategic Buffer Stock
PPMED	Policy Planning, Monitoring and Evaluation Directorate
PPRSD	Plant Protection and Regulatory Services Directorate
PRSC	Poverty Reduction Support Credit
RELC	Research Extension Liaison Committee
SARI	Savannah Agricultural Research Institute
SME	Small–Medium Scale Enterprise
SMS	Subject Matter Specialist
SRDP	Smallholder Rehabilitation and Development Project
SRI	Soil Research Institute
SRID	Statistics, Research and Information Directorate
SWAp	Sector Wide Approach
WIAD	Women in Agricultural Development
WTO	World Trade Organization

Preface

In an effort to halt and reverse the decline of the agricultural sector in the continent, the African ministers for agriculture unanimously adopted, at the 22nd FAO Regional Conference for Africa (ARC), held on 8 February 2002 in Cairo, a resolution laying down key steps to be taken in relation to agriculture in the framework of the ***New Partnership for Africa's Development (NEPAD).*** *As a follow–up to this resolution, they endorsed, on 9 June 2002, the NEPAD* ***Comprehensive Africa Agriculture Development Programme (CAADP).*** *The* ***Declaration on Agriculture and Food Security in Africa*** *ratified by the African Union Assembly of Heads of State and Government during its Second Ordinary Session, held in Maputo in July 2003, provided strong political support to the CAADP. During this session, the Heads of State and Government agreed to adopt sound policies for agricultural and rural development, and committed themselves to allocating at least 10 percent of national budgetary resources for their implementation within five years.*

The CAADP provides an integrated framework of development priorities aimed at restoring agricultural growth, rural development and food security in the African region. In its very essence, it seeks to implement the key recommendations on food security, poverty reduction and sustainable use of natural resources, made at recent global conferences. The CAADP comprises five pillars:

1. *Expansion of the area under sustainable* ***land management*** *and reliable* ***water control systems.***
2. *Improvement of* ***rural infrastructure*** *and* ***trade–related capacities*** *for improved* ***market access****.*
3. *Enhancement of* ***food supply*** *and* ***reduction of hunger****.*
4. *Development of* ***agricultural research, technological dissemination and adoption*** *to sustain long–term productivity growth.*
5. *Sustainable development of* ***livestock, fisheries and forestry*** *resources*[1]*.*

As an immediate follow–up to the Maputo Declaration, representatives of 18 African ministries for agriculture from member countries of the NEPAD Implementation Committee, the NEPAD Steering Committee, the African Development Bank, the World Bank, the International Fund for Agricultural Development, the World Food Programme, FAO and civil society, participated in a meeting held in Rome on 17 September 2003, in order to discuss the implementation of the CAADP, and more specifically:

- *the methodology for the review/update of the* ***national long–term food security and agricultural development strategies;***
- *the preparation of* ***national medium–term investment programmes****; and*
- *the formulation of the related* ***"Bankable Projects".***

It is within this context that the Government of Ghana, in an effort to reinforce its interventions aimed at fighting poverty and food insecurity, has requested FAO to assist in preparing

[1] Pillar 5 was initially not part of CAADP, but has been added in recognition of the importance of the sub–sectors.

a ***National Medium–Term Investment Programme (NMTIP)*** *and a* ***Portfolio of Bankable Investment Project Profiles***[2] ***(BIPPs)****, with the aim to:*

- *create an environment favourable to improved competitiveness of the agricultural and rural sector;*
- *achieve quantitative objectives and mobilize resources to the extent needed for the associated investment in agriculture;*
- *achieve the targeted allocation of national budgetary resources to this area, reflecting the commitment made in the Maputo Declaration, and*
- *create a framework for coordinated bilateral and multilateral financing of the sector.*

The government laid the foundation for the ongoing preparation of a NMTIP for Ghana during the Stakeholder Workshop on NEPAD and Agricultural Development in Ghana in April 2003, which proposed an action plan to operationalize the CAADP strategies in the country. The NMTIP has been prepared by a team of consultants[3] *under the overall supervision of the National Project Coordinator/NEPAD Focal Point from the Ministry of Food and Agriculture*[4]*, and with the assistance of the FAO Investment Centre Division*[5]*. In the process of preparing this document, the major stakeholders from government, development partners, private sector and civil society were involved as much as possible. Key to the finalization of the NMTIP was the National Stakeholder Workshop which took place in Accra on 9 and 10 June 2004, during which the NMTIP was discussed and validated*[6]*.*

The document starts with a brief description and analysis of Ghana's agricultural sector in the context of the country's economy and poverty and food security situation. This is followed by a review of national and development partner strategies and programmes, lessons learnt, and an analysis of the principal constraints to as well as opportunities for the development of the sector. Based on this analysis and taking into account existing government strategies and the five pillars of CAADP, as well as the findings of the NEPAD/CAADP launching workshop of April 2003, priority areas for investment have been proposed and a list of projects identified for preparation. Finally, an attempt is made to estimate the financing gap in terms of additional resources that would be required to meet the target of allocating 10 percent of the national budget to the sector by 2009, and to achieve the sector goals, and a proposal put forward for Monitoring and Evaluation of the NMTIP. During the National Stakeholder Workshop, preliminary project ideas were further elaborated and prioritized based on agreed–upon selection criteria. Bankable project profiles were subsequently prepared for the following two projects, which are presented in Volumes II and III: (i) Small–scale/Micro–scale Irrigation and Drainage Project; and (ii) Post–harvest Systems and Agro–processing Support Project.

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[2] *"Bankable investment project profiles"* are defined as documents elaborated in a format and with the information that could make them favourably considered by the financial institutions, donors and private investors foreseen in the Maputo Declaration. These documents should enable partners to make preliminary indications of interest, and of approximate level of funding commitment. Further feasibility analysis and subsequent processing through the concerned partner(s) regular project formulation systems would follow to obtain an investment project/programme proposal elaborated to the feasibility study level.

[3] Messrs Ben S. Tetteh, Damodar Tripathy, Ditchfield P.K. Amegashie (consultants) and Ms Angela Dannson (MOFA/PPMED). Main authors of the BIPPs were Messrs Humphrey A. Torgbor and Philip J. Riddell (Vol. II) and Mr Christopher Mensah (Vol. III).

[4] Mr Lambert Abusah (MOFA/PPMED).

[5] Mr Thomas Muenzel, Agricultural Economist (TCIW).

[6] See Annex 6.

I. INTRODUCTION

A. The Economy

I.1. Ghana is situated on the west coast of Africa, bordered by Côte d'Ivoire, Burkina Faso and Togo – on the west, north, east, and the Atlantic Ocean on the south. It was the first country to gain independence from colonialism in Sub–Saharan. The total population of Ghana was 19.7 million in 2000. Nearly 60 percent of the population are in the rural sector[7]. Its Gross Domestic Product (GDP) was US$6.2bn or US$308 per capita, and external debt was US$7.4bn (US$333 per capita) in 2002. The country is rated as one of the Heavily Indebted Poor Country (HIPC) and is ranked 129 out of the 175 countries covered by the United Nations Development Programme (UNDP) Human Development Index.

I.2. Ghana has experienced a real GDP growth rate between 3.3 and 4.7 percent over the period 1993–2002 (average 4.2). In 2002, agriculture accounted for about 36 percent of GDP, services for almost 40 percent and industry for around 24 percent. Export revenues were US$2.1bn and US$2.3bn in 2002 and 2003 respectively. Cocoa, timber and gold are the major export commodities, accounting for US$1.3bn or 64.7 percent and US$1.8bn or 78.8 percent of export revenues in 2002 and 2003 respectively. Cocoa alone earned over 35 percent of the export revenues in 2003. Non–traditional exports (horticulture products, processed fish, handicrafts, textiles, etc.) were US$490.1m in 2003, compared to US$728.7m in 2002, mainly due to declining exports of aluminium products on account of the closure of the Volta Aluminium Company. Imports in 2003 were US$2.7bn, of which the crude oil import share averaged 18.8 percent.[8]

I.3. Ghana had the highest Gross National Product (GNP) per capita on the continent at its independence and before the economic crises in the late 1970s[9]. However, the country experienced a series of military takeovers, which destabilized vital institutional structures critical for sustained economic growth. At the insistence of the World Bank and IMF and supported by major donors, the country got back on the path after launching one of the most stringent economic recovery programs in the region in nearly two decades. The reforms for economic liberalization included abolition of price controls and monopolies in handling goods and services for government and parastatals, and opened up to private sector participation and led to divestiture of most of the state enterprises. Controls on foreign exchange and imports were also lifted.

I.4. In 1998, inflation dropped to 15.7 percent from 20.8 percent in 1997 and 32.7 percent in 1996. Overall balance of payment surplus was US$99.4m in 1997. These results were realized against the backdrop of some extraordinary external economic shocks, such as the financial crisis in East Asia, the offloading of gold reserves onto the world market by Russia and parts of Western Europe, and the El Nino, which brought about drought and energy crisis.

I.5. The economy went into crisis in 1999, when world market price for cocoa plummeted by nearly 40 percent. Gold prices also fell to their lowest level since the early 1990s (US$253 per ounce), whilst prices for crude oil, which consumes most of the foreign exchange, appreciated by almost 100 percent. By 2000, the external adverse factors, fiscal mismanagement and curtailment of donor disbursements exacerbated the situation, resulting in an increased savings–investment gap in the economy. The year–end inflation rose to 40.5 percent from 13 percent recorded in the previous year. Interest rates also were significantly affected, increasing from 35 percent in 1999 to 47 percent in 2000.

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7 Ghana Statistical Services 2000 Population & Housing Census Report 2001.
8 Ministry of Finance and Economic Planning 2004 National Budget.
9 ADB. Country Strategy Paper 2002-2004.

I.6. However, the macroeconomic fundamentals turned around in 2002, due to stringent fiscal policies applied by the newly elected administration. Real GDP growth rose to 5.2 percent in 2003 compared to the recent trend of 4.0–4.5 percent per annum. Inflation and base interest rates at the end of 2003 registered at 26.7 percent and 18.3 percent respectively. The rate of deprecation of the cedi against major international currencies is diminishing. Table 1.1 in Annex 1 presents selected macro–economic indicators of Ghana.

B. Poverty and Food Security

I.7. Overall, the percentage of the Ghanaian population defined as poor declined from almost 52 percent in 1991–92 to just below 40 percent in 1998/99 as a result of the positive economic performance. However, structural and institutional weaknesses have resulted in the benefits of such a performance not being distributed evenly among all sections of society. Some vulnerable sections of society have seen their poverty increase rather than ease, especially women and food crop farmers (the majority of whom are women). Food crop farmers actually represent the group with the highest incidence of poverty (59 percent). Geographical disparity of poverty indicates that five out of ten regions in Ghana had more than 40 percent of their population living in poverty in 1999; the worst affected being the three northern savannah regions (the Upper East, Upper West and Northern Regions). Nine out of ten persons in the Upper East, eight out of ten in the Upper West, seven out of ten in the Northern Region and five out of ten in the Central and Eastern Regions were classified as poor in 1999[10].

I.8. Although the real price of food in the country fell substantially during the last decade, a significant proportion of the population is unable to buy enough food due to their relatively low purchasing power. Prices of the staple foods are still relatively high, mainly due to the high transportation and handling costs resulting from poor rural infrastructure.

I.9. At the same time, however, the proportion of undernourished in the total population declined from 35 percent during 1990–92 to 12 percent in 2002, corresponding to a decrease of the number of undernourished people from 5.5 million to 2.33 million. This is also reflected by an estimated average daily per capita consumption of around 2,400 kcal as compared to the average requirement of 2,300 kcal per capita per day, and to a consumption level of around 1,900 kcal per capita per day in 1980. Although there are generally much greater quantities of locally produced food available, particularly in urban markets, poverty and inadequate marketing and processing structures in most of the rural areas constrain access to sufficient food by large parts of the rural population for at least some time of the year. Nevertheless, it is worth noting that seasonal variability of domestic food production in some areas decreased in recent years, resulting from the introduction of improved soil and water management systems and from some limited increase of the area under irrigation[11.]

I.10. Production levels of the major staple food crops in Ghana, in a normal–rainfall year, are adequate, as the estimated self–sufficiency ratios of 100 percent for roots and tubers, fruits and vegetables, and fats and oils, and 90 percent for cereals (excluding rice) suggest. However, seasonal food insecurity is widespread, due to almost total dependence on rainfed agriculture and weak post–harvest capacities limiting the shelf life of many commodities. Estimated self–sufficiency ratios for rice (50 percent), fish (60 percent) and meat (30 percent) are much lower. Despite the high self–sufficiency ratios for most food crops, the food balance, derived from available supply and demand

10 Ghana Statistical Services. Ghana Living Standards Survey (GLSS). 2001.
11 Ghana Food Security and Agriculture Development - Horizon 2015 - Summary National Strategy. Draft. Nov. 2003.

statistics for key food commodities, shows a deficit for the major food items for which data is available, with the exception of cassava, millet, sorghum, plantain, cocoyam and yam. For instance, from 1995 to 2000, Ghana imported, on average, 100 percent of its wheat[12], 90 percent of its sugar, two thirds of its rice, half of its beef, one third of its chicken meat and around 15 percent of its milk[13].

I.11. The government, in its efforts to reduce poverty and enhance food security, has recognized the need not only to increase productivity through improved land and water management, technologies, and strengthened support services, but also to improve market, transport, and processing infrastructure.

C. The Strategic Framework

I.12. ***Contribution to the Economy*****.** Agriculture is the mainstay of the Ghanaian economy and will remain the principal sector for development and growth in the foreseeable future. It accounts for about 36 percent of GDP and generates 55 percent of the foreign exchange earnings. The sector employs around 51 percent of the labour force and is the major source of income and employment for 70 percent of the rural work force[14]. The potential increase in rural incomes that could be derived from agriculture and related activities make it a pivotal sector for poverty reduction.

