GOVERNMENT OF THE REPUBLIC OF SIERRA LEONE

NSADP INVESTMENT PLAN II

Inclusive Comprehensive Agriculture Development Programme (ICADeP) 2018-2022

December, 2017

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(By His Excellency the President of the Republic of Sierra Leone, Doctor Ernest Bai Koroma) with his photo

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(By the Hon Minister of Agriculture) with his photo

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Acronyms and Abbreviations

A4P	Agenda for Prosperity
AAG	Agricultural Advisory Group
ABC	Agriculture Business Centre
AfDB	African Development Bank
AESD	Agricultural Extension Services Division
AESD	Agricultural Engineering Services Division
AFAIP	Agriculture, Fisheries and Agro-Industry Programme
ASREP	Agricultural Rehabilitation Project
ASR	Agriculture Sector Review
ATHS	Agriculture Household Tracking Survey
AU	African Union
BMI	Body Mass Index
BSL	Bank of Sierra Leone
CAADP	Comprehensive Africa Agriculture Development Programme
CB	Community Banks
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CILSS	Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel
COOPI	Cooperazione Internazionale
CORAD	Coalition for Relief and Development (CARE, Catholic Relief Services, AFRICARE and World Vision International)
CORAF	West and Central Africa Council for Agriculture Research and Development
CPIA	Country Policy and Institutional Assessment
CRC	Citizens Report Cards
DAO	District Agriculture Officer
DCC	District Coordinating Committee
DEPAC	Development Partnership Committee
DFID	Department for International Development
DHS	Demographic and Health Surveys
DIT	District Implementation Team
DoA	Department of Agriculture
DoF	Department of Fisheries
ECOWAP	ECOWAS Common Agricultural Policy
ECOWAS	Economic Community of West African States
EU	European Union
EUFF	European Union Food Facility
EVD	Ebola Virus Disease
FAO	Food and Agriculture Organization
FARA	Forum for Agricultural Research in Africa
FBO	Farmer Based Organization
FDI	Foreign Direct Investment

FFS	Farmer Field School
FFA	Fisherfolk Association
FFW	Food for Work
FISIM	Financial Intermediation Services Indirectly Measured
FMTI	Fisheries and Marine Training Institute
FSA	Financial Services Association
FSCA	Food Security through Commercialization of Agriculture
GAE	Government Agriculture Expenditure
GAFSP	Global Agriculture and food Security Programme
GAM	Global Acute Malnutrition
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographic Information System
GOSL	Government of Sierra Leone
GTZ	German Technical Cooperation
HDI	Human Development Index
HDR	Human Development Report
HIPC	Highly Indebted Countries
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HQ	Headquarters
ICT	Information and Communication Technologies
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
IITA	International Institute for Tropical Agriculture
ILO	International Labor Organization
IVS	Inland Valley Swamp
JICA	Japan International Cooperation Programme
JMWG	Joint Ministerial Working Group
KfW	German Financial Cooperation
LBM	Labor Based Methods
LPO	Livestock Producer Association
M&E	Monitoring and Evaluation
MAFFS	Ministry of Agriculture, Forestry and Food Security
MDAs	Government Ministries, Departments and Agencies
MDG	Millennium Development Goal
MFI	Micro Finance Institution
MFMR	Ministry of Fisheries and Marine Resources
MIS	Management Information System
MoFED	Ministry of Finance and Economic Development
MSME	Micro, Small and Medium Enterprise
MSMEL	Micro, Small, Medium and Large Enterprise
MOHS	Ministry of Health and Sanitation
MSWGCA	Ministry of Social Welfare, Gender and Children's Affairs

MTI	Ministry of Trade and Industry
NaCSA	National Commission for Social Action
NACU	National Agricultural Coordination Committee
NaFFSL	National Federation of Farmers in Sierra Leone
NEPAD	New Partnership for Africa's Development
NGO	Non Government Organization
NPCA	NEPAD Planning and Coordinating Agency
NPISH	Nonprofit Institutions Servicing Households
NRS	National Road System
NSADP	National Sustainable Agriculture Development Programme
P4P	Purchase for Progress
PAF	Partnership for African Fisheries
PAGE	Promoting Agriculture, Governance and Environment
PEMSD	Planning, Evaluation, Monitoring and Statistics Division
PER	Public Expenditure Review
PLW	Pregnant and Lactating Women
PO	Producer Organizations
PPP	Public Private Partnership
PRSP	Poverty Reduction Strategy Paper
PTFAg	Presidential Task Force on Agriculture
RCPRP	Rehabilitation and Community Poverty Reduction Project
RFCIP	Rural Finance and Community Improvement Project
SAM	Social Accounting Matrix
SCP	Smallholder Commercialization Programme
SME	Small and Medium Enterprise
SCP	Smallholder Commercialization Programme
SEED	Seed Enterprise Enhancement and Development
SLARI	Sierra Leone Agricultural Research Institute
SLeCAD	Sierra Leone Chamber for Agri-business Development
SLEIPA	Sierra Leone Investment and Export Promotion Agency
SLeWOFF	Sierra Leone Women Farmer’s Forum
SLIHS	Sierra Leone Integrated Household Surveys
SLRA	Sierra Leone Roads Authority
SSL	Statistics Sierra Leone
SWAP	Sector Wide Approach
TAA	Technical Assistance Agency
TCPs	Technical cooperation programs
TVET	Technical and Vocational Education and Training
UNCDF	United Nation Capacity Development Fund
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund

UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
USD	United States Dollars
UTB	Union Trust Bank
VAM	Vulnerability Analysis and Mapping
WAPP	West African Pilot Project
WARFP	West African Regional Fisheries Programme
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization

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1.0. Introduction

The Inclusive Comprehensive Agriculture Development Programme (ICADeP) is developed as an Investment Programme within the framework of the National Sustainable Agriculture Development Plan (NSADP) 2010-2030 within the new Country Development Strategy 2013-2037 "Agenda for Prosperity" (A4P) that aims at Sierra Leone achieving middle-income status by 2037.

The NSADP is a broad sector-wide development framework which also serves as Sierra Leone's contribution to the Comprehensive Africa Agriculture Development Programme (CAADP) Compact under the African Union's New Partnership for Africa's Development (AU/NEPAD) activities. The NSADP/CAADP originally identified four major investment sub-programmes: the Commodity Commercialization Sub-Programme; the Agriculture Infrastructure Development Sub-Programme; the Private Sector Promotion Sub-Programme; and the Sector Coordination and Management Sub-Programme.

Following the NSADP adoption, the Ministry of Agriculture, Forestry and Food Security (MAFFS) in coordination with donors prioritised and adopted the Smallholder Commercialization Programme (SCP) 2010-2014 based on the assumption that this NSADP component "had the potential to achieve the greatest impact in terms of improved food security and wealth generation for the most vulnerable population in the short and medium term framework" (SCP Investment Plan, 2010).

ICADeP builds on the successes and lessons learnt from SCP formulation and implementation, and emphasize the importance of developing the domestic small and medium-level commercial farms, as well as monitoring the impacts of the large-scale investments. The ICADeP also envisages urgent measures to develop evidence-based private sector support policies and mechanisms in fulfillment of the Agenda for Prosperity. The investment plan incorporates the recent Agricultural Sector Review findings and recommendations, as well as the outcomes of extensive stakeholder consultation process in 2014, and analyses the wealth of literature available for African, West African and Sierra Leonean agriculture and rural development.

ICADeP is also aligned to the Sustainable Development Goals (SDGs) and the sub-regional new vision and priorities which are highlighted in the Comprehensive African Agricultural Development Program (CAADP); the ECOWAS Regional Agriculture Policy (ECOWAP) 2025; and other key documents such as the Strategic Orientation Framework 2016-2025; and the Regional Agriculture and Food and Nutrition Security Investment Programme 2016-2025. These priorities are the result of profound and inclusive analysis of 10-year implementation of ECOWAP first version.

2.0. ICADeP Formulation Context

2.1. ICADeP Global, Continental and Sub-regional Strategic Context

2.1.1. Global Context

At the global level, the Sustainable Development Goals (SDGs) have now replaced the Millennium Development Goals, with SDG 2 "*End hunger, achieve food security and improved nutrition, and promote sustainable agriculture* "focusing on the role of agriculture for human and socioeconomic development. It also emphasizes on the linkages between agriculture and food systems for improved food and nutrition security.

Climate change has become a key challenge for agriculture and development in general, and countries with their partners have decided to take actions towards reducing the impacts of climate change, through the Paris Declaration adopted during the COP 21. Consequently, climate smart agricultural procedures and practices will underpin the implementation of production and productivity component of this plan.

2.1.2. Continental and Sub-Regional Contexts

With Heads of States commitment made at Maputo in 2003 to transform the agricultural sector, the Sierra Leone Government's key response was the formulation of the National Sustainable Agriculture Development Plan (NSADP) with the aim to provide short, medium and long-term Investment programmes in the agriculture sector. The NSADP/CAADP identified the aforementioned four major investment sub-programmes: the Commodity Commercialization Sub-Programme; the Agriculture Infrastructure Development Sub-Programme; the Private Sector Promotion Sub-Programme; and the Sector Coordination and Management Sub-Programme. The Smallholder Commercialization Programme (SCP) was prioritised as the program component having the potential to achieve the greatest impact in terms of improved food security and wealth generation for the most vulnerable population in the short and medium term framework. Benefits include:

i. increased agricultural, livestock and fisheries production in the targeted supply chains/areas;

ii. improved national food security, food intake and raised levels of nutrition, particularly for infants and PLW due to increased food production, nutritional support and reduced post-harvest losses

iii. improved access to agriculture inputs, services, research and extension support, markets and market information

iv. reduced transaction costs -notably for transport due to rehabilitation of feeder roads

v. enhanced access to rural financial services

vi. increased returns from smallholders' activities and investments in agriculture - such as value added/agro-processing and agribusiness.

Challenges were; weak implementation capacity; constraints in accessing appropriate equipment/materials/inputs for implementing; weak extension service performance; limitations in establishing active linkages with private sector and in identifying viable market.

Post Maputo commitment is the Heads of States adoption of the Malabo Declaration in 2014 on "*Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods*", aiming at eradicating hunger by 2025. The key commitments of the Declaration are summarized in the box 1 below:

Box 1. Malabo Commitment

1. Re-commitment to the principles and values of the CAADP process

2.Re-engagement to improve the financing of investments in agriculture:
(a) Compliance with the 10% target for public expenditure
(b) Operationalizing the African Investment Bank

3. The commitment to eradicate hunger by 2025
(a) At least doubling productivity (with emphasis on inputs, irrigation, mechanization)
(b) Reduce PHL by at least half
(c) Nutrition: reduce stunting to 10%

4. The commitment to halving poverty by 2025, through inclusive agricultural growth and transformation

(a) Support the agricultural sector growth in the annual GDP to at least 6%
(b) Establish and/or strengthen inclusive partnerships between the public and private sectors for value chains of at least five (5) priority agricultural commodities that have strong linkages with smallholder farms
(c) Create employment opportunities for at least 30% of young people in agricultural value chains
(d) Entry and preferential participation of women and young people in lucrative and attractive agri-business

5. The will to promote inter-African trade in basic agricultural commodities and related services
(a) Triple inter-African trade in agricultural products
(b) Accelerate the Continental Free Trade Area and the transition to a continental system of a common external tariff system

6. Commitment to strengthen resilience in livelihoods and production systems to climate variability and other related shocks
(a) Ensure that by 2025 at least 30% of farmer/pastoralists households resist these shocks
(b) Increase investments for initiatives that build resilience, including social security for rural workers and other vulnerable social groups, as well as sensitive ecosystems
(c) Integrate risk management and resilience into investment policies, strategies and plans

7. Commitment to mutual accountability in relation to actions and results
(a) Through the CAADP Results Framework - conduct a biennial evaluation of agricultural commodities

Source: *African Union, 22nd ordinary session, 30-31 January 2014, Addis-Ababa, Ethiopia, Concept note: "2014, Year of agriculture and food security in Africa, marking the 10th anniversary of the adoption of the agricultural, development programme (CAADP)".*

In order to operationalise the Declaration, an Implementation Strategy and Road Map were developed, which includes an accountability mechanism - the biennial review requirement.

At sub-regional level, in line with Malabo Declaration and building on the assessment of 10-year implementation of the ECOWAP, ECOWAS has defined a new cycle of its regional Policy: ECOWAP 2025. The new policy's vision and orientation are reflected in the Strategic Orientation Framework 2016-2025 and the Regional Agriculture and Food and Nutrition Security Investment Programme 2016-2020.

Box 2: The Specific Objectives (SOs) of ECOWAP Strategic Orientation Framework 2016-2025

SO1. "Contribute to increasing agro-forestry-pastoral and fisheries productivity and production through diversified and sustainable production systems, and to reducing post-production losses";

SO2. "Promote contractual, inclusive and competitive agricultural and food value chains oriented towards regional and international demand, with a view to the regional market integration";

SO3. "Improve access to food, nutrition and resilience for the vulnerable populations";

SO4. "Improve business environment, governance and funding mechanisms of the agro-forestry-pastoral and fisheries and agri-business sector".

In the ECOWAS region, for the purpose of harmonising trade policies and strengthening the common market, a Common External Tariff was adopted - effective since January 2015. This will have an impact on agricultural commodities trade within and outside the sub-region.

2.1.3. Country Context

2.1.3.1. General Country Political Context

2.1.3.1.1. Governance and Political Context

Sierra Leone experienced a wobbly political clime from independence in 1961 that culminated some 30 years later into a deadly civil war in 1991 - producing a failed state without much to write home about. However, peace and state-building process after the war in 2001, ushered in security, power sharing and the rule of law that transform the country from being a recipient of some 18,000 peace keepers for the maintenance of security, to one that now contributes peace keepers to conflict-affected countries. Noteworthy, is the fact that Sierra Leone continues to be classified as a 'fragile state' evident from the New Deal pilot study that confirmed the country's fragile status though considerable progress in moving out of fragility has been made[1]. The unresolved challenge of ensuring that the country's growth benefit is inclusive and cuts across different segments of society remains an important causative factor of fragility. It is therefore not surprising that Pillar 1 of Sierra Leone's current development plan - A4P - considers economic diversification to promote inclusive growth as pivotal. Consequently, this agricultural investment plan is contextualised in this pillar - the agriculture sector being the bread basket of the country.

[1]Sierra Country Strategy Paper 2013-2017
https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/2013-2017%20-%20Sierra%20Leone%20Country%20Strategy%20Paper_01.pdf

Post war recovery includes, reconstruction and democratization, though it remains one of the poorest countries in the world. Situated on the West African coast bordering Guinea and Liberia, Sierra Leone covers 71,740 square km with a population of around 6.3 million people. Sierra Leone is among low human development countries (ranks 179 out of 188 according to 2016 UNDP Human Development Report), with still persistent gender gaps. The country is divided into three provinces with 14 districts (Kambia, Karina, Port Loko, Tonkolili, Bombali, Kailahun, Kono, Pujehun, Bo, Bonthe, Koinadugu, Falaba, Moyamba and Kenema), and the Western Area. The climate is generally equatorial with distinct dry (November – April) and wet (May – October) seasons. Sierra Leone has about 5,000,000 hectares of arable land of which about 2,000,000 hectares is under cultivation[2]. The arable land is divided between upland and more fertile lowland areas. With support from the international community, infrastructure is being rebuilt and peace and stability have been consolidated. In 2007, the country celebrated the first peaceful transition of power from one party to another with the election of the All Peoples‟ Congress candidate, Dr. Ernest Bai Koroma, as President who was again peacefully re-elected in 2012. The Country Policy and Institutional Assessment (CPIA) rating has improved from 2.5 in 2005 to 3.0 in 2014[3]. CPIA which ranges between 1 to 6 assesses the business regulatory environment with respect to the extent to which the legal, regulatory, and policy environments help or hinder private businesses in investing, creating jobs, and becoming more productive. The country is therefore half way to the highest score which it should endeavor to attain for a competitive agribusiness.

2.1.3.1.1.2. Policies and Government/Development Partners Engagement in Agriculture

GOSL, and the international community, has been addressing poverty and food insecurity through three post-war Poverty Reduction Strategy Papers (PRSPs) and agricultural and fisheries programmes, including “Operation Feed the Nation” (2005), “National Sustainable Agriculture Development Plan (2009), “Smallholder Commercialization Programme” (2010-2014), Institutional Support for Fisheries Management Project (2007-2010); West African Fisheries Programme in Sierra Leone (2010 – underway), West African Pilot Project-Sierra Leone (2012-2014), Technical Capacity Building in Fishing and Seafood Processing Technology in Sierra Leone (2010-2014)

The new country strategy, “The Agenda for Prosperity” - A4P (2013) has shifted the post-war reconstruction focus of solving immediate problems to a more forward looking perspective of developing Sierra Leone from a poor to middle-income country. The A4P aims to achieve results through “building a stable economy, founded on private sector - led growth, and diversifying activity across several competitive sectors, increasing value- added and generating gender-equitable employment.” It builds on 8 interconnected pillars: (i) economic diversification; (ii) natural resources management; (iii) accelerating the MDGs for human development; (iv) international competitiveness; (v) employment and labor strategy; (vi) social protection; (vii) governance and public sector reform; and (viii) gender. A4P highlights that “the next five years, 2013- 2018, have the potential to be the most transformative in the country’s history, as they lay the foundation for achieving middle income status. The years will represent the stage in national development where the economic model to ensure private - sector - led growth is set and pursued vigorously.”

2.1.3.1.1.2.1. National Sustainable Agriculture Development Plan (NSDP) (2010-2030)

The main policy paper for the agriculture sector is the National Sustainable Agriculture Development Plan (NSADP), which serves as the country CAADP document. The vision of the NSADP is to make agriculture the engine for socioeconomic growth and development through commercial agriculture. More specifically, its aim is to increase commercialization of the sector and promote “farming as a business” through short, medium and long term Investment Programmes. The NSADP/CAADP

[2] MAFFS

[3] Source: World Bank Group, CPIA database (http://www.worldbank.org/ida).

originally identified four major investment sub-programmes: the Commodity Commercialization Sub-Programme; the Agriculture Infrastructure Development Sub-Programme; the Private Sector Promotion Sub-Programme; and the Sector Coordination and Management Sub-Programme. Following the NSADP adoption, MAFFS in coordination with donors prioritized and adopted the Smallholder Commercialization Programme 2010-2014 (SCP) based on the assumption that this NSADP component "had the potential to achieve the greatest impact in terms of improved food security and wealth generation for the most vulnerable population in the short and medium term framework" (SCP Investment Plan, 2010).

2.1.3.1.1.2.2 Smallholder Commercialization Programme (SCP) (2010-2014)

The SCP has been a flagship programme of MAFFS and has proved to be a successful attempt to consolidate and coordinate the available resources. Within three years of SCP implementation, 193 Agribusiness Centres (ABCs) were constructed and equipped, thousands of farmers trained in Field Farmer Schools, hundreds of Farmer-Based Organizations (FBOs) established, nearly 2000 km of feeder roads rehabilitated, hundreds hectares irrigated, Community Banks strengthened and dozens of Financial Services Associations created. According to MAFFS, the SCP efforts resulted in major commodities productivity and output increase and improved food security. However, the latter is difficult to attribute only to smallholder farmers support in the absence of comprehensive agricultural statistics.

The lessons learnt from SCP include the need to address the lack of focus on developing marketing and management skills for "farming as business"; mixed success of ABCs due to unresolved community ownership and management structure; the need to develop value chains "from field to market" versus only focusing on production; and the need to improve monitoring and evaluation, and information systems generally.

It was also noted that programme budgeting should be based on realistically available resources, with no big "financial gaps". Particularly, the management, monitoring and evaluation activities should have clear government budget allocations. If these are expected to be funded by donors, there is no government ownership of the programme. The other important lesson learnt was the insufficient consideration of cross-cutting issues such as nutrition, gender, social protection and climate change in the SCP.

ICADEP builds on the strengths of SCP. However, there is recognition of the limitations of focusing only on the smallest and poorest farmers and fishers and the need to support the success and growth of local medium-sized farmers, fishers and businesses along the value chain. Also there is a need to improve monitoring and optimizing the benefits of large agricultural investments and projects.

2.1.3.1.1.2.3 . Growth Poles Programme (2014)

A World Bank investment initiative known as Growth Poles Programme was introduced in Sierra Leone in Sierra Leone in 2014 when Growth Pole Diagnostic Value Chain Analysis where carried-out some sectors including Agriculture, Fisheries and Mining sectors in 2014. Growth Poles are simultaneous, coordinated investments in various sectors to support self - sustaining industrialization in a country. Typically there is a combination of public and private investments; specifically built around an already existing resource at a specific location in an economy. In particular, there should be a focus on how infrastructure can be developed within an existing private investment in a manner that will encourage spillovers into other sectors. A growth pole typically will have an existing resource that serves as an inherent revenue producer.

2.1.3.1.1.2.4. A Comprehensive Programme to Enhance Food and Nutrition Security through Agriculture, Fisheries and Agro-Industry (AFAIP)

AFAIP is a new Initiative driven by many different elements of the 8 pillars in the A4P. It is planned to be implemented as a Presidential Initiative, focusing on the achievement of specific results through the concerted efforts of at least five line ministries – Ministry of Agriculture, Forestry and Food Security (MAFFS), Ministry of Fisheries and Marine Resources (MFMR), Ministry of Education, Science and Technology (MEST), Ministry of Trade and Industry (MTI), Ministry of Health and Sanitation (MHS) – but with active support from Ministry of Youths (MOY),Members of Parliament (MPs,) local authorities, Non-Governmental Organizations (NGOs) and the private sector. Success will depend upon effective cross-sectoral and cross-ministerial collaboration, innovative financing by government with donor support, and flexible and responsive management informed by Monitoring and Evaluation (M&E).

AFAIP builds on NSADP priorities for the sector:

- Increasing agricultural productivity (intensification and diversification)
- Promoting commercial agriculture
- Improving agricultural research and extension delivery systems
- Promoting efficient and effective sector resource management systems
- Mainstream cross-cutting issues in agriculture (self-sufficiency, gender, youth employment, farmer and fisher health (including HIV/AIDS) and environmental sustainability)
- Sustainably managing and exploiting Sierra Leone's fishery and marine resources
- Sustainably managing and exploiting Sierra Leone's forestry resources

2.1.3.1.1.2.5. Institutional Support for Fisheries Management Project (2007-2010);

The European Union (EU) supported €3million project assisted the Sierra Leone Ministry of Fisheries and Marine Resources to establish a realistic picture of the status of fisheries resources, thus contributing to the development of fisheries management measures in line with an approved strategic fisheries policy statement.

2.1.3.1.1.2.6. West African Fisheries Programme in Sierra Leone (2010 – underway)

The World Bank supported programme sets out to strengthen the capacity of Sierra Leone to manage the nation's fisheries within the good governance framework, reduce illegal fishing and increase local value added to fish products. The phase 1 ended in 2014 and a Global Environment Facility (GEF) support of about US$4million is currently financing preparatory activities to receive US$60 million phase 2. The second phase should provide a fishing harbour in order to establish full ownership over fisheries resources and optimize derivable benefits.

2.1.3.1.1.2.7. Technical Capacity Building in Fishing and Seafood Processing Technology in Sierra Leone (2010-2014)

The Russian Federation supported and United Nations Industrial Development Organization (UNIDO)/MFMR implemented US$1.4million project aimed at developing national human resource capacity within the fishery sector to effectively manage for optimum revenue generation and sustainability. The outcome was an established Fisheries and Marine Training Institute (FMTI) at Kissy Dockyard administered by Fourah Bay College for providing middle-level manpower needs of the fishing industry

2.1.3.1.1.2.8. West African Pilot Project-Sierra Leone (2012-2014)

An appropriate fisheries policy and legal framework, and the design and implementation of fisheries management systems are pre-conditions for successful fisheries development. In order to provide long term policy advice for the management of Sierra Leone Fisheries in addition to making the fish receiving infrastructure operational and beneficial to both public and private sector of Sierra Leone, the Partnership for African Fisheries (PAF) of the NEPAD Planning and Coordinating Agency (NPCA) supported the Ministry of Fisheries and Marine Resources with US$1million under a Department for International Development (DFID) grant of the West African Pilot Project (WAPP) within the framework of the West African Regional Fisheries Programme (WARFP). Working groups of experts established and provided technical backstopping for a long term policy support.

