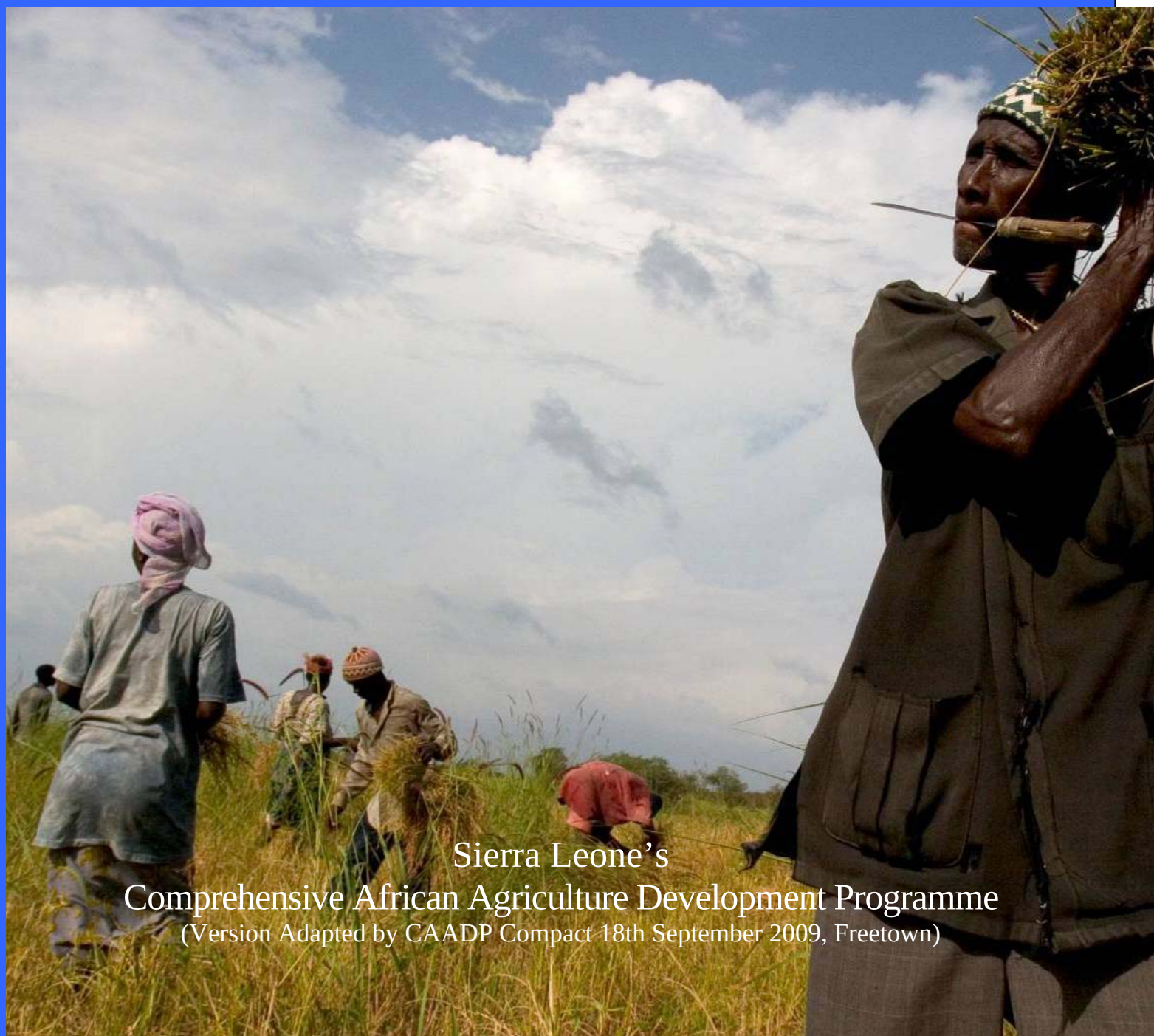




THE REPUBLIC OF SIERRA LEONE

National Sustainable Agriculture Development Plan 2010-2030



Sierra Leone's
Comprehensive African Agriculture Development Programme
(Version Adapted by CAADP Compact 18th September 2009, Freetown)



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Or consult www.maffs.gov.sl website



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National Sustainable Agriculture Development Plan 2010-2030

Sierra Leone's Comprehensive African Agriculture Development Programme

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TABLE OF CONTENTS

ACRONYMS	6
PREFACE.....	7
NATIONAL SUSTAINABLE AGRICULTURE DEVELOPMENT PLAN and COMPREHENSIVE AFRICA AGRICULTURE DEVELOPMENT PROGRAMME (NSADP/CAADP)	8
PART I: MAIN FINDINGS FROM THE STOCK-TAKING ANALYSIS.....	9
CHAPTER ONE: THE AGRICULTURE SECTOR OPPORTUNITIES AND POTENTIAL	10
Agriculture and the Economy	10
Trade Balance	10
Population and Markets	10
Overview of the Sub-Sectors	11
Climate and Soil Features	12
Water Resources	12
Climate Change	12
Farm Size, Distribution and Farming System	13
Land Tenure	14
CHAPTER TWO: THE AGRICULTURE SECTOR CHALLENGES	15
Expert Crisis	15
Declining Soil Fertility	15
Low Technological Input	15
Agricultural Infrastructure	16
Value Chain and Value Addition	16
Input and Output Marketing	16
Financial Services	17
Technology Access and Farmer Empowerment	17
Formal Farmer Based Organisations	17
Access to Land	17
Tax Structure	18
Investment Policy	18
Fisheries	18
Weak Sector Coordinating Mechanism	18
Gender and Youth in Agriculture	18
Nutrition Diversification and Farmer Health	19



PART II: COUNTRY AND DISTRICT STRATEGIES

CHAPTER THREE: COUNTRY STRATEGY FOR AGRICULTURAL DEVELOPMENT 20

Agenda for Change and Agriculture Sector Vision 20

NSADP/CAADP and the ECOWAS Region 21

CHAPTER FOUR: DISTRICT AND COMMODITY STRATEGIC PROGRAMMES 22

Strategic Commodity Focus by District within Agricultural Sub-Sectors 22

Focus Commodities 22

Proposed Cultivation Methods for the five ecologies 24

PART III: NSADP/CAADP INVESTMENTS AND FINANCING

CHAPTER FIVE: NSADP/CAADP AGRICULTURE SECTOR INVESTMENT PROGRAMME PROFILE 28

Programme Objectives 28

Four Major Sub-Programmes 28

Sub-Programme 1. Commodity Commercialization 29

Sub-Programme 2. Agriculture Infrastructure Development 31

Sub-Programme 3. Private Sector Promotion 33

Sub-Programme 4. Sector Coordination and Management 34

CHAPTER SIX: FINANCING THE NSADP/CAADP AND FINANCIAL MANAGEMENT 35

NSADP/CAADP Financial Requirement 35

NSADP/CAADP Financing 35

Domestic Resources including National and Local Council Budgets Allocation 36

Private Sector Participation 36

Innovative Financing 36

External Resources 37

International Borrowing 37

International Donor Grants 37

NSADP/CAADP Financial Management and Coordination 37

Strategic MDAs in the Implementation of the NSADP 38

Monitoring and Evaluation of the NSADP 39

PART IV: ANNEX I

CAADP COMPACT 40



ACRONYMS

ABC	Agriculture Business Centre
AfDB	African Development Bank
AgGDP	Agric. Gross Domestic Product
AGRA	Alliance for a Green Revolution in Africa
CAADP	Comprehensive Africa Agriculture Development Programme
CARD	Coalition for African Rice Development (includes AGRA, JICA, FAO, IRRI, and others. Based in Nairobi, Kenya)
CGE	Computable General Equilibrium
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
CORAD	Coalition CARE, Catholic Relief Services, AfriCare and World Vision International
CORAF	West and Central Africa Council for Agriculture Research and Development
ECOWAS	Economic Community of West African States
EDF10	Economic Development Fund 10 th cycle from the European Union
EU	European Union
FAO	Food and Agriculture Organisation
FARA	Forum for Agricultural Research in Africa
FFLS	Farmer Field and Life School
FFS	Farmer Field School
GDP	Gross Domestic Product
GOSL	Government of Sierra Leone
IAR	Institute of Agricultural Research
IDB	Islamic Development Bank
IFAD	Islamic Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IITA,	International Institute of Tropical Agriculture
IMF	International Monetary Fund
IRDP	Integrated Rural Development Project
IRWR	Internal Renewable Water Resource
IVS	Inland Valley Swamp
JICA	Japan International Cooperation Programme
LIFDC	Low Income Food Deficit Country
LRSP	Land Resources Survey Project
LWDD	Land and Water Development Division
MAFFS	Ministry of Agriculture, Forestry and Food Security
MDA	Government Ministries, Departments and Agencies
MDG	Millennium Development Goal
MFMR	Ministry of Fisheries and Marine Resources
MOFED	Ministry of Finance and Economic Development
MRU	Mano River Union (Côte d'Ivoire, Guinea, Liberia, Sierra Leone)
MTI	Ministry of Trade and Industry
NaCSA	National Commission for Social Action
NAFSL	National Association of Farmers for Sierra Leone
NEPAD	New Partnership for Africa's Development
NGO	Non Government Organisation
OFID	OPEC Fund for International Development
OFTN	Operation Feed the Nation (National Food Security Programme)
PAGE	Programme for Agriculture, Governance and Environment (USAID)
PRSP	Poverty Reduction Strategy Paper
ReSAKSS	Regional Strategic Analysis Knowledge Support System-West Africa
RRRS	Rokupr Rice Research Station
SAM	Social Accounting Matrix
SAP	Structural Adjustment Programme
SLARI	Sierra Leone Agricultural Research Institute
SPFS	Special Programme for Food Security
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
WB	World Bank
WHH	Welt Hunger Hilfe



PREFACE

The President of the Republic of Sierra Leone, His Excellency Dr. Earnest Bai Koroma, during the 2008 World Food Celebrations in Magburaka, Northern Sierra Leone, publically declared that agricultural development is his Government's top priority after the significant progress achieved so far in the energy sector. This Plan is a follow-up to the Agenda for Change, the country's second generation PRSP, which prioritizes the energy, agriculture and infrastructure sectors.

This declaration underlines the fact that, long-term sustained macroeconomic growth and development of the Sierra Leone economy heavily depends on agriculture – its back-bone, which has the potential to create more wealth, employment and trigger industrialization and services leading to, among others, a significant increase in food security and poverty reduction. The sector's current share of GDP stands at about 46% and accounts for over 1/4th of export earnings and is by far the largest employer (almost 2/3rds). Hence, its development has positive implications for the majority of the population and other sectors of the economy.

In order to put into action the President's declaration, the Ministry of Agriculture, Forestry and Food Security (MAFFS) is developing a new vision with efficient service delivery mechanisms: "Make agriculture the 'engine' for socio-economic growth and development through commercial agriculture". To realize this vision the following objectives are to be achieved:

- Fostering increased agricultural productivity (intensification)
- Promoting commercial agriculture through Private Sector (extensification)
- Improving Research & Extension Service Delivery
- Promoting effective and efficient Resource (financial, physical and human) Management
- Mainstreaming cross-cutting themes: gender and youth promotion, farmer health care issues (including HIV/AIDS, IVS sicknesses and hazards, malaria, etc) and natural sustainability

Sierra Leone is endowed with sufficient arable land with favorable climatic conditions, reasonable access to land; several agro-ecologies suitable for wide variety of crops, abundant water resources and political commitment for investment in the sectors. There are a lot of opportunities for promoting small to large scale holders so that they benefit from linkage to market economies. Sierra Leonean agricultural products have high demand at local, MRU, ECOWAS and International markets. So there are a myriad of market opportunities for investors in the agriculture sector in Sierra Leone.

As a government initiative, in order to organize, attract and coordinate investments in the sector, and in tandem with the AU/NEPAD Comprehensive Africa Agriculture Development Programme (CAADP) Compact process, the National Sustainable Agriculture Development Programme (NSADP) has been formulated with the aim to provide short, medium and long-term investment programmes in the agriculture sector. The programme hopes to ensure economic growth and increased revenues to households, firms and the state so that basic services (health, education, etc.) will be provided to the population.