I.13. ***Physical.*** Ghana has 13.6 million hectares of arable land, of which about 6 million hectares (44 percent) are cropped. Agro–ecological distribution of Ghana classifies the country into three main agriculture zones. The forest vegetation zone consists of parts of Western, Eastern, Ashanti, Brong Ahafo and Volta Regions. The northern savannah vegetation zone includes the Upper East, Upper West, Northern and Brong Ahafo Regions. The coastal savannah vegetative zone includes mainly the Central, Greater Accra and parts of Volta Region. With the exception of the northern savannah zone, which has one rainy season per year (1,000 mm mean), rainfall distribution is bimodal in the forest and coastal savannah zones with annual mean rainfall of 1,850 mm and 800 mm respectively. The diversity in the agro–ecological zones and other natural and human resources provide the potential to develop a wide range of crops, livestock and fish.

I.14. The northern savannah zone is the largest agriculture zone; yet it lacks the most basic facilities e.g. adequate irrigation, feeder road network, markets and post harvest facilities. Experiments by the Village Infrastructure Project and NGOs have demonstrated that remarkable improvements in agriculture production and productivity could be achieved with the construction of mini dams and dugouts for small–scale irrigation for crop and livestock. Most of the nation’s supply of rice, millet, sorghum, yam, tomatoes, cattle, sheep, goat and cotton are grown in the region. In recent times, mango and ostrich commercial farms are also gaining footholds here.

I.15. The coastal savannah is notable for rice, maize, cassava, vegetables, sugar cane, mangos and coconut, as well as livestock. Even though the zone receives the least amount of rainfall in a year, it has several lowland areas that were once used for sugar cane plantations, specifically, for the defunct state owned sugar factories. The sugar estates comprising of smallholders will be viable if proper management structures could be put in place with involvement of the private sector. Experimental farms run by the Agriculture College in the Volta Region confirm that sweet potato and soybean crops are viable in this agro–ecological zone, especially under irrigation. Smallholder farmers could be organized with proper marketing, logistics structures, appropriate technology and infrastructure support to cultivate these crops, the products of which are currently being imported. The lower part of

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[12] Wheat is not a major food crop in Ghana.
[13] Ghana Food Security and Agriculture Development, *cit.*
[14] Ghana Statistical Services 2000 Population & Housing Census Report 2001.

this zone is drained by River Volta. Together with other streams and lagoons, these water resources present the opportunity for fish farming or aquaculture to flourish.

I.16. In the forest zone where rainfall is plentiful, tree crops are the most adaptable. Cocoa, coffee, oil palm, cashew, and rubber are cultivated. The majority of plantain, banana and citrus supplies are from this zone. The farms are owned by smallholders, cooperatives and large–scale commercial farmers. It is one of the areas that do not need a lot of irrigation facilities, but rather, a good feeder and trunk road network to facilitate its access to markets.

I.17. Ghana, which is drained by numerous water bodies and lakes, has only 12,000 ha (0.2 percent) of the cultivated land under irrigation, largely because most of the past efforts by government to establish irrigation schemes failed to meet farmers' expectation, due to poor planning, mismanagement and lack of maintenance of the facilities.

I.18. ***Structure.*** The agriculture sector is dominated by small–scale farmers with less than 2 hectares of land, representing 90 percent of farm holdings and accounting for more than 80 percent of food crop production. There are basically three main categories of farmers in Ghanaian agriculture: small–scale (less than 4 ha), medium– (4 to 8 ha) and large– (above 8 ha) scale farmers. Small–scale or subsistence farmers are mostly women. They also constitute 59 percent of the poor in Ghana[15]. Lack of access to land, markets, and financial credits, the high cost of input and low levels of infrastructure are some of the problems they face. Table 1.3 in Annex 1 summarizes the structure of the Ghanaian agriculture sector.

I.19. The main system of farming in Ghana is predominantly traditional. Most food crop farms are intercropped to spread risk of harvest failures, maximize returns on scarce family labour and maintain soil fertility, whereas large–scale commercial farms are mostly mono–cropped. The crops sub–sector, including cocoa, contributes about 77 percent to agricultural GDP. In recent years, the number of medium to large–scale farms and plantations is on the rise, particularly for important food and cash crops such as cassava, rice, maize, sorghum, pineapple, papaya, banana, cocoa, rubber, oil palm and coconut. Though the government attempted to encourage commercial farm establishments through tax reforms, input supply, extensions services and other incentives packages, their growth has been hampered by the similar problems faced by small scale farmers.

I.20. Livestock in Ghana plays a major economic, social and cultural role in the lives and livelihoods of small holder farmers, processors and traders. The sub–sector contributes about 7 percent to agricultural GDP. Livestock acts as a bank and insurance in times of urgent financial needs, since it generates cash income. Livestock provides draught power to particularly in the northern regions, which enables bullock–owning households to cultivate 60 percent more land than those who do not. Women benefit from livestock, since they are able to own pigs and small ruminants, and are able to control income generated there from. Livestock population is concentrated in the Guinea and Sudan Savannah vegetation zones of the 3 northern regions, which combined account for about 75 percent of the cattle population in Ghana. The relatively dry coastal savannah in the south accounts for about 15 percent of total cattle population. The remaining transitional and humid forest zones are sparsely populated with cattle because of the prevalence of tsetse flies, which transmit trypanosomiasis. Small ruminants and poultry are more evenly distributed throughout the country, where pigs are concentrated in the forest belt and around urban areas.

[15] National Planning Commission. GPRS. Feb. 2002.

I.21. The fishery sub–sector contributes 4–5 percent to agricultural GDP, and is the major source of protein for Ghanaians, with per capita consumption at about 29 kg[16], representing 60 percent of all animal protein consumed. Invariably, about 80 percent of fish landed either from marine or inland sources is processed by traditional methods, i.e. smoking or salting for the domestic market, with the remainder being frozen or canned for export. The industry provides employment for over 500,000 fishers, traders and mechanics (about 10 percent of the workforce). Total fish production in recent years has been declining: 468,000, 454,000 and 378,000 metric tons in 2000, 2001 and 2003 respectively[17]. The marine sector production has been on the decline since 1997, due to the adverse effects of years of unregulated and illegal fishing in the Exclusive Economic Zone by local and foreign vessels. Production decline and high consumption demand have resulted in nearly 58 percent of fish demand being met by imports. The government passed a fisheries bill in 2002 to curb illegal fishing by prescribing rules for the industry's activities.

I.22. ***Land Use.*** Ghana has 23.8 million ha of land of which 13.6 million ha (57 percent) are suitable for agricultural production. Land use in Ghana can be grouped into eight major categories, namely; savannah woodlands (30 percent); bush fallow and other uses (25 percent); unimproved pasture (15 percent); forest reserves (11 percent); tree crops (7 percent); annual crops (5 percent); wildlife reserves (5 percent); and unreserved high forest (2 percent).

I.23. ***Land Tenure.*** Most of the agriculture land in Ghana is under stool ownership. Stool land is controlled and allocated by traditional authorities, i.e. chiefs, to interested parties through usufructuary, lease or purchase (freehold) transactions. The leasehold tenure provides for title deeds for a renewable period up to 99 years. In general, land tenure is problematic. For example, land title registrations could take up to four years to accomplish, and on many occasions more than one party may claim ownership of a piece of land culminating into long and expensive legal battles/disputes. This heightens land insecurity and discourages potential investors in the sector. Additionally, access to land by women is restricted due to customary practices, where female descendants are not eligible for land inheritance among certain groups in the Ghanaian society.

I.24. ***Land Policy.*** To address the above issues and make land available for agriculture and other uses, a national land policy was developed with the assistance of FAO and introduced in June 1999. This provides, among others, a framework for free access to land by all Ghanaians provided that the land is available for disposal in any part of the country where a male or female operator seeks to have it, and the individual agrees with land owners to adhere to the covenants and other customary practices governing the disposal/use of the land.

I.25. Though the national land policy moves in the right direction, it lacks strong pillars in order to have the desired impact. A key pillar would be the national land registry system which is still highly inadequate. It makes it difficult, therefore, to conduct a reliable and cost–effective title search on land. The Land Administration Project being funded by the World Bank, ADB and IFAD, and scheduled for completion in 2008, is designed to develop a sustainable land administration system that would be fair, efficient, transparent, cost effective, and decentralized, to increase land tenure security and agriculture production.

I.26. ***Policy.*** The Economic Recovery Programme (ERP) was introduced in 1983 to reverse the decline in the economy of Ghana, which was characterized by shortages of goods and services, high inflation rates and budget deficits. To consolidate the gains made in the agricultural sector due to production incentives induced by the policy reforms a Medium–Term Agricultural Development

[16] FAOSTAT Food Balance Sheet – Ghana.
[17] MOFA Agriculture in Ghana - Facts and Figures, Sept. 2003.

Programme (MTADP) was initiated in 1988 jointly by GoG/World Bank to provide guidelines for the operation of the Ministry of Food and Agriculture. The programme started in 1991, was a two 5 year rolling plan. The MTADP contributed significantly to improvements in the sector through the implementation of a number of projects. However, agricultural growth was slow during the early 1990s due to the prevailing adverse macroeconomic conditions. In order to address the situation the Government of Ghana launched the Vision 2020 Document in 1995 with the objectives of increasing employment and average incomes, thereby reducing poverty and inequalities, and targeting an annual growth of 4 percent. It was later realized that a 4 percent growth in the sector was not sufficient to achieve an overall 8 percent GDP growth that would be required to reduce poverty and ensure equity. Consequently, the Ministry of Food and Agriculture formulated the Accelerated Agricultural Growth and Development Strategy (AAGDS) which aimed at increasing the average growth rate from 4 to 6 percent over the period 2001–2010.

I.27. The current policy framework under which the sector is operating is provided by the Food and Agriculture Sector Development Policy (FASDEP). It was introduced in 2002 to articulate the vision of the government on agriculture, as well as to identify clearly, the facilitation and regulatory roles incumbent on government for promoting an enabling environment for investment in the agriculture sector. The objectives and strategic thrusts of FASDEP are discussed further in the section on Government Objectives and Strategies below (paragraph I.34).

I.28. ***Institutions.*** Several institutions are involved in planning and implementation of various programmes related to agriculture and rural development. The Ministry of Food and Agriculture (MOFA) is responsible for agriculture policy, legislation and services such as crops, livestock, fisheries and agricultural extension and research, phyto– and nonphytosanitary services; the Ministry of Lands and Forestry (MLF) is responsible for land use policy and maintenance of forestry resources, the Ministry of Energy (MOE) is responsible for energy policy; the Ministry of Environment and Science (MES) is responsible for all matters to do with the environment; the Ministry of Finance and Economic Planning (MFEP) is responsible for resource mobilization, and national planning; the Ministry of Local Government and Rural Development (MLGRD) is responsible for local governance and administration and the Ministry of Roads and Transport (MRT) is responsible for the construction and maintenance of roads. Inter–ministerial coordination of various programmes which can accelerate agricultural development has been very weak. This could be attributed to the over–concentration of energies on internal issues to the neglect of forging partnerships to resolve common problems. In MOFA, a National Agriculture Advisory Committee (NAAC) has been put in place, which has replaced the former Agricultural Policy Coordinating Committee (APCC), to provide the needed linkage between MOFA and other Ministries, Departments and Agencies (MDAs). Membership of NAAC is drawn from the Ministries of Manpower Development and Employment, Environment and Science, Communication and Technology, Lands and Forestry, Roads and Transport, Finance and Economic Planning, Trade and President’s Special Initiatives, Local Government and Rural Development, Women and Children Affairs, Regional Cooperation and NEPAD, as well as from Association of Ghana Industries, Federation of Association of Ghanaian Exporters and Ghana Association of Private Voluntary Organizations. The NAAC, which is an inter–ministerial body, is supposed to meet twice a year to review progress of implementation of the Agricultural Services Sub–sector Investment Programme and approve the Annual Plan of Work and Budget. Regrettably, the NACC has not functioned as expected. Though, the NAAC is an inter–ministerial body attendance at its meeting has been low–key. There is the need to impress upon members the necessity to attend NAAC meetings at the highest level possible.

I.29. The government’s ongoing decentralization process, aims at transferring functional powers, means and competence to the District Assemblies from the Central Government, Ministries, Departments and Agencies. District Assemblies would therefore be responsible for the implementation of development policies and programmes co–ordinated by the National Development Planning Commission (NDPC). In MOFA this process started in July 1997 and progress has been made regarding the de–concentration of administrative functions from the national to the regions and districts. However, its progress with devolution of functions to the local government system has been minimal. The key constraint has been the inability of government to establish the local government service and to implement the decentralization. Prior to decentralization, a top–down approach was adopted in planning and budgeting by MOFA. Each national directorate planned and budgeted for his/her respective department in the whole country with little or no consultation with the regions and districts. Currently, a bottom–up approach is used in planning and budgeting. Budgets are now prepared by districts and regions as units based on the Medium Term Expenditure Framework (MTEF). Allocations of funds are made directly by the Ministry of Finance and Economic Planning (MFEP) to all Regional and District Directorates of Agriculture. Ideally, district agricultural development plans should derive from the district development plans. In other words, agricultural plans of any district should be an integral part of the overall district development plan, the preparation of which is coordinated by the NDPC.

I.30. A number of statutory boards and agencies have been formed to assist MOFA in the proper implementation of its regulatory role. These include the Grains and Legumes Development Board (GLDB), the Ghana Cocoa Marketing Board (COCOBOD), and the Ghana Food Distribution Corporation (GFDC) whose roles are primarily to ensure markets for produce. As a promoting and marketing organisation, COCOBOD has done well by organizing and training its farmers, ensuring access to markets, and coordinated input supplies, and stable price mechanisms which have cushioned the cocoa farmers from commodity price fluctuations. The success of COCOBOD could be attributed to the fact that it has a well–organized purchasing and marketing system and guaranteed prices for the produce. GFDC, on the other hand, has collapsed reportedly due to mismanagement and corruption. Excessive political interference in GFDC's management and appointments was also largely the reason for its failure. Currently, the GFDC is on divestiture. Though some of the staffs are still at post, they are not on government payroll. They rent out the facilities, cold stores and warehouses, to private entrepreneurs for a fee to pay themselves and maintain the facilities. The effective example of farmer representation demonstrated by COCOBOD is a case study of successful intervention, which needs to be replicated for the organization of smallholder farmers across the country on commodity basis.