2.1.3.1.1.2.9. Sustainable Aquaculture for Food Security, Livelihoods and Nutrition Project (2015-2016)

The US$342,000 FAO supported Project, was one of FAO's technical cooperation programs (TCPs) aimed at establishing 30 to 50 hectares of fishponds in the non-coastal communities of Bo, Kenema, Tonkolili and Kono districts, with the view of equipping rural communities with the relevant and adequate knowledge and skills to establish and manage fishponds. The Project sought to contribute to the creation of livelihood opportunities that have the tendency to generate income and ensure temporary and permanent jobs for women and youths within the project areas. The project intended to improve aquaculture by providing assistance to smallholder farmers in communities and group fish farmers through empowerment and capacity building, strengthening of extension services for fish farming and pilot production of local fish feed.

It must be noted that recent fisheries sector development intervention focused on capture fisheries development and management. Consequently, support under ICADeP will be directed towards the development of Aquaculture.

2.1.3.2. General Country Economic Context

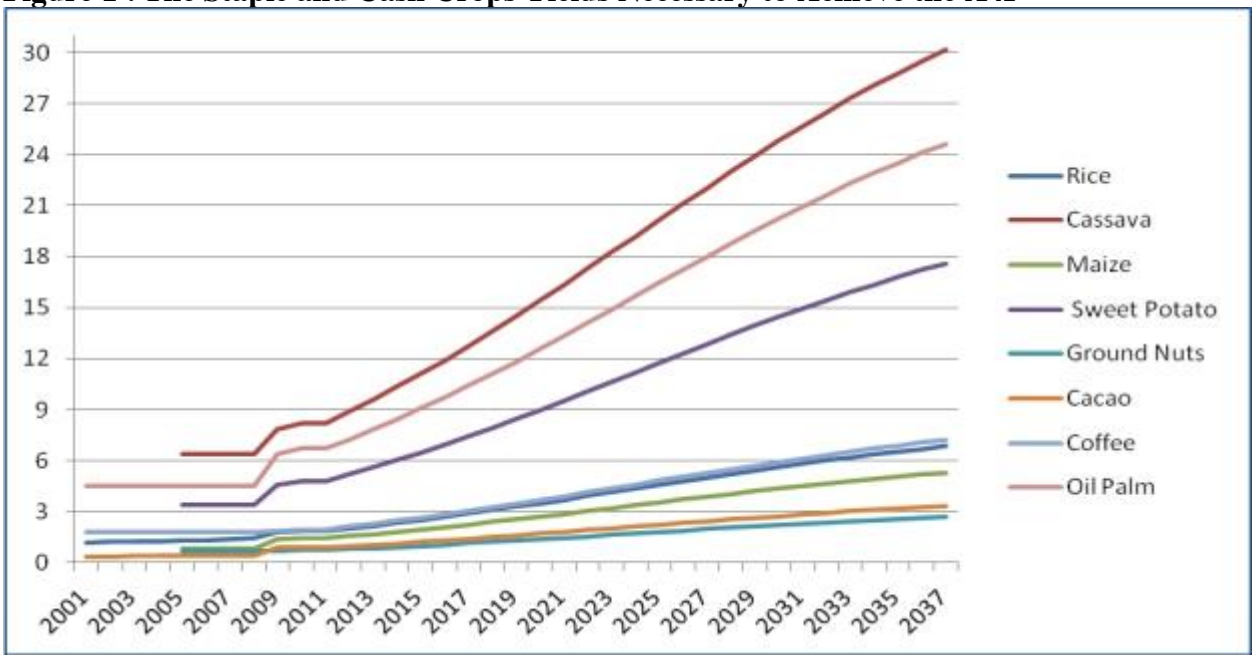
2.1.3.2.1. Country Economy and Participation of Agriculture Sector to Economic Growth

The economy has rebounded strongly since the end of the civil war. The conflict had a massive impact on the economy, as it contracted by around 6 % annually between 1995 and 1999. However, between 2004 and 2007, the economy grew by an average of 7%, driven by reconstruction and recovery in the mining and agriculture sectors. The growth slowed to 4%as Sierra Leone has felt the impacts of the global economic and financial crisis in 2008-2010, but jumped to nearly 20% in 2013 due to the start of iron ore production (growing at steady 6% in 2011-2013 excluding iron ore). Other indicators reflect increasing economic stability. Inflation has decreased from double to single digits. The Government's debt servicing ratio stands at 1.5 %. Sierra Leone reached the Completion Point of the Highly Indebted Poor Countries (HIPC) initiative and has gained additional support under the Multilateral Debt Relief Initiative. Foreign investment has been increasing from USD 9 million in 2003 to over USD 700 million in net foreign direct investment in 2012 (over USD 2 billion in FDI stocks), due to the recent increase due to iron ore and large agricultural projects investments.

Agriculture is recognized to play a key role in meeting the objectives of the Agenda for Prosperity (A4P – see section 2.4). The growth diagnostics performed for A4P sets ambitious targets of increasing the production of key crops, livestock, forestry and fisheries by 10% annually to provide the necessary contribution of 4% to the national economy growth of 7% p.a. with the purpose of reaching the middle income status. To illustrate the task on hand, the average rice yield is to increase from the current (official) 1.8 tonnes per hectare to 6.85 tonnes per hectare (as illustrated in Figure 1

as well as other projected crops yields). In addition to staple crops, it is also important to invest in the diversification of the production (for example fruits and vegetables, legumes, etc.). Comprising > 57% of total GDP in recent times (Table 2, Figure 3), agriculture is the largest sector in the economy, employing around 60 % of the workforce. Yet, there remains a high level of informality within the agricultural sector, estimated to be up to up to 50% of the production and trade, and the sector is still facing challenges in terms of productivity and production, value chains structuring and market access, mitigation and adaptation to climate change effects. Over the years, the economy and demographics have not remained static. Mining and services sectors are growing. The urban population is growing faster than those in rural areas, so that in 20 years more than half of the population will live in urban areas. Overall population is growing stands at around 2.1% annually, increasing food demand and pressure on the production. In addition to the challenges already highlighted, the 2014 Ebola Virus Disease (EVD) outbreak undermined significantly the recent growth that was projected to be at the level of 13%-15% before the occurrence of the disease. The GDP growth rate in 2015 was -20.6 (Table 2, Figure 3).

Figure 1 . The Staple and Cash Crops Yields Necessary to Achieve the A4P



Garrido, L. (2012): Sierra Leone's Vision of Prosperity: Overcoming Constraints to Diversification and Growth. Garrido, L. (2012): Sierra Leone: Policies for Economic Diversification and Growth

2.1.3.2.2. Domestic Investment and Farm Commercialisation

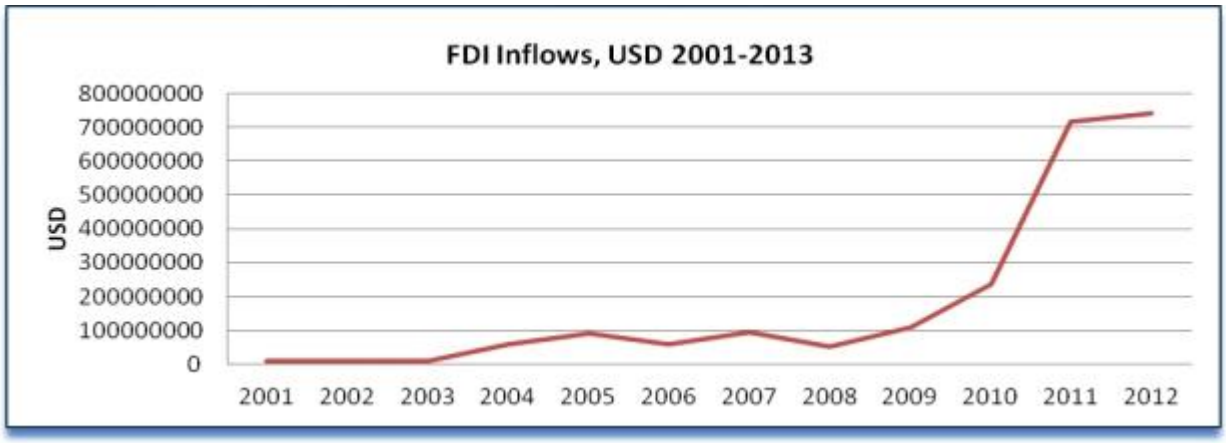
Official data on domestic private investment in agriculture are not available. The estimate is around USD 30-40 million per annum. The domestic investors are represented by local middle to large size farms (from 10Ha) with some investment from diaspora. Increased share of Government Agricultural Expenditure have been observed. The growth rate of Government Agriculture Expenditure (GAE) slowed to 13.4% per year on average during the NAIP period after a faster growth of 32% per year on average before NAIP period. The share of GAE in total government expenditure increased significantly to 7% per year on average during the NAIP period from 1.2% per year on average during the reference period. A similar trend was observed in GAE relative to agriculture value added – i.e., spending intensity – as the ratio increased from 1.2% before NAIP to 1.8% during NAIP. Data on middle or large farming is unavailable. However, the existing surveys demonstrate growth of a

n average land plot size from 2.5 Ha in 2003 to 2.9% in 2011[4]. Nearly 30 % of households operated 2 plots, while 12.6 % operated three to eight plots (equaling farm sizes from 6 Ha up to 100 Ha). This is only a proxy indicator or farms expansion. The data was based on Sierra Leone Integrated Household Surveys (SLIHS) that did not include bigger commercial farms.

2.1.3.2.3. Foreign Investment

Total amounts of Foreign Direct Investments (FDIs) are not readily available, but estimations by the Sierra Leone Investment and Export Promotion Agency (SLIEPA) point towards Ten Billion United States Dollars over the past five years. FDI has significantly increased in the last five years with new investments in iron ore and large agricultural projects as reported by Trading Economic and United Nations Conference on Trade and Development (UNCTAD) (Figure 2 and Table 1).

Figure 2. Net FDI Inflows 2001-2013



Source: http://www.tradingeconomics.com

Table 1. Net FDI Inflow and Stock 2005-2013 (UNCTAD)

FDI flows	2005-2007 (Pre-crisis annual average)	2010	2011	2012	2013	as a percentage of gross fixed capital formation 2005-2007 (Pre-crisis annual average)	2011	2012	2013
Sierra Leone									
Inward	80	238	950	548	579	42.7	77.8	58.6	56.0
Outward	- 3	-	-	-	-	- 4.2	..	..	..
FDI stocks	**1995**	**2010**	**2011**	**2012**	**2013**	**as a percentage of gross domestic product 1995**	**2011**	**2012**	**2013**
Sierra Leone									
Inward	242	482	1 311	1 740	2 319	20.7	44.7	40.1	48.4
Outward	-	-	-	-	-	..	..	..	..

http://unctad.org/en/pages/DIAE/World%20Investment%20Report/Country-Fact-Sheets.aspx

Statistical data gleaned from MoFED indicates dwindling annual FDI in agriculture and fisheries sector especially in recent year inching towards the general elections. (Figure 2b). It is absolutely necessary to monitor the achievements and impacts of these projects, their return on investment, yields, impacts on employment, growth and poverty reduction, as well as the effectiveness of the investment incentives.

[4] WB, Sierra Leone Agriculture Profile 2013; WFP Food Security Report 2011

Figure 2b. Foreign Direct Investment in the Agriculture Sector 2010-2017

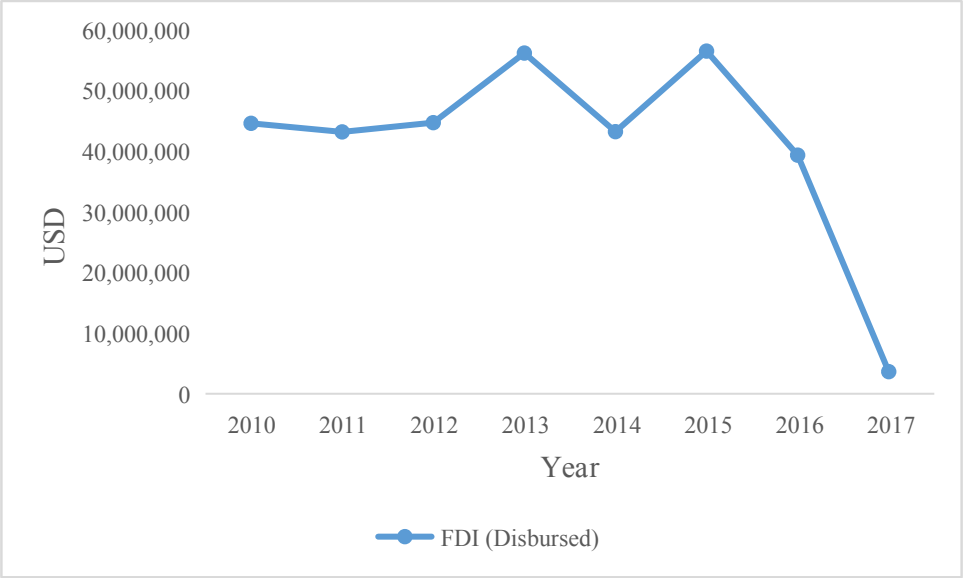
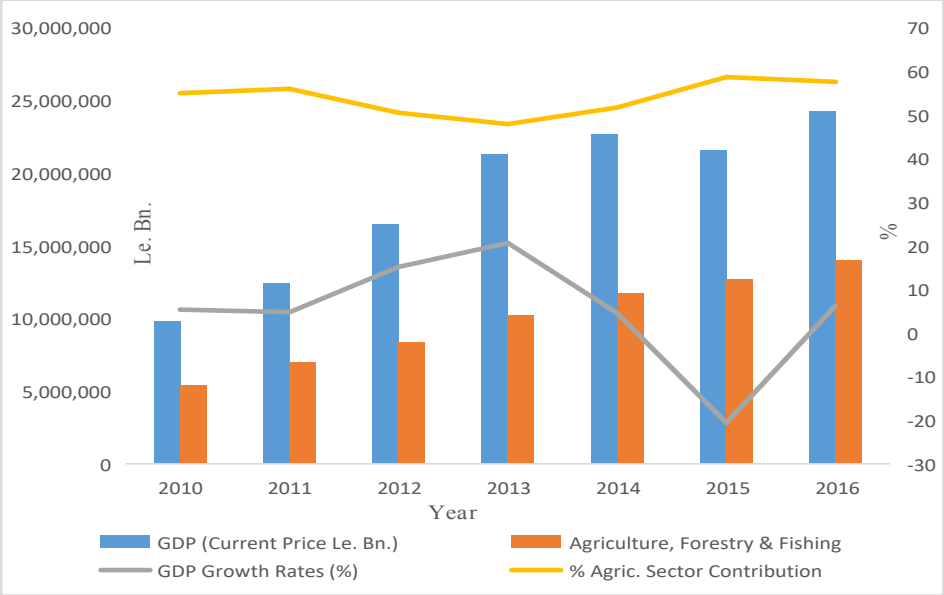


Table 2. GDP by Sector and GDP Growth[5]:

Year	GDP (Current Price Le. Bn.)	Agriculture, Forestry & Fishing	Industry	Services	GDP Growth Rates (%)	% Agric. Sector Contribution
2010	9,844,396	5,429,597	798,027	3,616,772	5.4	55.1
2011	12,460,722	6,986,660	1,007,125	4,466,937	4.8	56.1
2012	16,515,434	8,355,508	2,400,415	5,376,603	15.2	50.6
2013	21,317,382	10,228,785	4,525,363	6,071,094	20.7	48.0
2014	22,689,471	11,751,396	3,542,818	6,767,540	4.6	51.8
2015	21,582,558	12,681,597	955,044	7,323,042	-20.6	58.8
2016	24,287,894	14,023,240	1,641,659	7,958,130	6.3	57.7

[5] World Development Indicator and Statistics Sierra Leone
http://databank.worldbank.org/data/reports.aspx?Code=NY.GDP.MKTP.KD.ZG&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y

Figure 3. GDP Development and Agric. Sector Contribution to GDP



The Status and Progress of Sierra Leone's Agricultural Investment, Growth and Poverty which is used as the base-line for the results framework of this investment plan outlined in Table 10 for key indicator targets are given in Table 3.

Table 3. The Status and Progress of Sierra Leone's Agricultural Investment, Growth and Poverty

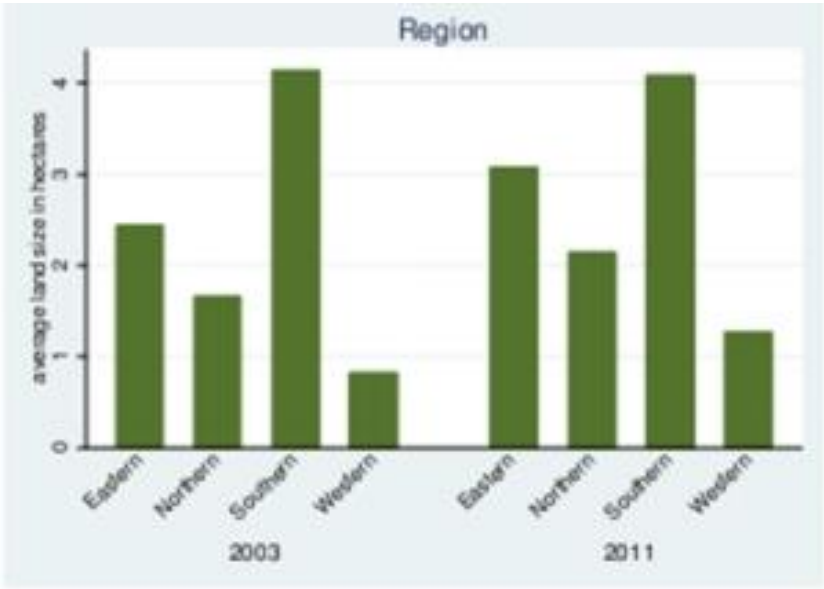
Metrics	Data Source	Reference Period Average 2003-2007	2008	2009	2010	NRDS Period Average 2011-2014	Change between NRDS and Reference Value	Unit
Government agriculture expenditure growth rate (%)	ReSAKSS	32.0	39.1	93.8	30.6	-13.4	-45.4	pp
Government agriculture expenditure (% of total government expenditure)	ReSAKSS	1.2	4.0	6.0	9.0	7.0	5.8	pp
Government agriculture expenditure (% of agriculture value added)	ReSAKSS	1.2	3.0	5.0	6.0	3.0	1.8	pp
Agriculture value added per agricultural worker (constant 2010 USD)	ReSAKSS	822.2	1002	1054	1053	1318	60.3	%
Agriculture value added per hectare of arable land (constant 2010 USD)	ReSAKSS	264.6	343	356	347	444.3	67.9	%
Yield for individual crops (Ton/Ha)								
Maize	FAOSTAT	0.92	0.84	0.92	1.45	1.97	113.4	%
Cassava	FAOSTAT	6.6	6.2	7.8	8.2	11.4	71.4	%
Paddy Rice	FAOSTAT	1.18	1.43	1.78	1.87	1.82	53.4	%
Plantains	FAOSTAT	5.3	5.4	5.4	5.4	5.5	3.9	%
Taro (cocoyam)	FAOSTAT	2.5	2.5	2.5	2.4	2.5	-0.3	%
Growth rate of output for individual commodities (%)								%
Maize	FAOSTAT	25.4	2.99	25.9	73.4	-6.5	-1.26	%
Cassava	FAOSTAT	58.0	5.0	41.5	15.5	6.2	-89.3	%
Paddy Rice	FAOSTAT	12.53	15.7	30.6	15.7	3.3	73.9	%
Plantains	FAOSTAT	3.9	2.6	2.6	1.6	1.8	52.3	%
Taro (cocoyam)	FAOSTAT	1.6	-10.7	10	1.8	2.6	66.9	%
Agriculture production index (2004-2006=100)	WDI	96.5	104.3	128.7	145.4	164.6	70.6	%
Agriculture value added (Billion US$)	WDI	1.0	1.3	1.3	1.4	1.5	50.8	%
Growth rate of agricultural value added (constant 2005 US$)	WDI	8.9	6.7	4.0	3.5	3.5	-5.4	pp
Growth rate of agricultural value added	WDI	5.8	5.1	2.7	2.2	2.2	-6	pp

per capita (constant 2005 US$)								
Growth rate of GDP per capita (constant 2005 US$)	WDI	2.7	2.8	2.2	2.9	8.8	6.1	pp
GDP per capita (constant 2005 US$)	WDI	353.9	384.9	393.5	405.1	498.9	40.9	%
GNI per capita, PPP (constant 2011 international $)	WDI	1,056.6	1,244.9	1,284.1	1,231	1,495.8	41.5	%
Gini coefficient***	WDI	40.2				33.9	-15.4	%
Number of jobs created per annum*	WDI	64813	44395	45081	147462	48435	25.3	%
Employment rate (% of population)	WDI	65.6	66.3	66.4	66.5	66.6	1.0	pp
Poverty headcount ratio, national (% of population)**	WDI	64.4				52.9	-11.5	pp
Poverty headcount ratio, national (% of rural population)**	WDI	78.7				66.1	-12.6	pp
Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)**	WDI	58.47				52.33	-6.14	pp

Legends: *ReSAKSS*: Regional Strategic Analysis and Knowledge Support System; *WDI*: World Development Indicators; *FAOSTAT*: FAO Statistic database; * Calculation from employment rate and population from the WDI database; ** Poverty measures for years 2003 and 2011. *** Gini values are for 2003 and 2011.

The Agriculture Household Tracking Survey (ATHS, 2011) shows 7% of households used fertilizers and other inputs and 8% used credit to buy agricultural machinery and equipment. Another 8% were selling their produce not at the farm gate suggesting more advanced marketing strategies. It can be presumed that these wages may represent the evolving class of bigger commercial farmers. ATHS has so far been the only survey in Sierra Leone that gives some idea of production and marketing activities of farmers. Again, ATHS did not include commercial farms. All the agricultural research is dedicated to smallholders, poverty and food (in) security.

Figure 4. Average Land Size Holding by Year and Region



Source: Calculations based on SLIHS (2003 and 2011)

Objective microeconomic and market research of agricultural enterprises is virtually absent in Sierra Leone and generally in Western Africa, although it is very important for the Government to understand the drivers and patterns of local farms commercialization. Thus it is imperative to

carefully analyze the nature of agricultural land expansion as it relates to agricultural commercialization at the microeconomic levels. This is particularly important given the ongoing debate about whether African governments and development partners should promote large-scale versus smallholder farming and given the uncertainty about the extent to which current commercialization and growth in agriculture have been inclusive. Indeed, anecdotal evidence suggests that the processes entail a special group of smallholder farmers that have transitioned to become medium- and large-scale commercial farmers, but the nature and implications of this transitioning process are not understood.

2.1.3.2.4. Poverty, Unemployment and Youth Employment

Sierra Leone recorded an increasing development progress over the last decade, according to UNDP Human Development Report 2016 (HDR, 2016). Sierra Leone registered an average annual HDI growth of 1.04%; 2.65%; 1.39%; over the periods: 1990–2000; 2000–2010; 2010–2015 respectively. Over a 25 year period, 1990–2015; an average annual HDI growth of 1.75% was scored. The country's Human Development Index (HDI) also shows a positive change in rank of value 3 between 2010–2015; denoting an improvement[6]. That Sierra Leone ranked 174/174 in 2000 just before the end of the war and now (in 2015) ranks 179/188; is indeed an improvement. However, given that the country was ranked 176/188 in 2014 but dropped to 179/188 in 2015 to (HDR, 2016); signals room for improvement. Health indicators depict a mixed bag. Some basic improvement in health indicators is observed. For example, Kamara *et al*., (2006)[7] reported mortality rates for infants and under 5s of 115-121 and 194-224 respectively in 2004 which according to (HDR, 2016), decreased to 87/1000 and 120/1000 live births respectively in 2015. But, maternal mortality is at 1360 per 100,000 in 2015 up from 1200 per 100,000 live births in 1990s. About 38% of under 5s are moderately or severely stunted. With only 0.2 physicians/10,000 people in 2015(HDR, 2016), that is sharp fall form 7.3 physicians for every 10,000 people in 2004 even when adjusted for population increase according to United Nations Population Fund UNFPA *et al*, (2006)[8]. About 37% and 56% do not have access to safe drinking water and improved sanitation respectively in 2015 (UNICEF)[9]compared to 57% and 39% respectively in 2004 (UNFPA *et al*., 2006). Gender difference is observed in literacy level with 59% and 76% registered for females and males respectively in 2015 to (HDR, 2016). It not surprising that citizen's overall satisfaction with wellbeing score of 4.9/10 was registered by Sierra Leone (HDR, 2016).