The NSADP/CAADP identified four major investment sub-programmes:

- The **Commodity Commercialization Sub-Programme** targeting rice, cassava, livestock, export crops (oil palm, cocoa, coffee, cashew), fisheries and forest products will be implemented through Small-Holder Commercialization and Medium and Large Farm Producer Promotion Scheme.
- The **Agriculture Infrastructure Development Sub-Programme** seeks to provide the basic infrastructure required for agricultural development. Such infrastructure include feeder roads, irrigation facilities, marketing, processing and storage facilities.
- The **Private Sector Promotion Sub-Programme** will provide the enabling environment through the review of investment and other related policies.
- The **Sector Coordination and Management Sub-Programme** will ensure an effective and coordinated implementation and management of the sector activities.

It is hoped that the successful implementation of the NSADP will ensure the sector plays its role as the engine for socio-economic growth in Sierra Leone. I therefore wish to present this programme to all key players in the agriculture sector including our hard working farmers, the private sector, development partners and friends of Sierra Leone. I entreat you all to endorse this plan and invest accordingly in the sector.

Joseph Sam Sesay (PhD.)
- Minister of Agriculture, Forestry and Food Security



NATIONAL SUSTAINABLE AGRICULTURE DEVELOPMENT PLAN and COMPREHENSIVE AFRICA AGRICULTURE DEVELOPMENT PROGRAMME (NSADP/CAADP)

Executive Summary

The National Sustainable Agriculture Development Plan (NSADP) provides the broad framework for putting the objectives of the Government's Agenda for Change (Sierra Leone's Second Generation PRSP) into action. The National Sustainable Agriculture Development Plan (NSADP) provides the roadmap for moving agriculture, forestry and fisheries forward to both address Sierra Leone's growing needs due to population growth and to create additional income to the national economy. In a wider context, the NSADP serves as the CAADP Compact (Comprehensive Africa Agriculture Development Programme) under the African Union's New Partnership for Africa's Development (AU/NEPAD) activities to assist countries and development partners to share a common vision for development.

Part I summarizes the results of a major stocktaking that included more than fifty national experts and many international experts who were involved in thematic group studies, policy reviews, chiefdom surveys and in-depth stakeholder consultations with District Councils. The results are discussed in terms of Opportunities and Potentials (Chapter 1) and Challenges (Chapter 2). They can only provide a glimmer of the richness of their studies, which are posted on the website of the Ministry of Agriculture, Forestry and Food Security (MAFFS) [www.maffs.gov.sl]. These Chapters conclude that while Sierra Leone is well endowed with natural production resources, there are great challenges in place due to lack of expertise, weak producer organizations, infrastructural limitations, institutional and financial impediments to private sector development and overall weak government coordination.

In Part II, current strategic directions for the nation and the region (MRU and ECOWAS) are discussed in Chapter 3 and for district strategies in Chapter 4. This NSADP/CAADP Plan follows from the second generation PRSP, the Agenda for Change, and the Vision of commercializing agriculture, forestry, fisheries and livestock through linking small to large farmers to market economies. In addition, the role of agricultural extension is decentralized to the local District Councils and thus their role is extremely important in planning and budgeting lean resources for efficient and effective implementation of programmes – in coordination with local actors such as NGOs, development agencies and private sector. These chapters conclude that the GoSL must support development of the private sector – including assisting small-holders to be organized for market access – through prioritized efforts on specific commodities with competitive advantage in each district while promoting an enabling overall national and regional environment.

In Part III, NSADP/CAADP Agriculture Sector Investment Programme is proposed that would include four major sub-programmes. The overall objective will be to increase agriculture sector growth from 2% to 6% per annum by 2015 and increase incomes of producers. The Programme seeks to contribute substantially to increased wealth and food security in line with the first Millennium Development Goal and World Food Summit targets. The four sub-programmes include:

- Commercialization of Key Commodities including a Small-Holder Commercialization Scheme and Medium and Large Farm Producers Promotion Scheme.
- Agriculture Infrastructure with focus on Rehabilitation and Upgrading of Feeder Roads, Development of Irrigable Swamps, Rehabilitation and Modernization of Storage and Processing Facilities and Rehabilitation and Construction of Research Centers and MAFFS/MFMR Facilities.
- Private Sector Promotion which will focus on policies and legislation to encourage sustainable domestic and international investments in the agricultural and fisheries sector.
- Sector Coordination and Management to improve transparent, efficient and effective sector coordination and management.

Financing methods from national and local budgets, private sector, international development banks and other development partners is discussed in Chapter 6 with proposals on efficient and effective fund management.



PART I: MAIN FINDINGS FROM THE STOCK-TAKING ANALYSIS

This NSAPD/CAADP report is the result of an extended national process in which a large number of national and international experts have carried out in-depth studies, surveys and stakeholder assessments. A complete set of reports, including the 2004 Agriculture Sector Review, can be found on the MAFFS's website: www.maffs.gov.sl

Part I includes Chapter 1 which focuses on the Opportunities and Potentials and Chapter 2 which focuses on the Challenges that need to be overcome to achieve these opportunities and potentials of the agriculture, fisheries and forestry sectors.

The Process

The NSADP formulation process started with a 3-day national retreat held in October 2008 attended by over 120 participants drawn from the key stakeholders in the agriculture sector including Government Ministries, Departments and Agencies (MDAs); farmers, the private sector, Development Partners, delegations from AU/NEPAD, Economic Community of West African States (ECOWAS), Forum for Agriculture Research in Africa (FARA), International Food Policy Research Institute (IFPRI), West and Central Africa Council for Agriculture Research and Development (CORAF), Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel (CILSS), Food and Agriculture Organization (FAO) and other United Nations (UN) agencies. The retreat prepared the roadmap for the formulation process.

Cabinet approval of the process was granted which led to the formation of the Presidential Task Force on Agriculture (PTFag) as the highest policy body charged with the responsibility to provide strategic direction for the formulation process and to mobilise all the necessary stakeholders to ensure successful implementation of the NSADP.

The Agriculture Advisory Group (AAG) and the Agriculture Technical Team (ATT) that already exist with a full range of development partners were incorporated into the process. Six Thematic Working Groups (TWGs) were then established to undertake a stock-taking exercise of the agriculture sector around the six themes that emerged from the alignment of the national objectives to the CAADP Pillars during the retreat. The six thematic areas were:

- Sustainable land and water management system
- Rural infrastructure and trade related capacities for improved market access
- Improved food production to reduce hunger including emergencies and disasters that require agricultural support
- Agricultural technology development, dissemination and adoption
- Sustainable use of forestry, fisheries and livestock resources
- Cross-cutting issues: policy formulation and review, agricultural statistics, M&E, women in agriculture, youth in agriculture and farmer health.

Field work was carried out by groups of consultants during December 2008-February 2009, including the Chiefdom Profile Survey. The consultants reviewed and identified opportunities, potentials and challenges facing the sector. The District Consultations held with the sector district stakeholders in all the districts including the Western Area, in May – June 2009, helped define the district priority agricultural action plans and investment opportunities for promotion.

A Social Accounting Matrix (SAM) was constructed and a Computable General Equilibrium (CGE) modelling exercise was carried out with the assistance of the Regional Strategic Analysis and Knowledge Support System-West Africa (ReSAKSS-WA)/IITA and IFPRI with support from ECOWAS. The key findings identified that if Sierra Leone is to achieve the MDG1 (poverty and hunger reduction) by 2015, focus should be on the development of Rice, Cassava, Oil palm, Fisheries and Non-timber forest products (firewood, charcoal, rattan, raffia and value addition), although district focused results are required for final applications to district processes.

The NSADP study teams made use of primary data and documentation and held a wide range of consultations with individuals and groups of farmers, agri-business, transporters, wholesalers, exporters and importers, government and private organizations during field visits. The Agriculture Sector Review of 2004 provided extensive baseline information. FAO and World Bank (WB) experts provided technical backstopping to national processes.



CHAPTER ONE

THE AGRICULTURE SECTOR OPPORTUNITIES AND POTENTIAL

Introduction

This chapter provides an overview of the agricultural sector and describes the natural endowments that are favourable for agricultural development.

Agriculture and the Economy

Agriculture including fisheries and forestry is the mainstay of the economy, contributing about 46 percent of the GDP and providing employment for about 75 percent of the population (with women as the predominant labour force). Table 1.1 below shows the composition of the sector and sub-sectoral contribution to agricultural GDP. The crops sub-sector dominates followed by fisheries. Contribution of the forestry sector has declined over the years from 6 percent in 2001 to 3 percent in 2008 whilst livestock has maintained 3 percent contribution over the last 7 years.

Table 1.1: Contributions of major Agricultural sub-sectors to Agricultural GDP (percent)

Sub-sector								
	2001	2002	2003	2004	2005	2006	2007	2008
Crops	25	29	28	30	32	32	31	32
Livestock	2	3	3	3	3	3	3	3
Forestry	6	5	5	4	4	4	4	3
Fishery	7	7	8	9	9	8	8	8
Agriculture's Contribution to GDP	40	44	44	46	48	47	46	46

Source: Statistics Sierra Leone.

Trade Balance

Sierra Leone has had an unfavourable balance of trade in agricultural goods in the period 2000 to 2008. This imbalance is made worse by unfavourable terms of trade related to the fall in world market prices of the country's exports, especially the price of coffee, and the steep rise in the price of imported rice and other agricultural imports. Cocoa has the greatest promise for export due to a strong export market and quality improvements that are taking place under the STABEX programme and private sector initiatives. Export of certified organically produced cocoa and Fair Trade cocoa is increasing by producers' cooperatives in eastern Sierra Leone with assistance of private sector exporters and buyers.

Population and Markets

The population growth rate of Sierra Leone is currently 2.1% (doubling of population approximately every 34 years). By 2050, the population of Sierra Leone is expected to have doubled to 12.4 million people. However, the growth of the Mano River Union (MRU) which includes Côte d'Ivoire, Guinea, Liberia and Sierra Leone needs to be considered both in terms of demand for commodities and also potential markets within a planned free-trade area. The current population is estimated to be 36.9 million persons but growing to 88.6 million by 2050. Within the ECOWAS region, the situation is dominated by the population growth of Nigeria with a current population of approximately 140.8 million people but growing to 289 million by 2050. This tremendous population growth in the region will present many opportunities for new economic development as regional markets expand, especially in commodities such as rice. However, the growth will also put stress on natural systems and increase water competition between urban and rural areas. Climate change is not expected to severely impact Sierra Leone's favourable rainfall if forest cover is maintained.



Overview of the Sub-Sectors

Crops share of Agriculture GDP is about 67%, hence it is a major contributor to the economy. In the past, Sierra Leone was a net exporter of a number of agricultural commodities including cocoa, coffee, ginger, palm kernels, piassava, rubber, and rice. Sierra Leone is now a net importer of rice and some other food crops largely due to infrastructure destruction during conflict and structural adjustments.

Domestic food production has, however, seen a steady increase since the war ended, and estimates show that the share of households with adequate food consumption has increased from 56% in 2005 to 71% in 2007. The level of rice self-sufficiency in the country increased from 57.4% to 71% between 2002 and 2007. The remaining 30% rice deficit is made up with rice imports and consumed primarily in Freetown in towns where 30% of the population is resident: it is unfortunately easier to import rice from Asia than to order from the districts for lack of adequate rice mills. The production of roots and tubers (mainly cassava and sweet potato) is currently far in excess of the national requirement for fresh consumption.

In terms of exports, cocoa now has a growing presence in Sierra Leone's international trade statistics, due to recent efforts to improve quality and increase levels of production. The total value of agricultural exports in 2007 was USD13.67 million, a modest increase from USD12.8 million in 2006. Of this figure, cocoa accounted for USD11.36 million or 85% of agricultural export earnings in 2007.

Livestock population was decimated during the war and its contribution to the national economy consequently dropped. Available data from MAFFS indicate that cattle population is about 330,000, sheep 470,000, goats, 550,000 and poultry 1.5 million. These are close to the pre-war levels yet the sector's contribution to agricultural GDP has stagnated at 3 percent over the last seven years.

Forestry accounted for 7 percent to the agricultural GDP by the end of the war and has reduced to 3 percent by 2008. Nonetheless forestry is still important in the local economy as over 90 percent of the domestic energy needs for heating and cooking are provided by fuel wood. Although no study has been carried out on the contribution of medicinal herbs to the well-being of the rural population, there is abundant evidence to suggest that most rural households depend heavily on such herbs for curative as well as preventive medicines.

The national forest estate has an area of 610,122ha (8.4% of the total land area of Sierra Leone) comprising gazetted and proposed forest reserves (360,622ha), proposed strict nature reserves (7,500 ha), proposed game reserves and game sanctuaries (60,100ha) and gazetted and proposed national parks (181,900ha), (Allan, 1990; Mnzana, 1992). The Wildlife Conservation Act of 1972 (see Phillipson 1978) provides explanation of the degrees of protection offered by the different categories in the protected area system.