I.31. ***Infrastructure.*** MOFA, with the collaboration of *private sector initiatives*, particularly since 2002 has introduced several infrastructural developments pertaining to production, processing, marketing, and research and technology dissemination. However, they are still insufficient and inadequate to provide required impetus for accelerated agriculture growth. For example, the Agriculture Engineering Services Directorate of MOFA teamed up with some private engineers and manufacturers to fabricate equipment such as rice threshers, windmills for underground water pumping, rehabilitation of irrigation facilities, trailers, and food processing plants and equipment. Since 2002, MOFA has been collaborating with the Department of Feeder Roads of the Ministry of Roads and Transport in the identification of critical feeder roads that connect food production areas and markets, for rehabilitation and construction. This is to ensure that food producing areas have access to markets and basic storage facilities. This collaboration with the Department of Feeder Roads has proven very successful.

I.32. ***Financing.*** The main challenge of the sector is the lack of appropriate credit to farmers, processors, commodity brokers, marketers and other operators in the sector. Heavy domestic borrowing by the government during the past years has also adversely affected the sector from accessing available funds for investment. The ADB micro–financing and other credit components of donor and GoG projects have not had significant impact on agriculture credit availability, largely because of highly cautious attitude of the on–lending local banks and reluctance to advance credits to deserving smallholders fearing low recovery rates for which the concerned officers would be held responsible. Lack of documented collateral for security, frequent crop failures, low yields under the rainfed conditions and inefficient marketing system have caused many farmers to default on loans. The government does not have disaster guarantees for farmers; and crop insurance for major crop failures is lacking.

I.33. While the private investment in agriculture has been low, public investment has not been forthcoming in required volumes to supplement, complement and boost private investment. Government's average budgetary allocation to the sector (1994–2004) has been less than 3 percent, including donor contributions[18], of the total national budget. This is not adequate enough for capital investments needed for the accelerated agricultural development in the economy (see also Chapter IV).

D. The Strategic Framework

(i) Government Objectives and Strategies

I.34. The main government objective is to make Ghana a leading agro–industrial country by the year 2010 through ***modernization of agriculture based on rural development.*** This strategy has been mainstreamed into the **Millennium Development Goals** (**MDGs)** and **Ghana Poverty Reduction Strategy (GPRS)** inspired budgets for the years 2003–2005. The Government of Ghana has consciously made some recent efforts to stimulate growth and development of the agriculture sector through appropriate policy framework and sectoral development programmes.

I.35. In the year 2000, MOFA launched the **Accelerated Agricultural Growth and Development Strategy (AAGDS),** aimed at accelerating agricultural GDP growth to 6 percent, and thereby enabling the sector to contribute to the envisaged economic growth that would make Ghana a middle income country. The AAGDS is a comprehensive strategy that covers the whole agriculture sector (food and industrial crops, livestock, fisheries and forestry) and includes policy reforms, institutional arrangements, rural infrastructure, rural finance, and provision of other agriculture and social services. The main elements of the strategy are: (i) promoting selected agricultural commodities through improving access to domestic, regional and international markets; (ii) developing of and improving access to improved agricultural technology; (iii) improving access to agricultural financial services; (iv) improving rural infrastructure; and (v) enhancing human resource and institutional capacity. The strategy is consistent with GoG's two basic orientations: (a) reliance on the private sector and (b) devolution of responsibilities from Central Government to District Assemblies. The function of MOFA and other central government agencies is therefore restricted to policy formulation, provision of a supportive legal and regulatory framework, coordination of sector development, provision of essential public services and monitoring of sector development.

I.36. The need to have a development policy for the food and agriculture sector that is holistic in approach, taking cognisance of all on–going efforts in the agricultural sector, is imperative. In 2002, government introduced the **Food and Agriculture Sector Development Policy (FASDEP),** a policy working document, which provides a holistic framework to guide the sector's vision and develop the country to become an agro–industrial economy by the year 2010. FASDEP builds on the five key elements of the AAGDS, with a focus on strengthening the private sector as the engine of growth. Its core objectives are: <u>*Objective 1:*</u> To ensure ***food security***; <u>*Objective 2:*</u> To facilitate ***production of agricultural raw material for industry***; <u>*Objective 3:*</u> To facilitate ***production of agricultural commodities for export***; <u>*Objective 4:*</u> To facilitate ***effective and efficient input supply and***

[18] Ministry of Finance and Economic Planning.

distribution systems; <u>*Objective 5:*</u> To facilitate ***effective and efficient output processing and marketing systems***; <u>*Objective 6:*</u> To facilitate and coordinate the **implementation and monitoring of sector policies and programmes**. FASDEP adopts the sector–wide approach to managing agricultural development, as opposed to the discreet approach pursued in the past. It is the strategic framework within which all on–going and future projects will operate. It also provides a broad framework for agricultural development, out of which detailed projects and programme implementation plans and activities will be developed to deal with specific issues.

I.37. Ghana's pro–poor economic policy framework, as articulated in the GPRS (2003–2005) and FASDEP involves a special role for agriculture. This is because the sector has unique characteristics of not only enhancing economic growth but also promoting equity. The overall objective of GPRS is to reduce the incidence of poverty from 40 percent in 2002 to 32 percent by 2004. Specifically, the incidence of poverty among food crop farmers is targeted to decrease from 59 percent to 46 percent in 2002 to 2004[19]. At this point in time, no empirical data are available to ascertain the extent to which these targets have been achieved by the end of 2003.

I.38. The GPRS further outlines the poverty reduction strategy for the rural sector based on five Pillars: *Pillar 1:* Vigorous infrastructure development – roads, mass transportation, ports, air travels, telecommunications and energy; *Pillar 2:* Modernization of agriculture based on rural development, focussing on (i) reforming the land tenure system, (ii) assisting the private sector to increase food production through facilitating extension, research and financial services, and irrigation facilities, (iii) encouraging cash crop production, and (iv) supporting the private sector to add value to traditional crops; *Pillar 3:* Enhanced social services with emphasis on rural education, health and sanitation; *Pillar 4:* Good governance – ensuring the rule of law, respect for human rights and the achievement of social justice and equity; and *Pillar 5:* Private sector development – supporting the private sector to ensure that it is capable of acting effectively as the engine of growth and poverty reduction.

I.39. Within the framework of the GPRS, AAGDS and FASDEP, and on the basis of a stakeholder analysis, a MOFA internal strengths and weaknesses analysis, as well as an analysis of external opportunities and threats, MOFA has prepared an **Agriculture Strategic Plan for the period 2003–2005.** The Strategic Plan, which is a three–year rolling document, identified the following major strategic thrusts: (i) enhanced human resource development and institutional capacity building; (ii) improved financial services delivery; (iii) development, dissemination and adoption of appropriate technology; (iv) infrastructural development; and (v) improvement in access markets. The following main strategic focus areas for interventions have been defined: (i) food security through increased food crops, livestock and fisheries production; (ii) ready markets and transportation; (iii) reduction of post harvest losses; (iv) promotion of value addition and of efficient packaging; (v) facilitation of production of raw materials for industry and of production for export, (vi) regular input supply and distribution system, including the establishment of early warning system, (vii) crosscutting issues such as bushfires, alien herdsmen, data collection and creation of land banks, and (viii) capacity building for district assemblies and rural communities and for formulation of policies and programmes, including extension service delivery, policy analysis, planning, budgeting, monitoring and evaluation. The strategic focus areas are presented in detail in Annex 2, Table G, related to the five CAADP pillars and indicating for each area the interested major cooperating partners.

I.40. The Multi–donor Budgetary Support (MDBS) and the World Bank's Poverty Reduction Support Credit (PRSC) are two budgetary support projects which are currently under implementation. The MDBS is funded by a group of development partners made up of six bilateral partners (Canada, Denmark, the Netherlands, Switzerland, Germany and the United Kingdom), the European

[19] National Planning Commission. GPRS. Feb. 2002.

Commission (EC) and the African Development Bank (ADB). For 2004, approximately US$240m will be provided through these two facilities to support the implementation of the Ghana Poverty Reduction Strategy (GPRS), in the form of a general budgetary support. This budgetary support is not targeted to any specific sector and the development partners do not monitor or track the specific use of the funds. However, both projects have milestones and triggers on which annual and semi–annual disbursements will be based. MOFA did not feature adequately in the PRSC1, which covered the year 2002, due to lack of information and awareness creation on the part of Ministry of Finance and Economic Planning (MFEP). Since getting on board, MOFA has submitted its policy matrix, which captures the triggers set by MFEP, but reframed it under the FASDEP/GPRS overall policy objective of rural development based upon modernized agriculture. MOFA has yet to fully participate in the review and policy dialogue at the MDBS/PRSC meetings.

I.41. The government, with the assistance of FAO, is presently updating the *Food Security and Agriculture Development – Horizon 2015 National Strategy document,* aimed at ensuring sustained development and accelerated real food and agricultural GDP growth in the long term. Though the document is still in the draft form, the identified strategic priorities and targets are within the holistic framework of FASDEP, and correspond to the objectives of CAADP. The resource implications to 2015 will be determined on the basis of the government's Strategic Plan, as well as the National Medium–Term Investment Programme.

I.42. The objectives of the five pillars of the CAADP[20] are consistent with the policies and strategies of the AAGDS, GPRS and FASDEP. This provides a sound basis for government's commitment to meet the objectives of CAADP, as well as the Maputo Declaration target of allocating 10 percent of its budgetary resources to agriculture. The main policies and strategies currently implemented by government and supported by development partners and their relationship to the CAADP pillars, are presented in Annex 2 Table E.

(ii) Major Strategies of Cooperating Partners

I.43. In partnership and through consultations with donors and other development partners, Ghana is transitioning to a sector wide approach (SWAp) of donor funding and project management. The move away from a large number of individual often donor–initiated projects towards a single strategy and expenditure programme leads to better coordination, planning and monitoring by the government in the sector, capacity building in procurement and better financial management. However, not all the ministries, including MOFA, are fully implementing SWAp. At the same time, a number of partners continues to place emphasis on the project approach and is reluctant to give up Project Implementation Units. Below is recap of the cooperating partners and their major strategies. A summary of programmes/projects supported by major cooperating partners is presented in Annex 2, Table B.

I.44. ***The World Bank.*** The overall goal of the Bank is supporting the implementation of GPRS through a mix of lending and non–lending activities to promote growth and diversification in production and exports to improve delivery of social services and incorporate crosscutting policy for HIV/AIDS, gender and the environment for the period 2004–2007. The Bank's strategic objectives are (i) sustained economic growth and job creation (supporting GPRS Pillars 1 and 2); (ii) human development and service delivery (supporting GPRS Pillars 3 and 4); and (iii) governance and empowerment (supporting Pillar 5).

[20] See *Preface.*

I.45. ***The African Development Bank (ADB).*** The overall strategy of ADB in Ghana for the period 2002–2004 is aimed at strengthening the foundations for sustainable development espoused in the GPRS, through the creation of an enabling environment for the private sector, improvement of social and economic infrastructure, while emphasizing the crosscutting issue of gender, the environment and good governance. Major goals for the agricultural sector include efforts to reduce poverty and attain food security for the people, especially in the savannah and rural areas, while giving due attention to gender–mainstreaming and environmental protection. Support in the provision of basic infrastructure aims at increasing productivity of women enterprises by reducing domestic workload and improving their access to social services as health care and education.

I.46. ***The Canadian International Development Agency (CIDA).*** The overall goal of the Ghana Programming Framework (GPF) 1999/00 to 2004/05 of CIDA is to support Ghana's efforts to achieve food security, primarily (but not exclusively) in the north of Ghana. Based on the GPRS, its strategy focuses on two key programming areas, namely: (i) Basic Human Needs; and (ii) Governance. The specific areas of intervention include improved access to water and increased food security, improved quality of life of poor groups in Northern Ghana and increased capacities of local and central governance structures to deliver poverty reduction programmes. Other components of the GPF include mainstreaming gender issues into basic human needs and governance programmes.

I.47. ***UK Department for International Development (DFID).*** DFID's Country Assistance Plan (CAP), 2003–2006, aims at supporting the GPRS by transferring resources directly through the government's budget via the innovative Multi–Donor Budget Support (MDBS) mechanism. The strategic objectives of the CAP, which mainstream GPRS objectives are: (i) The Enabling Environment: for private sector led pro–poor growth; (ii) Governance: enhanced accountability through public sector reform, deepening of democracy and strengthening the civil society; (iii) Human Development: provision of pro–poor basic services at the local level; and (iv) Sustainable livelihoods and increased production.

I.48. ***Agence Française de Développement (AFD).*** The AFD strategy in Ghana supports the economic and social development strategy of GoG for poverty alleviation and focuses its intervention in both rural and urban areas on projects that contribute to sustainable growth of the country and improve the living conditions of the poorest. The three–pronged strategy for the year 2003/2005 is: (i) Agriculture, rural development and regional equality; (ii) Urban development and decentralization; and (iii) Infrastructures and public–private partnerships. The specific strategy for agriculture and rural development includes support for development of new competitive agricultural production, including non–traditional commodities for exports and food for local consumption. AFD is giving high priority to the provision of basic infrastructure (feeder roads, rural water supply and sanitation) in rural areas, particularly in the least developed regions of the country.

I.49. ***European Union (EU).*** The Country Support Strategy (CSS) and National Indicative Programme (NIP) for the period 2002–2007 indicate a strong involvement in civil society and are closely aligned with GPRS. Taking into account a number of criteria, including the development priorities of the government, the financial requirements and implementation capacities of the sectors complimentary with other donors, three focal sectors for the EU are identified. The focal sectors are rural development, road transport and macro–economic support.

I.50. ***The International Fund for Agricultural Development (IFAD).*** IFAD's Country Strategic Opportunities Paper (COSOP 1998) indicates its strategy to assist Ghana in achieving its poverty reduction goals by focusing on enhancement of regional food security, arresting environmental degradation and increasing agriculture productivity. It focused on increasing income opportunities for the rural population through targeted income–generating activities. Although most of IFAD's projects have a wide geographical coverage, which cut across many regional and district administrative units, progressively, the emphasis has shifted towards the poverty–stricken northern areas. The three areas of intervention are: Technology Development and Dissemination, Rural Infrastructure and Rural Credit.

I.51. ***Food and Agriculture Organization of the United Nations (FAO).*** As a specialised agency of the UN, FAO is an active development partner of the Government of Ghana to which it gives technical assistance and support in the fields of agriculture, livestock, fisheries, forestry and rural development. FAO's Ghana field programme is focused on the Special Programme for Food Security. All projects presently being implemented are aimed at improving the food security situation in the country.