According to the World Bank Poverty Profile 2013, the poverty reduced from 66.4 % of the population in 2003 to 52.9 % in 2013. This poverty level rises to 66.4 % in rural areas, but is comparatively lower at 20.7 % in Freetown. Poverty is also concentrated among young people with around 70 % of youth (aged between 15 and 35) unemployed or underemployed. Women's labour force participation in crop farming and in trade and repairs stand at 65.8% and 21.9% respectively. The dominance of women in the self-employed/informal sector with poor working conditions, low salaries and no social protection leaves them open to exploitation and increases their vulnerability to poverty. The population in the eastern part of the country is more likely to be poor. In rural areas,

[6] UNDP Human Development Report (HDR) 2016: http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf

[7] Kamara, J.A.L., Williams, M.L.J., Turay, S and Sengeh, P. (2006). Republic of Sierra Leone - 2004 Population and Housing Census: Analytical Report on the Mortality and Disability Status of the Population. UNFPA/SSL/EU; Statistics Sierra Leone, Freetown, Sierra Leone; November 2006.

[8] UNFPA, SSL and EU (2006). 2004 Population and Housing Census. Statistics Sierra Leone (SSL), A.J. Momoh Street, Freetown, Sierra Leone.

[9]UNICEF Sierra Leone Data https://data.unicef.org/country/sle/

households in which the head's primary occupation is agriculture were more likely to be poor, as well as those with smaller landholdings. Those growing rice were neither more nor less likely to be poor. In addition, households in which the head has at least some secondary or post-secondary education were less likely to be poor. Women and youth are particularly vulnerable and trapped in perpetual poverty due to persistent norms of social exclusion, particularly common in rural areas. This undermines their participation in local decision-making, access to productive resources, fair targeting of public projects and services and opportunities to integrate into market systems. However, women-led households demonstrate better resilience to poverty than male-led households (WB Poverty Profile 2013).

The conflict in Sierra Leone affected access to educational opportunities for a large number of youth and this is reflected in the extremely low levels of literacy in the country. Low levels of education and vocational skills are an obstacle to decent employment and increased business opportunities. Lack of basic financial, marketing, management and other transferrable skills constrain business growth and trans-sectoral labor force movements, as well as posing a serious challenge for the investors. While the primary and secondary education situation is improving, the adult education needs to be addressed with involvement of the private sector. In general, in the country, a lack of alignment between labor market needs and curricula (both in formal and informal education) remains. The mismatch between education and training and the labor market needs, can be addressed through the development of labor market ready skills and entrepreneurship minded youth, with the capacity to successfully scale up business opportunities, both in the informal sector and the formal sector; ensuring education and training matches the requirements of both formal and informal employment, including self-employment. Holistic approaches will need to be adopted which will include not only market-demanded skills but also an array of life skills (from agro business to health related ones and diseases prevention and mitigation further to the current ongoing EVD crises).

2.1.3.2.5. Food Security and Nutritional Status

On average, households spend approximately 60 % of their incomes on food. About 49.8 % of households are food insecure, according to the 2015 Comprehensive Food Security and Vulnerability Analysis (CFSVA)[10], meaning they face difficulties to access and consume the required quantity and quality of food necessary to maintain a healthy and active life. Compared to 2010 CFVSA, there is an increase of about 5% of the food insecure. Out of these households in 2015, 8.6% are severely food insecure (an increase of 6.5% compared to 2010). Food insecurity is higher in rural areas (59.7%). The highest numbers of food insecure people were engaged in farming, including: production of vegetables and fruit (63.1 percent), food crops (62.3 percent) and cash crops (63.1 percent). Fact about food security status in Sierra Leone[11] depicts that ½ of the population - 3.5million people are food insecure. The diet of Sierra Leoneans is still less diversified. As example, in 2014, cereals (mainly rice) represented 49.8% share of the dietary energy supply, followed by starchy roots (12.6%). Some products such as fruits and vegetables, meat, fish, milk and eggs were less consumed (respectively 3.4%, 1.2%, 2.5%, 0.5% and 0.1%)[12]. This could be attributed to several factors, such as insufficient availability, high food costs coupled with poverty and cultural and social

[10] Sierra Leone - Comprehensive Food Security and Vulnerability Analysis, December 2015. https://www.wfp.org/content/sierra-leone-comprehensive-food-security-and-vulnerability-analysis-december-2015

[11] Launch of the 2015 Comprehensive Food Security and Vulnerability Analysis (CFSVA) 27 October 2016 .Freetown https://eeas.europa.eu/sites/eeas/files/cfsva_launch.pdf

[12] FAO. Food and Nutrition in numbers, 2014.

influences. It is therefore not surprising that the Sierra Leone Global Hunger Index is said to in the critical region[13]

It takes 7.7 miles to access a functioning market; the price of local and imported rice has risen by 38% since 2010; households spend 2/3 of their income on food and transport; 608,500 people about 10% of the population are severely food insecure; ½ of the total number of farmer's productivity is constrained due to lack of improved seeds; and local rice production has declined by 15% since 2010. Also very revealing is the condition that only 4% of famers can produce enough rice to meet their family's needs for 1 year; over ½ of households consume 4 food groups or less per week and 2/3 of all households do not get enough iron from their diet. National fish consumption is 17 kg per capita per year and close to the global average of 19.7 kg[14] and fish is the most accessible animal protein. Food fish security would be further guaranteed by boosting aquaculture.

Sierra Leone Demographic Health Survey gives the following key findings with respect to nutrition of children and adults[15]

Box 3. Key Findings on Nutrition of Children and Adults

• Thirty-eight percent of children under age 5 are stunted, 9 percent are wasted, and 16 percent are underweight. Children's nutritional status has a positive relationship with the mother's health, the mother's education, and household wealth.
• The proportion of children underweight has decreased from 21 percent in 2008 to 16 percent in 2013.
• Almost all children (97 percent) are breastfed at some point. Exclusive breastfeeding is uncommon, however; only 32 percent of children under age 6 months are exclusively breastfed. The median duration for exclusive breastfeeding among Sierra Leone children is 0.6 months, unchanged since 2008.
• Sixty-two percent of children age 6-9 months are consuming the recommended breast milk and complementary foods, and 68 percent of children age 12-23 months are consuming both.
• Only 7 percent of children age 6-23 months are fed appropriately, based on recommended infant and young child feeding practices.
• Eighty percent of children age 6-59 months are anaemic.
• Nine percent of women are undernourished (BMI < 18.5), while 18 percent are overweight or obese (BMI > 25.0).

The survey reports that nutritional status of children under age 5 as measured by wasting or low weight-for-height indicates that overall, 9 percent of children are wasted, and 4 percent are severely

13 The GHI is an association of 4 indicators:
- under-five year stunting prevalence
- under-five year underweight prevalence
- prevalence of undernourishment
- under-five year mortality prevalence

14 FACTSHEET. Feed the Future Sierra Leone Scaling up Aquaculture Production (SAP); http://pubs.iclarm.net/resource_centre/2017-27.pdf

15 Sierra Leone Demographic Health Survey, 2013. https://dhsprogram.com/pubs/pdf/FR297/FR297.pdf

wasted. Wasting increases initially with the child's age from 10 percent at under age 6 months (10 percent) to a peak of 18 percent at age 9-11 months, before declining steadily to 7 percent at age 48-59 months. A slightly higher proportion of male children than female children are wasted (11 percent versus 8 percent). Children reported to be very small at birth (14 percent) and children born to thin mothers (BMI < 18.5) (12 percent) are more likely to be wasted than other children (10 percent or less). Northern region has the highest prevalence of wasting (11 percent) and severe wasting (5 percent) compared with the other regions. It should be noted that 8 percent of children under age 5 in Sierra Leone are overweight.

At the national level the survey report indicates that, 16 percent of children under age 5 are underweight; with 6 percent severely underweight. There are no clear weight-for-age trends across age groups. Children age 6-8 months and those age 9-11 months are most likely to be underweight (both 20 percent or greater). As with the other two nutritional indicators, male children are more likely to be underweight (18 percent) than female children (15 percent), and smaller size at birth is associated with lower weight-for-age. Children born to thin or underweight mothers are more likely to be underweight (21 percent) than children born to mothers with normal BMI (16 percent), or mothers that are overweight (13 percent). The proportion of underweight children is higher in rural areas (18 percent) than in urban areas (12 percent). Children in the Western region are least likely (10 percent) to be underweight compared with the other regions (16 percent or higher).

Though under-nutrition rates in Sierra Leone remain high, an emerging food policy issue may be prevention of obesity. There are indications for increased risk for future obesity, if improved access to quantity, but not quality, of food is addressed.

The youth population, aged 15-35, comprises one third of the population of Sierra Leone and youth unemployment has been regarded as a major root cause of the outbreak of civil conflict in Sierra Leone. Youth unemployment remains a challenging social and economic problem in Sierra Leone. The country's youth unemployment rate of around 70 % is amongst the highest in the West African sub-region and an estimated 800,000 youth today are actively searching for employment (UNDP). Furthermore, illiteracy remains a persistent challenge and youth that lack that skills and education find it extremely difficult to compete for the limited jobs available. In the context of the Agenda for Change for 2008-2012, the government has implemented new legislation for youth-friendly initiatives that aim to provide an environment conducive to youth development, employment and empowerment. Youth employment remains a top priority in the Agenda for Prosperity. However, despite the implementation of various initiatives, aimed at creating jobs for youth, unemployment in Sierra Leone remains intractably high. With an economic growth spurred on to a large extend by the mining sector; the country is facing difficulties to absorb growing numbers of unemployed youth.

Decent employment also remains a challenge in the country. Basic labor standards do exist in Sierra Leone, but are not well implemented. Although in certain cases some improvements have been reported, a lot needs to be further reinforced. The country is a signatory to a number of international conventions on labor including freedom of association, elimination of compulsory labor, elimination of the worst forms of child labor and elimination of discrimination. In addition, a number of

labor-market regulations that seek to balance job creation with social protection exist but are not enforced well due to the lack of capacity. Such regulations include those governing the minimum wage, holidays and paid leave. Several social safety-net programmes in Sierra Leone now mostly rely on community-driven development initiatives, such as the Social Action and Poverty Alleviation Programme and the National Commission for Social Action (NACSA) project funded by the World Bank and the African Development Bank (AfDB).

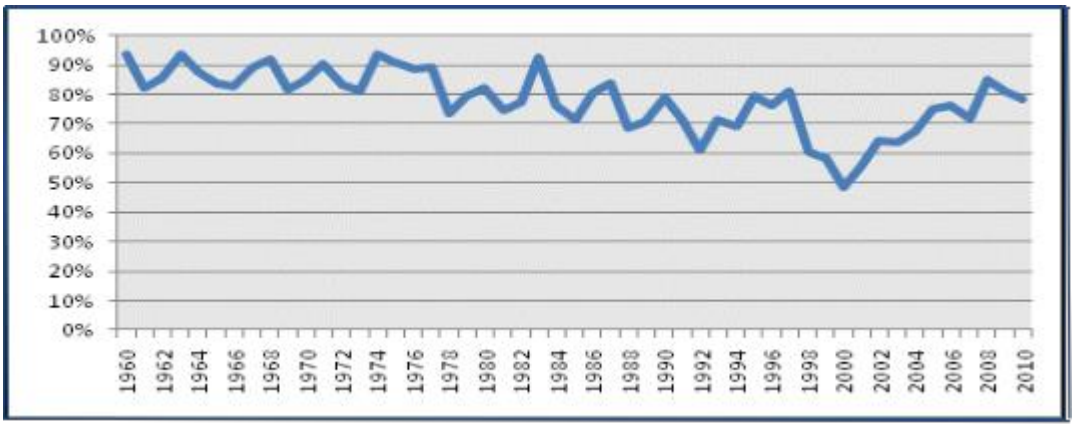
2.1.3.2.6. Physical Health Constraints

The current EVD crisis highlighted one of the key binding constraints for agriculture and the whole country – poor health due to very weak infrastructure. Even without the Ebola epidemic, there are up to 2 million annual cases of malaria, high cholera and other diseases incidence coupled with half of the population experiencing various levels of food insecurity and malnutrition. High incidence of water and food borne diseases (cholera, dysentery etc.) induces inadequate absorption of food nutrients due to frequent stools and result into malnutrition. Another trend is the "feminisation" of agriculture due to male and youth migration to urban centres, which sets physical limits to the extensive agriculture. The estimated effect is that at least half of the work force potential is lost due to illness or malnutrition. This is a very serious constraint, particularly for the smallholder family farms, which will only be alleviated with gradual health system improvement.

2.1.3.2.7. Food Self-Sufficiency and Food Security

The rate of food self-sufficiency declined from a high of about 95% at Independence in 1961 to a low of 50% during the civil war years in the 1990s (Figure 5). Although there has been some recovery during the last decade self-sufficiency has not yet recovered to the levels in the early 1960s as shown in Figure reflecting self-sufficiency levels for rice.

Figure 5. Rice Self-sufficiency



Source: WFP, 2011

There is high dependency on rice, the country's main staple, with 104kg consumed per capita per annum. It is not surprising that data with respect to self-sufficiency is only available on rice. However, there has been a rice deficit for the last two decades, a trend that dramatically worsened during the civil war. Although domestic production recovered quickly after 2001, the country produces only three-quarters of its rice requirement, with remaining demand being met by imports. During the food price crisis of 2008, the cost of rice rose by over 50 % between January and July 2008. The current EVD crisis could potentially have a similar or even more severe impact on the food process in 2014-2015. Food security will very much depend on the

sub-sector productivity increase through private sector development and the government policies towards balance nutrition and food diversification as discussed in the ASR main report. Depending on the success of the structural transformation and wealth growth, the Government will decide whether self-sufficiency in rice will still be a priority or the economy will have sufficient external shock absorption capacity and will follow other economic priorities.

2.1.3.2.8. Support for Agri-business - Farmer Linkages along Selected Agricultural VCAs

There is evidence from the 2014 ASR, that numerous commodities provide excellent opportunities for agriculturalists and fisher folks throughout Sierra Leone. Agricultural and fishery researchers, extension staff, governmental officials and donor personnel can and should provide guidance and recommendations to the agricultural community as to which commodities are suitable to conditions which exist with the country; as well as bring attention to market opportunities. However, to achieve economic improvement for the entire agricultural sector; of primary importance is for government is to resist regulatory restrictions which overly burdensome, a tax code which does not put agriculture in an uncompetitive position on the global stage and to continue the battle against corruption. In addition, government should insure there are no restrictions which inhibit trade and open markets. A key to economic success for agriculture is to maintain an environment in which the private sector can make practical business decisions relative to what to produce and market.

2.1.3.2.9. Formalization and Improvement of Productivity and Labor Conditions in the Informal Economy

A key problem facing those involved in agriculture is mostly the informal nature of the sector. This deprives them of better investment financing, insurance and other social benefits. ICADEP will encourage the transformation of the agribusinesses into formal and legal entities. This will not only promote a legal and formal agribusiness but will enhance much improved sector statistics, increased government revenue and strengthening the agriculture and fisheries value chain stakeholders in the market as an organized advocacy group(s). At the same time, in order to boost its poverty reduction objectives, the ICADEP will work on improving the productivity and decent labor conditions in the informal economy whilst promoting skills development, value chain partnerships with informal organizations of rural workers and inclusive responsible contract farming and out grower schemes.

3.0. The Agriculture Sector

3.1. Agriculture Development Trends

The agriculture sector remains the biggest sector of the economy contributing between >57% to GDP and is dominated by the crops sub-sector (Appendix 4). The contributions of the sub-sectors to the GDP are also shown in (Appendix 4). Crops represent 70% of the agricultural output while fisheries contribute 14%, forestry 11% and livestock only 4%. It should be noted that fisheries contribution must have been under-reported as small-scale fisheries data was not collected between 2010-2017 - the sub-sector that contributed about 92.5% of the national catch in 2009. The investment plan will therefore include support to data collection for capture fisheries in addition to aquaculture development which is emphasized in this plan. Traditionally, rice dominates the crops contribution to GDP with an average of over 15% in the last five years followed by cassava at 9.3%. The drivers of the value-added growth within the crops sector were rice, groundnut, maize and other crops (including cash crops).

3.1.1. Agricultural Production and Productivity Trends

There remains a high level of informality within the agricultural sector; perhaps up to 50% of the production and trade. Many of these informal producers are within the smallholder category which as a demographic group produced 47% of all agricultural raw products at the start of the implementation of the SCP. As mentioned earlier, fisheries figures are even higher with small-scale operator contributing about 92.5% of the national catch in 2009[16] (Appendix 11). That data was not collected between 2010-2017 on the subsector which makes such a significant contribution to food fish security is dumbfounding. Aquaculture and inland fisheries are yet to be fully developed. The capacity development of MFMR to keep up with the data collection requirement for management information is crucial for the development of aquaculture and inland fisheries resources.

Due to the GOSL post-conflict reconstruction effort, the agricultural production in all sub-sectors in Sierra Leone shows an increasing trend since the cessation of hostilities in 2001 as shown in Table 4, 5; Appendices 5, 8, 9 and 10; Figures 6, 7 8) .

Table 4. Annual Staple Crop Production Trends, '000 MT 2001-2017

Year	Paddy Rice	Maize	Cassava	Sweet Potato	Pulses/ Groundnut
2001	310.620	10.00	741.216	38.200	15.00
2002	422.065	10.03	895.817	45.450	28.00
2003	445.633	11.90	1,091.168	84.446	33.00
2004	542.000	12.49	1,758.004	153.196	40.00
2005	552.000	13.11	2,287.000	160.121	43.00
2006	562.000	16.24	2,973.100	168.129	48.00
2007	588.004	20.30	3,865.030	176.537	52.00

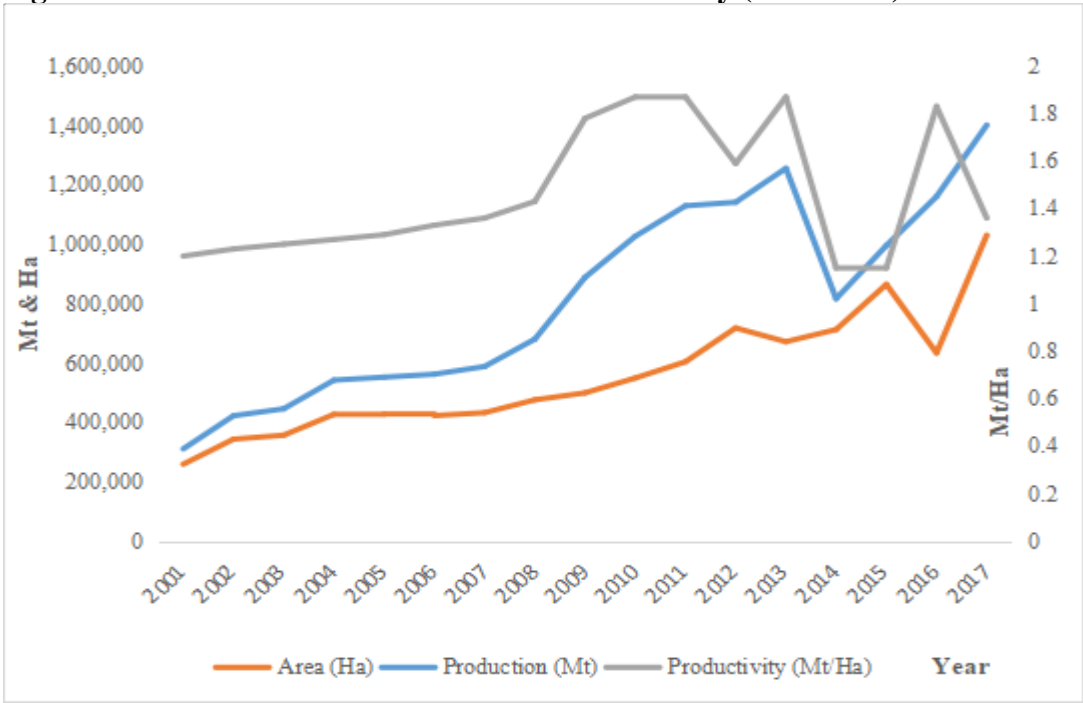
[16] MFMR Statistics Unit (note that small-scale fisheries data was last recorded in 2009)

2008	680.097	22.85	4,058.288	180.068	58.00
2009	888.417	23.53	4,261.205	183.670	59.00
2010	1,026.671	44.46	4,697.992	187.344	70.00
2011	1,129.338	52.416	3,460.357	210.313	83.068
2012	1,141.417	39.237	3,585.172	220.829	84.748
2013	1,255.559	40.022	3,810.418	225.246	86.443
2014	816.503	20.812	2,316.811	138.207	22.882
2015	995.360	22.619	2,556.554	153.298	25.169
2016	1,160.646	12.554	3,073.121	169.375	66.308

Source: PEMSD/MAFFS

Analysis in various reports of yields and the areas harvested demonstrates that the production growth has been mainly achieved through the expansion of crop areas (Figure 6, 7, 8). Time series for Cassava and sweet potatoes (Table 5) also indicates inelastic productivity with increase in production area. The same could be said about a range of crops (Appendix 5). Possible reasons for the productivity stagnation would include, low quality seed, little use of agricultural inputs and technologies, high post-harvest losses and farm fragmentation (lack of economies of scale). Consequently, measure for increasing productivity should be an important undertaking during ICADeP implementation. Table shows a somewhat marginal increase in livestock over the period 2014-2015 except for chicken production that witnessed a significant increase. Distribution of livestock by district depicted areas with comparative advantage for the production of the various livestock (Appendix 6). For example, Koinadugu district is clearly the biggest cattle producer, contributing about 25% of production - closely followed by Kono district providing 21%. The proximity of these districts to neighbouring Guinea – a significant cattle producing country, might be influential. Port Loko and Kambia districts lead sheep production whereas; Kailahun, Kambia, Kono, Port Loko and Tonkolili are the major producers of goats. Western Area dominates swine and chicken production contributing 31% and 35% respectively.

Figure 6. Trends in Rice Production and Productivity (2001-2017)



Source: MAFFS

It should be also noted that all surveys focus on smallholder households and do not capture the commercial farms; it is difficult to track the real production and productivity patterns of the different types and size of farming enterprise. The same relates to all sub-sectors productivity surveys to identify best production practices and yields.

Table 5. Cassava and Sweet Potato Harvested Area and Yields 2001 – 2016

Year	Cassava			Sweet Potato		
	Area Cultivated (Ha)	Yield (Mt/Ha)	Production (Mt)	Area Cultivated (Ha)	Yield (Mt/Ha)	Production (Mt)
2001	61,768	12.00	741,216	7,640	5.00	38,200
2002	68,909	13.00	895,817	9,090	5.00	45,450
2003	83,936	13.00	1,091,168	16,379	5.40	84,446
2004	134,404	13.00	1,758,004	28,240	5.40	153,196
2005	175,923	13.00	2,287,000	29,652	5.40	160,121
2006	228,700	13.00	2,973,100	31,115	5.40	168,129
2007	297,310	13.00	3,865,030	32,692	5.40	176,537
2008	312,176	13.00	4,058,288	33,346	5.40	180,068
2009	327,785	13.00	4,261,205	34,013	5.40	183,670
2010	344,175	13.00	4,697,992	34,693	5.40	187,344
2011	420,457	8.23	3,460,357	41,729	5.04	210,313
2012	225,766	15.88	3,585,172	21,419	10.31	220,829
2013	352,816	10.80	3,810,418	64,354	3.50	225,246
2014	180,493	12.84	2,316,811	19,565	7.06	138,207
2015	201,621	12.68	2,556,554	21,040	7.28	153,298
2016	195,824	15.69	3,073,121	18,659	9.08	169,375

Source: PEMSD/MAFFS

Analysis of the food production and the food demand in Sierra Leone, illustrated that rice production and imports have increased simultaneously[17]. Sierra Leone requires about 530,000 mt of milled rice to meet the consumption needs of the population annually. National Paddy Rice Production was projected at 524,000 mt in 2006 and 638,000 mt in 2007. The level of rice self-sufficiency rose from 57.45 percent in 2002, to 69 percent in 2005 and then to 71 percent in 2007. The remainder must be imported at increasingly expensive prices in the current situation of high prices for food including rice. International nominal prices of all major food commodities reached, in the first three months of 2008, their highest level in nearly 50 years, while prices in real terms in nearly 30 years. The prices of rice, the main staple food in Sierra Leone has seen a steady increase by more than 50% on average in the entire country.