The Wildlife Conservation Act of 1972, which was ratified in 1973, forms the backbone of existing legislation. It makes provision for the establishment of the different categories of protected areas. The act is now outdated and has been reviewed. Enactment of the reviewed act is still pending. The 1988 Forestry Act has upgraded government's policy and legislation on the use and management of forest resources, with emphasis on community forestry as a mechanism for sustainable forest resource exploitation.

The Sierra Leone Government has signed a number of international conventions and agreements, which are geared towards building international cooperation towards biodiversity conservation at the local and global levels. The Convention on International Trade on Endangered Species (CITES) was signed in October 1994, the Convention on Biological Diversity (CBD) in December 1994, the Convention on Climate Change (CCC) in June 1995, and the Convention on Desertification (CD) in September 1997. It is also a party to the OAU Convention on Wildlife. The Ramsar Convention was signed in December 1999 and the Sierra Leone River Estuary designated a Ramsar site. There are also areas proposed as UNESCO Biosphere sites in the Gola Forest. Considerable work is required for private sector to improve on sustainable forest practices and certification of such practices.

Fisheries Sierra Leone has a total coastline of 550km long with a continental shelf area of about 25,600km², which is about 140km wide in the north and tapers to about 13km in the south. The area of the 200 miles Exclusive Economic Zone (EEZ) is about 157, 000 km². The fisheries waters comprise of the marine ecosystem, inland water bodies such as rivers, estuaries, lakes and flood plains that are richly endowed with abundant and diverse species of finfish, shellfish and wetland resources (mangroves and wild life).

Fish accounts for about 75 to 80% of total animal protein intake. On the average, Sierra Leonean and the national per capita consumption is 23.5kg as compared to the global average of 15kg. This consumption level seemed very impressive, but it is not evenly distributed throughout the country due to seasonal and geographical variations.



Sierra Leone waters are generally believed to be endowed with very rich fish resources which include high value species such as shrimps, lobsters, cuttlefish, croakers, threadfins, sole, breams and snappers. However, recent surveys carried out in our waters by the Norwegian fisheries research vessel, R/V Dr. Fridtjof Nansen in 2006 and 2007, under the auspices of a Regional Fisheries Management Programme (RFMP) "Guinea Current Large Marine Ecosystem" (GCLME), in collaboration with FAO, estimated a standing stock biomass of about 300,000 metric tons of which the pelagic species constituted 90%. Comparing this recent result to those of R/V Dr. F Nansen (FAO 1984) and R/V Monocrys, (Chaytor et al. 1985) which estimated standing biomass ranging between 446,000 to 674,100mt, there is a clear indication that the stocks have been on the decline. EU supported stock assessments and research are underway to verify conditions. Export to the EU is expected to be possible by 2010 with the rehabilitation of the Competent Authority and revision of the fisheries legal framework.

Climate and Soil Features

The climate is a monsoon type humid tropical with two distinct seasons. The rainy season spans from May to October and the dry season from November to April. The annual rainfall averages about 3,000 mm, ranging from a low of 2,000 mm in the North to a high of 4,000 mm in the South. Average monthly temperature ranges from 23°C to 29°C, but it can rise to an average maximum of 36°C in the lowlands towards the end of the dry season while in the highlands the average monthly temperature could be as low as 15°C at the beginning of the dry season. Humidity is high all year, especially in the coastal areas.

There are five main physical regions of Sierra Leone (Table 1.2). These regions provide a basis for the delineation of agro climatic zones by combining the physical characteristics of these regions with the length of growing period (LGP) for crops as the average duration of the rain fed growing period.

Soils in Sierra Leone have been grouped into 12 soil associations to reflect the local soil attributes that have an important bearing on land suitability and can be easily and consistently observed and measured. Most of the soil types are ferralitic in nature and lack important mineral nutrient reserves.

The geographical area comprises a total of 60,650 km² referred to as upland areas and 11,650 km² of lowlands. Land suitable for cultivation is estimated at 5.36 million ha or about 74 percent of the total land area. Less than 15% of arable land is currently under cultivation. Arable lands in the uplands are estimated at 43,000 km² while about 90 percent of the lowland area is considered arable. The lowlands are differentiated in four ecosystems and comprise inland valley swamps (630,000 ha), mangrove swamps (200,000 ha), bolilands (120,000 ha) and riverine grasslands (110,000 ha).

Water Resources

Sierra Leone has abundant water resources mainly due to rainfall (2000-4000mm per annum) and nine major river systems. The total river catchment area varies from 720 to 14,140 km². Surface water therefore appears not to be in short supply at the national level. River discharges are high and the run-off coefficient is estimated between 20% and 40% on average. Some earlier estimates suggest that Sierra Leone's global renewable water resources (surface + ground + atmospheric) could amount to about 160 km³/year. Average run-off was computed for each basin based on some selected rainfall stations, totalling about 74 km³/year.

Of the total water potential, only about 0.37 km³/year is used, mainly in agriculture, for irrigating a total water-managed area of 155,360ha, comprising 1,000 ha of surface-irrigated sugar cane, 28,000 ha of equipped wetlands and inland valley bottoms and 126,000 ha of other cultivated wetland and inland valley bottoms (MAFFS-MFMR, 2004). This level of utilisation is very low (i.e. less than 0.5 %) in relation to the available potential. There is as yet no national strategy to utilise the surplus annual rainfall for extending the growing season into the six-month dry season.

Climate Change

On the global scale, Sierra Leone's contribution to global warming is negligible but like all other African countries, it is likely to be disproportionately affected by the impacts of climate change due to limited adaptive capacity and widespread poverty. Key sources of green house gases are: fuel combustion for power plants and transport; use of charcoal and fuel wood, burning of forest products for agricultural purposes and burning of solid waste.

A rise in sea level and increased risk of flooding are some of the expected impacts of global warming. Other likely effects are changes in rainfall patterns and temperature changes. Farming practices are expected to change with a move towards practices better adjusted to erratic rainfall such as photo-insensitive rice varieties for more flexibility in planting times, potentially more sorghum and millet for dry field crops, and greater demand for drying equipment. However, a major change in rainfall volume is not expected if forest cover is maintained although other ECOWAS countries may have more drastic climate changes (e.g. drought



and flood impacting production) providing opportunities for more regional exports due to higher demand but also exposure to the “climate change migrants” that may begin to move regionally.

Table 1.2. Agro climatic Regions in Sierra Leone

	AREA (KM2)	DOMINANT LANDFORM	ALTI- TUDE	MEAN TEMP. (°C)	RAINFALL (mm.)	AVERAGE LGP DAYS	DOMINANT VEGETATION
COASTAL PLAIN	11,016	Estuarine swamps, alluvial plains, beach ridges and coastal terraces.	< 150	27.9	3000	260 ± 10	Mangrove, swamp and grassland.
SAVANNAH WOODLAND	27,993	Drainage depressions, undulating plains, low plateau and hills.	150-300	28.2	2280	255 ± 10	Lophira Savannah, Savannah woodland, mixed tree Savannah, upland grassland and forest re- growth.
RAIN FOREST/ SAVANNAH	20,712	Plateau with undulating high lying plains, rolling hills.	150-300	28.5	2730	270 – 300	Savannah woodland, montane grassland and forest re- growth.
RAIN FOREST	12,579	Plateau with undulating plains, rolling plains and hills.	300-600	28.6	2660	314 ± 9	Forest and forest re- growth.
HILLS and MOUNTAINS	14,723	Highly dissected hill ridges.	> 600				Montane grassland, upland Grassland.

Source: UNDP/FAO, 1979

Farm Size, Distribution and Farming System

Typical farm holding comprises a major upland farm with a smaller portion of one type of lowland ecology. The 1985 census indicated an average farm size of 1.63 ha with the farmer holding encompassing a 60-80 percent upland portion with a 20-40 percent lowland area. Ideally, the production system of a farm holding is a continuum that begins at upland level, tends to include a foot slope runoff area (for early maturing rice varieties) and eventually ends with the more fertile wet lowlands.

In 1980, a nation-wide survey (FAO-UNDP Land Resources Survey) showed the country mean fallow period length to be 8.8 years with wide variations. It is now widely argued that the fallow intervals are declining mainly due to population pressure on land, which is said to contribute land degradation and yield decrease.

There are five main types of cultivable land in Sierra Leone:

- The Uplands account for 80% of arable land, highly leached with low fertility status, suitable for a variety of food and cash crops



- Bolilands (3%) are seasonally flooded plains, inherently low fertility
- Inland Valley Swamps (10%), highly fertile from hillside runoff
- Riverine Grass lands (3%), flooded in the rainy season otherwise fertile
- Mangrove swamps (3%), subject to sea water flooding during rainy season, of medium fertility suitable for rice cultivation.

The main farming practice is shifting cultivation with mixed cropping being the common cropping pattern although there are significant differences depending on the land type. Rice stands is usually the main crop grown in mixed stands with other crops such as cassava, maize, sorghum, sweet potatoes, millet, sesame, ground nuts and maize. This shifting cultivation is to be discouraged with incentives to switch to permanent cropping with higher value and more sustainable tree crops with food crop inter-cropping.

Land Tenure

Land tenure in Sierra Leone is characterised by a dual ownership structure due to historical developments. The Western Area including the Freetown Peninsula is governed by an English system of land ownership which includes fee conveyances, mortgages and leases. Unoccupied and uncultivated land remain Crown (State) land. Thus, land in these areas is either owned by individual families or is Crown land. Communally owned land does not exist in the Western Area.

Land in the rest of the country (i.e. the majority of the agricultural land) is held in communal ownership under customary tenure and is controlled by traditional rulers who administer it on behalf of their communities in accordance with customary principles and usage. Though there are minor differences among the various ethnic communities, the general trend is that land is considered a divine heritage not to be bought and sold.

The responsibility to ensure the preservation of the land and subsequent enjoyment by future generations therefore rests on the community as a whole. The absolute interest in land vests in families. In other words, it is the land-owning family, which deals in its land. The Paramount Chief is regarded as the custodian of the land on behalf of the entire Chiefdom but decisions regarding the land are the preserve of heads of the various land owning families. New efforts at land use planning and leasing legislation are under discussion.

Summary

The country has abundant arable land with favourable climatic conditions, reasonable access to land, several agro-ecologies suitable for a wide variety of crops, abundant water resources and political commitment for investment in the sectors. The opportunities for increasing production, adding value and raising the income of rural communities are numerous. In the past, such opportunities were successfully developed but at a high cost of unsustainably high subsidies and political maneuvering that ultimately resulted in failures. Lessons from other countries indicate the need to improve the private sector – or even to encourage the development of private sector actors such as producer companies – and for government to provide an enabling environment which may include smart subsidies, regulation and some public goods such as research and extension.

The next chapter explores the numerous constraints obstructing realization of these opportunities.



CHAPTER TWO

THE AGRICULTURE SECTOR CHALLENGES

Introduction

In spite of Sierra Leone being naturally endowed with land, water (marine and inland), human resources, and favourable climatic conditions, the sector's contribution to growth, attainment of food security and increased prosperity for the people is still lagging behind expectations and recognized potential. The country has been slow in developing most commercial crops despite huge potential for export and diversifying sources of food for human consumption. This section of the report provides a summary of the challenges militating against the development of the agricultural sector, identified by the six thematic groups.

Key aspects are summarized as follow while in-depth reports are available on the MAFFS website.

Expert Crisis

Before and during the national conflict, most highly skilled experts left the country for the safety of family and for livelihood sustenance. During and after the conflict, national universities, colleges and polytechnics were not able to train new staff due to lack of teachers and professors who had fled the country and due to unstable conditions. Experts that were able to stay are now approaching retirement. The sum effect is that there is a massive expert crisis just on the horizon in 3-5 years when the well-trained and experienced agriculturalists, animal scientists, foresters, fishery experts, and others will retire and no new people will be able to train them. In addition, the sector is weakened by staff movement to better paid jobs due to low remuneration to staff by government, and limited staff development and promotion opportunities.

Due to lack of expertise, the GoSL is unable in its current form to fully provide strategic and technical direction for the implementation of key macroeconomic and social policies, including the Agenda for Change and NSADP/CAADP without external assistance. Urgent action is needed to boost training capacity and to quickly bring up new experts. This might be done with a crash programme with visiting professors from Anglophone Africa, Philippines, or other sources; with scholarships to students; limited training overseas and expediting advisory technical support.