I.52. ***German Technical Cooperation (GTZ).*** GTZ is a partner in policy formulation for the ministry and extension services delivery. Areas of cooperation include market–oriented agriculture, participatory extension, institutional and organizational development capacity building of farmers (FBOs) and natural resource management. In addition, it is also engaged in private sector development in processing, especially organization of farmers in the Brong Ahafo Region, to revamp/recapitalize the Wenchi Tomato Factory, grasscutter domestication, horticulture production and post harvest handling. Over a decade of operating in Ghana on a project approach basis, GTZ has taken a decision to adopt a programme approach, which identifies weaknesses in the "value chain" and assists farmers through the private sector, delivering necessary interventions and empowering the beneficiaries to continue their self–improvements and wealth creation. This important strategy shift, which would be launched mid–2004, is still being reviewed.

I.53. ***German Bank for Reconstruction (KfW).*** KfW's mandate is to carry out financial assistance (technical assistance is carried out by GTZ) on behalf of the German Ministry of Economic Cooperation and Development. Agriculture is one out of three future focal areas of Ghanaian–German Cooperation. On the basis of discussions KfW has had with MOFA and other partners in Ghana in the last two years, it will be focusing in the time being on the improvement of access to markets (feeder roads and bridges) and in the future probably on the promotion of outgrower schemes.

I.54. ***Japan International Cooperation Agency (JICA).*** In the agricultural sector, JICA focuses on the development and promotion of small scale irrigation schemes. Currently it is supporting the rehabilitation of some selected small scale irrigation schemes across the country, which also involves training of farmers on these schemes.

I.55. ***Non Governmental Organizations (NGOs).*** There is large number of NGOs who are involved in the promotion of agriculture activities and rural development in Ghana. Their activities include farmer education and training in land and water management, land preparation, farm maintenance, post harvest activities, processing, marketing, and provision of financial service assistance. These include Technoserve, Action Aid, World Vision, Care International, Sasakawa–Global 2000, Agriculture & Rural Development Foundation Africa, Anointed Mission Organization and Self–Help Initiative Support Services. At the district level, NGOs take part in the consultative process to draw district agricultural development plans. This is to ensure complementarity, and take advantage of synergies to unlock the potentials of the respective districts.

I.56. ***Conclusions***. The Government of Ghana, in particular MOFA, has had and is still having fruitful cooperation with its developing partners in pursuing its development objectives and strategies. They have been particularly helpful by assisting in the preparation of development programmes. Through the recently established Donor Coordination Desk, a central clearing house has been created to ensure synergy of efforts and thus avoid duplication of scarce resources.

(iii) Major Ongoing and Pipeline Programmes and Projects

I.57. Table B in Annex 2 lists the ongoing and pipeline programmes/projects supported by major cooperating partners, summarizing main objectives, duration, budget, regional focus and relating them to the five CAADP pillars. The main programmes/projects are briefly presented below.

I.58. ***The Agricultural Services Sub–sector Investment Programme (AgSSIP) [2001–2004; US$123m].*** This programme, supported by World Bank, IFAD, EU, JICA, DANIDA and CIDA, is one of the major instruments for implementing the AAGDS, dealing mainly with the first two elements, i.e. the promotion of (i) agricultural commodities and (ii) improved agricultural technologies. Improvement of rural infrastructure and of access to rural finance is to be supported under separate and ongoing or pipeline investment programmes supported by IDA and other donors. The AgSSIP is supporting all public agricultural services programs managed by MOFA and the Council for Scientific and Industrial Research (CSIR). The first three–year phase of the Adaptable Program Loan (APL) is focusing on: (i) the introduction, on a pilot basis before its full implementation, of a demand–driven, polyvalent agricultural delivery system; and (ii) the implementation of policy and institutional reforms to re–focus government services on their core functions and strengthen the technical, financial and managerial capacities of sector ministries and district government for executing these core functions effectively. Specifically, the first phase aims at increasing the growth of agricultural productivity and incomes as the driving force for reducing rural poverty, improving food security and providing the basis for accelerated growth in the overall economy in an environmentally sustainable manner. During the joint Implementation Support Mission (ISM) of the government and Developing Partners in the agricultural sector in May 2002, concerns were raised about the slow implementation and financial disbursement. In February 2003, during the second ISM, it was agreed to restructure the project to provide more direct support to farmers and also to provide more tangible investments. By the end of the Mission, some ideas and proposals were collated for consideration under the restructured AgSSIP. These ideas have been packaged as AgSSIP New Initiatives and have been approved by the WB for implementation. These include development of fish landing sites and hatcheries; establishment of four agricultural machinery and equipment service sites; rehabilitation of surface irrigation schemes; oil palm development; and horticulture development. There are two subsequent phases of the AgSSIP planned, which would expand these reforms and programs to a national level and support their consolidation.

I.59. ***Livestock Development Project (LDP) [2002–2006; UA22.07m].*** This ADB–funded project is focused on reducing poverty and contributing to food security. It proposes to intervene in livestock production and processing since they are predominantly income–generating activities carried out by smallholder operators in rural areas. The project has the following components: (i) development of animal production; (ii) development of animal health; (iii) credit provision; (iv) capacity building; and (v) project management.

I.60. ***Food Crops Development Project (FCDP) [2000–2004; UA10.0m].*** The project is financed by ADB and seeks to assist participating farmers in eight districts to attain higher income and improve their overall food security on a sustainable basis. The project design has incorporated activities which will: (i) encourage farmers to form groups for production, storage, processing and marketing and eventually for bulk buying of inputs and other necessities; (ii) introduce farmer groups to credit for crop production and develop inventory credit; (iii) strengthen the existing extension service through the provision of equipment and training to field staff, seed inspectors, farmers, women and youths; (iv) support project–related adaptive research in cereals, legumes; and (v) undertake a study on the feasibility of small–scale soybean processing and utilization.

I.61. ***Cashew Development Project (CDP) [2001–2005; UA9.89m].*** The ADB–funded project is being implemented in five regions, is to improve the living standards of the rural population by generating rural employment in order to contribute to poverty reduction and earn foreign exchange for the country. The components of the project are: (i) production development; (ii) extension and training; (iii) credit; and (iv) project management.

I.62. ***Special Programme for Food Security (SPFS) – Pilot Project [2000–2005; US$1.26m].*** The project was initiated as a follow–up to the 1996 World Food Summit and is supported by ADB and FAO. The focus is on water control system development, with emphasis on low–cost irrigation facilities, crop intensification, and diversification of agricultural production systems to include small ruminant production, local poultry improvement, seed multiplication and fishing. In addition, a new extension delivery method based on Farmer Field Schools (FFS) is being tested. Ghana has also signed a tripartite agreement with FAO and Vietnam in the framework of South–South Cooperation. Currently five experts and 12 technicians from Vietnam are working closely with rural communities to support SPFS initiatives on water conservation, cropping systems, horticulture and fishery. Small scale farmers participating in SPFS have access to rural credit which is provided by the Agricultural Development Bank of Ghana under an agreement with the ADB project.

I.63. ***Village Infrastructure Project (VIP) [1998–2004; US$60.0].*** The recently completed VIP was jointly financed by IDA, IFAD, KfW, GoG, District Assemblies and beneficiaries. IDA provided credit for 50 percent of project cost (US$30m) while IFAD provided 16.7 percent (US$10m) and KfW 11.7 percent (US$7m). The rest was shared among GoG (11.8 percent), District Assemblies (5 percent) and beneficiaries (4.8 percent). The project targeted poor farmers in rural communities and District Assemblies covering at least 500,000 rural families. The main objective of the project was to support the efforts of government in poverty reduction through increased transfer of technical and financial resources for the development of basic village–level infrastructure that can be sustained by the beneficiaries. The main components of the project were: (i) rural water infrastructure; (ii) rural transport infrastructure; (iii) rural post–harvest infrastructure; and (iv) institutional strengthening.

I.64. ***Community–Based Rural Development Project (CBRDP) [2004–2008; US$80.0m].*** The aim of the IDA–financed project is to strengthen the capacity of the rural population and reduce poverty by improving their productive assets, rural infrastructure and access to key support services from private and public sources. It is a follow–up project of the VIP for better attainment of the same objectives as those of the VIP. The project comprises the following five components: (i) institutional strengthening and capacity building for service delivery; (ii) infrastructure for agricultural development; (iii) rural enterprise development and learning centres; (iv) infrastructure for social and human development; and (v) community–based natural resource management.

I.65. ***Root and Tuber Improvement Programme (RTIP) [1999–2005; US$10.1m].*** The Root and Tuber Improvement Programme is a national programme co–financed by the International Fund for Agriculture (IFAD) and the Government of Ghana. The World Bank is the supervising institution on behalf of IFAD. The programme is national in scope, potentially covering the 10 administrative regions and 110 districts of Ghana. The main objective of the programme is to enhance food security and increase the incomes of resource–poor farmers on a sustainable basis by facilitating access to new but proven locally–adapted technologies of root and tuber crops (cassava, yam, cocoyam, sweet potato and frafra potato). The programme covers six components as follows: (i) multiplication and distribution of improved planting material; (ii) integrated pest management; (iii) adaptive research; (iv) community support and mobilisation; (v) post–production and marketing; and (vi) programme management and co–ordination. Collaborating/implementing institutions are: MOFA, Crop Research Institute (CRI), Savanna Agricultural Research Institute (SARI), Food Research Institute (FRI), Plant

Genetic Resources Centre (PGRC), Grains and Legumes Development Board (GLDB), Soil Research Institute (SRI), the four Universities, International Institute for Tropical Agriculture (IITA), Farmers/Processors and End–users. A second phase of the programme is presently being prepared, which would focus more on marketing aspects.

I.66. ***Land Administration Programme (LAP) [2003–2008; US$20.5m].*** The main objective of this IDA, IFAD and ADB–supported programme is to develop a sustainable and well functioning land administration system that is fair, efficient, decentralized and that enhances land tenure security. Some of the activities to be undertaken under the projects are: (i) harmonization of land policies and the legislative framework with customary law for sustainable land administration; (ii) institutional reform and capacity building for comprehensive improvement in land administration system; and (iii) establishment of efficient, fair and transparent system of land titling, registration, land use planning and evaluation.

I.67. ***Land Conservation and Smallholder Rehabilitation Project (LACOSREP II) [2000–2005; US$13.9m].*** The primary objective is to promote sustainable food production, poverty alleviation and environmental protection. It is an IFAD–initiated project is located in the Upper East Region and designed to extend the benefits of dam rehabilitation. The project provides mobile banking facilities to participating banks and savings/credit groups to meet the credit needs of women. The major training components for both banks and beneficiaries are gender sensitization, negotiating–skills enhancement, and group development. About 34,400 families (constituting about 50 percent of the target group) are expected to benefit directly from project activities. The beneficiaries are rural people including smallholders, near–landless farmers, women (specifically female heads of households).

I.68. ***Inland Valleys Rice Development Project [2001–2006; UA15.0m].*** This project is supported by ADB and aims at contributing to food security and reduction in rice imports. Specifically, the project aims at increasing the production of rice and incomes of smallholder rice producers, traders and processors in the project area and neighbouring areas. The project area covers the Ashanti, Brong Ahafo, Central and Eastern Regions. Twenty–five inland valley sites covering a total of 4,500 ha will be developed. The main components of the project are land management, credit for crop development, capacity building, adaptive research and surveys and project coordination.

I.69. ***Rural Enterprise Project – Phase II [2003–2011; US$29.27m].*** The goal of the project is to reduce poverty and improve the living conditions and incomes of the rural poor, with emphasis on women and vulnerable groups, through increased self–and–wage–employment. The beneficiaries will participate in the identification of training needs and business opportunities through the local institutions and trade associations. Project clients will mainly be the entrepreneurial poor including rural unemployed poor interested in self–employment but lacking skills, technologies and initial capital; those with some basic skills who need skills upgrading, entrepreneurship – development training and initial capital to set up their businesses; and existing self–employed and owners of micro– and small enterprises (MSEs) who would like to upgrade skills or technology to expand and create more jobs. The project will focus essentially on socially disadvantaged women, unemployed and underemployed youth and young people already apprenticed to a trade but lacking the capital and/or acumen to start a business.

(iv) Lessons learnt

I.70. ***Decentralization, Beneficiary Ownership and Private Sector Participation.*** Past agricultural projects depended heavily on public intervention, resulting in top–down planning and implementation, less than satisfactory relevance and cost–effectiveness and poor ownership of the programmes by the beneficiaries. To ensure beneficiary ownership and sustainability, it would be necessary to manage the new projects in a decentralized manner, with most of the planning, implementation and decision–making take place at the district level. Farmers and communities should be empowered to participate fully in the planning and management process. To improve cost effectiveness, the private sector needs to be encouraged to participate actively in the provision of services in extension, input supply, animal disease control and treatment, marketing and processing.

I.71. ***Cost Recovery.*** For some years now, research, extension and livestock services have been totally funded by central government. The new projects would be designed to promote cost recovery from beneficiaries through voluntary contributions by the industry and farmer groups/associations, and full privatization of certain services.

I.72. ***Delays in Implementation, Slow Disbursement and Inadequate Counterpart Funding.*** Most donor funded projects have been bedevilled with delays in implementation. Closely linked with the slow implementation is the slow rate of disbursement and inadequate counterpart funding. The Development Credit Agreements of most of these projects require that government contributes a specific portion of expenditures upfront before project accounts are credited or projects are allowed to utilize funds. Due to the inability of government to meet these conditions, there are delays in implementation of such projects.

I.73. ***Low Absorptive Capacity.*** The design of some of the projects is such that, with prevailing manpower resources at various levels, it is not possible to utilize the funds allocated. As a result, quite a sizeable portion of the donor funds are left undisbursed at the end of these projects. Hence the frequent request for extension of these projects.

I.74. ***Beneficiary Contribution.*** Of late, the design of donor–funded projects requires that beneficiaries contribute a certain percentage to the cost of the project. Granting that these people are poor and that projects serve to alleviate their poverty situation, it is becoming increasingly difficult to achieve such targets, especially when the project is of a public nature. The rural road infrastructure component of the Village Infrastructure Project (VIP) is such a case.