Rice Yields

Rice production has increased steadily and continuously after the civil war touching an all-time record of 1,279,612 tons in 2017 (Appendix 8). This increase in production is attributed to increase in area cultivated which has increased form 258,850 hectares in 2001 to 1,030,450hectares in 2017. There is also some movement in productivity, yields increased from 1.20t/ha in 2001 to 1.87 t/ha in 2013 but dropped to 1.30t/ha in 2017. This increase in yield appears to be a result of increase in area under rice cultivation. Despite this increase, yields are still very low in Sierra Leone compared to the average of Sub Saharan Africa and remain far below the potential.

Cassava Yields

Like rice, cassava production has been increasing since the end of the conflict. Production has increased from 741,216 tons in 2001 to 4,932,892 tons in 2012, an increase of about 85 percent. It is clear (from Appendix 9; Figure 7) that increase in production is entirely a result of increase in area under cultivation. However, in recent year 2016-2017 productivity is increasing due to improved variety and input supplies. The area under cultivation increased from 61,768 ha in 2001 to 379,453 ha in 2012, while productivity stagnated at 13.00t/ha from 2013 to 2012. Cassava yields are relatively low given the yield potential of 20-40t/ha of available improved cassava varieties (SLICASS). The low yield on farmer's field could largely be attributed to poor management practices, and the predominant use of traditional varieties which are susceptible to the yield reducing cassava mosaic disease.

Cocoa Yields

In recent years, there has been a big push in Sierra Leone to increase cocoa production, following on from the demise of the industry during the civil war. Efforts to improve the sector include the establishment of Kenema Forestry and Tree Crop Research Centre (KFTCRC) mandated to conduct research on tree crops. While agriculture plays an important role in Sierra Leone's economy, given that it employs around two-thirds of the country's labour force, however, cocoa production still constitutes a tiny fraction of the country's overall agricultural production. This is not surprising, as for instance, in 2011, only 123,576 ha of land were committed to cocoa production compared to 603,924 ha for rice and 361,384 ha for cassava (Tables 4,5; Appendix 5, 8 9 and 10). Nonetheless, both area under cultivation of cocoa and the crop yields have been gradually increasing. Area under cultivation increased from 30,333 ha to 139,980 ha, while productivity increased from 0.36 t/ha to 0.47 t/ha in 2001 and 2017, respectively after attaining 0.96t/ha in 20012 (Appendix 10; Figure 8).

[17] A. M. H. Conteh *et al*. (2012). The influence of price on rice production in Sierra Leone. *Agricultural Sciences* **3** (2012) 462-46

Figure 7 Trend in Cassava Production and Productivity, 2001-2017

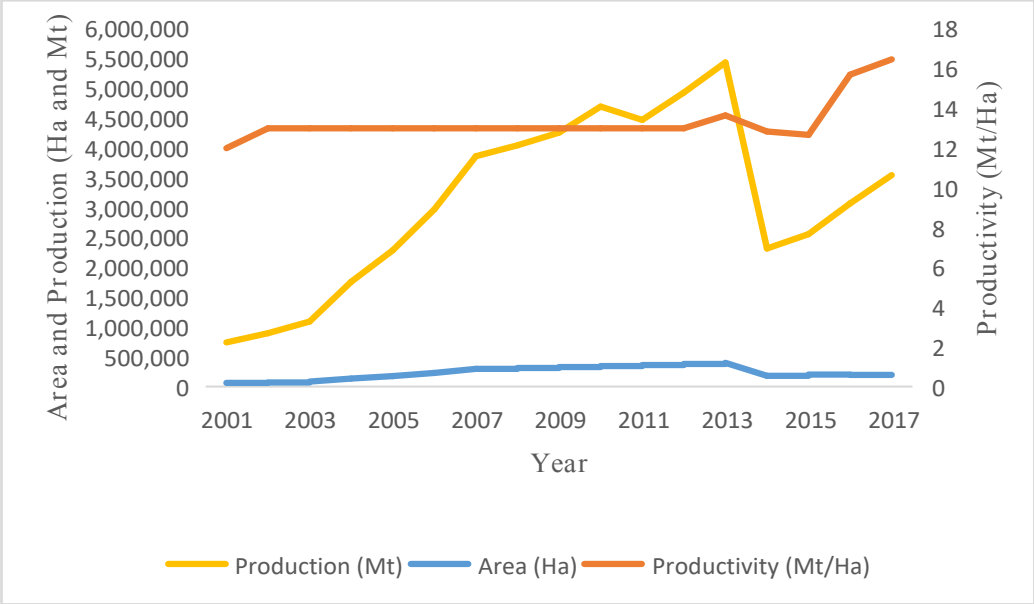
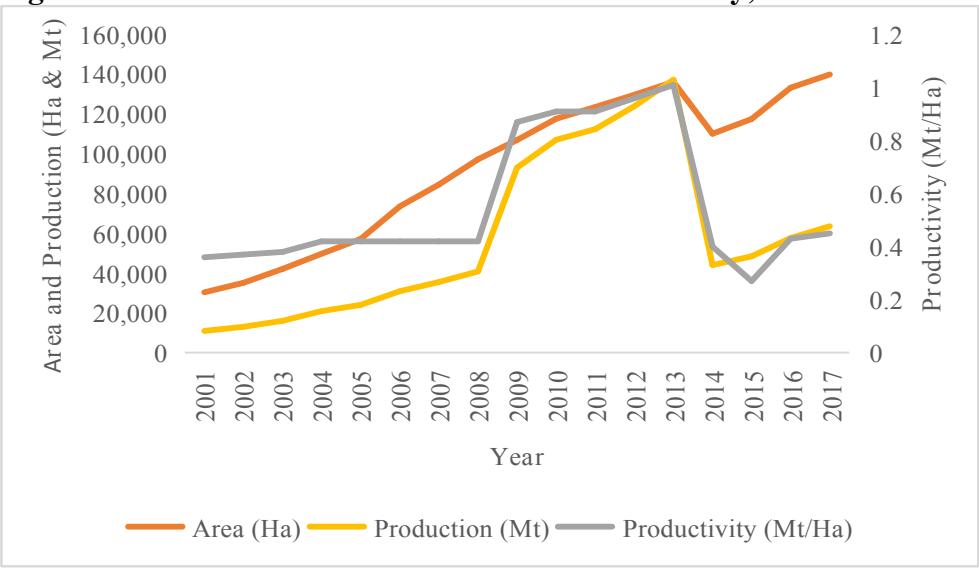


Figure 8: Trend in Cacao Production and Productivity, 2001-2017



Forestry

Sierra Leone is part of the Upper Guinea Rainforest, accommodating a diversity of plants and animals. Thus, forest products (both timber and non-timber) have customarily being major sources of ways and means of eking-out a living especially for the rural poor. Wood products such as timber are significant income earners whereas; well-being supporters such as bush meat, medicinal plants, fuel wood (charcoal), wild fruits, nuts and tubers can also bring in income. Other non-use values and services such as serving as a carbon sink in climate mitigation; a source of water supply and recreational facilities or as fish breeding sites in the case of mangrove forest are also very important. It is therefore not surprising that the A4P recognised reconciling economic development and environmental sustainability as crucial for continued provision of those use and non-use services by forest[18]. Therefore, that, Sierra Leone developed a national biodiversity strategic action plan in 2003;

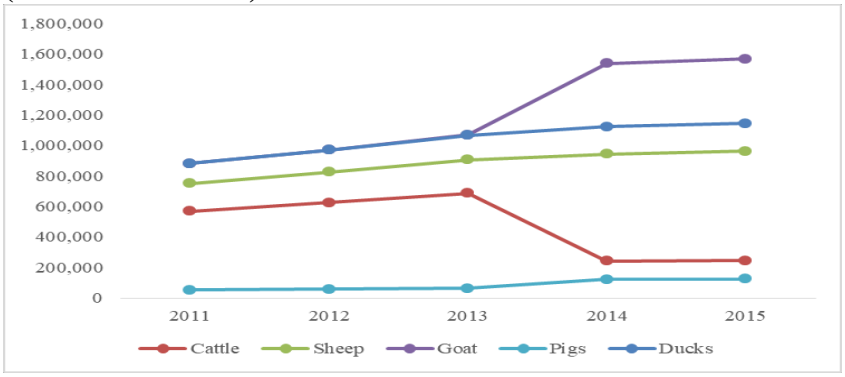
[18] Agenda for Prosperity: Sierra Leone's Third Generation Poverty Reduction Strategy Paper (2013 – 2018).

which described the status of biodiversity, and action plans for its sustainable management worth's the while. Sierra Leone has 48 forest reserves under the custody of government occupying approximately 285,000 hectares of total land cover. In addition, there are 300,000 hectares of mangrove forests and 30,000 hectares of constituted community forests. Fifteen protected areas are proposed, eight in the terrestrial ecosystem and seven in the wetlands (Op.Cit). FAO (2010) Forest Resource Assessment Country report for Sierra Leone [19] indicate that 38% of Sierra Leone's land area, or over 2.5 million hectares, comprises wooded landscapes. Although effective management of Sierra Leone's natural resources and the environment was identified as key to Peace and Development in the Agenda for Change, A4P observed that unregulated exploitation of these resources has resulted in deforestation, resource depletion, environmental degradation and biodiversity loss. ICADeP activities would include Advocacy/research for the development of selected value chains such as neem tree, moringa, honey bee, garlic, and mint tree.

Livestock

The 2015 CFSVA also estimated levels of livestock products, especially milk, produced during 2014-15[20]. The average production per farming household was 73.8 pints nationwide. It was observed that the production of milk is sizeable only in a few districts in Sierra Leone. The districts with the highest quantity of milk production per household per year are Koinadugu (198.0 pints), Tonkolili (40.1 pints) and Port Loko (28.0 pints). The rest of the districts recorded low or insignificant levels of milk production.

Figure 9. Production (Number of heads) of Key Livestock (Without Chicken)

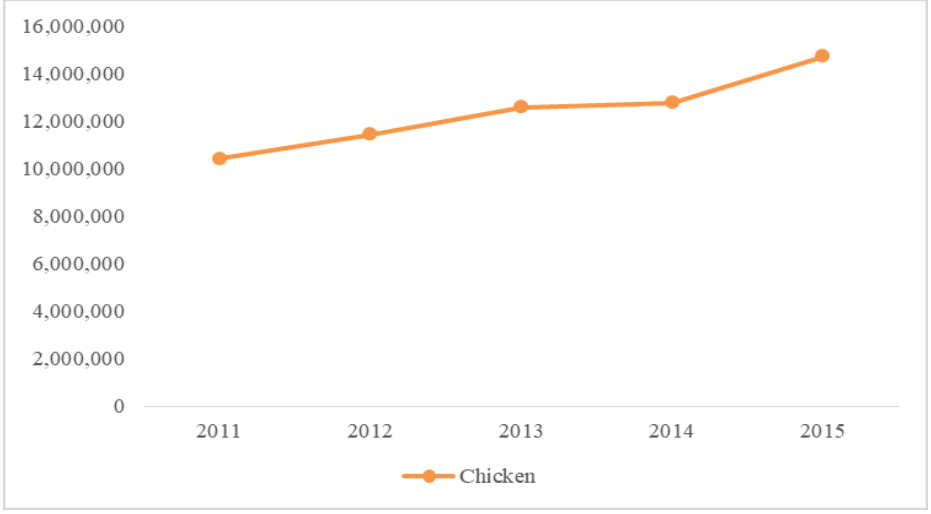


The production of eggs was recorded at 25.4 per household per year compared to 30.7 in 2013-14, before the EVD outbreak. This may represent a knock on effect of the breakdown in the provision of livestock extension services, such as vaccination of chickens, as a result of movement restrictions during EVD. The highest egg production was in Kambia (35.6 per household per year), followed by Bonthe and Port Loko. Reduced availability of eggs, an important protein source, also bears implications for nutritional security.

[19] FAO. (2010). Global Forest Resource Assessment. Country Report Sierra Leone. FRA 2010/189. FAO, Rome.

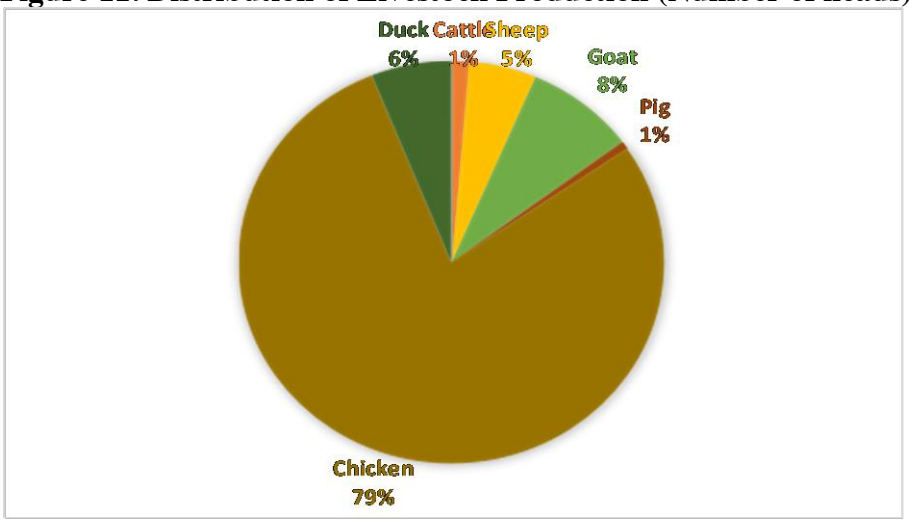
[20] State of Food Security in Sierra Leone 2015 Comprehensive Food Security and Vulnerability Analysis Data collected September - October 2015. http://documents.wfp.org/stellent/groups/public/documents/ena/wfp288316.pdf

Figure 10. Production (Number of heads) of Chicken



Overall, the production of livestock products declined during 2014-15 compared to 2013-14, demonstrating the impact of the EVD outbreak (Appendices 6,7; Figures 9, 19, 11). Milk production declined by 40.5 percent in the country, with the highest decline at the district level observed in Kambia (89.8 percent), Kailahun (79.6 percent), Tonkolili (79.5 percent) and Bombali (73.9 percent). Similarly, egg production declined by 17.2 percent between 2013-14 and 2014-15. At the district level, whilst egg production increased in some districts, this was offset by larger decreases in other districts.

Figure 11. Distribution of Livestock Production (Number of heads) (2015)



3.1.2. Fisheries Sector Production and Productivity Trends

Marine Capture Fisheries

Recent studies[21] noted that the fisheries sector of Sierra Leone has a diverse and valuable array of fish stocks in marine and inland environments, which are exploited mainly through fishing and a limited number of aquaculture systems. According to the Ministry of Fisheries and Marine Resources

[21] Neiland, A.E., Cunningham, S., Arbuckle, M., Baio, A., Bostock, T., Coulibaly, D., Gitonga, N.K., Long, R. and Sei, S. (2016) Assessing the Potential Contribution of Fisheries to Economic Development—The Case of Post-Ebola Sierra Leone. *Natural Resources*, **7**, 356-376. http://dx.doi.org/10.4236/nr.2016.76031

(MFMR) Statistics Unit, the current total annual fisheries production is about 260,000 tonnes in 2009 (Figure 12; Appendix 11). The marine artisanal fishing sub-sector, characterized by small-scale, inshore, low technology operations, accounts for the bulk of this catch (240,000 t, valued [first sale only] at USD 100 million per year). The marine industrial fishing sub-sector catches an estimated 20,000 t (valued at USD 25 million per year). Both inland fisheries and aquaculture production are relatively small in comparison. It should be noted that the official statistics (above) use a set of financial indicator values (e.g. gross catch value based on first sale market prices and landings, costs are not included). While this approach provides a good starting point for understanding the value of the sector (assuming that the basic catch and market statistics are accurate), the next level of analysis (using formal economic approaches to assess expenditures, profitability and net returns) is needed to better understand the performance of the sector, and its contribution to the economy overall. The fisheries sector is estimated to provide employment and a source of livelihoods for over 500,000 people, mainly in coastal communities. Fish is the most important source of animal protein for the majority of the population. Annual fish exports are valued at USD 2.5 million and fishing license fees amount to USD 2.5 million per year. In terms of domestic revenue collection by the Government of Sierra Leone, the fisheries sector contributed USD 34 million (1 per cent of total revenue) in 2014. This represents a doubling of the revenue collected in 2013. The contribution of the fisheries sector to GDP in Sierra Leone was estimated to be 10.2 per cent in 2014. The largest contribution came from agriculture, hunting and forestry (42.5 per cent) and then mining (11.6 per cent). GDP figures underestimate the economic importance of the fish resources, because fisheries sector GDP is restricted to fish catching activities alone. The GDP generated by downstream secondary economic activities such as fish processing and trading which depend on healthy fish stocks are attributed to other sectors of the economy.

Inland Fisheries

Fish production from inland fisheries has the potential to contribute greatly to national fish production, alleviate poverty and food insecurity. Indicative estimates put the annual production at 40,000mt comprising of about 150 species from 34 families (of which 40 species have been identified in the Pujehun district)[22]. Sierra Leone is considered as one of the West African countries with a major inland fisheries potential – one which can bring in US$ 30 million annually – providing a per caput consumption of 12.3kg, and with the capability to contribute up to 1% to GDP[23]. Inland artisanal fisheries are undertaken from lakes (Table 6), rivers (Table 7) and coastal and riverine wetlands. Much attention has not been given to fisheries development from these ecosystems. Apart from Lake Sonfon (permanent throughout the year), the other lakes are considered as Lagoons.

[22] FAO Fishery Country Profile (Sierra Leone). http://www.fao.org/fishery/countrysector/naso_sierraleone/en

[23] World Fish Centre (2008). Tropical River Fisheries Valuation: Establishing Economic Value to Guide Policy. Issues Brief/1890.Online:http://www.worldfishcenter.org/v2/files/WF_1106_Establishing%20economic%20value%20to%20guide%20policy.pdf

Figure 12. Production of Marine Capture Fisheries Catch (MT) - 1971-2013

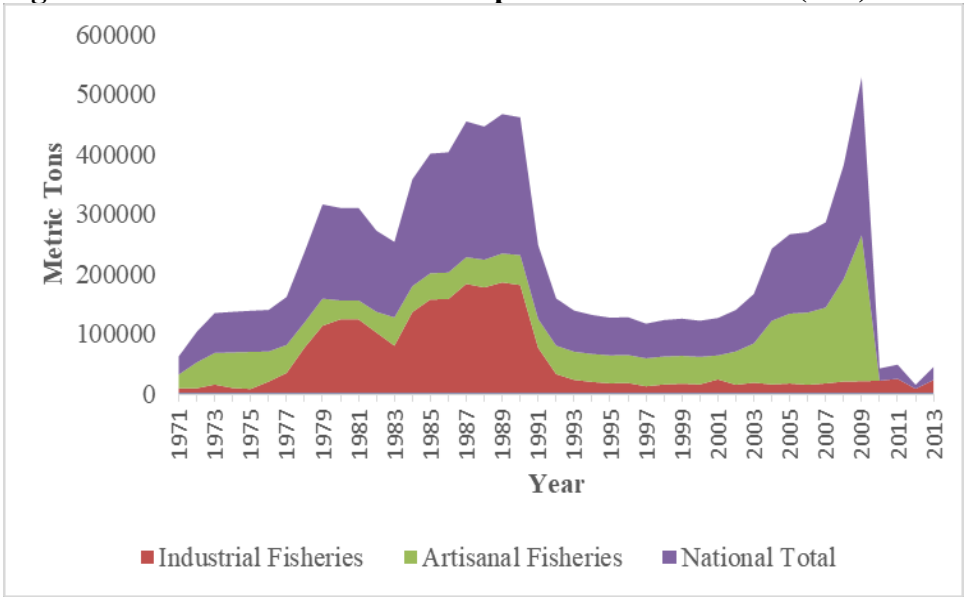


Table 6. Area and Location of Lakes in Sierra Leone

Lake	District	Area (KM^2)
Mape	Pujehun	27.7
Mabesi	Pujehun	20.7
Baiama	Bonthe	6.5
Popei	Bonthe	5.4
Sonfon	Koinadugu	2.6
Masatoi	Pujehun	2.6
Kamason	Bonthe	1.8
Tibi	Bonthe	1.8
Kenema	Bonthe	1.3
Kwako	Bonthe	1.0
Gambia	Bonthe	0.9

Source: Surveys and Lands Division, Ministry of Lands, Housing and the Environment, Freetown, Sierra Leone.

Table 7. Length and Area of Principal Rivers in Sierra Leone

River	Length (KM)	Area (KM^2)
1. Rokel (Sierra Leone River)	290	396
2. Moa	266	256
3. Sewa	209	303
4. Wannjei	177	67
5. Mabole	161	114
6. Little Scarcies	161	202
7. Pampana	153	91
8. Bagbe	137	15
9. Great Scarcies	129	91
10. Mongo	105	67
11. Mano	105	16
12. Jong	97	119
13. Bagru	89	78
14. Teye	89	36
15. Tabe	80	39
16. Meli	80	10
17. Ribbi	56	39
18. Bafin	56	16
19. Kukuli	43	31

Source: Surveys and Lands Division, Ministry of Lands, Housing and the Environment, Freetown, Sierra Leone

Extensive river networks drain the country before emptying into the sea and these rivers form basins which are the primary areas for agricultural and fisheries production.

Aquaculture

Aquaculture survey in 2005[24] estimated a total of 1,190 fishponds nationwide of which 708 (59.5%) were active and 482 (40.5%) were inactive; 95.9% of them cultured tilapia. Bo district had 29 ponds which constituted 60% of the total number of ponds in the country. About 22 percent of the ponds belong to village communities or fishing associations; approximately 80 percent of the same total number of ponds are private ponds, with about 87 percent of the same total are owned by males. There are a total of about 1,800 ponds in operation nationwide, with a total annual production of about 90 t/year. Another base line study conducted in 2009[25] indicated the existence of 2,494 ponds nationwide, of which 1,801 were in operation and the rest (31 %) were abandoned. The estimated operational pond area was 61.8 ha and the maximum production was 92 t/year. The baseline study ACP Fish II study in 2011[26] concluded that the districts of Bo, Kenema, Pujehun and Kailahun are suitable areas for the development of low input low output fish farming in dam ponds. The study strongly recommended the practice of low input low output dam ponds and further concluded that if the utilization of only 2 % of the existing Inland Valley Swamps (IVS) in the three districts are developed with low input fish farming, it would result in the development of about 6900 ponds, covering 4,100 hectares, with a total potential production of 2,071 t/year to improve the food security of about 207,000 persons. When aquaculture started in Makali in the 1970s farmers owned 1-4 fishponds, with a total surface area ranging from 100 to 500 m2 per pond. The yield from these ponds was 1.5 to 2.5 tons/ha/year. This base line study provides the base line for ICADeP intervention in Aquaculture. From detailed analysis of previous surveys and evaluation of recent developments, recent baseline study on aquaculture conducted in 2015[27] offered a number of problems facing the industry based on the responses of fish farmers. These include: the Difficulty in obtaining fish feed and seeds; Lack of technical skills and knowledge in pond management; Lack of adequate support from government and NGOs; Difficult access to suitable land; Difficulties and lengthy processes in obtaining the loans; High interest on loans; Risks and hazards in travelling to get supplies or to dispose of the harvest by marketing.

[24] Deen, S.I.S. (2005) Report on National aquaculture baseline survey. Ministry of Fisheries and Marine Resources.

[25] MFMR 2009. Baseline studies on the aquaculture of Sierra Leone. Report by K.Dabo *et al*

[26] Anon. (2013) ACPFishII. A comprehensive aquaculture baseline study. Final technical report, Project Ref. No. WA-1.2-B1, region: Sierra Leone. European Union – COFREPECHE: Strengthening Fisheries Management in ACP countries.