Declining Soil Fertility

Current land and land-use patterns present three basic constraints to achieving growth and reducing poverty. First, is the nature of the soils. The upland soils - the most dominant - are generally ferralitic, shallow and susceptible to low fertility with high aluminium contents. The remaining land types, with relatively better fertility status, are subjected to seasonal or permanent water logging, inadequate drainage and also have problems related to high iron and aluminium content. Second, farmers are reluctant to cultivate in the more fertile lowlands due to difficulties associated with tilling wet soils with rudimentary implements. Third, is declining soil fertility due to pressure on land, especially upland soils, with the consequent reduction in fallow periods and low levels of fertilizer use among small holders. Sustainable soil fertility management with nitrogen fixing rotations, conservation agriculture/minimum tillage and targeted use of chemical inputs that are increasingly expensive.

Low Technological Input

Higher levels of agricultural technology are not affordable due to low economic returns from commodities. Land preparation, cropping, harvesting and threshing is largely done by hoe, cutlass and bare hands, and labour is expensive and dominated by women. Fertilizer use at 4kg/ha compared to 9kg/ha for sub-Saharan Africa is low due to high prices and lack of commercial markets for fertilizable commodities such as rice. Use of improved seeds by farmers for all commodities is also low. Consequently, crop yields remain low at: 0.72 and 1.23 metric tons for upland and lowland rice respectively; 2.2mt/ha for maize; 5.5mt/ha. for cassava; 6mt/ha for sweet potatoes; 1.8mt/ha for groundnuts; 100-200kg/ha for cocoa; and 4t/ha for oil palm. Birth rates for cattle at 45 percent are low, whilst mortality is high and off take is only 7 percent because of parasites, disease and deficiencies of feed. There is a lack of rice milling facilities, feed mills and mechanics to ensure that farmers can benefit from sales of their final products and use mechanized technologies.



Agricultural Infrastructure

One reason for the lack of economic activity in the rural areas is limited investment in infrastructure as they relate to agriculture. Rice mills, feed mills, rural roads, transportation, markets, irrigation systems, sea and inland ports and landing sites for fisheries, and the lack of these, have undoubtedly inhibited agricultural growth because it limits opportunities for marketing products and monetizing the rural economy. Limited investment and neglect means that transport infrastructure is still in an appalling state even seven years after conflict. Limited paved trunk roads restricts long distance transport while the entire system of secondary and feeder roads are all unpaved making vehicular traffic difficult in the dry season and impossible in the rainy season. There are a few old trucks to transport goods and a weak market for trucking services. The riverine areas are serviced by inadequate boats, ferries and canoes. The consequence of poor roads and transport services is that transport costs are high. There is only one sea port for all imports and exports and no railway system. Landing sites are poorly developed and the fisheries harbour requires extensive rehabilitation.

Less than two percent of arable land is irrigated despite the fact that irrigation permits higher value-added crop production - especially during the 6 month long dry season, reduces vulnerability to drought and climate change, and generally increases productivity. Use of technologies for water conservation or drainage is low. The potential for irrigation remains largely unexploited.

Value Chain and Value Addition

Value chain analysis has been carried out for cocoa, oil palm, cassava, vegetables (cabbage), rice, ginger, poultry (focusing on eggs) and in all cases, very little value addition takes place, with the chains being limited, very short and often confined to only two or at best three stages along the chain. For example, cassava is converted into gari which permits marketing over longer distances or time periods without deterioration but the value increase is marginal.

Post harvest losses are high estimated to average 40 percent and much higher for perishable fish, and crops including vegetables, fruits, cassava and sweet potato. Damage to perishables results from poor handling, transportation, lack of storage and lack of processing facilities among others. In addition, the quality of harvested produce is not controlled and added value that should accrue from processing is thereby lost because of inadequate agro-processing facilities. Add to this the costs of transportation, the absence of logistical infrastructure (storage and warehousing facilities), and the present landscape for commercial agriculture appears challenging.

The presence of limited value chains does not mean that these commodities cannot become important commercially, but investment needs to be made in training, infrastructure, in setting up agro-processing centres that can convert the products into higher value commodity, in food quality assurance and food handling, in storage, warehousing transport and packaging. Rice mills, feed mills, pulping plants for fruits and other agro industry needs to be encouraged to ensure that financial benefits accrue at the end of the value chains.

Input and Output Marketing

Market entry and exits into agricultural inputs, fertilizers, pesticides, planting materials, fishing gear, farm machinery and tools are dominated by the private sector and are generally not constrained by government intervention. Livestock input supplies on the other hand, have been mostly government controlled. Importation of these products is infrequent, perhaps due to low demand and uncertainties in the sector. Distribution outlets are also non-existent and farmers have to obtain supplies from the capital city, Freetown, or depend on cross-border trade in unidentified and unregistered products entering the market through Guinea. Costs of agricultural inputs in the country are generally higher than the neighbouring countries as supply is low with attendant higher transportation costs due to the deplorable rural roads conditions. The lack of rice mills, feed mills and other agro-processing companies means that farmers have difficulty selling crops (i.e. commercializing) in order to have the cash required to cover input costs. Thus inputs are closely connected to rapid improvement in agro-processing to ensure that sales promote demand and eventually availability.

The legal and regulatory framework for input marketing, including the sale, storage and use of agrochemicals, is embodied in the Sierra Leone Export Development and Investment Corporation (SLEDIC) Act 23, 1996, the Control of Pesticides Act 1989, and the Fisheries (Management and Development) Decree 19. These Acts may have to be reviewed with the view of facilitating access and distribution where necessary.

Private sector and small operatives dominate the food marketing system, although organized groups and associations are beginning to emerge in some areas due to support provided by some NGOs and GoSL



projects. The export sector is also dominated by few companies and there is no agency overseeing their activities to help maintain producer quality standards as well as ensure fair prices for producers. Private sector has difficulties accessing agricultural lending even as loans carry interest rates of more than 20 percent per annum.

Financial Services

Rural Finance has been identified as one of the several key contributors to the economic growth of Sierra Leone. About 50-60 suppliers of micro-finance are currently active in the country, supplying around 13,000 customers with a combined loan portfolio of less than \$5 million, although primarily to petty traders and town-based enterprises. Overall demand has been conservatively estimated at \$45 million. Limited access to funds is often cited by farmers and those in the agri-business, and it is only part of the problem. The whole micro-finance process needs to be coordinated to match demand and supply and more effectively managed and monitored. Business skills capacity needs to be built and strengthened for better micro-finance performance, farmers need to prepare better business plans and land issues need urgent adjustment to allow land leases as collateral.

Technology Access and Farmer Empowerment

Poor soil fertility management and relatively static crop yields are strongly linked to the limited supply of and demand for better and improved technologies – partly due to problems in research and the limited capacity of the extension service and partly due to low commercialization of crops. Some of the technologies are either inappropriate or have not filtered down to the farmers with the intended speed (like the case of the NERICA rice that faces difficulties fitting into Sierra Leone's long wet season). Strengthening the access to technology will surely yield attractive dividends for the Sierra Leonean farmer.

Physical infrastructure (buildings and laboratories) for the research system was dilapidated even before the war and requires rehabilitation. The governance system has been streamlined with the establishment of Sierra Leone Agricultural Research Institute (SLARI) in 2007 and the development of a strategic plan in 2008. SLARI, however, lacks trained manpower to carry out research functions on the most important economic crops and livestock in the farming system.

The extension system tended to rely exclusively on the government staff until after the war when a number of NGOs broadened their participation from distribution of seeds and implements to on-farm activities. Until 2009, when the Department of Agricultural Extension was created within MAFFS, extension programmes and activities were decentralized to District Councils and District MAFFS offices. Extension methodology is being turned toward a loosely defined collection of participatory approaches, none of which has taken on any form of operational dominance. The introduction of the Farmer Field Schools (FFS) to strengthen Farmer Based Organizations at village level and the Agricultural Business Centres (ABCs) are a step in that direction. The extension system is still preparing a coherent policy to guide the structure, organization, delivery and approaches in collaboration with NGOs and other actors. A Unified Agricultural Extension System (UAES) using Farmer Field Schools to build Farmer Based Organizations/Agric. Business Centres (FBO/ABCs) and district networks is recommended. Strengthening of community radio as part of a national network is crucial for broad information dissemination. Breaking the cycle of farmer dependence is a key goal of extension.

Formal Farmer Based Organisations

Farmers in Sierra Leone have recently been organised into formal farmers associations, limited liability companies, and cooperatives although the Cooperative Societies Act 1977 is in need of review and amendment in order to assist with restructuring the Cooperative Societies in Sierra Leone. The farmers' associations offer a good potential for reaching the farmers in the rural areas since they are fairly representative of their farming communities but define themselves in terms of advocacy despite any regular communication systems. There are activities by GoSL and NGOs towards public-private partnerships within extension systems to support FBO/ABCs and district networks evolve as part of the private sector. On the whole, farmer market associations are still weak and lack the capacity to carry out their main functions of supporting farmers and entering into any serious market dialogue or business venture for which they access further business advising and coaching.

Access to Land

Due to the differences in historical developments and legal status, the practice of obtaining land differs between the Western Area (bought and sold) and the Provinces (traditional holdings and leasehold). Nevertheless, land may be acquired for any purpose by private individuals or corporate bodies. Rather, it is the security of holding which may be a deterrent to serious investment. The uncertainties inherent in the



land tenure system go against the productive use of land, particularly for agricultural use at any scale of investment. Titles to land in Sierra Leone represented through conveyances are uncertain and require proper registration. Farmers and landholders in the Provinces are unable to use their land for collateral thus limiting their access to credit and finance. New computerized GIS-based land registration systems and clear land use policies need to be developed and are under discussion by GoSL, UNDP and FAO.

Tax Structure

If agriculture is destined to play a central role in the development of Sierra Leone's economy, laws and policy on investment and tax should directly address inward investment in the agriculture sector. The current tax structure and investment policy have a direct bearing on the medium and long term investments in the sector.

The main fiscal instruments for this purpose include the Income Tax Act 2000 (as amended by the Income Tax Amendment Acts 2004 and 2005), the Finance Acts of 2006 and 2007, and Sierra Leone's tariff regime which effectively implements the ECOWAS Common External Tariff (CET). In addition to import duties, tariffs and taxes, imports and exports are subject to a number of port, stevedoring, demurrage and other fees associated with shipping which add to the cost of doing business for firms. In contrast, Sierra Leone's nearest neighbours, Guinea and Liberia operate free ports (Liberia is an official free port while Guinea operates a free port de facto), effectively making Sierra Leone products uncompetitive.

Import restrictions: A special permit, issued by the Ministry of Agriculture, is required for the import of plants, seeds, soil other than sterilized peat and special rooting compost, and any material mixed with any soil (Agriculture Act Public Notice No. 66 of 1974 - Cap 185, 12 December 1974). Generally, export procedures are rather cumbersome and need to be streamlined and simplified.

Investment Policy

Apart from the specific taxes and charges mentioned above, there is no overall investment policy for Sierra Leone. An Investment Promotion Act was enacted and entered into force in August 2004, replacing the 1969 legislative framework, and other laws (e.g. the Non-Citizens Trade and Business Act of 1969). The Act is designed to promote and attract both domestic and foreign investment for production and value-adding activities; to improve export and provide employment opportunities; and generally to create an environment conducive to private investment and to provide for other related matters. It is worth noting that the package of regulations and incentives which should accompany the Act and give it effect did not get passed by Parliament.

Fisheries

The opportunities for fisheries development, represented especially by the valuable and probably underexploited fish resources, are constrained by weaknesses in the policy and fisheries management framework which unless addressed in the near future, will inevitably lead to over exploitation and continued theft of the fisheries wealth through illegal, unregulated and unreported (IUU) fishing. The Competent Authority which certifies safety and quality of exported marine products must be brought up to standard while the Monitoring, Control and Surveillance (MCS) systems are put in place. The GoSL recently established the Joint Marine Committee to undertake improvements in MCS.

Weak Sector Coordinating Mechanism

The sector is characterised by different players at national and at district levels since the emergency period when there was a plethora livelihood supporting NGOs, government, UN and other agencies. In addition, the post war period also saw donor supported projects and some private sector activities in the sector. The stock taking exercise observed that the existing mechanisms to coordinate and effectively manage the different players in the sector are weak. The sector coordination is presently anchored in the office of the Deputy Director General in the Ministry of Agriculture. There is need to strengthen the coordination mechanisms so that all of these players including other ministries, departments and agencies will be effectively organised and coordinated.