II. CONSTRAINTS AND OPPORTUNITIES

A. Weaknesses and Constraints

II.1. Ghana's natural and human resources and political climate confer on it a comparative advantage in the agricultural sector. Its relatively strong governance, democratic and social capital base, and economic potential, set Ghana apart from its neighbours experiencing troubles in social, economic and institutional management. However, several issues need to be addressed to fully exploit its potential by converting it to comparative advantage and turn threats into opportunities. The major areas to be addressed relate to issues that include macro–economic policies, natural resource management, institutional development, capacity building, productivity and crosscutting issues such as HIV/AIDS.

II.2. ***Macro–economic.*** Macro–economic instability played a significant role in exacerbating poverty in the Ghanaian society. The economy is still very vulnerable to external shocks. Public investment in the agriculture sector does not reflect the important role of the sector in the economy; with only around 4 percent of total national budget allocated to the sector during the 2004–2006 periods (see Chapter IV). Donor contribution to agriculture sector is 64 percent of its allocated budget in 2004. The total national budget for 2004 consists of 19 percent donor contribution in the form of loans and grants. Servicing of external debt (¢972.1bn) is more than double the total budget for agriculture (¢394.4bn) in 2004[21].

II.3. The government has a high budget deficit because of its inability to mobilize revenues, as well as overspending in anticipation of donor inflows. Attempts to finance these deficits through domestic borrowing, Treasury Bills and printing of money (i.e. debt monetization) by the Bank of Ghana pushed up inflation and interest rates, crowded out the private sector from the capital markets, stifled investment and resulted in sub–optimal growth and employment opportunities in the private sector and agriculture in particular.

II.4. Realizing the marginal benefit of removing these macro–economic constraints, the government has been implementing tax reforms to effectively mobilize revenues, reduce budget deficits and domestic borrowing, while, among others, promoting agriculture diversification. However, proper long–term planning, coordination, and commitment to set fiscal and monetary targets are required to ensure macro–stability and support agricultural growth.

II.5. ***Crop productivity.*** The performance of agriculture remains well below what is necessary and feasible due to several factors: erratic and inadequate rainfall in relation to crop water requirements, non–availability of timely and adequate credit, and adoption of traditional technology. Crop yields per hectare are 35–50 percent below potential yields[22]. Some of the reasons attributed to the low yields are lack of certified and improved seeds, inadequate application of fertilizer and improper land preparation and crop maintenance. Plant disease and high post–harvest losses also restrain productivity. Youth migration to urban centres, have left behind an aged farming population whose capacity to take up modern methods continues to decline.

II.6. ***Infrastructure.*** As a result of the dearth of basic infrastructure such as good transportation systems, reliable utilities supply, and modern processing and storage facilities, links between production and consumption areas are weak, limiting farmers' access to markets and their incomes. The road network sector is a case in point because of its implications for internal, regional and international trade. Currently, only 40 percent of feeder roads are classified as good quality. The inadequacy of farm–to–village access roads contributes to high post–harvest losses and low volume turnout. Ninety percent of farm produce is head–loaded at the village level due to inadequate infrastructure and prohibitive transport costs. In the case of export crops, it is further exacerbated by the rather poor port–handling facilities and insufficient infrastructures at Accra airport. This situation is a disincentive to potential investors.[23] Investments in market–oriented production and activities are also seriously constrained by the inadequacy of structures for supplies of water for agricultural purposes, particularly in the northern parts of the country.

II.7. ***Institutional.*** Ministries, Departments, and Agencies, which have a direct bearing on agriculture and rural development, are poorly coordinated, resulting in duplication of efforts and waste of resources. Ministries lack the necessary motivation to work efficiently due to the low remuneration and reward system. Closely linked to the low remuneration is the high staff turnover, leaving only a few skilled persons. In addition, capacity for policy analysis to inform good decision making is also lacking, resulting in *ad–hoc* decisions not based on rigorous policy analysis. The use of Information and Communication Technology (ICT) to improve efficiency in communications is still not satisfactory, resulting in delays in reporting and quick decision making. The National Institutional

21 Ministry of Finance and Economic Planning
22 MOFA. Agriculture in Ghana - Facts and Figures Sep. 2003.
23 Food Security and Agriculture Development - Horizon 2015 Summary National Strategy Draft Nov. 2003.

Renewal Programme (NIRP) was designed to revitalize the public sector and make it more responsive to current demands. The programme has reportedly run into implementation problems and is being reviewed.

II.8. ***Natural resource/environmental.*** Ghana faces a number of natural resource and environmental challenges resulting from natural factors, rapid population growth and economic and social activities. The productivity of most agricultural lands in Ghana is declining at an alarming rate due to over–reliance on rainfall, widespread land degradation caused by soil erosion, deforestation, soil nutrient mining, uncontrolled perennial bush burning and other poor management practices. Some experts forecast that population pressure, as well as lack of access and cumbersome land tenure systems may reduce agricultural land availability per capita to 0.38 ha by the year 2020 if the current land tenure system is not overhauled.

II.9. ***Livestock production.*** The livestock sub–sector faces severe constraints evidenced by the very low per capita (9.5 kg)[24] meat consumption of the country. These include the lack of improved breeds, periodic shortages and absence of quality standards for animal feed, insufficient mechanisms to control animal diseases, sub–standard animal husbandry practices and shortage of pasture and water sources especially during the dry season.

II.10. ***Fisheries.*** The fisheries sub–sector continues to grapple with a number of constraints. Fish stocks in marine and inland water sources are dwindling at an alarming rate due to lack of effective monitoring and regulation of fishing activities. Ghana does not have a period of moratorium or ban on fishing to allow proper reproduction and replenishment of its fish resources. Fishermen use illegal, unsustainable fishing practices, which have long term negative effects on the industry. The bulk of fish landed by the artisanal fishers suffers high post–harvest losses due to insufficient storage and processing facilities. Per capita fish consumption in Ghana is 29.1 kg annually.[25]

II.11. ***Financial.*** The financial market faces a huge challenge to provide adequate credit facilities particularly to the smallholder. Prominent among the challenges are (i) high transaction costs on credit, (ii) non–availability of medium and long term credit, (iii) lack of adequate savings mobilization strategies and policies, (iv) uneven spatial distribution of commercial and rural banks (concentration of financial institutions in urban areas), (v) the narrow definition of “collateral” and lack of regulations that accept guarantees as collateral (backed by savings), (vi) late credit disbursement, (vii) lack of a properly functioning judiciary to pursue debtors rapidly and at low cost, and (viii) inadequate credit to non–farm agricultural activities such as input supply, marketing and distribution, processing and value–addition. Rural financial institutions need to be strengthened to develop appropriate financial services for the agriculture sector aimed at enhancing effective savings mobilization and credit delivery.

II.12. ***HIV/AIDS.*** Ghana has a relatively low HIV/AIDS adult infection rate (3–4 percent), though it is estimated that about 200 people are infected daily. Women constitute 63 percent of the cases reported[26]. The high migrant population and resistance to attitudinal change point to an increasing prevalence rate over time. Considering that women constitute the majority of food crop producing farmers for the nation, HIV/AIDS is a major threat to agriculture growth and food security. Ghana Aids Commission needs to redouble its efforts to reduce the impact of the disease on the nation’s labour supply.

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[24] FAOSTAT Food Balance Sheet – Ghana.
[25] *Ibid*.
[26] ADB. Country Strategy Paper 2002-2004.

B. Strengths and Opportunities

II.13. Despite the numerous constraints facing agricultural development in Ghana, the sector nevertheless has promising potential. With the necessary macro–economic, financial, and institutional and land reforms, the resources of the country can be turned into a comparative advantage.

II.14. ***Creating an enabling macro–economic environment.*** The broad objective of the medium–term macro–framework is to promote private sector–led growth. Achieving this would require attainment of macroeconomic stability and reforms in fiscal, monetary and trade policies set forth by the government in the GPRS and 2004 budget and economic policy statement. The government has laid out its policy to stimulate growth through empowerment of the private sector by creating an enabling business environment. Inflation and interest rate hikes are being reduced through government expenditure controls and reduced domestic borrowing. The fiscal discipline exercised by the government, if continued in the coming years, would help agro–business by proving a stable economic situation.

II.15. ***Financial and institutional sector reform.*** Proper reforms among institutions and the financial sector would contribute significantly to agricultural growth. Potential opportunities would come from: (i) the establishment of marketing structures dealing with internal and external markets on behalf of farmers on trade issues, e.g. WTO, ECOWAS and other international protocols, supported by information technology, (ii) the establishment of smallholder organizations, which would achieve economies of scale and lower production cost per unit if large–scale production can be realized at reasonable transaction costs, and (iii) the development and strengthening of appropriate financial intermediaries including micro–finance institutions, in order to help farmers in investment and to meet operation and marketing expenses.

II.16. ***Natural resources.*** Ghana's natural resources and its abundance of land suitable for cultivation offer good potential for agriculture–led development. As part of the economic reform programme, which began in 1983, there has been an increasing trend towards diversification, and a shift from a sector characterized by small–scale farming. Research has shown that more than 60 exportable tropical food items can be produced in Ghana for new markets in the Middle East and East Asia, apart from the traditional European market.[27]

II.17. ***Agro–processing.*** Ghana also has considerable potential in agro–processing. The sub–sectors of food processing, beverages and wood processing offer great potential, which the private sector is gradually beginning to take advantage of. However, in order to realize its full potential in agro–processing, Ghana will need to increase its competitiveness by improving on quality and cost control, and investing in market research as well as product development. The proposed tax holidays and reduced marginal tax rates for agro–processors contained in the 2004 budget statement is likely to encourage the private sector to take up the challenge of being competitive with high standards of product quality.

II.18. ***Land and water use policies.*** A coherent land and water management policy is being drafted by the government to grant transparent and equal access to land and water resources and enable their efficient utilization, to spur both public and private investments in the agriculture sector. Specifically, the ongoing Land Administration Project would help removing constraints on land administration, ownership and related matters.

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[27] ADB, *cit*.

II.19. ***Harnessing local expertise.*** A few organizations such as the Integrated Technology Transfer Unit (ITTU), the Ghana Regional Appropriate Technology Information Service (GRATIS), NGOs, Technical Schools, Universities and private companies are being encouraged by MOFA to manufacture basic tools for farmers to reduce the drudgery and increase efficiency. Some farmers are also receiving assistance in land preparation, planting, harvesting and storage. Though these efforts are yielding good results, more investment is needed to make an impact on the agriculture sector.

C. Conclusion

II.20. It is imperative that government, in collaboration with its development partners, systematically addresses the above–identified issues, which impede the growth and transformation of the agriculture and rural sectors, if the sector's potential is to be fully exploited. This would be facilitated by the sector development policy (FASDEP) that is holistic in approach, highlighting the importance of the private sector and the need for a strong linkage among relevant institutions, to support a broad–based growth of agriculture in a decentralized system.

II.21. It is recognized that food security is the basis of social stability and development. Therefore, access to adequate food for the mass of the population will be critical, if sustainable development is to take place.

II.22. The agriculture sector requires appropriate investment to raise production and productivity. Specific efforts should be directed to the most socially relevant groups that are engaged in agriculture, particularly smallholder farmers and women, by providing them access to land, financial services, and inputs, proven technologies, markets, irrigation and other infrastructure. Unless the potential productivity gains and market opportunities of smallholder farmers are fully exploited, the goals of poverty reduction, food self–sufficiency and food security will not be achieved.

III. INVESTMENT PROGRAMME OUTLINE

A. Priority Setting

III.1. Ghana's priority for investment areas is based upon its needs to ensure food security for the vulnerable rural population in poverty, the opportunities and the comparative advantage it has for agricultural and allied activities both within the economy and in the regional context, and the constraints it would like to remove or minimise so that regionally balanced and accelerated agricultural development could take place within a medium–term framework. Such investments would also have the perspective of substantially reducing poverty, both in proportion and severity, by 2015. This medium–term investment programme is aimed at strengthening public, private and decentralized institutions at local level, to efficiently manage resources so that rural income, consumption and employment will be increased and vulnerable groups, landless labourers, women farmers, smallholders, and rural artisans will benefit substantially.

III.2. In 2002/2003, the Policy Planning Monitoring and Evaluation Directorate (PPMED) of MOFA, with assistance from FAO, carried out an assessment of agricultural investment that would be required until 2015, in order to achieve the goal of the World Food Summit of halving the number of undernourished by 2015. The analysis, based on an estimate of additional production and corresponding investment required, arrives at an annual investment of US$301m until 2015.

III.3. The analysis concluded that: (i) arable land expansion would continue by 10 percent over the 2003–2015 period although at a somewhat slower rate as in the past depending on the degree of production intensification (mechanisation, fertilizer use adoption, improved seed use, soil fertility improvements, etc); (ii) the area under small–scale irrigation would need to double and existing large–scale irrigation would need to be fully developed to achieve 80 percent rice self–sufficiency (in conjunction with considerable expansion in upland rice area and yields); (iii) increasing smallholder oil palm yields to two–thirds of the estate yields and cocoa yields by 50 percent would be both feasible and required to increase exports; (iv) intensive aquaculture projects would need to be supported if fish is to remain an important component of the Ghanaian diet and the main source of animal protein; (v) investment in rural roads and markets are a pre–condition for better price formation at farm–gate level and effective processing at a cost attractive to national and international consumers; (vi) expected incremental cassava production would require 23 mills with a capacity of 100 000 t/year; (vii) existing cotton ginnery– and dairy processing capacity would suffice in the years to come; and (viii) the potential to produce sugar for domestic consumption which would reduce import requirements from 90 percent to 40 percent of domestic consumption.

III.4. The priority areas proposed below address the key constraints analysed under Chapter II, and take into account the findings of the above–mentioned investment assessment, as well as the priority areas selected in the NEPAD Stakeholders' Workshop held in Accra during 9–10 April 2003 and the FASDEP[28]. Table G in Annex 2 relates these areas to the five CAADP pillars, and indicates for each area the major development partners interested in supporting it. The outlined priority areas provide the basis for the preliminary identification of programmes/projects in Section III.C below. Validation and prioritization of proposed programmes/projects took place during a National Stakeholder Workshop on 9 and 10 June 2004 (see Section III.C).