[27] Baseline Survey on the Aquaculture Sector in Sierra Leone. FAO Technical Cooperation Programme TCP/SIL/3502, 2015. Report by PAT. Showers

4.0. Programme Context, Challenges and Rationale

4.1. The Context

4.1.1. Agriculture Sector Framework

At the national level, the Agenda for Prosperity (A4P) (2013-2018) is the principal policy framework within which the GoSL channels national developmental efforts. Specifically, ICADeP will be anchored in Pillar 1 of the A4P "Economic Diversification to Promote Inclusive Growth" focusing on increasing agricultural productivity and value-addition. As sub-sectors within the agricultural sector such as fisheries and forestry are natural resources; Pillar 2 of A4P "Managing Natural Resources" will also guide the programme. This is so because, well managed natural resources, provides productive services such as energy, shelter, food, employment, and exports, as well as regulating services, such as watershed and flood management. Because we live in an environment where we engage in activities to make a living, we must reconcile economic development with environmental sustainability under Pillar 2. A competitive economy is necessary for improving a country's standard of living, creating jobs and sustainably reducing levels of poverty. Accelerated agricultural production and productivity would require production of competitive products in forms, shapes and sizes that are acceptable in the local and international markets. Consequently, Pillar 4 dealing with "International Competitiveness" would be instructive. The National Sustainable Agriculture Development Plan (NSADP) (2010-2030) is the broad framework for putting the objectives of the Government's A4P into action in the agricultural sector. The flagship program under NSADP was the Smallholder Commercialisation Program (SCP) (2010-2014) which focused on commercialising agriculture through linking large and small farmers to markets. This ICADeP investment plan (2018-2022) serves as a follow-up to SCP. It is vital to note that NSADP and SCP were developed in fulfillment of the compact under the umbrella regional Comprehensive African Agriculture Development Program (CAADP). At sub-regional level, in line with Malabo Declaration and building on the assessment of 10-year implementation of the ECOWAP, ECOWAS has defined a new cycle of its regional Policy: ECOWAP 2025. The new policy's vision and orientation are reflected in the Strategic Orientation Framework 2016-2025 and the Regional Agriculture and Food and Nutrition Security Investment Programme 2016-2020. This ICADeP investment plan follows up on the SCP with the goal of

4.1.2. Challenges

The agriculture sector as the largest contributor to GDP has the potential to significantly contribute to societal well-being in Sierra Leone. However, there is a general acceptance that the sector lags behind from achieving its full potential due to a number of challenges. In addition to the main sectoral constraints identified by the Agriculture Sector Review (2014), provided in Annex 1, the following challenges should be addressed by the investment plan in other to achieve expressed goal and objectives

4.1.2.1. Non-Agriculture Related Challenges

Social and Age Discriminations and Cultural Barriers in the Agriculture Sector

There are social and cultural barriers affect the agribusiness in Sierra Leone, as traditional "glass ceilings" prevent even the most successful entrepreneurs from growing and deny their access to resources: those who are not well connected with the political or social elite, women entrepreneurs (notably market women), rural women who have no property rights, or bound with other traditional

limits e.g. women cannot become part of fishing crew.[28] This can only be overcome with consistent and persistent equal rights promotion campaign, community empowerment and sensitization, as well as establishing level play field in agriculture. Age-based discriminations are also persistent in the country. Young people have major issues concerning access to land, assets, finance and markets[29]. Considering the average aging farming population and the need to increased agricultural production to meet the food and nutritional needs of a growing population, barriers and impediments for young women and men entering the sector should be timely addressed through incentives, adequate capacity development, facilitated access and private – public partnerships (PPPs).

Physical Health Constraints

As already mentioned in sub-section 2.1.3.2.6, the infrastructure and medical supplies in the health sector is grossly inadequate as testified by the recent EVD crisis. Poor health is the key binding constraints for agriculture and the whole country.

"Feminisation" of Agriculture and Rural-Urban Migration

Another trend is the "feminisation" of agriculture due to male and youth migration to urban centres, which sets physical limits to the extensive agriculture. Again the general movement of abled men and women from rural areas to urban centers/mining areas in search of greener pastures/fortune deprive the agricultural sector of much needed labour force.

Weak Sectoral Policy, Regulatory and Institutional Framework

Sectoral policy, regulatory and institutional environment are incoherence and inadequate to accommodate the required reforms that would supports agricultural investment and transformation. Moreover, all sector stakeholder coordination mechanisms are not strengthened and functional. The same could be said about M&E and accountability systems which are not fully functional to inform policy-making. Public institutions and sector actors' organizations not have adequate (institutional, technical, organizational, financial and management) capacities to carry out their professional activities.

Weak Sectoral Coordination

Low Levels of Vocational Skills and Basic Education

The agriculture sector of Sierra Leone is dominated by illiterate smallholder/artisan practitioners lacking basic skills and education. The technological infusion necessary for the attainment of the expressed objectives of ICADeP would require extensive and intensive extension services including training of practitioners in basic skills. The conflict in Sierra Leone affected access to educational opportunities for a large number of youth and this is reflected in the extremely low levels of literacy in the country. Low levels of education and vocational skills are an obstacle to decent employment

[28] Andy Thorpe, Nicky Pouw, Andrew Baio, Ranita Sandi, Ernest Ndomahina, and Thomas Lebbie (2013): "Fishing Na Everybody Business": Women Work and Gender Relations in Sierra Leone's Fisheries, *Feminist Economics*, 20 , Iss. 3, 2014

[29] Richards, P. 2006. "Young men and gender in war and post-war reconstruction: some comparative findings from Liberia and Sierra Leone". In I. Bannon and Maria Correia, eds, *The Other Half of Gender: men's issues in development*, Washington: World Bank, pp. 195-218.

and increased business opportunities. Lack of basic financial, marketing, management and other transferrable skills constrain business growth and trans-sectoral labor force movements, as well as posing a serious challenge for the investors. While the primary and secondary education situation is improving, the adult education needs to be addressed with involvement of the private sector. In general, in the country, a lack of alignment between labor market needs and curricula (both in formal and informal education) remains. The mismatch between education and training and the labor market needs, can be addressed through the development of labor market ready skills and entrepreneurship minded youth, with the capacity to successfully scale up business opportunities, both in the informal sector and the formal sector; ensuring education and training matches the requirements of both formal and informal employment, including self-employment. Holistic approaches will need to be adopted which will include not only market-demanded skills but also an array of life skills (from agro business to health related ones and diseases prevention and mitigation further to the current ongoing EVD crises).

4.1.2.2. Agriculture Related Challenges

A number of agricultural related challenges which the invest plan should address have been identified; viz:

- Inadequate availability and accessibility to quality production factors such as land, capital, viable inputs and knowledge.
- Obsolete crops, livestock, fishery and forestry production practices and techniques that are not climate smart
- Copious pre and direct post-harvest losses due to weak production infrastructures.
- Inferior food safety and quality standards along the production line
- Inadequate and dysfunctional domestic markets with weak regional and global markets linkages
- Unstructured value chains that are not inclusive and sustainable
- Vulnerable groups do not have sustainable and equitable access to market infrastructure and productive resources
- Limited access to sustainable healthy and nutritious diets and lack of food choices especially among the most vulnerable
- Weak warning and preparedness mechanisms against shocks undermining implementation of mitigation methods
- Lack of capacity by the vulnerable populations to access diversified income generation opportunities

4.1.2.3. Macroeconomic Challenges

As rightly and clearly noted in the A4P[30], notwithstanding strides made in stabilising the economic environment in recent years, the investment programme should be mindful of the following challenges which may undermine macroeconomic stability in the medium-term.

Less Diversified Economy

Lack of diversification in the structure of the economy with high unemployment hinders sustainable inclusive growth is the relatively. Few sectors dominate the economy and there is need to diversify

[30] Agenda for Prosperity: Road to Middle-Income Status. Sierra Leone 3rd Generation Poverty Reduction Strategy Paper. http://www.sierra-leone.org/Agenda%204%20Prosperity.pdf pp-21-22

into other growth-promoting and employment-creating sectors, such as fisheries, tourism and manufacturing.

Insufficient GDP growth
But for downturn induced by the EVD outbreak, the economy has experienced strong growth in recent years, averaging 5.2% excluding iron ore output. This rate of economic growth, even though high by regional and international standards, is not enough to have a significant impact on poverty.

External Shocks.
High international prices of food and fuel impact domestic prices adversely and contribute to high inflation. Government mitigation interventions on behalf of the poor and vulnerable through the reduction in duties and taxes on basic food items and petroleum products undermines domestic revenue mobilisation. In turn, Government attempts to deliver the planned level of services in the face of higher prices of goods and services, increases public expenditure above budgeted amounts to culminate in widening budget deficits. Deficits are in most cases financed by borrowing from the domestic bank and non-bank sectors, and so have adverse consequences for macroeconomic stability, leading to higher inflation and interest rates, and depreciating exchange rates. Climatic variability and natural disasters also impact agricultural production and productivity.

Fluctuations in Commodity Prices
The commodity boom in Iron ore was expected to generate substantial revenues to support public expenditure. However, projected mineral revenues depend largely on movements in the international prices of these commodities. As it turned out that the projected prices of these mineral exports, was not as high as projected due to price fluctuations. Thus the projected revenues did not happen, which complicated budgetary management; expenditures were adjusted accordingly, thereby disrupting the implementation of public programmes and projects. Government also borrowed to fill the shortfall, with consequences for macroeconomic stability.

Dutch Disease
A major challenge posed by the expected inflow of foreign currency from mineral/oil exports is the appreciation of the Leone. This has the tendency to make other sectors of the economy like agriculture less competitive and hence reduce growth prospects.

High Debt Burden
One of the challenges to macroeconomic stability and economic growth is the potential high debt burden. While Sierra Leone's external debt remains sustainable, with moderate risk of debt distress, a significant increase in non-concessional borrowing could increase debt overhang.

Low Domestic Revenue Mobilisation
Low domestic revenue to GDP ratio has resulted in huge budget deficits, financed partly by borrowing from the domestic banking sector. This thwarts private investment activities and undermining macroeconomic stability. Improved management of rent from natural resources should help increase domestic revenues.

4.1.2.4. Programme Rationale

The Agricultural Sector Review 2014 conducted after the SCP showed a significant change in the landscape of the agriculture sector. Sierra Leone is no longer a post-conflict country surviving on subsistence agriculture. There is a whole spectrum of micro, small, medium and large enterprises operating in the sector, including individual commercial farms, farmer-based organizations,

fisherfolk cooperatives, traders, processors, input dealers, medium-size producers and processors, and large-scale commercial enterprises. The rationale and indeed the justification for the ICADeP investment plan is the need to resolve the lessons learnt from the implementation of the SCP alluded to in sub-section 2.1.2; address sectoral challenges identified by the ASR specified in Annex I; and to resolve the challenges noted by appraisal teams of this investment plan summarised in sub-section 4.1.2. Logically, these challenges now form the basis of the intervention logics of the ICADeP investment plan. Addressing these challenges could accelerate agribusiness development and unleash the promising domestic investors and business potential by providing stimuli for business formalisation. This would present opportunities for establishing special Economic Zones for agro-processing and Clusters and Growth poles development. Such development should target regional and international trade thereby sustaining persistent infrastructure development and maintenance. Investment and diversification along the value chain would also benefit from increased financial literacy and developing entrepreneurial culture among youth.

Agriculture sector as the largest contributor to GDP and the biggest employer of Sierra Leoneans is the main conduit of poverty reduction in the short and medium term. The sector has the potential to absorb unskilled youth on a large scale, provide decent employment opportunities in rural areas and enhance food security and poverty reduction. This is so because; rural poverty is often a problem of poor employment quality. Most of the working poor (earning less than 1.25 USD a day) are typically subsistence farmers, own-account or contributing family workers. Furthermore, high child labor and youth unemployment and underemployment rates represent missed opportunities to harness the investment in the human capital of future generations. A transformed and competitive agriculture sector advocated by ICADeP would create decent employment opportunities in the country especially for young women and men - as a key priority of the programme.

The Implementation of ICADeP's involves review of laws, regulations and policies pertaining to land, taxation and import and export regulations. Although Sierra Leone has made some important strides towards improving the business climate; certain policy domains of particular importance to food security, agriculture and rural development require further efforts to crowd in investment and ensure the achievement of development goals.

Improving food and nutrition security and reducing households' vulnerability to shocks and stresses should remain the top priority of the country's developmental efforts but, food insecurity and malnutrition remains a pressing problem among rural populations. Coping mechanisms including seeking off-farm labor, reducing the number and diversity of meals - negatively affects productive capacity, or obtaining loans from others in the family or community - often push people further into the debt trap. By recognising financing of social protection as an investment in economic growth, ICADeP will promote equity and contribute to social stability. Poor rural households that mostly rely on agriculture for their livelihoods are often affected by limited access to resources, low agricultural productivity, poorly functioning markets and repeated exposure to risks which the investment plan will assess and alleviate.

Climatic variability poses a serious risk that could result into production failures. Climate Smart Agriculture (CSA) measures adopted by the ICADeP will ensure that households are resilient to

climate and weather-related shocks; agriculture is under sustainable land management practices; share of population exposed to climate risk are reduced; share of land under small-scale irrigation in is increased; soil fertility management practices are adopted; awareness of climate change risk and impact among farming population is improved and seeds adapted to heat and drought in major crops are used.

The paradigm shift from supply chain to value chain agribusiness adopted by ICADeP encourages a market oriented mentality wherein products that are valued and can be sold are produced. This enhances collaborative management and holistic participation across the value chain from up to downstream. Consequently, strong relationships are forged facilitating information flow wherein stakeholders know what the market wants.

The ICADeP is characterised by inclusiveness of stakeholders which engenders shared vision, objectives, and strategies; agreed performance; evidence-based analysis; transparent dialogue and commitment to implement recommendation from the ASR. These characteristics will enable adherence to mutual accountability.

5.0. Description of the Investment Programme

5.1. Scope

The Inclusive Comprehensive Agriculture Development Programme (ICADEP) follows-up from SCP with the **overall goal** or the **desired state of affairs** of "Increased agriculture sector contribution to a broad-based socioeconomic development and food & nutrition security of rural Sierra Leone in a sustainable and inclusive manner". The extent of increase will be the difference in end time target outputs and that of the base line as stipulated in the results framework in Section 6.

The ICADEP will be implemented over a four year period from 2018 to 2022. All components of the ICADEP will incorporate social, gender and youth development indicators which will be gender and age disaggregated for providing opportunities to men, women and youth. The Gender Desks in MDAs involved will facilitate and monitor women and youth participation. ICADEP will build on the successes and lessons learnt of previous agriculture and fisheries development programmes, the recent Smallholder Commercialization Programme and the findings of the Agriculture Sector Review 2014 (ASR). It is designed such that it incorporates the initiatives of the AFAIP. The Programme combines the existing initiatives, e.g. SCP components and programmatic gaps to be addressed.

In order to achieve the goal, a number of specific objectives or concrete steps are will be taken as specified in Box 4:

Box 4. Specific Objective of the ICADeP

Specific Objective 1: Strengthen governance structures and mechanisms for improved evidence-based policy and programming, coordination, implementation and monitoring and evaluation to enhance mutual accountability

Specific Objective 2: Increase sustainable, inclusive and intensified production and productivity of diverse quality commodities for improved food and nutrition security

Specific Objective 3: Improve efficiency, sustainability and competitiveness of agriculture value chains and market linkages

Specific Objective 4: Increase and improve resilience of livelihoods against shocks and promote full access to nutritious foods for the most vulnerable

The aforementioned specific objectives will be pursued via four (4) components as listed in Box 5:

Box 5: ICADeP Components

COMPONENT 1: Sector governance and ICADeP management and implementation

COMPONENT 2: Sustainable and inclusive agricultural productivity and production systems

COMPONENT 3: Agribusiness, infrastructure and value chain development

COMPONENT 4: Livelihoods, resilience, nutrition of vulnerable groups

5.1. Programme Benefits and Beneficiaries

The ICADEP will generate a number of interrelated economic and social benefits, including: (i) increased production and productivity and selected commodities targeted by the programme; (ii) improved food security and nutritional status, particularly of infants, children, women and other vulnerable populations because of increased dispensable incomes and food availability; (iii) improved access to agricultural and financial services for farmers and their organizations, agribusinesses and other actors along the value chain; (iv) formalization of agribusinesses and MSME development, leading to increased and diversified income opportunities and a vibrant rural economy; (v) improved market access and trade promotion through infrastructure improvements, market development, information provision and the enforcement of quality standards and food safety; (vi) decent work creation in both in formal and informal segments of agriculture, either in salaried employment or self-employment; (vii) a more effective and capacitated public sector, able to respond to sector stakeholders evolving support requirements; (viii) foreign exchange savings though increased production leading to a more positive trade balance and food price reductions. The programme benefits will all contribute to achieving a pro-poor and equitable growth path in Sierra Leone through sustainable agricultural development.

The programme will impact several groups of direct beneficiaries: smallholder commercializing farmers and their organizations, medium and small scale agri-business and agricultural entrepreneurs, and vulnerable and at-risk populations, including unemployed, underemployed and working in poverty youth. Consumers will also benefit from the improvement of the sector. Commercializing farmers will be supported to realize sustainable production and productivity increases leading to increased rural incomes through strengthening farmer organizations, improving the availability and access to rural services (inputs, technology transfers and finance, productive asset building, and improving market opportunities. Existing and emerging agri-businesses and rural entrepreneurs will be supported by addressing administrative and physical constraints to doing business and providing targeted incentives to the development of this sub-sector. Furthermore, ICADEP will improve market access and development, through feeder road development and providing accurate and up-date market information and promoting the introduction of food safety and quality standards. Vulnerable and at risk populations will be supported by participating in either

productive safety nets or cash transfer schemes. Additional support will be provided to these group in the form of additional (child) feeding and nutrition training and skill development. Throughout he programme special emphasis is placed on women and youth, identifying particular interventions that would raise their incomes, enhance their food security, by improving production and promoting non- and off-farm income generating activities.

The interventions of the programme will also bring indirect benefits to the wider rural population through expected multiplier effects achieved through increased dispensable incomes and a more diverse and vibrant rural economy.

5.2. Programme Components

5.2.1. Component 1. Sector governance and ICADeP Management and Implementation (US$)

ICADeP will contribute to the strengthening of governance structures and mechanisms for improved policy and programming, coordination, implementation and monitoring and evaluation. In particular it will focus on:

1. *Policy, legal and regulatory environment that adequately supports agricultural investment and transformation developed in an inclusive manner*

- Organize inclusive cross-sectoral and multi-stakeholder dialogues to formulate sector policies, strategies, regulatory measures and investments
- Conduct a mapping of current agricultural, fishery, livestock, land and forestry policy gaps
- Conduct an analysis of the legal, fiscal and regulation environment for agricultural investment and value chain promotion
- Develop, review and domesticate current policies, strategies and fiscal measures
- Implement policies and evaluated performance

2. *National and decentralized sector stakeholder coordination mechanisms strengthened in order to make them effectively functional*

- Strengthen multi-sectoral coordination dialogues through the multi-stakeholder coordination platform
- Establish intra-institutional working groups to address sector coordination gaps
- Conduct an analysis on multi-sectoral synergies and win-wins with the agriculture sector, including with nutrition, education, social protection and gender
- Develop dialogue platforms at decentralized levels by using decentralized advisory platforms

3. *National and decentralized information, M&E and accountability systems made fully functional for effective reporting and informed policy-making*

- Consolidate sectoral budget, financing and financial tracking systems
- Conduct a sectoral review and analysis to determine sector performance
- Develop and implement a communication strategy to guide the generation and dissemination of sector information
- Develop and ensure effective management of a multi-sectoral web-based information sharing platform
- Review and strengthen existing agriculture-based information systems and data management

4. *Institutional, technical, organizational, financial and management capacities of public institutions and sector actors built in order to carry out their professional activities effectively*

- Conduct an assessment to identify capacity gaps among National and decentralized sector institutions, actors and implementers
- Develop an inclusive capacity building programme for sector actors and implementers
- Implement the capacity building programme for sector actors and implementers, including extension agents
- Develop District Agricultural Investment Plans

5.2.2. Component 2. Sustainable and Inclusive Agricultural Productivity and Production Systems (US$)

ICADeP will support increased sustainable and inclusive production and productivity of diverse quality commodities for improved food and nutrition security. The programme will focus on:

1. *Availability and accessibility to quality production factors enhanced and supported in an sustainable and inclusive manner*

- Conduct normative and operational research for improved quality inputs;
- Create formal and informal system for the provision and timely distribution of quality and improved inputs for agriculture;
- Create formal and informal system for the provision and timely distribution of quality and improved inputs for livestock;
- Create formal and informal system for the provision and timely distribution of quality and improved inputs for aquaculture and fisheries;
- Create formal and informal system for the provision and timely distribution of quality and improved inputs for forestry;
- Provide and maintain small, medium and large scale irrigation infrastructure and equipment;
- Facilitate acquisition and maintenance of mechanization equipment by farmers
- Facilitate soft loans and financial services' access for farmers such as access to e.g. micro-finance; financial literacy village savings and loans schemes
- Undertake a mapping of arable, cultivated, non-cultivated areas and wetlands to identify and address land utilization issues.
- Undertake a soil fertility test/mapping to provide soil fertility profile across the country.
- Identify and disseminate innovative technology and productive practices through extension advisory services

2. *Crops, livestock, fishery and forestry production practices and techniques are improved and made climate smart*

- Train extension agents, smallholders and enterprises (in a gender sensitive manner) on climate-smart and enhanced agricultural practices, knowledge and techniques;
- Conduct normative and operational research for natural resource management;
- Set up an Information, Education and Communication (IEC) innovative platforms for technology transfer.

- Conduct normative and operational research for developing adequate, innovative, climate-smart and affordable technologies including pest bio-control measures for smallholders and enterprises;
- Undertake pest management campaigns to develop capacity of farmers to prevent and identify pest and diseases related to crops, livestock, fisheries and forestry;
- Improve pest management and control (including provision of sample control test kits to smallholders) from extension agents to farmers;
- Strengthen/establish production demonstration sites for improved practices among farmers;

3. *Production infrastructures strengthened so as to avoid pre -harvest losses and ensure food safety standards along the production line*.