Gender and Youth in Agriculture

Gender: A variety of studies indicate that there are gender differentiations in the agricultural sector in Sierra Leone. Women and men perform different farming activities, own or operate different crops and carry out different tasks in the field. For instance, while women are mostly engaged in crop farming and poultry the men dominate livestock, hunting, forestry and fishing (Census, 2004).



But in this gender division of labour, there are the so-called 'women's crops' (cassava, groundnut, maize, potato and vegetables) and there are those other crops mostly grown by men (coffee, cacao and oil palm). Similarly, women are associated with the rearing of small ruminants (goats and sheep), gathering of fuel wood and inland fisheries while the men are mostly known for cattle rearing, piggery, logging for timber and marine fisheries.

Women also play a significant role in the processing and distribution of fish products by handling, preserving, processing, storing and transporting fish. According to the 2004 census, there are more female farmers in Sierra Leone (52.2%) compared with male farmers (47.8%).

Yet women do not normally share direct benefits of additional income from their labour. In fact, agricultural activities by status in the census report noted that men dominate the paid and self-employed category while women mostly belonged to the unpaid family workforce.

Appropriate and sustained sectoral policies, strategies and programmes are required to ensure firstly that women's practical needs are met and secondly, that their strategic needs are mainstreamed into agriculture.

Youth mainstreaming in development planning in Sierra Leone is a relatively new phenomenon that emerged in the processes leading to the preparation of the National Youth Policy (2003) and the 2005 Poverty Reduction Strategy Paper (PRSP). In 2003, the government launched the Sierra Leone National Youth Policy. The policy is anchored in the twin notion of youth empowerment and the creation of responsible citizenry. Empowerment in a post-conflict context involves privileging and mainstreaming youth related activities in the overall process of national reconstruction.

The PRSP document identified youth employment as one of the country's main development challenges and as crucial for maintaining peace and promoting pro-poor growth. Though agriculture has the potential to provide employment for the youths, the Ministry of Agriculture and Food Security does not have a specific policy to mainstream youth into its programming other than policies that treat youth as a cross-cutting issue, being part of the menu of target beneficiaries.

Nutrition Diversification and Farmer Health

Nutrition: The current estimate kilocalorie in-take for the average Sierra Leone is below 2200 kc/caput. Most Sierra Leoneans depend on rice as the staple food. Diversified eating habits are required to reduce the over dependence on rice. A number of food diversification projects have been designed both in the past and at present; all of them target the growing of other crops besides rice that can provide much needed nutrients in the diet of Sierra Leoneans.

Food processing and preservation is very weak in Sierra Leone and as a result, food products perish shortly after harvest. Fruits and vegetables are the most vulnerable crops. There is need to intensify food processing and preservation.

Farmer Field Schools for FBO/ABC will assist farmers to actually know and adopt basic processing and food preservation methods. The Women-in-Agriculture-and -Nutrition Unit (WAIN) was recently established in the Extension Division of MAFFS, however, the unit is weak and under-resourced both in terms of personnel and logistics.

Farmer Health: Projects and programmes recently carried out in the agricultural sector have had health components, principally for raising the awareness of farmers and their families on preventing oneself from contracting certain diseases such as HIV/AIDS, malaria, tuberculosis and other common diseases prevalent within the farming communities. MAFFS focus on inland valley swamp will require efforts to protect farmers from schistosomiasis, a water-borne disease in flooded rice fields, with rice boots and medication. However, the sensitization and awareness raising is also very weak and will need to be incorporated in Farmer Field Schools and FBO/ABC activities.



PART II: COUNTRY AND DISTRICT STRATEGIES

CHAPTER THREE COUNTRY STRATEGY FOR AGRICULTURAL DEVELOPMENT

Agenda for Change and Agriculture Sector Vision

The analysis of agriculture sector potential, opportunities and constraints presented in Chapters 1 and 2 above suggests that rapid and sustained growth in the sector will only be achieved through raising the quantity, value-added and productivity in agriculture, fisheries and forestry. Current national policy instruments are already in place in this regard. The Agenda for Change, Sierra Leone's Second Poverty Reduction Strategy Paper, places top priority on energy, infrastructure and agriculture for national development efforts up to 2012. The Agenda calls on agriculture to be the engine for economic growth with a focus on production, processing and marketing of domestically consumed and export oriented crops, livestock, forestry and fisheries products. The Agenda recognizes that, from a pro-poor growth perspective, raising quantity and value-added productivity in agriculture and fisheries is critical to poverty reduction as the majority of Sierra Leoneans are engaged in agricultural and fishing activities.

The GoSL has set out a clear set of objectives to achieve the vision of the Agenda for Change. These objectives include:

Increasing agricultural productivity (intensification and diversification), in particular among the rural poor smallholders, who constitute the poorest segment of society, through a variety of support measures along the entire agricultural value chain, from pre-planting to marketing. This will include: the use of agricultural equipment; the establishment of supply chains for inputs such as fertilizers, integrated pest management and high yielding seed varieties; irrigation facilities; and the enhancement of agro-processing marketing and distribution.

Promoting commercial agriculture through private sector participation: Commercial agriculture will be promoted by creating an enabling environment that is attractive for the private sector to invest. Post harvest storage facilities will be facilitated in the form of storage, drying floors, rice mills, threshers, animal feed mills and abattoirs through loans and cost-sharing arrangements. Access to rural credit will be improved through establishment of community banks and financial services associations. Feeder roads and community markets will be rehabilitated and/or constructed to facilitate movement of goods to market places. Farmer-based organizations are to be reformed and trained in order to build their capacity to engage in commercial agriculture and link to the market economy.

Improving agricultural research and extension delivery systems: National Agricultural Research and Extension policies, strategies and programmes are to be formulated within one year. Implementation of these will improve the quality of extension services provided to farmers and therefore allow them to improve their productivity.

Promoting efficient and effective sector resource management systems, including the establishment of a database for agricultural statistics as well as creating a sector coordination mechanism, in order to strengthen sector policy formulation, planning, monitoring and evaluation, and resource management.

Mainstream cross-cutting issues in agriculture: Workshops and sensitization campaigns will be held in order to educate farmers about important issues such as self-sufficiency (e.g. no dependency), gender, youth employment, farmer health (including HIV/AIDS) and environmental sustainability.

Managing and exploiting Sierra Leone's fishery and marine resources: In the areas of fisheries, the Government will focus on providing adequate surveillance capabilities, facilitating the lifting of the ban on fish exports to EU markets, improving the infrastructure and support services for commercial fishing, providing adequate extension support for artisanal fishermen and strengthening the capacity of the Ministry of Marine Resources.

Managing and exploiting Sierra Leone's forestry resources: The government recognises the importance of conserving the now depleted forests of Sierra Leone. The forest plays a significant role in regulating the water cycle, the climate and providing a source of livelihood for the people from the timber and non-timber forest products. The forests are key to the country's productivity and production, and also



contribute to the country's cultural diversity and heritage, while serving spiritual and religious values, and provide ecotourism sites and medicinal herbs.

However, the natural forest cover has been reduced to less than 5%. In order to restore and secure the forest, the government intends to map and make inventory of the natural high forests and pursue the possibilities for investment in sustainable financing mechanisms, e.g. through carbon markets and trading schemes under the current and future Climate Change protocols, as well as by signing up to the Reducing Emission from Deforestation and Degradation (REDD) programmes.

In the area of [transport](#), the Agenda indicates that the Government will develop and implement projects that focus on the rehabilitation of 2,055 kilometres of feeder roads and of 160 kilometres of roads in major provincial towns. This will be coordinated to ensure that the agriculturally productive regions have the feeder roads that will enable farmers to market their produce in a timely manner and increase their income through significant reduction in post-harvest losses.

NSADP/CAADP and the ECOWAS Region

The CAADP is the AU/NEPAD's initiative to accelerate economic growth through agriculturally-led development that will eliminate hunger, reduce poverty, food and nutrition insecurity, promote exports and substitute imports. It provides a shared framework for strategic planning and implementation, and for partnership and development assistance in the sector.

The CAADP therefore will strengthen the NSADP which is the country's strategic and business plan for investment in the agriculture sector in Sierra Leone by the public and private sectors and development partners. In aligning with the CAADP, the country will fulfil the Maputo pledge of allocating at least 10% of the national budget to the sector and then seek to achieve an annual growth rate of 6% in agriculture.

The alignment does not only facilitate the identification of strategic options and sources for poverty reduction and growth driver but will also create the forum for knowledge support systems that will enhance peer review, dialogue, experience and information sharing, and evidence-based planning and joint implementation of agriculture sector policies and strategies within the framework of the ECOWAS Common Agriculture Policy (ECOWAP).

It is therefore hoped that the NSADP/CAADP Compact will significantly input into the formulation of an ECOWAS sub-regional and an African continental compact. Regional trade has great potential for economic development in the ECOWAS region including commodities such as milled rice, goats, dairy and poultry products, fruit juices and eventually biofuels as petroleum products become rarer.

Within the Mano River Union (MRU) the NSADP/CAADP Compact establishes a clear set of priorities from the Sierra Leone perspective including agricultural trade, regional integration for forestry and fisheries, promotion of private sector in key commodities and education of experts.

The NSADP defines a framework for moving agriculture, forestry and fisheries forward to both address Sierra Leone's growing needs due to population growth and to create additional income to the national economy, while promoting increased linkages with other sectors of the economy (production of raw materials to spur industrialization, development of upstream and downstream services to agriculture). A primary goal of the NSADP will be to contribute to the creation of employment and to reduce foreign exchange spending on import items that can be produced competitively locally while increasing traditional and new exports to achieve an overall positive agriculture sector trade balance.



CHAPTER FOUR

DISTRICT AND COMMODITY STRATEGIC PROGRAMMES

Introduction

Decentralized governance was reintroduced in Sierra Leone in 2004 after thirty-two years of centralized governance. After the 2004 Local Council Elections, nineteen local councils were elected (6 municipal and 13 districts) to take responsibility of the local governance of their areas. Other local council elections were held in 2008. The central government has now devolved some of its functions to these councils and it is hoped that this devolution exercise will be fully completed within the next couple of years. The MAFFS is one of the ministries that has already begun the devolution process passing some functions to the district councils. It is expected that the councils will promote agriculture development in their districts since most of them depend on agriculture.

The NSADP/CAADP formulation process has focused on identifying the means for efficient delivery of services within the decentralized structure involving District Councils and to identify strategic areas of agricultural economic growth. MAFFS is encouraging District Councils to focus on specific commodities for which they have a strong competitive advantage for production, processing, packaging and marketing and therefore using national and external budget sources more effectively. This section highlights the strategic focus of the twelve Districts and Western Area in respect of the agricultural activities they have planned to undertake immediately in the next five years but with an eye on a longer term of about 20 years. The priority actions will be incorporated into district development planning during the 2009 and 2010 budget preparation cycles. Development partners assisting District Councils and agriculture planning are therefore requested to work within these strategic areas and join in the NSADP/CAADP investment programmes discussed in chapters below.

The main national policy goal binding all districts is to ensure increased food security for all households, expand agricultural earnings from domestic and export market opportunities, and ensure the operation of the sector on a sustainable basis. Individual districts will have different means for ensuring these goals based on their specific assets including natural resources, human resources, infrastructure and institutions.

Below are strategic development by commodity, by district and specific other issues from each district gleaned from district stakeholder workshops and expert analysis.

Strategic Commodity Focus by District within Agricultural Sub-Sectors

This section highlights:

- The major crops (food and export) that the districts plan to embark on in the next 20 years
- The type of livestock prioritized for production
- The fishing activities to focus on
- Planned activities relating to the sustainable management of the forests
- Upland farming methods to employ
- Cultivation of IVS, bolilands, mangrove, and riverine ecologies.

Focus Commodities

Based on the analysis of the SAM and CGE model, commodities with the highest potential to grow the economy with equitable growth distribution and to eventually reduce poverty were analysed. Identified commodities on a national basis are rice, cassava, oil palm, fisheries (especially artisanal) and non-timber forests products (Table 5.1). These are commodities widely managed by the poorest but with potential for growth and contribution to poverty reduction (e.g. achievement of the first Millennium Development Goal to reduce hunger and poverty). District level analyses are continuing in addition to chiefdom survey analysis.

Major Food Crops: The major food crops of Sierra Leone are rice, cassava, potato and groundnut. Rice is the staple crop with cassava serving as its closest substitute for many households. All districts are producing rice and cassava, and have plans to continue production of these crops in next three to twenty years as well as increase their processing and marketing.