***Priority 1:* Sustainable Development and Management of Land and Water Resources (CAADP pillar 1)**

III.5. Water stress for crops grown under inadequate and erratic rainfall is a major constraint, which has been limiting productivity of crops and livestock over the years. Increase in crop production has mostly come about from the increasing crop area. Future expansion of the rainfed area is limited by the availability of fertile land. Therefore, increasing productivity to augment production will rest heavily on irrigation and rainwater management, which are pre–requisites of agricultural intensification. Small–scale and micro– irrigation and watershed development will have high priority in investment, which will help appropriate natural resource management.

- ***Irrigation:*** Small–scale and community–managed schemes will be developed for food, fodder and cash crops. Such irrigation is cost effective (US$2,500 average cost/ha) in relation to large–scale irrigation (US$15,000/ha). The Ghana Irrigation Development Authority (GIDA) has the present capacity to provide technical support to create irrigation potential of 4,000 ha annually. With a component to strengthen GIDA, this can increase to 8,000–10,000 ha per annum by 2010. Recent experience from donor–funded and locally developed small–scale and micro–irrigation systems, through technical assistance such as the FAO–assisted Special Programme for Food Security (SPFS) and the IFAD–assisted Land Conservation and Smallholder Rehabilitation Project (LACOSREP II), has shown productivity increase, agricultural diversification, and an increase in household income of farmers and agricultural labourers involved in such programmes.

[28] The order in which the priority areas are presented does not imply any ranking.

- ***Watershed development:*** The potential for upland agriculture development by impounding and conserving rainwater, as well as conserving soil through comprehensive watershed development in vast areas of Ghana in each agro–climatic region is high. Such schemes, which will be community–based, may require up to US$100/ha to develop, will involve employment of local people during an agriculturally lean season to work on structures and agro–forestry, fodder development, grass and tree planting along the contours and repair and maintenance of structures. The potential economic and financial returns to investment, which slowly and steadily build up are high. Annually, about 10–15 000 ha could be brought under watershed development, which will increase productivity and improve rural livelihoods, while reducing poverty.

- ***Land improvement:*** Interventions in the above areas will substantially reduce land degradation and improve fertility of land. However, there will still be vast areas in the different agro–climatic zones which will need improvement. Therefore, specific interventions would be required to conserve soil, improve low land, halt desertification and improve quality of water both for irrigation and drinking water supply.

<u>Priority 2:</u> Improvement of Rural Infrastructure and Trade–related Capacities for Market Access (CAADP pillar 2)

- ***Market infrastructure:*** Most rural markets lack basic facilities such as concrete aprons, covered areas, water supply and sanitation, fencing, as well as storage facilities for smallholders. Investment in improved market infrastructure, linked to rural roads, would be a pre–condition for reducing the high marketing transaction costs and losses associated with inadequate market facilities and road infrastructure, thereby increasing rural incomes and growth in agriculture.

- ***Food quality and safety standards:*** Raising Ghana’s food quality and safety standards and their proper control will be crucial if Ghana is to increase its food exports to international markets. Although it is recognized that the export industry is responsible for financing and managing quality and food safety measures, the government plays a crucial role with regard to providing a legislative framework, creating awareness, and strengthening the capacity of institutions and professional organizations to ensure that standards are complied with. The present food quality and safety standards are being reviewed within the framework of a Food Safety Assessment and Integrated Action Plan Study carried out by FAO/WB, as basis for a possible assistance programme.

- ***Storage and warehousing facilities:*** Quality standards can be maintained, provided there is adequate and appropriate storage, transport, and proper grading and packaging. High–value products (fruits, vegetables, processed food, meat and meat products, fish and fish products, and herbs) are required to be preserved and transported with adequate knowledge of their respective shelf–life. Agricultural diversification will need support from such investments, with appropriate regulatory measures for strictly adhering to the standards required by importing countries. Storage and warehousing facilities are to be developed at production, intermediate and port (including airport) sites. This is an area where public/private partnership would be necessary and desirable.

- ***Market information:*** Timely collection and dissemination of market information, relating to demand and supply of products, direction of imports and exports, prices (FOB and CIF) and tariff structure, will be crucial interventions, linked to information dissemination through information technology, starting from production, through processing, handling to export/import.

- ***Development of alternative sources of energy:*** Research is ongoing to assess the viability of other sources of energy and small hydropower generation systems for the rural sector. Public/private partnerships could be promoted to pursue research into this area.

- ***Integrated transport system:*** Intensification of efforts to improve the road network will be needed, including local feeder roads, in order to reduce high post–harvest losses and transport costs. In addition, the development of more appropriate haulage facilities and rehabilitation and expansion of the rail system is required, aimed at developing an integrated transport system, which will be crucial for reducing transport costs, and thus increasing competitiveness of Ghanaian products in regional and world markets.

***Priority 3:* Promotion of Agro–processing**
(links to CAADP pillars 2 and 4)

- ***Processing and marketing skills*** of smallholder farmers need to be substantially improved in order to add value to their products and thereby assist in the transformation from subsistence to commercial agriculture. Adequate training and advisory services will be required, focussing on: (i) selection and use of appropriate processing technology; (ii) existing quality standards; (iii) improved storage methods; (iv) packaging and labelling; and (v) organizing producers in order to facilitate links to traders and commercial processors.

- ***Food processing machinery availability/quality:*** Though quality standards and food processing machine manufacturers are available, the efficiency and quality of some machinery and equipment are not up to acceptable standards. There is a need to enforce regulation on the use of high quality materials and facilitate the private sector to establish machine tools centres that are linked to GRATIS/ITTUs.

- ***Raw material base:*** The seasonal and/or irregular supply of quality raw material for processing industries remains a major constraint of the agriculture sector. To address this issue, technologies to multiply planting materials must be expanded and intermediate processing plants introduced in the rural areas.

- ***Research support (storage, processing, and packaging):*** Issues that need to be addressed include: weak linkages, inadequate availability of technologies, inadequate and underutilized expertise and poor funding. There is the need to prioritize research topics and to strengthen the linkages between research institutes and the private sector in the sub–region.

- ***Packaging:*** Packaging is a nascent industry in Ghana. The quality of material needs improvement and packaging skills need to be upgraded. There is the need to set and enforce packaging standards and train manufacturers, exporters, processors and marketers in packaging and packaging technology.

<u>Priority 4:</u> Improvement of Household Food Security and Income (links to CAADP pillars 1, 3, 4 and 5)

III.6. While interventions under priority areas 1 to 3 will mainly address the availability dimension of food security by stimulating production and improving the income situation of the rural population, they need to be complemented by specific interventions geared to improve the access and the utilization of food by the most vulnerable groups, if poverty and hunger among the rural poor is to be reduced. For instance, interventions fostered by the Special Programme for Food Security in terms of enhanced productivity and agricultural diversification can be actually implemented by specific target groups through appropriate methodologies and building on wide FAO experience on school and hospital gardens, urban and peri–urban agriculture, farmers field schools; moreover efforts geared to stimulate production can be linked to social initiatives to facilitate food access to the most needy and to nutrition education campaign geared to improve nutrition of low income urban groups.

- ***Productivity improvements:*** Interventions to bring about the productivity gains that are required to achieve food security and income increases will focus on promoting, in a participatory way: (i) upgraded appropriate technology for water control; (ii) high–yielding seeds, and improved planting and breeding material; (iii) farm mechanisation; and (iv) improved management practices for crop, livestock and fishery production.

- ***Agricultural diversification*** to high value crops such as vegetables and fruits and other tree crops as well as different livestock and fisheries products, linked to capacity building in ***processing and marketing skills***, mentioned under priority 3. While productivity improvements and agricultural diversification will be crucial for enhancing food security and income, they need to be complemented by interventions outlined under priorities 1 to 3 above, as well as appropriate financial services programmes.

- ***Rural and agricultural finance:*** Non–availability of agricultural credit is a major constraint to the transformation process from subsistence to commercial production. Therefore, access to adequate agricultural financial services will be key to creating income, employment and wealth for the rural sector. Several attempts made in the past with donor assistance had limited success mainly due to poor capacity of the intermediate financing institutions, poor mobilisation of savings linked to credit, and poor political commitment regarding loan recovery.

B. Project Selection Criteria

III.7. Potential programmes/projects under the NMTIP will address at least one of the above–mentioned priority areas, thereby supporting the government’s strategy as outlined in the GPRS and FASDEP, and contributing to the pillars of CAADP. The principal criterion for selecting a specific programmes/project will be its potential to contribute to sustained poverty reduction and enhanced food security, particularly among the disadvantaged groups, while protecting the natural resource base. Additional key selection criteria are listed below, which will be further elaborated and prioritized during the stakeholder workshop when final selection of projects takes place.

III.8. ***Consistency with government’s basic orientation.*** Any new intervention needs to be consistent with government’s basic orientation to fully involve in a participatory process the private sector, decentralized public structures and beneficiaries in planning, financing and implementation of projects.

III.9. ***Comparative advantage.*** Resource allocations to the sector need to target areas in which Ghana has a comparative advantage in the context of regional or global competitors. This would involve identifying and promoting agricultural products that are favourable to each of Ghana's agro–ecological zone.

III.10. Technical feasibility will be a necessary condition at the initial stage of selection of public projects. Even while guiding the private sector and small farmers, fishermen and cattle farmers, public agencies must ensure that only technically feasible projects are recommended for the second stage where financial viability and sustainability issues will be considered. Inadequate technical reviews have rendered many public investments into highly uneconomic propositions. The poor farmers, who would be investing heavily on irrigation, land development, and expensive inputs, must be assured of the technical feasibility.

III.11. ***Financial and economic viability.*** Although a detailed analysis of the financial and economic viability of a project will not be possible at this identification stage, a number of criteria will provide guidance as to whether the project idea should be pursued further. These will include a preliminary analysis of: (i) crop and farm enterprise budgets; (ii) investment costs per ha and per beneficiary, as compared to ongoing interventions; and (iii) estimated overall investment costs and returns (cost–benefit analysis). In the light of limited available resources, a comparative analysis of competing projects will be carried out.

III.12. ***Absorptive capacity.*** Project design must take into account the human and technical capacity of the institutions and communities involved in the project. This will be crucial not only for successful project implementation, but also for ensuring that the project outputs can be sustained once the support by the project has phased out.

III.13. ***Synergy with ongoing programmes.*** While it is a precondition for selection that the proposed projects do not duplicate and/or adversely affect ongoing interventions, areas of synergy with other projects should be actively sought, e.g. by identifying interventions that complement and strengthen the impact of other programmes.

C. Identification of Projects for Preparation

III.14. On the basis of the priority areas and selection criteria outlined above, and an analysis of government priorities and main development partners' areas of interest, seven projects were identified for potential funding under the NMTIP. The project ideas were discussed at the National NMTIP Stakeholder Workshop on 9 and 10 June 2004 and ranked as follows, based on the total number of nominations: (1) Post–harvest Systems and Agro–processing; (2) Rural Roads and Market Development; (3) Special Programme for Food Security; (4) Irrigation Schemes and Groundwater Development; (5) Rural Financial Services; (6) Tree Crops Development; and (7) Fisheries Development. The project which was ranked first most frequently was Irrigation Schemes and Groundwater Development, followed by Rural Roads and Market Development/ Special Programme for Food Security and Post–harvest Systems and Agro–processing. The project ideas discussed at the workshop are listed below.

III.15. ***<u>Development of Irrigation Schemes and Groundwater Development for Irrigation. (Priority Area 1)</u>.*** The objective of this project would be to increase food production through increases in cropping intensity and reliability of water supply, including utilization of groundwater. This project would be aimed at expanding the area under economically viable small–scale and micro–scale irrigation in Ghana and the rehabilitation of existing irrigation schemes. The proposed project would comprise the following five sub–projects and would cover a total area of 50 000 hectares: (a) Small–scale/Micro–scale Irrigation and Drainage Project; (b) Lower Volta Plains Smallholder Project; (c) Rehabilitation of Irrigation Schemes; Kamba Irrigation Project; and (v) Upper and Northern Regions Irrigation Development Project.

III.16. ***Accelerated Rural Roads and Market Development Programme. (Priority Area 2).*** The project would aim to (i) better link rural markets to the national trunk road network through secondary roads and to the hinterland through feeder roads and (ii) improve the common infrastructure at rural markets and promote a simple and fast market information service.

III.17. ***Strengthening and Broadening of the Special Programme for Food Security (SPFS)***. (Priority Area 4). The project would aim at reducing poverty and hunger of the vulnerable and assist subsistence farmers to graduate as commercial farmers within a long–term framework. The programme currently under implementation, with the assistance of ADB/FAO, which focuses on productivity and income augmenting schemes including upgraded appropriate technology for water control, high yielding seeds, agricultural diversification into high–value crops, livestock and fisheries and improved marketing. It is expected that Ghana gradually moves towards a national programme for food security dealing with the various dimensions of food security: (i) increasing food availability through enhanced productivity of small farmers; (ii) increasing accessibility to food with more specific targeting measures for the most needy; (iii) improving utilization through processing and nutrition education and linking producers to consumers of high quality food items; and (iv) vulnerability assessment to provide improved targeting for SPFS interventions.

III.18. ***Post–harvest Systems and Agro–processing Support Project. (Priority Area 3).*** While it is recognized that the post–harvest and agro–industry sub–sector is clearly the domain of the private sector, there is the need to create an enabling environment for the development of the sub–sector and to promote the establishment of effective links between producers, traders and agro–industries. The project's main objectives would be: (i) to reduce food losses and (ii) to add value to agricultural produce and thereby increase rural incomes. Its main focus would be on (a) improving smallholder farmers' post–harvest crop handling, processing and marketing skills and (b) facilitating the establishment of financially viable commodity–based associations, which would have advisory, co–ordinating and facilitating functions in the areas of production, storage, processing and marketing of the produce.