- Provide, rehabilitate and maintain storage facilities for seeds and crops to smallholders and enterprises;
- Provide, rehabilitate and maintain ranches, slaughterhouses, dairy and meat production centers and feed stores;
- Provide and rehabilitate and maintain fish ponds, hatcheries, cold chains and feed mills;
- Establish, rehabilitate and maintain IVS;
- Provide harvesting infrastructure, equipment and materials
- Provide on-farm transportation means for crops, aquaculture and livestock
- Establish and equip food safety laboratories;
- Train lab technicians and extension agents about food safety standards;
- Ensure food safety for local market

5.2.3. Component 3. Agribusiness, Infrastructure and Value Chain Development (US$)
ICADeP will support efforts to improve efficiency, sustainability and competitiveness of agriculture value chains and market linkages focusing on:

1. *Post-harvest losses reduced and food safety and quality improved*

- Train farmers on post-harvest management practices (including storage and processing to maintain the quality and nutritional benefits of the crops)
- Build or rehabilitate individual/collective improved post-harvest storage and conservation facilities
- Facilitate acquisition of processing materials, technologies and inputs to communities and Small-Medium and Large Enterprises
- Provide incentive schemes to establish competitive agro-processing Small-Medium and Large Scale Enterprises
- Update/develop food safety standards and regulations for international and local markets
- Strengthen food safety control and certification systems (training of officers and provision of facilities)
- Promote a visual identity (branding logo) for Sierra Leone quality agricultural products

2. *Functional domestic markets established and their links with regional and global markets strengthened*

- Build and rehabilitate feeder roads

- Strengthen domestic market information systems
- Establish and capacitate a market information platform targeting external opportunities
- Strengthen linkages between local farmers, agro-processing actors and institutional markets (schools, army, hospitals, prisons, etc.) to enhance home-grown institutional feeding program for improved diet quality of occupants of those institutions
- Organize and support trade fares and periodic markets
- Developing commodity market structures in selected areas (abattoirs, markets, vegetable markets, fish markets etc.)
- Align national food safety policies and standards to regional and global ones

3. *Value chains are well structured, inclusive and sustainable*

- Conduct an assessment to identify and select agribusiness value chains based on financial, socio-economic, food and nutrition security impact; and disseminate the findings to attract investment
- Conduct an assessment to identify the typology of actors and activities involved in the selected agribusiness value chains
- Support the establishment of agribusiness actor groups into selected agricultural value chains
- Develop technical, managerial and organizational capacities of the organized agribusiness value chain groups
- Conduct needs assessment and reinvest in established Agribusiness Centre for effective governance and profitable business

5.2.4. Component 4. Livelihoods, Resilience, Nutrition of Vulnerable Groups (US$)

ICADeP will support efforts to increase and improve resilience of livelihoods against shocks and promote full access to nutritious foods for the most vulnerable. The focus will be on;

1. *Most vulnerable have sustainable and equitable access to market, infrastructure, productive and financial resources*

- Conduct a situation assessment and analysis of the most vulnerable groups in agriculture and rural areas.
- Developing a targeting system and an interactive database of most vulnerable groups.
- Develop/strengthen preventive and productive social safety nets including cash and asset transfer programmes to improve and diversify livelihoods of the most vulnerable.
- Build and strengthen organizational capacity and financial literacy of community -based saving groups.
- Capitalise and review the modus operandi of community banks and financial services associations to enhance their capacity to reach the most vulnerable.
- Develop and implement a strategy for women and youth inclusion in agriculture

2. *Access to sustainable healthy and nutritious diets is improved and food choices among the most vulnerable are improved*

- Conduct mass media and community on campaigns on food and nutrition education and BCC (Behavior Change Communication), capitalizing on the existing Food Based Dietary Guidelines - emphasising diversifying food production systems for nutrition security)

- Strengthen capacities of local communities on food preparation, preservation and processing techniques and enterprises for nutrient-sensitive food processing, packaging and conservation
- Support backyard gardening for diversification and enhancement of increased nutritious food consumption
- Encourage the consumption of locally grown food stuffs

3. *Early warning and preparedness mechanisms against shocks improved and mitigation measure implemented in consonance with National Adaptation Programme of Actions (NAPA) priorities*

- Carry out an assessment to identify gaps, constraints and needs in current early warning systems;
- Strengthen the capacity of institutions responsible for early warning systems and inter-agency collaboration;
- Develop a communication strategy and platform to disseminate information on/of early warning systems;
- Provide adapted information and tools/plans to strengthen capacity of communities and households to take early action before shocks;
- Improve risk management tools (as household insurance) and support mitigation and adaptation actions at central and decentralized levels
- Implement social safety nets in emergencies for affected agricultural communities (including conditional and non-conditional cash transfers during seasonal vulnerability)

4. *Capacities of the vulnerable populations built in order to have access to diversified income generation opportunities*

- Provide business development services, vocational training (+basic literacy and numeracy) to affected communities
- Provide value-chain oriented start up kits to affected communities
- Promote integrated farming systems

5.3. Programme Key Principles

5.3.1. Inclusiveness

ICADEP will focus on identifying and intensifying growth poles: micro, small, medium and large domestic businesses, as well as the potential of large farming with foreign investment. This growth shall be inclusive and pro-poor, not in the sense that 100% of rural citizens are expected to become successful entrepreneurs but in the sense of creating improved decent rural labour conditions and opportunities, incomes, skills and food security and nutrition. ICADEP will also make sure that medium-size enterprises and middlemen playing a vital role in the value chains and markets development are not excluded from the support programmes while checking the tendency of exorbitant profiteering. A major role in this inclusive process will be played by regional, national and local member organizations including National Federation of Farmers of Sierra Leone ((NaFFSL), the Sierra Leone Chamber for Agribusiness Development (SLeCAD), Fisherfolk Association, Livestock Producers' Organization, Sierra Leone Women's Forum (SLWF), Cocoa and Coffee Commodity Association (SLCCCA), Business Forum (SLBF), other produce organizations (PO), farmer-based organizations (FBOs) and cooperatives. The active involvement of women and youth

groups and associations, as well as informal workers organizations will facilitate their inclusion across programme activities.

5.3.2. Comprehensiveness

The ICADEP is a comprehensive programme as it identifies and promotes the key and viable commodities covering the four subsectors of Agriculture: *Crops, Fisheries, Livestock and Forestry* and envisages measures strengthening the Value Chain approach for each of the prioritized commodities. It is also comprehensive in the sense that it aims to bring sustainable benefits to the diverse array of livelihood groups of rural Sierra Leone.

5.3.3. Competitiveness and Commercialization

ICADEP will provide support to improve the competitiveness of local grown products and their commercialization, development and growth of domestic small and medium agribusinesses and agricultural entrepreneurs, as well as stimulating investments by large scale business and attracting FDIs. Development of the agricultural value chains will be supported through a package of investment incentives for the private sector. It will promote linkages among smallholders, medium and large-scale enterprises as vertical and horizontal integration strategies for promoting commercialization and modernization of production as well as processing and value addition in Sierra Leone. Issues of meeting international food safety standards will be addressed. ICADEP will address the key binding constraints and seize growth opportunities for the agricultural sector contribution to A4P.

5.4. Food Categories for the Promotion of Food Security and Nutrition

Stakeholders categorised the various food stuffs produce in Sierra Leone for the purpose of promoting food security and nutrition during a well-attended retreat over 5 days (Table 8). These priority value chains will be the focus of ICADeP.

Table 8: Food Category and Type

Food Category	Food type
Staples	Rice; Cassava; Sorghum; Millet; Maize; Yam; Sweet Potato; Plantain
Pulses/Legumes	Soya Beans; Black Eyed Beans; Broad Beans; Groundnut, Sesame
Fruits	Citrus; Pine Apple; Avocado; Banana; Mango; Pawpaw; Guava; Water Melon; Plum
Vegetables	Tomato; Onion; Pumpkin; Okra; Carrot; Cabbage; Runner-Beans; Peppers; Cucumber; Garden-Eggs; Green Leafy Vegetables
Meat and Dairy	**Dairy Value Chain**: Milk/Cheese from cattle and small ruminant
	Meat Value Chain: Meat from cattle, small ruminant, rabbit, pig
	Poultry Value Chain: Eggs, Meat
Fish/Aquatic Resource Value Chains	Tilapias, Cat fish, Cutlass fish, Carps (introduction), Crabs, Shrimps, Oysters
Non-Wood Forest	Neem Tree, Moringa, Honey Bee, Garlic (advocacy/research), Mint tree

Products Value Chains	
Cash Crops	Palm Oil; Ginger; Coffee; Cacao, Cashew nuts; Sunflower

5.4.1. Staple Crops VCAs

The GoSL has with good rationale, encouraged the production of *Rice* in the interest of the nation becoming self-sufficient for this crop. While this goal has yet to be met, good progress has been achieved. At the same time, as noted further, a more balanced diet involving fruits and vegetables has been recommended by nutritionists and leaders within the GoSL. For business people who engage in agriculture; two general crops emerge within the ASR as having great potential for continued expansion within the unique conditions which exist within Sierra Leone. *Sorghum* and *Cassava* each present largely untapped potential as commodities with stable processing possibilities. The success of developing increased *Sorghum* production to serve beer distilleries in Sierra Leone is a classic example of how to engage and improve a value chain in a developing country. And *Cassava* which is now referred to as the "multipurpose crop for the 21st century" presents a host of multiple opportunities as a commodity destined for processing. In addition to these staples, the country could engage in production of nutrient-dense crops such as legumes/pulses.

5.4.2. Cash Crops VCAs

When export crops are considered, the ASR reports on how devastating the loss of exports becomes for a fragile economy as was evidenced during and after the long period of turmoil and war in Sierra Leone. *Cocoa* and *Coffee* were the traditional export commodities produced in Sierra Leone prior to the period of war. After the war, a decade of effort and investment was required to once again gain a foothold for these two commodities in the global marketplace. Although exports of *Cocoa* or *Coffee* has yet to put Sierra Leone on the map as a major player on the world stage as a supplier of these commodities; during recent years producers and exporters have developed an solid reputation as dependable suppliers. This has been especially true as related to organic *Cocoa*. With a foundation for growth in the export marketplace established in the past few years; increased production along with globally acceptable standards should set the stage for continued export expansion; especially for *Cocoa* that will continue to be in short supply globally for years to come. In addition, as Sierra Leone continues to gain a reputation as a dependable source for *Cocoa* and *Coffee*; opportunities for other crops such a *Cashew Nuts, Mangoes, Oranges, Avocado, Hot Chili Pepper, Pineapple, Palm Oil, as well as processed products, e.g. Fruit Juices* should evolve substantially. In addition to increased production of exportable commodities, acceptable standards of quality and identity, sound promotion and marketing will be promoted by GOSL in order to achieve sustainable success. The GoSL will also continue to improve logistical infrastructure as related to roads, air transport and seaports. Without these improvements, exports will not flourish.

5.4.3. Livestock VCAs

As compared to crops, the ASR makes note of little investment being made by either the GoSL or donors to stimulate the development of the livestock and poultry sub-sectors in agriculture. ICADEP will promote opportunities for *Poultry, Small and Large Ruminants*; as well as specifically in the *Dairy* business. Although there are constraints, primarily of a social nature there remain vast areas where livestock grazing is practical. In addition, adding livestock as a component of general farming, a practice which largely evaporated during the long war, presents a viable income addition for small and medium holders. Additional research, education and extension focus on livestock all represents very good investments in the interest of a stronger agricultural sector. The GOSL will be investing in extension and veterinary services to provide sustainable livestock and poultry Value Chains.

5.4.4. Forestry VCAs

Value-added Forestry Products present a valuable opportunity in Sierra Leone. Value added wood working ventures will be encouraged within the country as opposed to loosening restrictions on export of logs. Forested areas are facing serious challenges due to traditional farming practices which involve clearing land via fire, deforestation from logging activities, and the development of large commercial farms. The GoSL will develop stronger regulations and enforcement as related to the 'slash and burn' practices; especially for smallholder farmers. Non-timber forest products will also be promoted, as means of income diversification and considering their contribution to food and nutrition security

5.4.5. Fisheries/Aquaculture VCAs

One of the greatest resources within Sierra Leone is the marine ecosystem which includes not only ocean waters; but inland water bodies such as rivers, estuaries, lakes and flood plains richly endowed with abundant and diverse species of finfish, shellfish and wetland resources. As reported within the ASR, the contribution of fisheries to the GDP has been increasing substantially between 2004 and 2013; however the national demand is yet to be met. Illegal, unreported and unregulated (IUU) fishing is a serious global problem, and one of the main constraints to the achievement of sustainable fisheries. Investment within the Ministry of Fisheries and Marine Resources (MFMR) to reduce IUU will benefit private business interests engaged in the fisheries sector. As an important nutritional source for domestic consumption and a potentially significant export revenue stream; fisheries should be given a high priority from an investment perspective. Aquaculture will be particularly promoted under ICADeP investment.

5.5. Specific Strategies for VCs

A number of specific strategies could be followed in the development of the value chains specified in the food categories in Table above. These strategies include;

5.5.1. Export Strategy

Under this strategy, an export market oriented mentality is encouraged for the traditional cash crops such as palm oil, ginger, coffee, cacao, cashew nuts, sunflower etc.

5.5.2. Increasing Input Access and Production to Satisfy Sufficiency

Here, the focus is on increasing production from access to inputs supplies and other factors of production to satisfy the demand for staples such as rice, cassava, sorghum, millet, maize, yam, potato (orange flesh sweet) and plantain.

5.5.3. Agribusiness

Livestock integrated with cereals and vegetable production is a viable agribusiness. Cereals and vegetables could be used in ration formulation whereas; animal waste is used as organic manure in vegetable production. Net feeding cost reduction gained would translate into good profit margins as animal feeds account for a significant proportion of production cost in livestock production.

5.6. Indicative Cost

Table 9: Detailed Cost (US$) of Project Financing by Component, Sub-Components and Activities

Component	Description	Cost (US$)				
		2018	2019	2020	2021	2022
Component 1. Sector governance and ICADeP Management and Implementation (US$)						
Sub-Component 1	*Policy, legal and regulatory environment that adequately supports agricultural investment and transformation developed in an inclusive manner*					
Activity 1.1.0	Organize inclusive cross-sectoral and multi-stakeholder dialogues to formulate sector policies, strategies, regulatory measures and investments					
Activity 1.1.1	Conduct a mapping of current agricultural, fishery, livestock, land and forestry policy gaps					
Activity 1.1.2	Conduct an analysis of the legal, fiscal and regulation environment for agricultural investment and value chain promotion					
Activity 1.1,3	Develop, review and domesticate current policies, strategies and fiscal measures Implement policies and evaluated performance					
Sub-Component 2	*National and decentralized sector stakeholder coordination mechanisms strengthened in order to make them effectively functional*					
Activity 1.2.0	Strengthen multi-sectoral coordination dialogues through the multi-stakeholder coordination platform					
Activity 1.2.1	Establish intra-institutional working groups to address sector coordination gaps					
Activity 1.2.2	Conduct an analysis on multi-sectoral synergies and win-wins with the agriculture					

	sector, including with nutrition, education, social protection and gender					
Activity 1.2.3	Develop dialogue platforms at decentralized levels by using decentralized advisory platforms					
Sub-Component 3	*National and decentralized information, M&E and accountability systems made fully functional for effective reporting and informed policy-making*					
Activity 1.3.0	Consolidate sectoral budget, financing and financial tracking systems					
Activity 1.3.1	Conduct a sectoral review and analysis to determine sector performance					
Activity 1.3.2	Develop and implement a communication strategy to guide the generation and dissemination of sector information					
Activity 1.3.3	Develop and ensure effective management of a multi-sectoral web-based information sharing platform					
Activity 1.3.4	Review and strengthen existing agriculture-based information systems and data management					
Sub-Component 4	*Institutional, technical, organizational, financial and management capacities of public institutions and sector actors built in order to carry out their professional activities effectively*					
Activity 1.4.0	Conduct an assessment to identify capacity gaps among National and decentralized sector institutions, actors and implementers					
Activity 1.4.1	Develop an inclusive capacity building programme for sector actors and implementers					
Activity 1.4.2	Implement the capacity building programme for sector actors and implementers, including extension agents					
Activity 1.4.3	Develop district agricultural investment plans					

Subtotal						
Component 2. Sustainable and Inclusive Agricultural Productivity and Production Systems (US$)						
Sub-Component 1	*Availability and accessibility to quality production factors enhanced and supported in an sustainable and inclusive manner*					
Activity 2.1.0	Conduct normative and operational research for improved quality inputs;					
Activity 2.1.1	Create formal and informal system for the provision and timely distribution of quality and improved inputs for agriculture;					
Activity 2.1.2	Create formal and informal system for the provision and timely distribution of quality and improved inputs for livestock;					
Activity 2.1.3	Create formal and informal system for the provision and timely distribution of quality and improved inputs for aquaculture and fisheries;					
Activity 2.1.4	Create formal and informal system for the provision and timely distribution of quality and improved inputs for forestry;					
Activity 2.1.5	Provide and maintain small, medium and large scale irrigation infrastructure and equipment;					
Activity 2.1.6	Facilitate acquisition and maintenance of mechanization equipment by farmers					
Activity 2.1.7	Facilitate soft loans and financial services' access for farmers such as access to e.g. micro-finance; financial literacy village savings and loans schemes					
Activity 2.1.8	Undertake a mapping of arable, cultivated, non-cultivated areas and wetlands to identify and address land utilization issues.					
Activity 2.1.9	Undertake a soil fertility test/mapping to provide soil fertility profile across the country.					
Activity 2.1.10	Identify and disseminate innovative					

	technology and productive practices through extension advisory services					
Sub-Component 2	*Crops, livestock, fishery and forestry production practices and techniques are improved and made climate smart*					
Activity 2.2.0	Train extension agents, smallholders and enterprises (in a gender sensitive manner) on climate-smart and enhanced agricultural practices, knowledge and techniques;					
Activity 2.2.1	Conduct normative and operational research for natural resource management;					
Activity 2.2.2	Set up an Information, Education and Communication (IEC) innovative platforms for technology transfer.					
Activity 2.2.3	Conduct normative and operational research for developing adequate, innovative, climate-smart and affordable technologies including pest bio-control measures for smallholders and enterprises;					
Activity 2.2.4	Undertake pest management campaigns to develop capacity of farmers to prevent and identify pest and diseases related to crops, livestock, fisheries and forestry;					
Activity 2.2.5	Improve pest management and control (including provision of sample control test kits to smallholders) from extension agents to farmers;					
Activity 2.2.6	Strengthen/establish production demonstration sites for improved practices among farmers;					
Sub-Component 3	*Production infrastructures strengthened so as to avoid pre -harvest losses and ensure food safety standards along the production line*.					
Activity 2.3.0	Provide, rehabilitate and maintain storage facilities for seeds and crops to smallholders and enterprises;					

Activity 2.3.1	Provide, rehabilitate and maintain ranches, slaughterhouses, dairy and meat production centers and feed stores;					
Activity 2.3.2	Provide and rehabilitate and maintain fish ponds, hatcheries, cold chains and feed mills;					
Activity 2.3.3	Establish, rehabilitate and maintain IVS;					
Activity 2.3.4	Provide harvesting infrastructure, equipment and materials					
Activity 2.3.5	Provide on-farm transportation means for crops, aquaculture and livestock					
Activity 2.3.6	Establish and equip food safety laboratories;					
Activity 2.3.7	Train lab technicians and extension agents about food safety standards;					
Activity 2.3.8	Ensure food safety for local market					
Subtotal						
Component 3. Agribusiness, Infrastructure and Value Chain Development (US$)						
Sub-Component 1	*Post-harvest losses reduced and food safety and quality improved*					
Activity 3.1.0	Train farmers on post-harvest management practices (including storage and processing to maintain the quality and nutritional benefits of the crops)					
Activity 3.1.1	Build or rehabilitate individual/collective improved post-harvest storage and conservation facilities					
Activity 3.1.2	Facilitate acquisition of processing materials, technologies and inputs to communities and Small-Medium and Large Enterprises					
Activity 3.1.3	Provide incentive schemes to establish competitive agro-processing Small-Medium and Large Scale Enterprises					
Activity 3.1.4	Update/develop food safety standards and regulations for international and local markets					

Activity 3.1.5	Strengthen food safety control and certification systems (training of officers and provision of facilities)					
Activity 3.1.6	Promote a visual identity (branding logo) for Sierra Leone quality agricultural products					
Sub-Component 2	*Functional domestic markets established and their links with regional and global markets strengthened*					
Activity 3.2.0	Build and rehabilitate feeder roads					
Activity 3.2.1	Strengthen domestic market information systems					
Activity 3.2.2	Establish and capacitate a market information platform targeting external opportunities					
Activity 3.2.3	Strengthen linkages between local farmers, agro-processing actors and institutional markets (schools, army, hospitals, prisons, etc.) to enhance home-grown institutional feeding program for improved diet quality of occupants of those institutions					
Activity 3.2.4	Organize and support trade fares and periodic markets					
Activity 3.2.5	Developing commodity market structures in selected areas (abattoirs, markets, vegetable markets, fish markets etc.)					
Activity 3.2.6	Align national food safety policies and standards to regional and global ones					
Sub-Component 3	*Value chains are well structured, inclusive and sustainable*					
Activity 3.3.0	Conduct an assessment to identify and select agribusiness value chains based on financial, socio-economic, food and nutrition security impact; and disseminate the findings to attract investment					
Activity 3.3.1	Conduct an assessment to identify the typology of actors and activities involved in					

	the selected agribusiness value chains					
Activity 3.3.2	Support the establishment of agribusiness actor groups into selected agricultural value chains					
Activity 3.3.3	Develop technical, managerial and organizational capacities of the organized agribusiness value chain groups					
Activity 3.3.4	Conduct needs assessment and reinvest in established Agribusiness Centre for effective governance and profitable business					
Subtotal						
Component 4. Livelihoods, Resilience, Nutrition of Vulnerable Groups (US$)						
Sub-Component 1	*Most vulnerable have sustainable and equitable access to market, infrastructure, productive and financial resources*					
Activity 4.1.0	Conduct a situation assessment and analysis of the most vulnerable groups in agriculture and rural areas.					
Activity 4.1.1	Developing a targeting system and an interactive database of most vulnerable groups.					
Activity 4.1.2	Develop/strengthen preventive and productive social safety nets including cash and asset transfer programmes to improve and diversify livelihoods of the most vulnerable.					
Activity 4.1.3	Build and strengthen organizational capacity and financial literacy of community -based saving groups.					
Activity 4.1.4	Capitalise and review the modus operandi of community banks and financial services associations to enhance their capacity to reach the most vulnerable.					
Activity 4.1.5	Develop and implement a strategy for women and youth inclusion in agriculture					

Sub-Component 2	*Access to sustainable healthy and nutritious diets is improved and food choices among the most vulnerable are improved*					
Activity 4.2.0	Conduct mass media and community on campaigns on food and nutrition education and BCC (Behavior Change Communication), capitalizing on the existing Food Based Dietary Guidelines - emphasising diversifying food production systems for nutrition security)					
Activity 4.2.1	Strengthen capacities of local communities on food preparation, preservation and processing techniques and enterprises for nutrient-sensitive food processing, packaging and conservation					
Activity 4.2.2	Support backyard gardening for diversification and enhancement of increased nutritious food consumption					
Activity 4.2.3	Encourage the consumption of locally grown food stuffs					
Sub-Component 3	*Early warning and preparedness mechanisms against shocks improved and mitigation measure implemented in consonance with National Adaptation Programme of Actions (NAPA) priorities*					
Activity 4.3.0	Carry out an assessment to identify gaps, constraints and needs in current early warning systems;					
Activity 4.3.1	Strengthen the capacity of institutions responsible for early warning systems and inter-agency collaboration;					
Activity 4.3.2	Develop a communication strategy and platform to disseminate information on/of early warning systems;					
Activity 4.3.3	Provide adapted information and tools/plans to strengthen capacity of communities and					

	households to take early action before shocks;					
Activity 4.3.4	Improve risk management tools (as household insurance) and support mitigation and adaptation actions at central and decentralized levels					
Activity 4.3.5	Implement social safety nets in emergencies for affected agricultural communities (including conditional and non-conditional cash transfers during seasonal vulnerability)					
Sub-Component 4	*Capacities of the vulnerable populations built in order to have access to diversified income generation opportunities*					
Activity 4.4.0	Provide business development services, vocational training (+basic literacy and numeracy) to affected communities					
Activity 4.4.1	Provide value-chain oriented start up kits to affected communities					
Activity 4.4.2	Promote integrated farming systems					
Subtotal						
Total						

6.0. Results Framework for ICADeP

6.1. Background

Sierra Leone's National Sustainable Agriculture Development Plan (NSADP) 2010-2030 as the Agricultural Sector's Development Framework, is also the country's contribution to the Comprehensive Africa Agriculture Development Programme (CAADP) at the continental level under the auspices of the African Union's New Partnership for Africa's Development (AU/NEPAD) initiatives. The commodity commercialization aspect of NSADP - as an important sub-programme identified under the NSADP/CAADP, attracted national and donor's priority which resulted into the implementation of the Smallholder Commercialization Programme (SCP) 2010-2014 as the component with the greatest potential impact with respect to improved food security and wealth generation. This Inclusive Comprehensive Agricultural Development Programme (ICADeP) is a follow-up programme building on the lessons learnt from the implementation of the SCP. The programme developmental genealogy outlined above is germane to the approach used in preparing this results framework for ICADeP (Table 10) as an M&E tool for results-based programming and performance monitoring. The M&E method is based on Monitoring and Evaluation indicators set forth in this results framework including; i) result based mechanisms of the CAADP Result Framework; ii) programme development objectives/outcomes result indicators, iii) component activity indicators subjected to logframe analysis; vi) participatory methods to include the views of direct beneficiaries from surveys e.g. Citizens Report Cards (CRC).