A National Rice Development Strategy (NRDS) is being prepared by national partners under the Coalition for Africa Rice Development (CARD) which is led by international development partners. Investments under the CARD either on a national or regional basis will improve research, extension and processing of rice. A key strategic focus will be increasing market quality milling with improved bagging. The WFP Purchase for Progress (P4P) programme will help local producers to compete with international markets. Medium term strategy is to recapture Freetown and small town markets with quality milled rice. Long-term strategy is to enter regional trade. Government facilitation will be required for a rice milling private sector to develop while increasing production with better access to inputs and mechanization for small to large farms.

For cassava, the focus is to industrialise the cassava production, processing and marketing to produce products like cassava flour, chips, animal feed, organic fertilizers and ethanol biofuel in Bombali District. So-called “Irish Potato” has huge potential for commercial production. A Dutch private company in partnership with a national company is in the process of establishing potato farm in the Western area, installing cooling and preservation machines, packaging and selling. Out-growers at Ogo Farm and Hamilton in the Western Area will be assisted by FAO and Small-holder Commercialization Schemes to act as out-growers.

The potential exists for the transformation of these crops into export crops. Cassava and potato production, for instance, has been in excess of national demand over the last couple of years. All districts have expressed the need to invest in agro-processing to add value to farm produce while national incentive packages are being debated with assistance of the Sierra Leone Investment and Export Promotion Agency (SLIEPA).

Cash Crops: The key traditional export crops of Sierra Leone are coffee and cocoa; they have been cultivated mainly in Kailahun, Kono and Kenema districts. These districts continue to indicate interest in the cultivation of these crops in the next 20 years. Some parts of Tonkolili, Koinadugu and Bo Districts have the potential to produce cocoa and coffee. Oil palm, which is the main source of cooking oil for most households and has potential for industrial biofuels, soap making and other lubricants, is grown by all districts and is therefore a key to the poverty reduction drive of the country.

It is expected that expansion of area and quality of key tree crops will be supported under the proposed EDF-10 support from the EU and implemented through the Small-holder Commercialization Scheme and with support of the Sierra Leone Agriculture Research Institutes (SLARI), MAFFS decentralized extension service, NGO and private sector partners. Cocoa, coffee, oil palm, cashew and ginger are key commodities under discussion. Certified sustainable practices will be required by many importers in the coming five years. Organic and FreeTrade are two examples but other sustainable management certification standards are underway internationally.

Ginger, cashew, cola nut, plantain, chili pepper and sugar cane all have large potential for export and are therefore prioritized for promotion in the various districts as per their competitive advantage. Pujehun and Kenema Districts continue to indicate interest in rubber cultivation and this could be another potential. Bo District plans to experiment with cotton cultivation which has been a major source of export revenue in the Sahelian countries in West Africa. Honey bee and wax also have potential for export; it is therefore prioritized in the districts that are suitable for industrial production.

Fruits and Nuts such as Bananas, Mango, Pineapple, Coconut and Citrus are also grown in Sierra Leone and have potential for processing into fruit drinks and jam. These crops also need to be integrated into school and home gardens to improve nutrition with lower labour input permaculture approaches.

Livestock Production: Virtually all districts express plans for the production of cattle, goat, sheep and poultry. The focus of the PRSP I was on the production of cattle, goat and sheep. The PRSP II focuses both on agricultural intensification and extensification so that attention can be given to the production of meat and dairy products such as milk, cheeses, butter and fresh eggs. Integrated farming will be a key practice of the Small-holder Commercialization Scheme to ensure better soil fertility management and balanced diets.

Fishery Products: Districts along the coast- Kambia, Port Loko, Western Rural, Western Urban, Pujehun, Bonthe and Moyamba are very suitable for artisanal and industrial fishing, while all of the other districts will embark on inland and aquaculture fishing. Fishery resources if managed properly could be a good source of revenue and food security in terms of protein needs of the population. 75-80% of protein intake for the average household in Sierra Leone is from fish.

Forest Products: Sustainable timber management and non-timber forest products such as honey bee and wax, rubber, fuel wood, wildlife conservation, watershed management, agro-forestry, and medicinal herbs and carbon credits will be promoted. Sustainably managed forest products and added-value processed goods should be certified under new global standards to be internationally competitive.



Proposed Cultivation Methods for the five ecologies

This section highlights the farming methods districts are advised to adopt in the cultivation of the various ecologies for crop production upland, IVS, bolilands, mangrove, and riverine. Determining appropriate farming techniques is critical to the sustainable contribution of the agricultural sector, food security and national revenue generation.

Upland rice system: A gradual shift will be encouraged from damaging and low yielding but diversified slash and burn upland rice systems towards more stable perennial and tree crops with inter-planting of rice and diverse crops including livestock. Upland areas will also include more legumes to improve the quality of run-off into inland valley swamp systems and improve long term soil fertility. A more diversified system management will also incorporate watersheds and forest crops. Long-term land security issues and lease holding payments to communities must be solved to move towards stable tree crops systems.

Inland valley rice system: IVS rice systems have the potential for greater development with improved water control structures and cropping systems that will have both rice and legumes. While ensuring local variety use where appropriate, short season non-photoperiod sensitive varieties will be emphasized for double cropping (rice-rice and rice-legume). Long-term soil fertility management will focus on hill run-off and legume rotation complemented by external inputs as required. Land security issues need to be resolved to encourage long term investments in water control structures. Rice boots will be encouraged to protect farmers from water borne diseases and small scale production and processing mechanization subsidized to increase productivity.

Mangrove rice system: The mangrove is a potentially sensitive and more productive system that will require careful environmental assessments. Future mangrove research will consider integration of rice and mariculture to improve economic returns.

Boliland and riverine rice systems: These systems are appropriate for medium to large scale enterprise either by individuals or cooperatives. Emphasis will focus on private sector mechanization services, diversified cropping and processing.



Table 4.1: Key priority areas identified by districts.

	East			North					South				WA
	Kailahun	Kenema	Kono	Bombali	Kambia	Koinadugu	Port Loko	Tonkolili	Bo	Bonthe	Moyamba	Pujehun	Western Area
Key Income Sources and Food Security Crops													
Rice/Legume													
• Upland													
• Inland valley swamp													
• Boliland													
• Mangrove													
• Riveraine													
Oil Palm													
Cassava, Sweet Potato and Ground Nuts													
Cocoa and Coffee													
Forestry													
• Sustainable Timber													
• NTFP- Non-Timber Forest Products													
• Rubber													
• Honey and Wax													
• Kola Nuts													
• Carbon Credit													
Livestock													
• Poultry													
• Goat													
• Cattle													
Fisheries													
• Artisanal Costal													
• Inland Aquaculture													
• Industrial Marine													
Other Crops													
• Banana													
• Ginger													
• Cashew													
• Chili Pepper													



Each district has also identified key objectives towards the achievement of this goal in the next 20 years as summarized in the Table 4.2 below.

Table 4.2: Priority objectives by district

District	Objectives
Port Loko	Increasing crop production through extensification Improving market access for farm produce through the rehabilitation of feeder roads Strengthening the organization of farmers and their capacity
Bombali	Provision of material and financial support to farmers sustainably Adding value to produce through access to processing facilities Improving market access through improved feeder road system Improving capacity of farmers through training
Tonkolili	Improving water control system for IVS development Encouraging and supporting fish farming Encouraging agro-forestry Supporting livestock restocking Improving access to market through feeder roads construction Formation of farmer groups
Koinadugu	Improving beekeeping methods Improving general farming methods and use of mechanized farming Adding value to produce through processing Improving animal health for the development of livestock Reducing post harvest loss
Kambia	Increasing food and cash crop production Development of IVS Training farmers on and encouraging them to adopt improved farming techniques
Kono	Increasing access to micro-finance, and agricultural machinery Improving feeder road condition Adding value to farm produce Training farmers on improved techniques Reducing post harvest loss Strengthening organization of farmers
Kenema	Provision of financial support and building capacity for farmers Increasing the use of mechanized farming Improving road network Providing processing facilities for farm produce
Kailahun	Organizing farmers into groups Developing IVS Increasing capacity of farmers Introducing food processing technologies Increasing access to farm equipment



District	Objectives
Bo	Adding value to farm produce Creating market access Improving farm infrastructure (feeder roads, storage, drying floor, etc.) Facilitating use of mechanized farming Improving bio-chemical control Facilitating commodity exportation Improving commodity preservation
Bonthe	Promoting agricultural intensification Creating market access Improving farm infrastructure (feeder roads, storage, drying floor, etc.) Intensifying fishing activities (providing fishing gears, cold room, trawlers, etc; Provision of agricultural processing facilities Organization of farmers into groups Establishing forest nurseries at chiefdom level
Moyamba	Using mechanized farming methods; improving feeder road condition Adding value to farm produce Reducing post harvest loss Improving animal health Developing district fund for agricultural development Improving forest conservation
Pujehun	Encouraging agricultural diversification Improving road network Reducing post harvest loss Adding value to agricultural produce Increasing the use of sustainable agricultural methods Facilitating access to mechanized farming facilities Provision of preservative facilities Training farmers on use of improved techniques
Western Urban	Provision of inputs and marketing facilities Promoting environmentally friendly agricultural practices
Western Rural	Acquiring sufficient land Promoting mechanized agriculture and improving road network Training farmers on use of farming machinery Enhancing access to finance Promoting food processing Preservation of wetlands for agricultural purposes Improving conservation of the forest



PART III: NSADP/CAADP INVESTMENTS AND FINANCING

CHAPTER FIVE

NSADP/CAADP AGRICULTURE SECTOR INVESTMENT

PROGRAMME PROFILE

Introduction

The strategic options identified in the previous chapter provide the basis for the development of national and district programs to overcome the challenges that militate against the development of the agricultural sector. The challenges are clearly interdependent and require a concerted action. The proposed programme combines policy, institutional, infrastructure and technology related measures to address the multiplicity of supply-side constraints to enhance the growth potential of Sierra Leone's agriculture. The programme would integrate on-going programmes and projects into this framework and take on the role of a national programme for food security.

Programme Objectives

The overall objective of the programme is to increase the agriculture sector's contribution to the national economy. This will be achieved through productivity increases through commercialization and private sector participation. The programme will facilitate and strengthen the productive capacities of small and medium scale farmers, provide an enabling environment to promote large scale farming and development of agribusiness, and facilitate access to markets and value addition for the selected commodities. The selected commodities are: rice, cassava, oil palm, cocoa, fisheries and non-timber forest products (firewood, charcoal, rattan, raffia)

Key Performance Indicators

- Increase in the agriculture sector growth from its current estimate of 2% to 6% per annum by 2015
- Increase incomes and food security status producers

Four Major Sub-Programmes

The NSADP/CAADP Agriculture Sector Investment Programme will have four major inter-related sub-programmes, namely:

- Sub-programme 1: Commodity Commercialization
 - Component 1: Small-holder Commercialization Scheme
 - Component 2: Medium and Large Farm Producers Promotion Scheme
- Sub-programme 2: Agriculture Infrastructure Development
 - Component 1: Support to the Rehabilitation and Upgrading of Feeder Roads
 - Component 2: Support to the Development of Irrigable Swamps
 - Component 3: Rehabilitation and Modernization of existing storage and processing facilities and equipment
 - Component 4: Rehabilitation and construction of Research Centers, MAFFS Offices
- Sub-programme 3: Private Sector Promotion
- Sub-programme 4: Sector Coordination and Management.

The objectives and activities as well as key performance indicators of the sub-programmes are described below:



Sub-Programme 1. Commodity Commercialization

The objective of this component is to increase the productivity of producers through the use of appropriate technologies and linking small to large producers to markets for the selected commodities in order to transform subsistence farming to commercial agriculture. To achieve this objective, the sub-programme will address the specific needs of small as well as medium and large scale producers in order to enhance their organizations, productivity and market linkages. Particular attention will be paid to small and medium scale farmers to increase the use of well tested sustainable agricultural technologies, inputs and farm equipment to increase productivity and building new market access organizations. Recognizing the different research, extension and organizational needs of small-holders versus medium and large farmers, two components are proposed for specific group focus:

Component 1: Small-Holder Commercialisation Scheme will focus on small-holder value chain development of key economic areas specific in each district as noted above in Chapter 4. Small-holder producers will be linked to the national economic system through new commercial groups, out-growers, stockists and producer owned companies. The component will include (i) village level Farmer Field and Life School (FFLS) training leading to Farmer Based Organization (FBO) establishment/strengthening. The FFLS would also cover production technology, processing, marketing and key life skills (i.e. health, nutrition and functional literacy); (ii) creation of a system of Agriculture Business Centers (ABCs) owned by FBOs and backstopped by MAFFS extension and research service under a public-private franchise model; (iii) producer owned companies at district or chiefdom level for bulk processing of rice and cassava; and (iv) social protection activities such as food for work, food for training and school or home gardens. This component will be facilitated through the decentralized local government's extension services and in collaboration with FAO, WFP, UNIDO, UNDP and NGO development partners. Key commodity focus will be based on district prioritization of commodities for food and cash income.