III.19. ***Fisheries Development Project. (Priority Areas 2, 3, and 4).*** This project would focus on two main areas: (1) **Improvement of fisheries infrastructure**: landing sites, slipways, outboard and net repair facilities, ice flake production, sanitary facilities, etc. This would be a cooperative effort by fishermen with government support. (2) **Development of inland fisheries**: (i) restocking of waterways, dams, reservoirs, etc. (ii) training of fisheries communities on legal regulations and their enforcement, and (iii) support to fish farming, particularly incorporated in rice farming systems. Government would mostly need to provide advisory services, whilst actual production and the provision of support services (production of fingerlings, feed and veterinary services) would be private sector driven.

III.20. ***Rural Financial Services Project. (Priority Area 4).*** The project would aim at strengthening the capacity of rural financial institutions and promoting procedural and organizational arrangements in order to improve the rural poor access to appropriate and affordable financial services.

III.21. ***Tree Crops Development Project. (Priority Areas 2, 3 and 4)***. This project would focus on: (i) rehabilitation of the oil palms sector aimed at bringing about substantial increases of smallholder yields, and (ii) nuts and fruits for local consumption and exports including mangoes, papaya and pineapple. This project would need to be complemented by a programme to enhance food safety management in particular for export commodities.

III.22. As a follow up to the workshop, MOFA decided to have the following three of the four highest ranked projects prepared in the form of Bankable Investment Project Profiles (BIPPs), indicating also the main government stakeholders to be involved outside MOFA: (i) ***Irrigation Schemes and Groundwater Development*** (Ghana Irrigation and Development Authority – GIDA and Community Water and Sewerage Agency – CWSA); (ii) ***Post–harvest Systems and Agro–processing*** (Ministry of Trade and Industry – MOTI and Association of Ghana Industries – AGI); and (iii) ***Rural Roads Development*** (MRT/Department of Feeder Roads and Ministry of Local Government and Rural Development – MLGRD). Although the project for the expansion of the SPFS was ranked third, government decided not to prepare a BIPP for this project, which would also cover aquaculture, as preparation of this project is underway.

III.23. Two BIPPs were subsequently prepared which are summarized in Boxes 1 to 2 below and are presented in Volumes II (Small–scale/Micro–scale Irrigation and Drainage Project) and III (Post–Harvest Systems and Agro–processing Project). The third BIPP (Rural Roads Development Project) is presently under discussion by MOFA and MRT and is not part of this report[29].

Box 1: Bankable Investment Project Profile 1 – Summary Sheet Proposed Project Name: Small–scale/Micro–scale Irrigation and Drainage Project
Estimated Cost: US$63.3m Project Duration: 5 years
1. Rationale Viable agricultural water control systems would facilitate agricultural growth and poverty alleviation. It would also increase the productivity of land, reduce the pressure for extending cultivation area into marginal lands, and facilitate protection of soils and the environment. 2. Project Objectives 2.1 Overall Goal/Development Objective National food security and poverty alleviation. 2.2 Project Development Objective A sustainable increase in production and/or productivity by small farmers at selected scheme locations as a result of appropriate investments in agricultural water control technology, participatory scheme management and enhanced service delivery. 3. Project Description 3.1 Project Area and Beneficiaries 8 out of 10 regions in Ghana: Upper East, Upper West, Northern, Brong Ahafo, Ashanti, Central, Greater Accra, Volta. Primary beneficiaries are the rural smallholder farmers. 3.2 Project Components and Main Outputs Component 1: *Agricultural Water Management Schemes* Economically viable smallholder irrigation or agricultural water management schemes at up to 22,590 ha, distributed between almost 120 communities situated in 8 out of 10 of Ghana's regions. Component 2: *Strengthening Institutional Capacity in Water Resource Management* Strengthened institutional capacity for sustainable water resources management and demand driven service delivery. Component 3: *Support to Irrigated Agriculture and Support Services* Cost effective support services contributing to sustainable agricultural water control and successful, profitable operation of the Output 1 schemes. Component 4: *Project Management Coordination and Monitoring and Evaluation* Effective and replicable Project Management, Coordination and Monitoring and Evaluation skills.

[29] The deadline for the finalization of the BIPPs, in order to be able to incorporate them in this report, was end of June 2005.

4. Main Benefits

Total cropped area increased by 22,290 hectares, resulting in an incremental crop production of about 302,000 tons of vegetables and 44,000 tons of paddy rice annually. All year round cropping of high value crops resulting in employment and cash income during the dry season. Increased income and employment opportunities about 16,400 households generated by the project in the areas of agricultural production, civil works construction, operation and maintenance activities as well as marketing and processing of farm produce. Reduced risks to farming families resulting from irrigation and higher cropping intensities, protecting farmers against shortfalls in food production and encouraging crop diversification. Increased cash income from irrigated crops and higher family consumption of a greater variety of foods resulting in improved diets and nutritional levels in the poor rural farm households. Improved access to credit and to improved faming technologies. Additional indirect downstream benefits in terms of additional employment arising from the need for transportation, storage and marketing services as well as added value opportunities such as grading, packaging and processing.

Box 2: Bankable Investment Project Profile 2 – Summary Sheet

Proposed Project Name: Post–Harvest Systems and Agro–processing Project

Estimated Cost: US$43.0m Project Duration: 5 years

1. Rationale

Efficient post–harvest management and agro–processing technologies are an important pre–requisite for increased income from agricultural production as well as for household and national food security. While it is recognized that the post–harvest and agro–industry sub–sector is clearly the domain of the private sector, there is the need to create an enabling environment for the development of the sub–sector and to promote the establishment of effective links between producers, traders and agro–industries.

2. Project Objectives

2.1 Overall Goal/Development Objective

Income and food security of rural population enhanced and agricultural exports increased.

2.2 Project Development Objective

Small–holders supported in the transformation from subsistence to commercial agriculture and local agro–industries strengthened to meet the domestic and export market demand.

3. Project Description

3.1 Project Area and Beneficiaries

Nationwide. Primary beneficiaries would be small–scale producers as well as small and medium–scale agro–industries

3.2 Project Components and Main Outputs

Component 1: *Support to Small– and Medium–scale Manufacturers to Manufacture and Effectively Market High–quality Agro–Processing Machinery and Equipment*

Efficient and reliable agro–machinery–supply, repair and maintenance, and exploitation system in the project coverage areas established.

Component 2: *Provision of Professionally Managed Warehouses at Major Producing and Marketing Centres*

75,000 tonnes of drying and warehousing capacity built/refurbished in major production and market centres to be managed by licensed warehouse operators and used by product associations under inventory credit and warehouse receipts system.

Component 3: *Provision of Appropriate Packaging and Cold Chain Technology and Facilities and Support to Farmers, Traders and Processors for Commercialization*

Appropriate handling, processing, packaging and cool chain facilities for local staple crops such as plantain, cassava, yam and vegetables, as well as fish and meat developed and established.

Component 4: *Promotion of the Use of Measures and Weights for Trading in Agricultural Commodities in Ghana*

Standard Weights and Measures are used throughout the country for trading that will bring about fair trade.

4. Main Benefits (by Component)

- Improved quality of locally manufactured agro–processing machinery as well as skills and knowledge of local equipment manufacturers; reduced imports of agricultural machinery and equipment, with related savings in foreign exchange; improved rural income, mainly through increased commercial level processing, increased value addition and reduced post–harvest losses.
- Reduction of post–harvest losses; improvement in food quality of grains; increased stability of grain prices; employment generation; creation of market and service linkages; and improved farmer group dynamics.
- Reduction of post–harvest losses; quality improvement and value addition of farm produce, resulting in improved incomes for small farmers and increased potential for export; enhanced income–generating activities in the communities; improved food safety as consumers will enjoy farm products well packaged under hygienic conditions and free from contamination.
- Reduced transactions costs, increased pricing efficiency, improved transparency in pricing and a more effective regulation of trade for the benefit of all stakeholders.

IV. FINANCING GAP

IV.1. It has been realized that the current low public investment of around 4 percent of national budget must be increased in critical areas in order to accelerate growth in agriculture and to provide adequate incentives to the private sector activities listed below (para. IV.2). The increased public allocation should go to those priority areas identified in Chapter III that take into consideration the national priorities reflected in FASDEP and GPRS, with strong links to various CAADP pillars. However, it is important to keep in mind that accelerated agricultural growth does not depend on increased public expenditures alone, but primarily on: (i) a conducive overall policy and institutional environment; (ii) the quality of the public expenditure programme; and (iii) the efficiency of public resource use and of public service delivery.

IV.2. At the Maputo Summit in July 2003, Heads of State and Government have pledged to commit *"… allocating at least 10 percent of national budgetary resources for* [the] *implementation of* [CAADP] *… and sound policies for agricultural and rural development within five years"*. Ghana is striving to reach this target[30] within the next five years, i.e. by 2009. While providing additional public resources for the sector, the government takes full cognizance of the key role of the private sector in accelerating agricultural development through production, processing, marketing, storage, transport and export. Increasing public investment is basically geared to providing leverage for the acceleration of private investment and efficient utilization of all investments, both public and private.

IV.3. The total public resources allocated to agricultural and rural development comprise the budget of the Ministry of Food and Agriculture (MOFA), as well as the budgets of other Ministries for activities related to agriculture and rural development (e.g. rural development, including rural infrastructure; forestry; and environment). For the purpose of this analysis, only the MOFA and the Ministry of Lands and Forestry (MLF) budgets have been included. Resource allocations by other Ministries that can be linked to rural development (e.g. (i) rural development under the Ministry of Local Government and Rural Development (MLGRD); (ii) rural roads under the Ministry of Roads and Transport (MRT); and (iii) environmental protection under the Ministry of Environment and Sciences (MES) have not been included when assessing the achievement of the 10 percent target, but will be presented separately once the information is available.

IV.4. The budget allocations to the agriculture sector as defined above (agriculture, lands and forestry) as a percentage of the total budget for the economy during the period 1999–2003 have varied between 4.59 and 9.11 (average 5.92). For the current year, the allocation is 4.07 percent, with government projections in percentage terms for 2005 and 2006 marginally going down to below 4 percent, despite government's commitment to increase agricultural budget in relation to total budget. However, government has indicated that this allocation would increase to 6 percent in 2008 and 8 percent in 2009/2010, which would still fall short of the 10 percent targeted for 2009. Government's actual and projected total and sector budget allocations from 1999 to 2006 are presented in Table 1.

Table 1: Budget Allocation to the Agriculture, Lands and Forestry Sector from 1999 to 2006

(amounts in million ¢)	1999	2000	2001	2002	2003	2004	2005	2006
Total Budget (*)	3,858,620	5,318,798	6,329,456	7,455,801	10,442,100	13,005,379	14,590,300	16,455,100
% increase over previous year (**)	*n.a.*	*37.8*	*19.0*	*17.8*	*40.1*	*24.5*	*12.2*	*12.8*
Ministry of Food and Agriculture	133,694	174,902	453,746	349,986	419,346	394,376	424,386	466,088
Ministry of Lands and Forestry	43,554	69,244	123,036	102,690	125,543	135,421	148,532	165,159
Agriculture, Lands and Forestry	177,248	244,146	576,782	452,676	544,889	529,797	572,918	631,247
% of Total Budget	*4.59*	*4.59*	*9.11*	*6.07*	*5.22*	*4.07*	*3.93*	*3.84*
Source: MFEP. (*) MOFA/MLF (**) Nominal.								

[30] The 10 percent target relates to the *total national budget, including domestically–funded and loan and grant–funded resources*.

IV.5. Table 2 presents the budgetary projections for the 2004–2010 periods, and the financing gap in terms of resources required to meet the 10 percent target by 2009. For the purpose of this analysis, the figures are expressed in US dollar at 2004 prices, and the following assumptions are made:

- overall budget growth would decline from 24.5 percent per year in 2004 to 12.8 percent in 2006, as projected in the Medium–Term Expenditure Framework (MTEF), and to an annual average of 12.5 percent from 2007 to 2010;
- the sector budget share of total budget would increase from around 4 percent in 2004 to seven percent in 2006, and subsequently by one percent per year to reach 10 percent by 2009.

IV.6. The resulting annual additional resource requirement would vary from US$17.4m in 2005 to US$58.6m in 2010, totalling US$344m over the 2005–2010 period.

Table 2: Projections of Budget Allocation to the Agriculture and Lands and Forestry Sector 2004–2010 and Financing Gap

		2004	2005	2006	2007	2008	2009	2010
Current total public budget projections (*)	(US$m)	1,445.04	1,621.14	1,828.34	2,056.89	2,314.00	2,603.25	2,928.65
Increase over previous year	*(%)*	*24.5*	*12.2*	*12.8*	*12.5*	*12.5*	*12.5*	*12.5*
Projected allocation to agriculture, lands and forestry sector (**)	*(%)*	*4.1*	*3.9*	*3.8*	*5.0*	*6.0*	*7.0*	*8.0*
	(US$m)	58.87	63.66	70.14	102.84	138.84	182.23	234.29
Increase over previous year	*(%)*	*-2.8*	*8.1*	*10.2*	*46.6*	*35.0*	*31.3*	*28.6*
Required allocation to sector to meet the 10% target by 2009	*(%)*	*4.1*	*5.0*	*7.0*	*8.0*	*9.0*	*10.0*	*10.0*
	(US$m)	58.87	81.06	127.98	164.55	208.26	260.32	292.87
Increase over previous year)	*(%)*	*n.a.*	*37.7*	*57.9*	*28.6*	*26.6*	*25.0*	*12.5*
Financing gap (***)	*(US$m)*	0.00	17.40	57.85	61.71	69.42	78.10	58.57

(*) 2004 prices: US$1 = ¢9,000; 2004–2006: projections from MTEF; from 2007: projected avg. annual growth in total budget: 12.5% (avg. annual growth 2005/2006)
(**) MOFA/MLF; 2004–2006 projections from MTEF; from 2007: MFEP projections.
(***) Required allocation – projected allocation.

IV.7. It should be noted that the achievement of the 10 percent target only serves as an indicator for the increased *relative* budget allocation to the sector. It does not necessary imply that sufficient resources are available for achieving the stated goals of accelerated agricultural growth, enhanced food security and reduced poverty. The *actual amount available for public investment* depends on three factors: (i) the growth rate of the overall budget, (ii) the sector share of the total budget, and (iii) the recurrent budget share of the sector budget. It is therefore critical to use realistic projections for overall budget growth rates. With the expected additional allocation coming to the sector, the recurrent budget share of total sector budget is likely to fall considerably. At present, of the total budgetary allocation to the sector, more than 75 percent is used to meet recurrent expenditure, leaving barely 25 percent for investment.