In their Declaration in Malabo; during the ASSEMBLY OF THE UNION Twenty-Third Ordinary Session 26-27 June 2014 (see Part VII - Commitment to Mutual Accountability to Actions and Results), the African Heads of State were mindful of the need for monitoring, tracking and reporting on the implementation of the Declaration using the CAADP Results Framework for bench-marking programme progress. This is to say that, the CAADP Results Framework is an integral part of CAADP implementation. Consequently, as ICADeP is a progeny from the CAADP process, this ICADeP result framework has been contextualised in the CAADP Results Framework ensuring; strengthening systematic capacity to deliver results as the basis of agricultural transformation and sustained inclusive agricultural growth in order to enhance agriculture's contribution to economic growth and inclusive development. Within that global structure, a results matrix has been developed for monitoring programme development objectives indicators. The logical framework matrix will be used to track progress on implementing component activities on short term basis to feed into the results framework

The ICADeP Results Framework should strengthen and align existing systems and tools, including enhancing multi-sectoral linkages and promoting multi-stakeholder implementation, partnership, monitoring & evaluation and improving accountability. The framework is meant to standardise and harmonise strategies and programmes by stakeholders, including farmers' and fishers' organisations, the private sector, civil society, research institutions and multilateral and donor partners. Importantly, systematic tracking and monitoring of core indicators will generate progress reports from robust monitoring plans for data generation and from stakeholder consultations to corroborate the reports. Such reports will be useful for planning, implementation and decision-making. The proposed project will be implemented over a 4 year period and assumes the SMART-W guiding principles requiring

that actions should be Specific, Measurable, Assignable, Result Based, Time bound and Written down (SMART-W)[31].

[31]Scarborough, N.M. (2010). Essentials of Entrepreneurship and Small Business Management, 6th Edition (Pearson Custom Business Resources), Pp. 85.

Table 10. ICADeP Results Framework

INTERVENTION LOGIC *General objective*	**ACTIVITY** *Activity to be carried out and in what sequence*	**EXPECTED RESULTS** *Output envisaged*	**MILESTONE INDICATORS** *Key indicators related to general objectives* **Indicator/Unit of Measurement**	**TARGETS** *Output quantification with timeline* **Baseline**	**Mid-term**	**End**
Goal (Impact) Increased agriculture sector contribution to a broad-based socioeconomic development and food & nutrition security of rural Sierra Leone in a sustainable and inclusive manner		Rural income growth Rural poverty reduced Extreme hunger reduced Food insecurity reduced Nutrition insecurity reduced	% Increase % Reduction % Reduction Reduced % Reduction	2.2% 66% 49.4%	3.5% 50%% 25% 37%%	7% per annum 40% by 2022 50% by 2022 25% by 2022
Development Objective Conducive environment and incentives in place for sustainable agricultural production and agribusiness and value chain development.		Agriculture growth	Growth rate of agriculture value added, in constant US dollars, per agricultural worker (tAgW) Growth rate of agriculture value added, in constant US dollar, per hectare of agricultural arable land (tAgL) Growth rate of yields for selected VCs, (t/ha) Maize; Cassava; Rice	2.2 3.5 -6.5; 6.2; 3.3	2.7 4.0 -3.5; 6.5; 3.8	3.0 4.5 0; 7.0; 4.0

		Budgetary allocation to agriculture	Public agriculture expenditure as share of total public expenditure (ţPAE)	2.5%	7%	10%
			Volume of foreign direct investment in agric (disbursed). VC	41.5M (2010-2017 average)	60M	100M
		Incidence of rural working poor	Reduction rate of poverty headcount ratio, at national poverty line (% of population), dpovN	66%	50%	40%
			Reduction rate of the gap between the wholesale price and farmgate price (ţfgws)	50%	30%	20%
		No of agricultural jobs created along the value chain	Number of part-time jobs created per annum by age group and gender (doubled 100%)	20,000	30,000	40,000
			Number of full-time jobs created per annum by age group and gender (doubled 100%)	10,000	15,000	20,000

COMPONENT 1: Sector Governance and ICADeP Management and Implementation						
Specific Objective 1: Strengthen governance structures and mechanisms for improved policy and programming, coordination, implementation and monitoring and evaluation to enhance mutual accountability.						
1.1. Policy, legal and regulatory environment that adequately supports agricultural investment and transformation developed in an inclusive manner	1.1.1 Organize inclusive cross-sectoral and multi-stakeholder dialogues to formulate sector policies, strategies, regulatory measures and investments	Inclusive multi-sectoral/multi-stakeholder dialogues for policy/strategy formulation organised	Number of inclusive multi-sectoral/multi-stakeholder dialogues for policy/strategy formulation organised	15	45	75
	1.1.2. Conduct a mapping of current agricultural, fishery, livestock, land and forestry policy gaps	Policy review undertaken and gaps identified & rectified	Number of reviewed & updated agricultural, fisheries, livestock and forestry policies available	Agriculture: 0 Fisheries: 1 Livestock: 0 Forestry: 0 Land: 1	Agriculture: 1 Fisheries: 1 Livestock: 1 Forestry: 1 Land: 1	Agriculture: 1 Fisheries: 1 Livestock: 1 Forestry: 1 Land: 1
	1.1.3 Conduct an analysis of the legal, fiscal and regulation environment for agricultural investment and value chain promotion	Comprehensive legal, fiscal and regulatory needs assessment for agricultural investment and value chain promotion carried-out	Report on assessment analysis available and used in implementation.	0	1	1 Updated
	1.1.4 Develop, review and domesticate current policies, strategies and fiscal measures and ensure implementation and performance evaluation	Existing agricultural policies and institutional settings strengthened to successfully implement ICADeP to achieve goals and targets.	Number of evidence-based policies, supportive institutions and corresponding human resources developed	0	10	20
			Evidence of policy implementation and publication of performance	0	1 performance evaluation report/sector	1 performance evaluation report/sector

1.2 National and decentralized sector stakeholder coordination mechanisms strengthened in order to make them effectively functional	1.2.1 Strengthen multi-sectoral coordination dialogues through multi-stakeholder coordination platform	Multi-sector coordination among stakeholders strengthened by establishing and operationalizing Multi-sectoral Platform	Degree of adherence to mutual accountability principles such as:			
			Level of participation and inclusiveness %	25%	75%	100%
			No of joint decisions taken and implemented through joint coordination body	5	15	25
			Proportion of farmers having access to Agricultural Advisory Services (FAgAS).	0.05%	10%	20%
			Recruit trained and qualified extension staff	124	524	620
			Degree of adherence to mutual accountability principles.			
			Level of participation and inclusiveness	25%	75%	100%
			No of joint decisions taken and implemented through joint coordination body	6	12	18
			Published report shared and implemented	0	2	4
	1.2.2 Establish intra-institutional working groups to address sector coordination gaps	Intra-institutional working group established through Joint Ministerial Working Group (JMWG)	Number of platforms established and made effectively functional	2	3 (to be strengthened)	3 (strengthened)

			Degree of adherence to mutual accountability principles. Level of participation and inclusiveness	60%	75%	100%
	1.2.3 Conduct an analysis on multi-sectoral synergies and win-wins with the agriculture sector, including with nutrition, education, social protection and gender	Study conducted on multi-sectoral synergies to discern win-win possibilities within the agriculture sector	No of joint decisions taken and implemented through joint coordination body Number of study conducted	12 per district 0	24 1	48 2
	1.2.4 Develop dialogue platforms at decentralized levels by using decentralized advisory platforms	Multi-sectoral/stakeholder platform established at district and local council levels	Number of platform established at decentralised levels	13	15	15 Maintained

1.3 National and decentralized information, M&E and accountability systems made fully functional for effective reporting and informed policy-making	1.3.1 Consolidate sectoral budget, financing and financial tracking systems	Accountability system for tracking sectoral budgets established	No. of Accountability system in place effectively tracking sectoral budget	5	5 (to be strengthened)	5 (strengthened)
	1.3.2 Conduct a sectoral review and analysis to determine sector performance	Joint sectoral review conducted	Number of sector reviews completed and lessons learnt used to inform policy review or implementation strategy	0	2	4
	1.3.3 Develop and implement a communication strategy to guide the generation and dissemination of sector information	Communication strategy developed and implemented	Number of useful information generated and disseminated across sub-sectors	4/year	20	20 Maintained
	1.3.4 Develop and ensure effective management of a multi-sectoral web-based information sharing platform	Web-sites developed and managed where multiple sectors have access and share information	Number of website established and functional	0	1	1
			Number of end-users tracked with feed-back	0	5,000	10,000
	1.3.5 Review and strengthen existing agriculture-based information systems and data management	Agricultural statistics and Market information management improved and available to all stakeholders	No. of SME and survey data publicized annually	0	2	4
			No Agric-market bulletin published and distributed	4	24	48
			Number of slots in community radio discussions on Agricultural Market information	0	48 48	96

			Number of Agric-Market Data Collection conducted No. of information campaigns carried out across sub-sectors No of SME Info Points operational Large business monitoring report publicized annually Index of capacity to generate and use agriculture statistical data and information (ASCI)	12 10/year 0 0 0	60/year 66 2 25	96 90/year 66 4 ASCI of 55 achieved by 2022
1.4 Institutional, technical, organizational, financial and management capacities of public institutions and sector actors built in order to carry out their professional activities effectively	1.4.1 Conduct an assessment to identify capacity gaps among National and decentralized sector institutions, actors and implementers 1.4.2 Develop an inclusive capacity building programme for sector actors and implementers 1.4.3 Implement the capacity building programme for sector actors and implementers, including extension agents 1.4.4. Develop District Agricultural Investment Plans	Study conducted and capacity gaps identified Capacity building programme developed based of existing gaps Capacity programmes implemented District Investment Plans Developed	Number of capacity assessment report implemented to inform development of capacity building programme Number of available capacity building programme developed Number of capacity programmes implemented Number of District Investment Plans Developed and made available to potential investors	0 0 0 2	2 2 2 8	4 4 4 15

COMPONENT 2: Sustainable and inclusive agricultural productivity and production systems						
Specific Objective 2: Increase sustainable and inclusive production and productivity of climate smart and diverse quality commodities for improved food and nutrition security						
2.1 Availability and accessibility to quality production factors enhanced and supported in a sustainable and inclusive manner	2.1.1. Conduct normative and operational research for improved quality inputs; 2.1.2. Create formal and informal systems for the provision and timely distribution of quality and improved inputs for agriculture;	Improved and quality agriculture sector inputs provided and distributed	List of improved and quality inputs across the agriculture sector	1	1	2
			Increase use of fertilizer for agriculture development	3kg/ha	25kilograms per hectare of arable land	40kilograms per hectare of arable land
			Increase public expenditures to agriculture as part of national expenditures, to at least 10% from the year 2018 to 2022.	2.1%	10%	10%
			Proportion of men and women engaged in agriculture have access to financial services to be able to transact agriculture business.	5%	10%	25%
			Access to finance as % of total commercial banks loans advances to agriculture	1%	5%	10%
			Increase the size of	7,176 hectares	14,000	28,000

			irrigated areas (as per its value observed in the year 2018)			
			Increase the current levels of quality agricultural inputs for increased crop production			
			Production			
			Increase in rice production:	1,160,646mt	1,400,000	1,700,000
			Increase in other arable crops production:	830,280	1,004,640	1,215,000
			Increase in tree crops production:	1,678,984	2,031,000	2,460,000
			Number of farmers trained in improve farming techniques and value addition:	37,500	225,000	375,000
			Inputs			
			Quantity of improved seeds/planting material distributed to farmers			
			Improved seed rice (mt):	58,548	70,565	85,900
			Other improved arable crop planting materials (units):	2,991,000	3,619,000	4,376,800
			Improved tree crop (mt):	13,380,000	14,280,500	19,603,000

			% farmers have access to quality agricultural advisory services that provide locally relevant knowledge, information and other services.	0.05%	10%	20%
			Increase the level of Investments in Agricultural Research and Development to at least 1% of the Agricultural GDP, from 2018 to 2022.	0.04%	1%	2% GDP
			Ensure that 100% of small-scale farmers (< 5hectres) and agribusiness interested in agriculture have rights to access the required land.	70%	80%	100%
			Ensure that 60% of large-scale farmers and agribusiness interested in agriculture have rights to access the required land.	30%	50%	60%
			Increase agricultural yield levels of priority commodities, by the year 2022 from the year 2018 Rice:			

	2.1.3. Create formal and informal systems for the provide and timely distribution of quality and improved inputs for livestock	Quality livestock breeds produced and distributed	Cassava: G/nuts: Sweet Potatoes Maize: . Increase number of quality agricultural inputs for livestock (breed), Number of nucleus Artificial Insemination (AI) Stations established and functional set up and implemented for animal improvement (1 per Region) Number of Paddocks established Number of Pasture and Range Management Programmes implemented % of farmers practicing zero grazing Number of cattle settlement exercises supported in cattle/small ruminant production areas Number of milk processing	1.24mt 15.69 0.77 9.08 2.23 0 0 0 5% 0	3.0 20.0 1.5 15.0 3.0 3 3 7 15% 50	4.0 25.0 2.0 20.0 5.0 5 5 14 30% 100

			plants established (Peri-Urban)	0	3	5
			Number of Vaccination and deworming/treatment exercises conducted against Anthrax, Black Quarters, worms, tick, mange for farm animals etc	0	30	50
			Number of animal fattening programmes/demonstrations conducted and functional	0	30	50
			Production of dairy products(cheese production etc) businesses establish	0	3	5
			Number of pig breed improvement stations for the production and distribution of piglet production established and operational	0	90	190

			Number of farm buildings Constructed for extension (1 per block	0	33	66
			Number of poultry feed mill established	1	4	6
			Number of Vaccine cold chains provided	0	90	190
			% Slaughter houses refurbished and upgraded	0%	20%	60%
			Number of Vets trained	0	10	20
			Number of middle level manpower trained	0	10	20
			Number of animal production cadre trained	0	20	40
			Number of Lab technicians trained	0	20	40
			Number of mobile clinics	0	3	5
	2.1.4. Create formal and informal systems for the provision and timely distribution of quality and improved inputs for aquaculture and fisheries.	Increased pond development and provision of inputs/tools equipment/infrastructure	Increase levels of fish pond ($400m^2$)from current levels (maintain existing ponds and develop new ones			
			Existing	1170	Maintain 1170	Maintain 1170
			New Ponds - 100/district	0	700	1,400
			Tools/Pond/Country			

			Shovels (6/pond) Machetes (6/pond) Hoes (3/pond) Pipes - 6" (2/pond) Elbows (2/pond) Mattocks (2/pond) Tape rule (100 Pieces for country) Lines (1,700 pieces for country) Head pan (5/pond) Hacksaw frame (50 for country) Hacksaw Blades (1,000 pieces for country) Wheelbarrow (20/district) Drag nets (4/District) Fertilizer (5/pond) Lime (5/pond) Vehicles (10 for country) Bikes (40 for country) Computer and accessories Lab equipment (0_2 and PH meter; test tubes, sachi disc, cupboards) **Labour requirement/pond and capacity development** Labour/pond National sensitisation campaigns	2person/pond	10/pond	Maintain 10/pond

			Training Programmes	0	2	4
			Exchange Programmes	2/year	10	20
			National			
			International	0	2	4
				0	1	2
			Infrastructure			
			Rehabilitation of Stations			
				2 buildings /stations	Rehabilitate 2	Rehabilitate 2
			Farm House			
			3 Bedroom accommodation for Aquaculture Officers – 1/District	0	7	14
			Fingerlings/pond.			
			Tilapia	800	1,500	Maintain 1,500
			Catfish	800	1,000	Maintain 1,000
			Number of data collected on artisanal fisheries	0	2	4

	2.1.5. Provide and timely distribute quality and improved inputs for forestry;	Quality forest trees seedling produced and distributed	Increase current levels of quality agricultural inputs for forestry (seedlings) by the year 2022 from the year 2018.	0	5	10
	2.1.6. Provide and maintain small, medium and large scale irrigation infrastructure and equipment;	Irrigation infrastructure and equipment provided and maintained	Increase the current levels of large scale irrigation infrastructure and equipment			
	2.1.7: Facilitate acquisition and maintenance of mechanization equipment by farmers	Farmers acquire and maintain mechanised equipment	- Dams (80x50x5m)	0	3	5
			- Giant Sprinklers	0	60	80
			- Pumps (50,000 hp)	0	6	10
			Increase the current levels of small scale irrigation infrastructure and equipment			
			- Dams (10x20x3m)	2	20	50
			Number of mechanised equipment available in 66 Agriculture blocks			
			- Threshers	0	198	330
			- Power Tillers	0	198	330
			- Tractors	0	132	198
			- Combined Harvesters	0	66	132
			- Transplanters	0	132	264
			- Weeders	0	66	132
						198

			- Rice haulers	0	132	198
			- Destoners	0	132	198
			- Planters	0	132	132
			- Graters	0	66	132
			- Peelers	0	66	132
			- Pressers	0	66	28
			- Hammer mills	0	14	132
			- Hatcheries	0	66	66
			- Feeders	0	33	330
			- Incubators	0	198	198
			- Chippers	0	66	198
			- Feed Blenders	0	66	132
			- Generators (250KVA)	0	66	
	2.1.8. Facilitate soft loans and financial services' access for farmers such as access to e.g. micro-finance; financial literacy village savings and loans schemes	Farmers have accesses to financial services and literacy	Increase the current levels of access to financial services such as loans, financial literacy by farmers			
			% of farmer with access to loans	5%	10%	25%
			% of farmers having financial literacy services	1%	10%	20%
	2.1.9. Undertake a mapping of arable, cultivated, non-cultivated areas and wetlands to identify and address land utilization issues.	Map of arable, cultivated and non-cultivated land produced	Number of Mapping undertaken reviewed updated annually	0	2	4
			Proportion of country for			100%

	2.1.10. Undertake a soil fertility test/mapping to provide soil fertility profile across the country. 2.1.11. Identify and disseminate innovative technology and productive practices through extension advisory services	Soil fertility map/profile across the country produced Farmers benefit from innovative technology and productive practice	soil fertility profile is conducted Increase current levels of the farmer/extension work ratio delivering effective innovative advisory services	0 0.05	50% 10%	 20%
2.2 Crops, livestock, fishery and forestry production practices and techniques are improved and made climate smart	2.2.1. Train extension agents, smallholders and enterprises (in a gender sensitive manner) on climate-smart and enhanced agricultural practices, knowledge and techniques. 2.2.2. Conduct normative and operational research for natural resource management.	Extension workers trained in climate smart practices that are passed on to farmers. Promote initiatives of building resilience of production systems to reduce vulnerabilities of the livelihoods of farming communities to climate variability and other related risks. Research for developing appropriate natural resource management measures conducted and results	Increase % of farm, pastoral, and fisher households are resilient to climate and weather related risks, by the year 2022. Increase % of agricultural land placed under sustainable land management practice. Number of agronomic natural resource management measures developed and introduced Number of vegetative natural resource management measures developed and introduced Number of structural natural resource management measures developed and introduced Number of management	0 0.13% 0 0 0	10% 1% 2 2 3	20% 5% 4 2 5

		implemented	measures developed and introduced	0	2	4
			% reduction of deforestation	0	10%	20%
	2.2.3. Set up an Information, Education and Communication (IEC) innovative platforms for technology transfer ;	IEC innovative platforms set up and effectively functional	Number of IEC platforms set up and functional (1 per district)	1	8	16
			% reduction of farm families exposed to climate risk	0	15%	30%
	2.2.4. Conduct normative and operational research for developing adequate, innovative, climate-smart and affordable technologies including pest bio-control measures for smallholders and enterprises;	Innovative, climate smart and affordable technologies developed from results of research and implemented	Increase proportion of land under small-scale irrigation	1%	3%	6%%
			Rate of adoption of soil fertility management practices	5%	10%	20%
	2.2.5. Undertake pest management campaigns to develop capacity of farmers to prevent and identify pest and diseases related to crops, livestock, fisheries and forestry;	Pest management campaigns undertaken and impact assessed	Degree of awareness of climate change risk and impact among farming population practices	5%	25%	50%
	2.2.6. Improve pest management and control (including provision of sample control test kits to smallholders)	Pest management and control measures improved	Share of seeds adapted to heat and drought in major crops practices	5%	10%	20%
			No. of natural resource management campaigns undertaken	12	48	96

	from extension agents to farmers;		Number of farmer who can identify diseases due to campaign	5%	25%	50%
			Number of farmer who can prevent diseases due to campaign	5% (of 750,000)	25% (of 750,000)	50% (of 750,000)
			Number of farmers who can effectively use improved measures including sample kits	5%	25%	50%
	2.2.7 Strengthen/establish production demonstration sites for improved practices among farmers;	Demonstration sites strengthened or established	Number of site established			
			Number of technologies developed and implemented	1	8	16
				0	5	10
			Number of pest management campaigns developed and implemented	84	150	150
			Number of improved Pest management control measures developed and implemented	84	150	150
			Recommended and approved Pesticides, herbicides, etc made available in all Agric blocks	0	33	66
			Number of Pest Management			

			Demonstration sites strengthened or established	13 existing to be strengthened	66 to be established and maintained	66 to be established and maintained
2.3 Production infrastructures strengthened so as to avoid pre -harvest losses and ensure food safety standards along the production line.	2.3.1. Provide, rehabilitate and maintain storage facilities for seeds and crops to smallholders and enterprises;	Storage facilities provided, rehabilitated and maintained	Number of facilities provided	403	Maintain 403 and get them operational	Maintain 403 and get them operational
			Number of facilities Rehabilitated (All)	403	Maintain 403 and get them operational	Maintain 403 and get them operational
			Number of facilities maintained (All)	403	Maintain 403 and get them operational	Maintain 403 and get them operational
	2.3.2. Provide and maintain ranches, slaughterhouses, dairy and meat production centers and feed stores;		Number of facilities provided			
			Ranches:	0	15	15
			Slaughterhouses	0	15	15
			Dairy and Meat Production Centre	0	15	15
			Feed Stores	0	4	4
	2.3.3. Provide and rehabilitate and maintain fish ponds, hatcheries, cold chains and feed mills;		*Rehabilitated and maintained* Hatcheries: Feed mill: *Provided* Hatcheries: Feed mill: Cold Chains	 2 1 0 0 0	 2 1 4 5 8	 2 1 6 9 16

	2.3.4. Develop, rehabilitate and maintained IVSs	IVSs developed/ rehabilitated and maintained	Hectares of IVS developed/rehabilitated	9304	14,000	28,000
			Hectares of IVS maintained	9304	14,000	28,000
			Number of facilities provided			
	2.3.5. Provide harvesting infrastructure, equipment and materials	Harvesting infrastructure, equipment, and materials provided, rehabilitated and maintained	Threshers Combined Harvesters Rice haulers Destoners Graters Peelers	0 0 0 0 0 0	403 403 403 403 403 403	403 403 403 403 403 403
	2.3.6. Provide on-farm transportation means for crops, aquaculture and livestock	On-farm transportation means provided	Number of transportation Provided	0	190	190
			No of transportation for crops (one/chiefdom)	0	190	190
			No of transportation for aquaculture (one/chiefdom)	0	190	190
			No of transportation for livestock (one/chiefdom)	0	1	2
	2.3.6. Establish and equip food safety laboratories;	Safety labs established and equipped	Number of labs established, equipped and functioning effectively	0	5	10
			% of products certified by	0%	50%	100%

	2.3.7. Train lab technicians and extension agents about food safety standards;	Lab Tech and extension agents trained to man labs and demonstration sites	labs are accepted in the international market Number of lab technicians trained and employed at labs	0	5	10
	2.3.8. Ensure food safety for local market	Local food stuffs monitored for safety	Proportion of markets monitored for safety of local food stuffs	0%	50%	100%

COMPONENT 3: Agribusiness, infrastructure and value chain development						
Specific Objective 3: Improve efficiency, sustainability and competitiveness of agriculture value chains and market linkages						
3.1 Post-harvest losses reduced and food safety and quality improved	3.1.1 Train farmers on post-harvest management practices (including storage and processing to maintain the quality and nutritional benefits of the crops)	Farmer trained in post- harvest management measures	Number of farmers trained	0	187,500	375,000
	3.1.2 Build or rehabilitate individual/collective improved post-harvest storage and conservation facilities	Improved post-harvest storage and conservation facilities built or rehabilitated	Post-Harvest Losses (PHL) level for the 5 national priority commodities	40%	30%	20%
	3.1.4 Facilitate acquisition of processing materials, technologies and inputs to communities and Small-Medium and Large Enterprises	Acquisition of processing material , technologies, and inputs facilitated	Number of post-harvest storage and conservation facilities built or rehabilitated	403	403 maintained and operational	403 maintained and operational
	3.1.5 Provide incentive schemes to establish competitive agro-processing Small-Medium and Large Scale Enterprises	Competitive agro-processing enterprises established	Number of small-medium and large enterprises acquiring processing materials, technologies and inputs doubled from current levels	12	90	190
	3.1.6 Update/develop food safety standards and regulations for international and local market	Safety standards and regulations updated	Percentage of businesses applying NFIQ standard certificates	5%	25%	50%
			% of farm families			