Specific activities include:

- Development, training and adoption of productivity enhancement technologies including: propagation and use of high quality seeds, seedlings and fingerlings that are high yielding, disease tolerant and adapted to the environment; improved agronomic and water management practices; improved harvesting, processing and marketing techniques; establishment of tree nurseries of medium scale (25,000 trees per year per ABC)
- Support to strengthen FBOs to be able to access services, credit and marketing outlets, processing and equipment and leveraging their advocacy activities that affect the context in which they produce, market, transform and export their products
- Promote appropriate small to large agro-industrial development for added value to the selected commodities and other potential commodities
- Mechanic training for servicing small to medium scale equipment such as 2 or 4 wheeled tractors, trailers, threshers, cassava graters and other appropriate equipment
- Strengthen research and extension capacities following FARA's innovation platform methodology for participatory research and extension techniques
- Livestock management on poultry and small ruminants from production to marketing
- Training and micro-financing support for artisanal fishermen and aquaculturalists for safe and quality fish handling, stock management and processing
- Social protection activities such as food for work to rehabilitate and build local agricultural infrastructure, food for training including farmers and extension staff, and other employment creating activities

Component 2: Medium and Large Scale Producers Promotion Scheme will focus on the development of private sector mechanization and processing businesses (e.g. tractorization, rice mills, oil processing, production of dairy products, ethanol and bio-fuel processing, etc.). Training for farm managers, mechanics, developing sound business plans, packaging, branding and marketing etc. will be provided to the medium to large scale farmers. Industrial fisheries will be considered elsewhere. The project will be implemented in collaboration with the MAFFS, FAO, UNDP, Chamber of Agriculture, Njala University, IPAM and private sector partners.

Specific activities include:

- Capacity building for: medium and large producers on topics such as farm and business management, agriculture technologies; for banking institutions on agriculture lending; for mechanics to service equipment



- Use of TradeNet market information systems and quality control measures and standards
- Development of agribusiness along commodity chains aimed at improved value chain addition and linking farmers with input and output marketing
- Development of a legal agriculture investment which would include a framework for secure land leases including GIS digital frameworks for farming investments, labor and social security protection policy
- Establishment of national biofuel policy

Key Performance Indicators

- Percentage increase in total production and processing of selected commodities
- Percentage increase in total exports/sales of selected commodities

Funding requirement for Sub-Programme 1 – Commodity Commercialization

Component	Est. Programme Cost (5 years)	Secured support	Associated
Small-holder Commercialization Scheme	USD 98 million Gap: approx USD 60 million	AfDB/ASREP EC food security EU-Food Facility FAO TCP IFAD/RCPRP Irish Aid Italian Cooperation OFID WFP WB RPSDP	CARD/MRU CARD Concern Coopi EC/EDF 10 GTZ IsDB/NERICA JICA KfW/NaCSA USAID/CORAD USAID/PAGE WHH
Medium and Large Farm Producers Promotion Scheme	USD 5 million Gap: approx USD 4 million	WB RPSDP	USAID/PAGE UNDP/FAO Chamber of Agric.



Sub-Programme 2. Agriculture Infrastructure Development

The objective of this component is to develop appropriate infrastructure of public goods in nature to support commodity commercialization. Infrastructures of most immediate need are: roads, irrigation facilities, markets, processing, packaging and storage facilities.

This sub-programme has four main components:

Component 1: Support to the Rehabilitation and Upgrading of Feeder Roads of major agricultural importance will rehabilitate and upgrade 2,055 kilometres of feeder roads. This component will be implemented in collaboration with SLRA, NaCSA, Local Councils and private contractors.

Specific activities to be carried out include:

- Identification and prioritization of strategic feeder roads that will link major production areas to market centers
- Formulation of a common policy on feeder roads construction, rehabilitation and maintenance
- Construction, rehabilitation and upgrading of 2055 kilometers of feeder roads into all weather roads within five years
- Regular maintenance of the upgraded roads

Key Performance Indicators

- Reduction in cost of transportation
- Increase in the volume of goods and services transported from production areas to market centers
- 2,055 km of feeder roads rehabilitated

Component 2: Support to the Development of Irrigable Areas for both small scale and large scale holders to enhance the double cultivation of rice, vegetables and other crops.

The key activities include:

- Inventory of all perennial inland valley swamps to consider appropriate usage
- Feasibility Studies and investment analysis of three major irrigable areas: Gbondapi, Torma Bum and Komrabai Mamayla. Studies have already been conducted for Rhombe and Rolakoh swamps
- Formulation of strategic irrigation investment plan
- Development of irrigation infrastructure including land development to make it suitable for mechanization in accordance to strategic plan

Key Performance Indicators

- Three major feasibility studies undertaken
- Strategic irrigation investment plan formulated
- Irrigation project underway in accordance to strategic plans in selected locations

Component 3: Rehabilitation and Modernization of existing storage and processing facilities and equipment; develop local storage, processing and marketing facilities to improve stability of food supplies.

The key activities include:

- Strategic location of market centers, storage and processing facilities to effectively service production areas
- Storage facilities should be commodity focused to ensure quality control
- Providing drying, processing and packaging facilities (private sector) to the storage facilities and market centers
- Establish market information systems
- Encourage the private sector to invest in transportation, especially water transport for the riverain areas



Key Performance Indicators

- Increase in the number of storage and processing facilities
- Increase in the number of locally processed products in the market

Component 4: Rehabilitation and construction of research Centres, MAFFS offices, staff quarters, outstations and other related agriculture infrastructure.

The key activities include:

- Construction and rehabilitation of MAFFS Offices and staff quarters, Research Centers, Markets

Key Performance Indicators

- Number of MAFFS offices, staff quarters, Research and Information Centers rehabilitated and/or constructed

Component 5: Construction of fish harbours, processing and packaging facilities in selected areas

The key activities include:

- Assessment and identification of suitable sites for the construction of fish harbors and associated facilities
- Construction of the facilities

Key Performance Indicators

- Number of fish harbors, processing and packaging facilities appropriately constructed and are in use.

Funding requirement for Sub-Programme 2 - Agric. Infrastructure Development

Component	Est. programme Cost (5yrs)	Secured Support Source	Associated
Rehabilitation and Upgrading of 2,055 km of Feeder Roads	USD 51.3 million Gap approx USD 27 million	WB/RPSDP ADB/ASREP IFAD/RCPRP IDB/RIDP/NaCSA KfW/GPC/NaCSA IDB/DFPP EU/STABEX-USTP, ADB/NERICA GoSL/SLRA	
Support to the Development of Irrigable Swamps	USD 80 million Gap approx. USD 75 million	ADB/ASREP IDB/DFPP IFAD/RCPRP	
Rehabilitation and Modernization of existing storage and processing facilities and equipment	USD 30 million Gap USD 28 million	WB/RPSDP	
Rehabilitation and construction of Research Centres, MAFFS Offices, etc.	USD 15 million Gap USD 10 million	ADB/ASREP	
Rehabilitation and construction of fish harbours, processing and packaging facilities	USD 10 million Gap USD 10 million		ADB/AFDEP/Fisheries



Sub-Programme 3. Private Sector Promotion

The objective of this sub-programme is to provide a conducive environment and incentives for sustainable agribusiness and fisheries commodity commercialization and investment into agriculture and fisheries sector, including processing and export. This includes the review of laws, regulations and policies pertaining to land, taxation and import and export regulations and those that will enhance the formation of farmer based organizations and support the delivery of services.

Activities to be undertaken include:

- Review of land laws to give legal status to freehold interests, facilitate access by non-Sierra Leoneans, establish user rights over state lands, and allow for title registration
- Review investment policies and tax structure to facilitate agricultural production, agro-processing and services
- Carry out reforms to provide a level playing field, certainty and predictability for both domestic and foreign investors
- Develop mechanisms to enhance long-term lending to the agricultural sector
- Develop comprehensive policy on climate change together with regulations on use of carbon credits to encourage reforestation and afforestation
- Review of Cooperatives Societies Act 1977 to reflect modern functions and roles of cooperative societies and farmer-based organizations
- Develop an agricultural extension policy
- Revise the Investment Promotion Act's package to reflect the new agricultural incentives in 2009 GoSL budget
- Develop and enact a comprehensive law and regulations on sanitary and phyto-sanitary standards
- Formulate a new forest policy and legislation, based on the principles of Sustainable Forest Management
- Formulate policy on Organic and Fair Trade tree crops production

Key Performance indicators

- Increase in the number of private investors in the agricultural sector

Funding requirement for Sub-Programme 3 - Private Sector Promotion Programme

Component	Est. programme Cost (5 yrs)	Secured Source	Associated
Provide the enabling environment to attract investors into the agriculture sector through the review of investment policies and laws, standards, loan guarantee, long term lending to agriculture etc.	USD 5 million Gap approx USD 4 million	WB/RPSDP	SLEIPA, MTI/PSD Chamber of Agriculture



Sub-Programme 4. Sector Coordination and Management

The objective of this component is to develop appropriate capacities for the management of the programme as well as governance structures. In addition, the **Multi-Partners Commodity Groups** under the Presidential Task Force on Agriculture consist of national and international expertise on specific commodities including rice, industrial cassava, fisheries, livestock, export and new potential crops and sustainable timber forest products. These Groups will comprise of members from Government, Non-Government, Private Sector, Farmers, University/Academia and Development Partners. The terms of reference of the commodity groups will focus on the following activities:

- Coordinate the sector activities, the NSADP and across sub-programmes and components to monitor results and impact
- Monitor evaluation, reporting and fine-tuning of programmes and components
- Manage the programme and sector activities at national and district levels
- Build the capacity (training of personnel, technical assistance, logistics) of the Ministry of Agriculture and other related MDAs, The University, National Farmers Federation and farmer based organizations, Chambers of Agriculture and other related institutions
- Developing policies and guidelines on national level issues such as technical packages, types and location of processing centers, transport, trade, financing, etc. Advise on focused research, quality control and market information
- Formulate strategies for the development of agribusinesses along commodity chains aimed at improved value addition
- Linking producers with input and output marketing
- Support and strengthen FBOs to be able to access services such as credit, processing equipment, direct export opportunities
- Develop, train and ensure adoption of productivity enhancement technology

Key Performance Indicators

- Transparent, efficient and effective sector coordination and management

Funding requirement for Sub-Programme 4 – Sector Coordination and Management

Component	Est. programme Cost (5 yrs)	Secured Source	Associated
Coordination and management of all sector programmes and activities	USD 2.5 million Gap approx USD 2 million		FAO, DFID, WFP WB/RPSDP ADB/ASREP IFAD/RCPRP IDB/RIDP/NaCSA IDB/DFPP ADB/NERICA
Capacity Building of the Sector Institutions, including Multi-Sector Commodity Group	USD 3 million Gap approx. USD 3 million		



CHAPTER SIX

FINANCING THE NSADP/CAADP AND FINANCIAL MANAGEMENT

NSADP/CAADP Financial Requirement

The NSADP/CAADP requires a total outlay of USD 333.5 million for its implementation in the first five years (2010 – 2015). Out of this requirement, approximately USD 104.5 million could be available based on the committed funds within the various on-going interventions in the sector. A gap of USD 229 million will then be required to be filled as seen in Table 6.1.

Table 6.1: Funding requirement for NSADP/CAADP for five years 2010 – 2015

Sub-programme	Est. programme Cost (5yrs) in million USD	Committed Resources in million USD	Gap in million USD
Commodity Commercialization	103.0	39.0	64.0
Agric. Infrastructure Development	186.3	36.3	15.0
Private Sector Promotion	5.0	1.0	4.0
Sector Coordination and Management	5.5	0.5	5.0
TOTALS	299.8	76.8	223.0

A key development challenge for Sierra Leone is scaling up resources to be able to finance sustainable agricultural development for economic growth and lasting poverty reduction, which is the main thrust of PRSP II. This places tremendous pressure on the Government to improve resource flows and the effectiveness of resource utilisation, and maximize the benefits of private sector participation while ensuring greater efficiency in natural resource management.