IV.8. Based on the assumption that the recurrent agriculture sector budget would increase by 15 percent annually, which is slightly above the projected national budget increase of 12.5 percent per year over the 2004–2010 period, the share of the recurrent budget is likely to fall to around 35 percent until 2010. The annual resources that would be available for public investment under these assumptions would increase considerably from around US$15m in 2004, to over US$190m in 2010, totalling US$705m over the 2004–2010 period (see Annex 3, Table 3.1). The critical issue of absorptive capacity has not been considered within this analysis but needs to be addressed in a second step.

IV.9. The key question is: *would these resources be sufficient to achieve the sector goals?* In order to assess the incremental total investment required for Ghana to reach World Food Summit goal of halving the number of malnourished people by 2015, an input–output model was developed in 2002/2003 (see para. III.2). This MOFA–PPMED model has been used for an analysis up to the year 2010, with modified assumptions on the basis of recently available data and trends in population growth and consumption.

IV.10. Using 2003 as the base year, consumption demand and productivity factors for crops, livestock and fisheries were estimated to generate the incremental production required by 2010. The investment cost to generate the incremental production is then calculated using the unit cost of the identified investment items. The analysis shows that a total investment of US$1,974m will be required over the seven–year period (2004–2010), with an annual average incremental investment of US$282m. These investments will come from the public and the private sector, the latter comprising the agribusiness and farmers. As shown in Annex 3, Table 3.2, around 52 percent (US$147m) would be contributed by farmers, 26 percent (US$73m) by the agribusiness sector (large–scale farming of selected export commodities, agro–processing, storage and transport), and 22 percent (US$62m) by the public sector (including development programmes and rural infrastructure, in particular rural roads, which is the biggest item and not under MOFA).

IV.11. The analysis shows that, if an increase in sector allocations to 10 percent of total budget could be achieved by 2009, the total MOFA/MLF resources available for investment (development budget) would be in excess of *total* incremental public investment required over the 2004–2010 periods. (It should be noted that forestry was not included in the PPMED model). However, there would be a shortfall in 2004 and 2005, totalling around US$33m. Assuming a 6 percent agricultural GDP growth, which is the target of the AAGDS, and an average incremental capital–output ratio (the ratio of investment to change in output) of 2.2, an investment requirement of similar magnitude has been calculated (see Annex 3, Table 3.3).

IV.12. The above analysis indicates the desirability of aiming at allocating 10 percent of total budget to agriculture and rural development, in particular rural infrastructure, and the overall adequacy of this level of public investment to achieve the desired level of agricultural growth. However, it should be noted that it is not the total investment but the period in which the investment is made that will determine the sectoral growth pattern, on account of the lags between the investment and output generation. In the above analysis, although the eventual total public investment resources that would be needed over the 2004–2010 period is lower than the amount that would be available if 10 percent of the budgetary allocation to agriculture development is reached by 2009, the shortfall of at least US$33m in the initial two years (2004–2005) will delay accrual of benefits and therefore would require higher level of investment in the remaining period to provide the required level of output and income by the year 2010. It is therefore imperative to implement productive investments, in particular for infrastructure development, as soon as possible.

IV.13. An important aspect relates to the source of financing for investment by farmers and agribusiness operators. Although farmers’ investment is mainly in the form of labour and forgone consumption, their need for credit for investments in inputs and improved technologies will be substantial. It is expected that at the initial stage of agribusiness, the debt: equity ratio would be around 60:40, i.e. the business operators providing 40 percent and financial institutions providing 60 percent of investment. The role of financing institutions is therefore crucial in achieving desired objectives of accelerated growth. To this effect, the priority programmes of the Ghana NMTIP need to include development of financial institutions.

V. MONITORING AND EVALUATION

V.1. Monitoring and Evaluation (M&E) of the NMTIP will be carried out within the GPRS and MOFA M&E frameworks. In the Ministry of Food and Agriculture, overall responsibility for monitoring and evaluation rests with the Policy Planning Monitoring and Evaluation Directorate (PPMED). Apart from this, the various directorates at all levels carry out monitoring and evaluation duties. PPMED will be responsible for project monitoring and evaluation in a participatory and gender sensitive manner. Specific performance and impact indicators would be defined for the various projects, based on each project's logical framework, and integrated into MOFA's M&E system. At the district level, the District Agricultural Committee, which includes all major stakeholders, will constantly monitor project implementation and impact. The Ministry of Finance and Economic Planning and the Ministry of Regional Cooperation and NEPAD will periodically monitor overall programme implementation and macro–economic and rural development indicators.

V.2. The main indicators to be monitored, which need to be further specified, are presented below.

- ***Indicators measuring achievement of development objectives:***
  - Number of undernourished people;
  - Household income levels and distribution, supplemented with ownership of visible assets;
  - Incidence of rural poverty;
  - Household food security situation – length of lean period i.e. number of months household is able to feed itself from its own food production;
  - Growth of the agricultural sector and its contribution to GDP, broken down by sub–sector;
  - Self–sufficiency ratios for major food crops – quantity of food consumed as a ratio of quantity produced;
  - Export revenues from agricultural commodities.

- ***Indicators measuring achievement of target of allocating 10% of national budget to agriculture and rural development:***
  - Percentage of the national budget allocated to the agriculture and rural development sector and sub–sectors;
  - Actual public expenditures in the agriculture and rural development sector and sub–sectors and share of recurrent costs;

- ***Indicators measuring sector performance and achievement of programme outputs:***
  - Production and yield levels of major crops;
  - Livestock population and incidence of diseases;
  - Area under irrigation (developed/rehabilitated);
  - Area under aquaculture (total/aquaculture integrated into irrigation schemes);
  - Outreach of rural financial services;
  - Extension agent/farmer ratio;
  - Number of small–scale agro–processing industries;
  - Number of farmer–based organisations;
  - Kilometres of rural feeder roads constructed, rehabilitated or maintained;
  - Number of rural markets constructed, rehabilitated or maintained.

ANNEXES

Annex 1: Macroeconomic and Sector Indicators

Table 1.1: Selected Macro–economic Indicators					
					2002
Population (million)					20.1
Population – Average Annual Growth, 1996–2002 (percent)					2.1
Key Economic Indicators		1982	1992	2001	2002
GDP (US$ billion)		4.0	6.4	5.3	6.2
Gross domestic investment/GDP (%)		3.4	12.8	26.6	19.7
Export of goods & services/GDP (%)		3.3	17.2	45.2	42.5
Gross domestic savings/GDP (%)		3.7	1.3	8.8	5.9
Gross national savings/GDP (%)		3.5	3.6	21.3	20.2
Interest payments/GDP (%)		0.7	1.3	1.3	1.2
Total debt/GDP (%)		36.8	69.6	126.8	119.3
Total debt service/exports		15.5	28.2	8.5	7.8
Average Annual Growth (%)	1982–92	1992–02	2001	2002	2003
GDP	4.7	4.2	4.2	4.5	5.2
GDP per capita	1.1	2.0	2.1	2.6	3.5
Export of goods and services	6.8	8.8	-3.6	10.2	7.1
	1990	2000	2001	2002	2003
Inflation (CPI percent)	37.3	25.2	32.9	14.8	26.7
Lending Interest rate (Average annual, percent)		53.0	43.8	36.4	27.5
Exchange rate market mid rate (Cedi/US$)		6,935	7,322	8,423	9,260
Source: Bank of Ghana, MOFEP.					

Table 1.2: Structure of the Economy						
Percent of GDP		1982	1992	2001	2002	2003**
Agriculture		57.3	44.8	35.9	36.0	37.0
Industry		6.2	17.4	25.2	24.3	23.0
Services		36.4	37.8	38.9	39.7	40.0
Average annual growth (percent)	1982–1992	1992–2002	2001	2002	2003	2004*
Agriculture	2.1	3.8	3.7	4.1	6.1	6.0
Industry	7.1	3.8	4.8	6.3	5.1	5.1
Services	7.3	4.8	4.5	4.4	4.7	4.7
Source: The World Bank – *African Development at a Glance*, MOFEP. (*) Projected. (**) Provisional.						

Table 1.3: Structure of Farm Households			
Farming Characteristics	Small–scale	Medium–scale	Large–scale
Avg. total area per farm household (ha)	Under 4.0 (<2.0 ha = 90%)	4.0 – 8.0	Over 8.0
No. of farm households (total:2.74 million)	2,310,000	296,000	137,000
Percent of farm households	84.2	10.8	5
Main crops grown	Food crops	Food/cash crop	Cash crops
Production focus	Subsistence	Subsistence/commercial	Commercial
Source: SRID, MOFA.			

Table 1.4: Rainfall Distribution by Agro–ecological Zone

Agro–ecological zone	Mean annual rainfall (mm)	Growing period (days)	
		Major season	Minor season
Rain Forest	2,200	150–160	100
Deciduous Forest	1,500	150–160	90
Transitional	1,300	200–220	60
Guinea Savannah	1,100	180–200	(*)
Sudan Savannah	1,000	150–160	(*)
Coastal	800	100–110	50

Source: Ministry of Land and Forestry; Meteorological Services Dept, & Ministry of Food and Agriculture
(*) Rainfall distribution is bimodal in the Forest, Transitional and Coastal Zones, giving a major and minor growing seasons; elsewhere (Guinea Savannah and Sudan Savannah), the unimodal distribution gives a single growing season.

Table 1.5: Ghana Gross Domestic Product 1993– 2002 by Sector (Billion cedi – Constant 1993 Prices)

Sector/Sub–sector	Year										Average 1993-2002
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002*	
AGRICULTURE	1,430.0	1,456.7	1,511.2	1,590.1	1,658.4	1,743.2	1,810.8	1,849.1	1,923.4	2,007.2	
% of total	*36.9%*	*36.4%*	*36.3%*	*36.5%*	*36.6%*	*36.7%*	*36.5%*	*36.0%*	*35.9%*	*35.8%*	*36.4%*
% increase over previous year	*n.a.*	*1.9%*	*3.7%*	*5.2%*	*4.3%*	*5.1%*	*3.9%*	*2.1%*	*4.0%*	*4.4%*	*3.8%*
Agriculture and Livestock	994.0	1,003.0	1,038.4	1,103.5	1,132.7	1,182.5	1,238.1	1,251.7	1,314.3	1,382.6	
% of total	*25.7%*	*25.1%*	*25.0%*	*25.4%*	*25.0%*	*24.9%*	*25.0%*	*24.3%*	*24.5%*	*24.7%*	*25.0%*
% increase over previous year	*n.a.*	*0.9%*	*3.5%*	*6.3%*	*2.6%*	*4.4%*	*4.7%*	*1.1%*	*5.0%*	*5.2%*	*3.7%*
Cocoa Production and Marketing	108.1	121.3	134.7	138.6	151.5	168.3	167.5	177.9	176.1	175.2	
% of total	*2.8%*	*3.0%*	*3.2%*	*3.2%*	*3.3%*	*3.5%*	*3.4%*	*3.5%*	*3.3%*	*3.1%*	*3.2%*
% increase over previous year	*n.a.*	*12.2%*	*11.0%*	*2.9%*	*9.3%*	*11.1%*	*-0.5%*	*6.2%*	*-1.0%*	*-0.5%*	*5.6%*
Forestry and Logging	107.7	109.6	111.8	114.8	139.5	153.5	163.9	182.1	190.8	200.4	
% of total	*2.8%*	*2.7%*	*2.7%*	*2.6%*	*3.1%*	*3.2%*	*3.3%*	*3.5%*	*3.6%*	*3.6%*	*3.1%*
% increase over previous year	*n.a.*	*1.8%*	*2.0%*	*2.7%*	*21.5%*	*10.0%*	*6.8%*	*11.1%*	*4.8%*	*5.0%*	*7.3%*
Fishing	220.2	222.8	226.3	233.2	234.7	238.9	241.3	237.4	242.2	249.0	
% of total	*5.7%*	*5.6%*	*5.4%*	*5.4%*	*5.2%*	*5.0%*	*4.9%*	*4.6%*	*4.5%*	*4.4%*	*5.1%*
% increase over previous year	*n.a.*	*1.2%*	*1.6%*	*3.0%*	*0.6%*	*1.8%*	*1.0%*	*-1.6%*	*2.0%*	*2.8%*	*1.4%*
INDUSTRY	961.1	994.5	1,035.3	1,084.4	1,153.3	1,190.1	1,248.4	1,295.3	1,333.2	1,396.2	
% of total	*24.8%*	*24.9%*	*24.9%*	*24.9%*	*25.4%*	*25.1%*	*25.2%*	*25.2%*	*24.9%*	*24.9%*	*25.0%*
% increase over previous year	*n.a.*	*3.5%*	*4.1%*	*4.7%*	*6.4%*	*3.2%*	*4.9%*	*3.8%*	*2.9%*	*4.7%*	*4.2%*
SERVICES	1,065.8	1,118.6	1,170.8	1,220.3	1,300.2	1,378.7	1,447.8	1,525.3	1,602.7	1,678.1	
% of total	*27.5%*	*28.0%*	*28.1%*	*28.0%*	*28.7%*	*29.0%*	*29.2%*	*29.7%*	*29.9%*	*30.0%*	*28.8%*
% increase over previous year	*n.a.*	*5.0%*	*4.7%*	*4.2%*	*6.5%*	*6.0%*	*5.0%*	*5.4%*	*5.1%*	*4.7%*	*5.2%*
SUB–TOTAL	3,456.9	3,569.8	3,717.3	3,894.8	4,111.9	4,312.0	4,507.0	4,669.7	4,859.2	5,081.5	
Net Indirect Taxes	415.6	429.3	442.7	456.4	422.0	434.7	449.9	472.4	497.9	519.3	
TOTAL GDP in Purchasers' Values	3,872.5	3,999.1	4,160.0	4,351.2	4,533.9	4,746.7	4,956.9	5,142.1	5,357.1	5,600.8	
% increase over previous year	*n.a.*	*3.3%*	*4.0%*	*4.6%*	*4.2%*	*4.7%*	*4.4%*	*3.7%*	*4.2%*	*4.5%*	*4.2%*

(*) Provisional Source: Bank of Ghana.