All programmes and projects implemented by GoSL, UN agencies, NGOs and other players that are related to the sector activities should subsume into the NSADP/CAADP framework to guide Sierra Leone's Agricultural development process in the short, medium and long term. The UN agencies in Sierra Leone have prepared a UN Joint Vision in which they have already integrated their programmes into the Small-Holder Commercialization Scheme (formally National Agriculture Response Programme) and are preparing further programmes within the Agenda for Change and this NSADP/CAADP. Ideally, a broader public sector profile incorporating all agricultural related programmes and enterprises provides a more realistic assessment of NSADP/CAADP financing estimates, given that these programmes will be the implementing agencies for the NSADP. However, obtaining comprehensive data on their operations still remains a serious challenge. More remains to be done in this area. Consequently, gross financing estimates for NSADP/CAADP are therefore based on a wider programme approach consistent with the Policy Objectives of the Ministry of Agriculture and the Government Agenda for Change for 2009 and its medium term perspective.

NSADP/CAADP Financing

Undoubtedly, Sierra Leone needs additional resources to meaningfully finance its agricultural development programmes and alleviate widespread poverty, especially in the rural areas. Ensuring that adequate financing is available for the implementation of the sub-programmes identified in the NSADP, resources will be mobilized both within (domestically) from the National and Local Councils' budget allocations as well as externally (International borrowing and International donor grants). There are various sources that could be identified for the financing of the NSADP. These include but not limited to the following:

Domestic Resources:

- National and Local Budget Allocation
- Private Sector (Investment Promotion)
- Innovative Financing



External Resources:

- International Borrowing (Bilateral and Multilateral)
- International Donor Grants

Domestic Resources including National and Local Council Budgets Allocation

The government has been the main source of domestic financing. As noted above, the Government's fiscal policy in the medium term will seek to ensure fiscal sustainability by enhancing domestic revenue mobilization and improving expenditure management. Domestic revenue will be mobilised through expanding the tax base, increasing tax rates and fees as appropriate, transferring all off-budget revenues by MDAs to the Consolidated Revenue Fund (CRF), improving efficiency in both tax and non tax collection and enforcing compliance. Domestic revenue is projected to increase progressively from 10.8% of GDP in 2007 to 13.7% of GDP by 2012.

The government budget allocation to the Agricultural Sector has been grossly inadequate, which hinders the development of the sector. Policy pronouncements by government for the importance of the agricultural sector do not match the actual allocations and disbursements, which makes it rather impossible to achieve set targets of making agriculture the engine of growth for sustainable economic development.

Analysis has shown that the contribution of the national budget to the agriculture sector has been between 1.5% to 7.7% between the fiscal period of 2007 and 2009. For agriculture to achieve the 6% annual growth rate in the agriculture sector, at least 10% of the domestic budget should be allocated to the Agriculture sector in accordance with the Maputo Declaration. For the successful implementation of the NSADP/CAADP, it is envisaged that the national budget allocation to the agriculture sector will increase to 10% as per the MREF projections in the Agenda for Change. However, it is also hoped that the projected estimates for the other related sectors such as transport (including rural roads), energy, lands and the environment will be allocated by the national budget to the benefit of rural areas.

Presently local council's budget outlay for agricultural development is minimal. Some councils have the intention to allocate 10% of their budgets to agriculture, but given the current total revenue from these councils, not more than 5% of the identified gap will be financed by local council budgets.

Private Sector Participation

Despite the progress made in improving the climate for doing business, Sierra Leone has a poor record of involving the private sector, especially in financing, operating and maintaining the key drivers of growth and poverty reduction. This is especially the case in agriculture. The shift in government policy to rely on the private sector for financing development is therefore central to expanding the resource base to adequately support development activities. As a result of the Government's sustained drive to attract the private sector, various options of engagement must be explored and large private sector projects encouraged, including Build-Operate-Transfer (BOT), which will certainly require a special BOT Law, and Public Private Partnership (PPP) projects. Arguably, involving the private sector can have many benefits, including stronger incentives for more efficient performance, access to capital and external markets, and an improvement in skills, management and technologies.

As Government takes steps to increase meaningful private sector involvement, it is acutely aware that private sector participation without a good policy and regulatory framework will not improve sector performance. Effective private sector participation therefore poses a number of challenges for the government as it seeks to transform its role from exclusive financier, owner, and operator to that of a facilitator and regulator of services provided by private enterprises.

However, given the history of private sector investment in agriculture, one should be cautious to place an estimate on the amount this source will contribute to finance the NSADP.

Innovative Financing

In order to effectively implement the NSADP/CAADP, other sources of funding should be identified and exploited. These sources could be obtained from within MDAs and other line ministries, government royalties and innovative ideas that could be transformed into bankable programmes and projects. One major source of funding could be financed from within government revenues. For example, revenues from individual line ministries could be directed to supporting programmes within the sub-sectors. Livestock revenue generation could be used to support Livestock programmes, Forestry revenues to support forestry and other programmes, phyto-sanitary revenue generated to support crop production activities.



In addition, tariffs on imported commodities as in the case of petroleum products could be used to support meaningful development programmes within the sector. It is estimated that, if effectively enforced, this revenue could support 5% of the programme costs on a phased out approach up to the period of implementation of the NSADP.

Furthermore, community initiated programmes in the form of in-kind contribution (unskilled labour, community materials), when properly computed could reduce the cost of implementing projects.

Another major source of innovative financing is the potential for carbon credits given the forest cover in Sierra Leone.

External Resources

Mobilising external resources will be done through Donor Round Tables, Consultative Group meetings and bilateral contacts with non-traditional partners. The strategy will focus on expanding the existing donor base and developing the capacity to negotiate donor agreements. Government will also explore the possibilities of attracting foundations and global funding initiatives. According to the Agenda for Change, the total MTEF for enhancing agricultural productivity estimates, more than 50% of the funding is to be derived from external sources that include but are not limited to the following:

International Borrowing

This has been the major source of finance for the entire economy. It is estimated that over 50% of the funding for programmes are from international borrowing (both bilateral and multilateral organisations).

International Donor Grants

Aid flows, both on-budget and off-budget, play a critical role in the post-conflict Sierra Leone rising from 11% in 1999 to 29% in 2000, 46% in 2001, 45% in 2002 and to 37% in 2003. On-budget aid alone has financed more than 50% of government expenditures in recent years while off-budget aid is also substantial. The aid surge during this period was typically motivated by the end of the civil war. Current estimates however show a significant fall in aid flows especially since the end of the emergency post-conflict phase. Aid is largely by concessional assistance and HIPC debt relief, with the grant element rising by up to 100% in some instances.

Aid is also channelled in the form of direct disbursements to NGOs and project financing. Regarding future aid flows, external budgetary support, which is currently as high as over 40% of total revenues and grants, is as a percentage real GDP projected to decline eventually during the PRSP II years as post-conflict support and HIPC grants taper off.

The main sources of aid are the multilateral financial and development institutions as well as bilateral donors. Three donors – the UK Department for International Development (DFID), the European Commission (EC) and World Bank – have agreed on a framework for Multi-Donor Budget Support (MDBS) backed by a Progress Assessment Framework (PAF). Many sectors including agriculture, infrastructure, health and education have been financed through direct investment and technical assistance. Some donors have also focused on improvement of governance through strengthened financial management, human resource management, delivery of services, security reform, and decentralization. However, experience has shown that there is a need to ensure that aid disbursements are consistent with aid commitments.

NSADP/CAADP Financial Management and Coordination

The NSADP/CAADP recognized that the past poor performance, weak management and little financial accountability in most of the agricultural programmes and state owned agro-industries have been major sources of financial vulnerability. Successive governments have felt compelled to bail out these enterprises through implicit subsidies and credits below market rates. Hence fiscal sustainability for NSADP/CAADP must eliminate this potential source of fiscal vulnerability by focusing on sound financial and corporate governance mechanisms including transparency and accountability.

Against this setting, expenditure rationalization, including reprioritization from consumption to productive spending, reduction in wasteful spending, and ensuring judicious use of natural resources represents the most promising path of wealth creation. A pooled Basket Fund approach is recommended for the implementation of NSADP/CAADP so that financial resources will be allocated as per the prioritised growth driver sectors. This approach may use external development partners or a special national account to allow contributors to track their own funds and allow tagging funds for specific purposes. The exact nature of the basket is still to be developed.



The overall coordination of the NSADP/CAADP Agriculture Sector Investment Programme is proposed to be undertaken by a Coordination Unit (CU) that will be set up for that purpose under the supervision of the MAFFS with representation from MFMR and Ministry of Trade and Industry. The Unit will be responsible to coordinate, monitor, evaluate and report on all sector activities, the NSADP and its sub-programmes and fine-tune them as and when necessary.

At national level, the Coordination Unit will comprise of an overall Programme Advisor who will be working closely with a National Coordinator. In order to ensure efficient use of the resources within the Basket Fund arrangements, Financial, Procurement and M&E Specialists will be attached as short-term Technical Assistants to the CU. They will also be working with government counterparts. Each of the four sub-programmes will be managed by a Programme Manager.

The Commodity Groups will work closely in tandem with the CU which will report to the Director-General who will review all the proposals, give feedback and report to the AAG which is co-chaired by the Minister of Agriculture and FAO. The AAG includes key stakeholders in the sector that regularly discuss policy issues, strategies, programmes and progress made in the sector. The AAG will review all the recommendations and proposals of the Commodity Groups, take decisions and then recommend to the Presidential Task Force on Agriculture (PTFAg) which is chaired by the President of the Republic of Sierra Leone. The PTFAg is comprised of all relevant MDAs (at Ministerial level), key development partners in agriculture and fisheries (at Country Representation level), representatives of the private sector and farmers. The terms of reference of the PTFAg among other things are:

- Highest policy decision making body with regards to agricultural development in the country
- Providing the strategic direction of the agriculture and fisheries sector in line with the government's development agenda
- Mobilizing resources for the successful implementation of the NSADP
- Ensuring that all relevant MDAs effectively play their role in order to achieve the government's vision of agriculture
- Responsible for the overall monitoring of the performance of the sector
- Review recommendations of the AAG forwarded to the Task Force and feedback to the AAG through the Minister of Agriculture.
- At District Level, the Agriculture Committees of the Local Councils will be the policy making body, while the District Agric. Officers, and their deputies will handle the operational issues.

The capacity of the MAFFS, MFMR, and other related MDAs, universities, National Farmers Federation and farmer based organizations, Chamber of Agriculture and other related institutions will be built in terms of expertise and logistics.

Strategic MDAs in the Implementation of the NSADP

- **The Sierra Leone Export and Investment Promotion Agency (SLEIPA), Standards Bureau and the Private Sector Development in the Ministry of Trade and Industry** will be very key strategic partners in the commercialization of commodities
- The **Ministry of Lands and the Environment** will work with the Ministry of Agriculture to harmonize land laws and develop common land policies for investors to access land for agriculture and agro-processing
- The **Ministry of Finance and Economic Development** will be key in the mobilization of resources, monitoring of progress and reporting to donor bodies. The Ministry through its specialized agencies such as the Bank of Sierra Leone, Statistics Sierra Leone and Economic Policy research Unit will over the years assess the contribution of the agriculture sector to the GDP
- The Ministry of Agriculture will work with the **Ministry of Local Government and Rural Development** through the **Decentralization Secretariat** to build the capacity of the councils to be able to implement their agricultural programmes within the NSADP framework
- The **Ministry of Energy and Water Resources** plays an important role in issues pertaining to sustainable water management systems. Also, the NSADP envisage a lot of processing activities that require energy. Since agriculture is both a source and user of energy, the collaboration of the two ministries in formulating strategies for low-cost energy sources is very much necessary
- With regard to **feeder roads and other infrastructure**, the Ministry of Works and Infrastructure, Sierra Leone Roads Authority, NaCSA, Ministry of Fisheries and Marine Resources, Ministry of Foreign Affairs, Ministry of Justice, etc. are all players in the NSADP



Monitoring and Evaluation of the NSADP

The monitoring of the NSADP will focus on efficiency and effectiveness of resource use while the evaluation will lay emphasis on results, outcomes and impact of the programme on the GDP and equitable distribution of growth. Result Framework Matrix, Impact studies, food security surveys, National Accounts and district level data collection will be the key tools used for monitoring

The Planning, Evaluation, Monitoring and Statistics Division (PEMSD) of the Ministry of Agriculture in collaboration with the CU will be responsible for the coordination of the monitoring and evaluation of the programme. The other key institutions responsible for the M&E of the programme include the PTFAg, AAG, MOFED, Local Councils and civil society.

Quarterly, semi-annual and annual reports will be prepared at programme and sub-programme levels and at district and national levels.



PART IV: ANNEX I

CAADP COMPACT