	3.1.7 Strengthen food safety control and certification systems (training of officers and provision of facilities)	Food safety control and certification systems strengthened	complying with food safety standards and regulations	0	15% (of 750,000)	30% (of 750,000)
	3.1.8 Promote a visual identity (branding logo) for Sierra Leone quality agricultural products	Quality agricultural products visually identified with logo	Number of food safety officers trained and employed (1 per block)	0	33	66
			% of products with quality logo	5%	25%	50%
3.2 Functional domestic markets established and their links with regional and global markets strengthened	3.2.1 Build and rehabilitate feeder roads	Feeders roads built and rehabilitated	Km of feeder roads rehabilitated	3789	5789	7789
	3.2.2 Strengthen domestic market information systems	Market information readily available to farmers	% of farmers accessing domestic market information	10%	25%	50%
	3.2.3 Establish and capacitate a market information platform targeting external opportunities	Market information platform for external opportunities established	Number of hits at the market information portal	0	5,000	10,000
			Increase in Income generated from provision of market information	0	10%	20%
	3.2.4 Strengthen linkages between local farmers, agro-processing actors and institutional markets (schools, army, hospitals, prisons, etc.) to enhance home-grown institutional feeding program for improved diet quality of occupants of those institutions	Local farmers and institutional markets strengthened	Number of market information system such as radio discussions etc held to disseminate information in good time	5	25	50
			Number of agro-processor cooperatives forged	0	10	20

			Food needs assessment study of key institutions (Police, Hospitals, Correction Centres etc)	0	2	4
			At least 50% of food needs of institutions met by local agro-processors	10%	25%	50%
			Number of campaigns conducted to promote consumption of local foods	8	25	50
	3.2.5 Organize and support trade/market fares and periodic markets	Trade fares and periodic markets organised and supported	Number of trade/market fares organised and supported	0	8	16
			Number of period markets across the country supported with WASH, Storage, medical facilities and Accommodation	0	15	30
	3.2.6. Developing commodity market structures in selected areas (abattoirs, markets, vegetable markets, fish markets etc.)	Commodity market structures developed and Food safety and quality standards are developed, disseminated and enforced	Map/profile of all market structures	0	1	1 updated
			Database developed for agro-industries in country with developed capacity to manage database	0	1	1 updated
			Number of public commodity markets structures refurbished and provided with WASH, electricity, medical facilities, Day-Care, cold chains and storage	0	15	30

	3.2.7 Align national food safety policies and standards to regional and global ones		Establish agro growth center in Freetown with input supplies e.g. seeds, fertilizer, pesticides, transportation	0	1	1 Maintained
		Foods safety policies aligned with global ones	Number of food safety policy alignment to global ones	0	3	5
		Support Sierra Leone Standards Bureau with requisite training and equipment to gain accreditation	Number of staff trained for accreditation relation duties	0	2	4
			Proportion of food stuffs gaining international certification	-	15%	25%
			Number of local food safety monitors trained to cover country	0	25	50%
			Number of monitoring exercise/month	0	10	15
		Popularise the ECOWAS Trade Liberalisation Scheme (ETLS) for citizens to take advantage of the trade opportunity	Number of training workshops on ETLS	0	10	20
			Number of radio discussions	0	20	40

3.3 Value chains are well structured, inclusive and sustainable	3.3.1 Conduct an assessment to identify and select agribusiness value chains based on financial, socio-economic, food and nutrition security impact; and disseminate the findings to attract investment	Assessment study conducted and results implemented to inform investors	Number of PPP established for priority agricultural commodity value chains	0	20	40
	3.3.2 Conduct an assessment to identify the typology of actors and activities involved in the selected agribusiness value chains	Assessment study conducted and actor's profiles in selected value chain determined	Actor's profile available	0	Database for Actors in the 4 MDAs established	4 database updated
	3.3.3 Support the establishment of agribusiness actor groups into selected agricultural value chains	Actor groups in selected VCs organised and supported for increased production and productivity, poverty reduction.	Number of actor groups registered with line ministries and MSWGC	0	2 group established for each VC	2 groups maintained and operational
			Proportion of actor groups linked with viable PPP	0	50%	100%
			Increased income generation by member of actor groups lined to PPP	0	25%	50%
			Reduction of poverty within actor groups	0	25%	50%
			Increase production and productivity within actor	0	10%	20%

			groups	0		
	3.3.4 Develop technical, managerial and organizational capacities of the organized agribusiness value chain groups	Technical, managerial and organizational skills agribusiness VCs developed	% of groups demonstrating improved management skills		10%	25%
	3.3.5. Conduct needs assessment and reinvest in established Agribusiness Centres for effective governance and profitable business	Needs assessment completed and reinvestment procedures established	No of business plans developed and financed	52	150	403
			No of ABC's supported	52		
			Number of ABCs operational on a sustainable basis	0	150	403
		Organizational capacity and financial literacy of community based saving groups	Number of financial literacy studies successfully completed		5	10

COMPONENT 4: Livelihoods, resilience, nutrition of vulnerable groups						
Specific Objective 4: Increase and improve resilience of livelihoods against shocks and promote full access to nutritious foods for the most vulnerable						
4.1 Most vulnerable have sustainable and equitable access to market, infrastructure and productive resources	4.1.1: Conduct a situation assessment and analysis of the most vulnerable groups in agriculture and rural areas.	Situation analysis of the most vulnerable groups in agriculture and rural areas completed	Availability of report	0	Available by year 1	Report reviewed and updated
	4.1.2: Developing a targeting system and an interactive database of most vulnerable groups.	Database on most vulnerable groups developed with baseline of their poverty, nutrition status, accessibility to productive resources, health status etc.	Number of data base established (1 per District)	0	7	14
	4.1.3: Develop /strengthen preventive and productive social safety nets including cash and asset transfer programmes to improve and diversify livelihoods of the most vulnerable	Preventive and productive social safety nets developed and strengthened	No. of farmer groups receiving reliable and timely cash transfer through national institutions	78	228	378
			Proportion of farmer groups covered by social protection:	5% (of 750,000)	15%	25%
	4.1.4: Build and strengthen organizational capacity and financial literacy of community based saving groups.	Organizational capacity and financial literacy of community based saving groups strengthened	Number of financial literacy studies successfully completed	0	5	10
			Number of loan beneficiaries (farm families)	15,000	187,500	375,000

	4.1.5. Capitalise and review the modus operandi of community banks and financial services associations to enhance their capacity to reach the most vulnerable. 4.1.6. Develop and implement a strategy for women and youth inclusion in agriculture	Community banks capitalise and reviewed to reach most vulnerable	At least 50% of farmers having access to finance Volume of agriculture credit provided in support to capitalise community based savings At least 15$ of volume of agriculture credit provided directly to youth and women Number of youths that is engaged in new job opportunities in agriculture value chains, (ţYth) Proportion of rural women that are empowered in agriculture, (ţWE) Number of jobs created per annum Strategy developed, implemented and monitored	Apex Banks Apex Banks Apex Banks 10,000 5% 10,000 0	25% 10% 50,000 15% 50,000 1	50% 15% 100,000 25% 100,000 1 Updated

4.2 Access to sustainable healthy and nutritious diets and improved and food choices among the most vulnerable improved	4.2.1. Conduct mass media and community on campaigns on food and nutrition education and Behavior Change Communication (BCC), capitalizing on the existing Food Based Dietary Guidelines - emphasising diversifying food production systems for nutrition security) 4.2.2. Strengthen capacities of local communities on food preparation, preservation and processing techniques and enterprises for nutrient-sensitive food processing, packaging and conservation	Mass media and community campaigns and BCC conducted for diversifying food production for nutrition security	Number of trainings, sensitization and advocacy conducted % of population aware of the food based dietary guidelines emphasising food diversification for nutrition security Prevalence of stunting (% of children under 5 years old) (St) reduced by 1.5% per year from current levels Prevalence of underweight (% of children under 5 years old) (Uw) – reduced by 1.5% per year from current levels	5 0 28.5 12.9	15 50% 25.5% 9.9%	25 65% 22.6% 6.9%

			Prevalence of wasting (% of children under 5 old) (W) reduced to ≤ 5% from current levels	4.7%	4.5%	4%
			Increase in proportion of Minimum Dietary Diversity-Women (ţMDDW) – increased by 20% from current levels	0%	10%	20%
			Proportion of 6-23 months old children who meet the Minimum Acceptable Diet (MAD) increased by 50% from current levels	7%	23%	50%
	4.2.3. Support backyard gardening for diversification and enhancement of increased nutritious food consumption	Backyard garden promotion scheme designed and implemented	Number farm families with backyard gardens growing diversified and nutritious food stuffs	45% (of 750,000)	65% (of 750,000)	85% (of 750,000)
	4.2.4. Encourage the consumption of locally grown food stuffs	Campaigns and demonstrations to promote consumption of locally grown foods stuffs undertaken	Number of campaigns	10	30	50
			Number of demonstrations	10	30	50

4.3 Early warning and preparedness mechanisms against shocks improved and mitigation measures implemented in consonance with the National Adaptation Programmes of Action (NAPA) Priorities	4.3.1: Carry out an assessment to identify gaps, constraints and needs in current early warning systems;	Early warning systems assess and improved for effective preparedness	Early warning systems needs assessed and report available	0	By year 1	Needs reviewed, updated and implemented
	4.3.2: Strengthen the capacity of institutions responsible for early warning systems and inter-agency collaboration;	Preparation for the Use of Meteorological Satellite in Africa (PUMA) station at the Lungi airport capacitated to provide Early Warning of Imminent Hazardous Weather or Climate as it relates to agriculture/fisheries.	Frequency of weather alerts received	0	Every other day	Daily
			Number of mitigation measures instituted against hazardous weather or climate from early warning alerts	5	10	10
		Permanent investment budget-lines created to respond to spending needs on resilience building initiatives, especially for disaster preparedness plans, functioning early warning and response systems.	Number of preparedness measures in place	5	10	10
	4.3.3: Develop a communication strategy and platform to disseminate information on early warning systems;	Communication and strategy and platform developed	Proportion of farmers reached with early warning information from platform	10% (of 750,000)	30%	50%

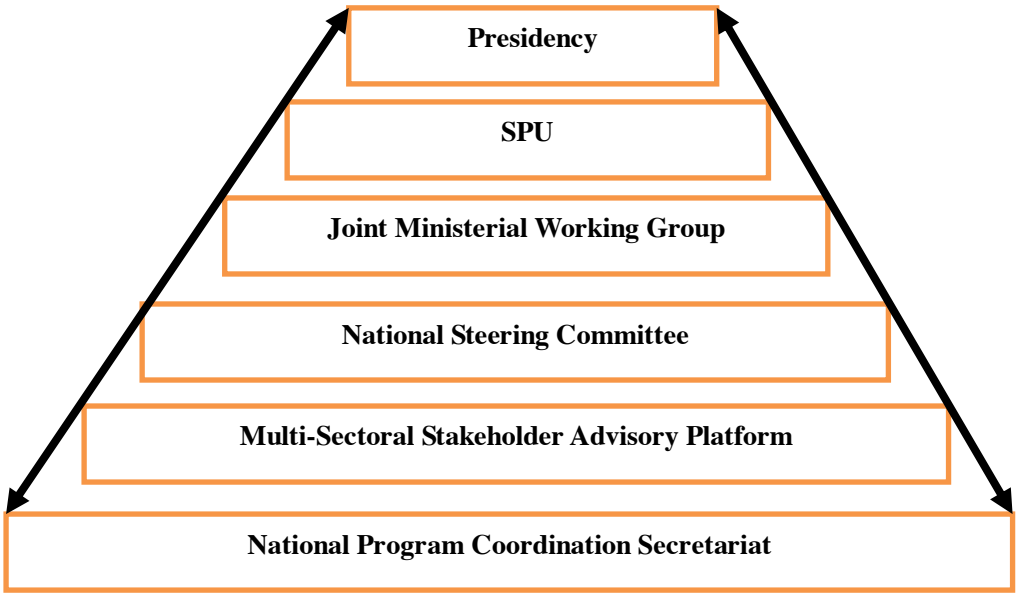
	4.3.4: Provide adapted information and tools/plans to strengthen capacity of personnel to take early action before shocks	Early warning systems apps install in personnel phone and trained in used	Number of personnel receiving early warning information via phone	52	60 Maintained and equipped	60 Maintained and equipped
	4.3.5: Improve risk management tools (as household insurance), mitigation and adaptation actions at central and decentralized levels	Risk management tools improved.	Number of mitigation measures instituted against hazardous weather or climate from early warning alerts	5	10	10
	4.3.6: Implement social safety nets in emergencies for vulnerable agricultural communities (including conditional and non-conditional cash transfers during seasonal vulnerability)	Social safety nets in emergencies provided	Proportion of farmer groups covered by social protection Number of farming households provided with Input: Cash transfer	5% 78 78	15% 228 228	25% 378 378
4.4. Capacities of the vulnerable populations built in order to have access	4.4.1: Provide business development services, vocational	Capacity of affected communities developed via	% of affected communities trained Percentage engaged in	0% (of 750,000)	15%	25%

to diversified income generation opportunities	training (+basic literacy and numeracy) to affected communities 4.4.2 Provide value-chain oriented start up kits to affected communities 4.4.3. Promote integrated farming systems	vocational training Affected communities provided with start-up Integrated farming systems to guard against risk total agri-enterprise/income failure	new job opportunities in agriculture value chains % of farmers provided with start-up and operational Number of farm families undertaking integrated farming system involving crop/forestry and farm animal/aquaculture production	10,000 0% (of 750,000) 25% (of 750,000)	50,000 15% 50% (of 750,000)	100,000 25% 75% (of 750,000) and improve on scope

7.0. Monitoring and Evaluation

The ICADeP management will be via a multiple tiers Vertical Hierarchical Management System (VHMS). Multiple-stakeholders such as traders, women, producer and investor/business associations and NGOs will be major actors in programme implementation accommodated by a multi-sectoral advisory platform.

Figure 13. Organogram for ICADeP Implementation and Monitoring



An important element of the ICADEP is to significantly improve agriculture sector governance through regulatory assessment reform, statistics and information management, and improved M&E systems and capacities. One core activity related to M&E is the development of a results framework at the medium and long time level outlined in Section 6. The M&E Manual developed under the supervision of National Program Coordination Secretariat will constitute a framework which focuses on tracking the impacts of the ICADEP on a short term basis which will be the basis of informing the results framework. To this effect, a programme logframe will be developed to monitor the impacts of the ICADEP activities at field level for the components and sub-components. The constituent sections of the logframe will include; an intervention logic – which specifies the general objective; activity section - which gives the activities to be carried out and in what sequence; a section on expected results - outlining output envisaged; verifiable Indicators (target) section – providing key indicators related to general objectives; assumptions/risks section – which provides the necessary conditions to achieve objectives; a section on responsibility –specifying institution responsible for implementation and finally, the timeframe section – which indicates period during which activities takes place or are projected to occur. MAFFS in collaboration with partner MDAs will establish baselines that will serve the basis for the programme progress measuring. Sources for verification will include the official and harmonized statistical data of GOSL's MDAs and non-governmental organisations, WB, FAO, AfDB, UNCTAD, UNDP, Enterprise Surveys, government, donor and private sector reports.

The multiple tiers Vertical Hierarchical Management System comprises of:

1. The Presidency - comprising the President and his/her advisers will be the highest governing body of the programme. The Presidency is responsible for resource mobilization, oversight, coordination of various MDAs, monitoring and evaluation of higher level objectives (Goal/Impact).

2. The Strategic Policy Advisory Unit in the State House will liaise between the Presidency and the Ministerial Group ensuring that the recommendations/concerns of the Presidency and its own reviews are considered by the Ministerial group. Summary reports will be presented to the Presidency every three months for the adjustment of policies and plans accordingly.

3. The Steering Committee report to the Joint Ministerial Working Group comprising of Ministers and their Permanent Secretaries who report to the Strategic Policy Advisory Unit at State House for the attention of the Presidency. At the Ministerial Level, the program will be anchored under Pillar One of the Agenda for Prosperity (i.e., economic diversification to promote inclusive growth) chaired by MAFFS, to be co-chaired by MFMR, MHS and MTI. The programme will therefore be implemented within that existing structure and new joint performance management systems. It will, among others, be responsible for ensuring the accomplishment of targets under their direct purview, supervising implementation, establishing and developing a base for record-keeping and reporting (area specific Management Information System). For that purpose, Component Teams will be established accordingly. It will report to the SPU on overall programme progress, issues or challenges and recommendations. Some modifications can be made as necessary.

4. The National Steering Committee of the program with the responsibility of reviewing more technical issues, approaches and monitoring the outcomes level of objectives. The National Steering Committee constituting Directors of the participating Ministries and the ICADeP Focal Points in those Ministries will reports to the Ministerial group and engages the multi-sectoral platform

5. Multiple-stakeholders such as traders, women, producer and investor/business associations and NGOs will be major actors in programme implementation accommodated by a multi-sectoral stakeholder advisory platform where their concerns, inputs will be discussed while appraising them about project progress and challenges.

6. For the day-to-day coordination of the program, it will be the responsibility of the unified National Program Coordination Secretariat housed at the MAFFS while the various MDAs and other stakeholders will be responsible for implementing specific aspects of the program under Performance based MOUs at national and decentralized levels to collect and analyse date on programme indicators and report results to the other 3 levels above. Tracking of the indicators

and activities will be conducted daily by the MDAs' national and district departments in charge of M&E who will constitute the National Programme Coordination Secretariat who will report to the Multi-Sectoral Stakeholder Advisory Platform. Other functions include:

i. Develop and establish M&E coordination procedures between implementing partners

ii. Develop M&E Manual under supervision of National Program Coordination Secretariat

iii. Prepare and submit M&E reports to Presidency/SPU, Ministerial JWG, National Steering Committee, Stakeholders and Donors for review.

The principles of mutual accountability should be adhered to wherein; vision, objectives and strategies are shared with all stakeholders who will then agree on performance indicators. It is important that programme analysis is evidence-based and inclusive of all stakeholders in order to facilitate transparent dialogue and enhance commitment to implementation of recommendations emanating from the review process.

7.1. Communication and Visibility

The people of Sierra Leone are the ultimate programme beneficiaries or losers depending on programme outcome. They are the beneficiaries in case of favourable outcomes and indeed they will be the loser where there are adverse outcomes or failures. This is so because, grant or loan for the programme implementation will be on their behalf. In the case of loans, the people will have to repay and even government contribution to the programme will likely come from taxpayer's money or national resources. But again, the successful attainment of all programme objectives should translate into improved society wellbeing. Therefore, it is the right of the population to be abreast with both the achievements and challenges during project implementation. Accordingly, at the level of the day to day monitoring of programme implementation, communication departments of all participating MDAs will be involved in M&E with the aim of reporting implementation progress or otherwise via print, television or social media. Citizens report cards will be periodically obtain to gauge public opinion about programme implementation.

8. 0. Risk Assessment and Mitigation Measures

The following risks and mitigation measures have been identified for ICADEP.

Table 11. Risks and Mitigation Measures

Risk	Probability/ Impact	Implications and Risk Mitigation Measures
Ebola health re-occurs	High/High	Part of the funding will be diverted from all components to provision of free and/or subsidised food, seeds and inputs. However, this distribution will still require good information systems and private sector development that are central to this ICADEP Programme. As soon as borders are reopened and quarantines lifted GOSL will run a hotline for business to remove all administrative barriers to reinvigorate trade
Iron ore prices will continue fall with the implication to lower than expected GOSL revenue	High/Medium	In combination with continuing health crisis, the impact can be high. However, if the Ebola epidemics are curbed GOSL should still aim at 10% budget spent on agriculture and provide necessary resources for ICADEP. Active involvement of the private sector in all components will also mitigate this risk. Simplification and streamlining tax, inspection, licensing and trade will encourage SMEs to "formalize" and increase the tax revenue.
Foreign investors will withdraw due to the health crisis or political unrest	Medium/Medium	The FDI impacts have not been assessed yet. Most were expected to start full commercial operations in 2014-2018. Part of the investors is expected to continue because of the well-established operations and multi-million investments. In any event, the short-term negative impacts are possible. However, the central concept of ICADEP and the follow-up programmes is to prepare and develop a highly profitable and socially responsible class of domestic medium and large-scale farmers, fishers and entrepreneurs that would fully mitigate the risk of the foreign investment exit. As elections draws nigh, the tendency is that donors may hold on to funds until after elections

Global rice price will be increasing	Low/High	The medium-term projections indicate stable global rice prices, production and consumption. This programme aims at development of a number of high-growth and high productivity enterprises who will have the potential to ensure rice self-sufficiency in SL in medium-term. In case of short-term fluctuations temporary price subsidising will be possible
Fluctuation of cocoa prices	Low/Low	The long-term forecast for global cocoa price is positive. Temporary fluctuations are not expected to significantly reduce the profitability of Sierra Leonean exporters.
Lack of MDAs and donor coordination	High/High	This risk will be mitigated through incorporation of common performance targets in MAFFS, MTI and MFMR Performance Plans and the leading role of the State House and PTFAG. GOSL will continue improving its transparency and accountability indicators to convince donors establish a unified PIU
Lack of MDA capacity to implement the Programme	High/Medium	GOSL has reasonably educated human resources. One of ICADEP objectives is for MDAs to readjust the existing structures and HR to new functions. The donors will help with the necessary training and improve their coordination to make the MDAs project management task easier.
Poor credit culture and low quality of bank portfolios	High/Medium	The risk is from medium to low because of low number of agricultural loans. The SL commercial banks have increasing number of NPLs. In this context, in the short term it is much more important to improve the banks' portfolio quality than extend more loans. BOSL shall strictly implement prudential controls over banks and MFIs and banks shall take legal action against NPL. On the other hand, MAFFS, MTI and MFMR will support developing good quality bankable projects.
ICADEP will concentrate only on the poor farmers/fishers and/or large foreign investors	High/High	While it is important to support the poor (and this is what most donor focus on), the GOSL will also make sure that medium farmers/fishers will receive the government support understanding that agricultural growth for prosperity needs economy of scale and significant increase productivity and profitability. GOSL will be improving business climate for all business sizes and monitor large farms for the balance of economic and social successes and lessons learnt, as well as incentives efficiency.

Information and statistical systems become unsustainable	High/Medium	It is important that information and statistical systems developed within this Programme are properly institutionalized in the form of laws, regulation and operating instructions and become part of the GOSL routine operations. To this effect, Component IV will be predominantly funded from the GOSL budget and use donor money mainly for specialist expert support.
Social or political unrest	Medium/High	The devastating Ebola impact may cause social or political unrest in the pre-election years. To mitigate this risk, GOSL will ensure maximum transparency in providing support to farmers, fishers and rural population and run an intensive information campaign on types of government support, achievements, problems and solution sensitization. Youth employment initiatives will have a particular emphasis in all Component activities and in the information campaigns.
Insufficient funding of infrastructure projects	Medium/High	GOSL Government will seek public - private partnership with private investors.
Targeting and elite capture risks	Medium/Medium	Information and sensitization of communities (during the trainings, through radio programmes) and implementing partners. Complaint mechanisms in place Audit, monitoring and evaluation, regular assessments of the targeting strategy Clear criteria of the beneficiaries selection Involvement of traditional and district authorities as well as the communities in the selection process of the beneficiaries Clear national criteria for medium and large enterprise support and M&E

Appendix 1. Main sectoral constraints as identified in the Agriculture Sector Review (2014)

Summary of problem description as stated in the ASR (for a more detailed insight consult the ASR document):

a) *Governance*
- Land market remains non-transparent and complicated causing problems both to smallholders and big investors
- Legal documents documenting title and certifying ownership to land is non existent
- Decent labor standards remain unimplemented;
- Lack of standards or quality certifications for agricultural crops
- Coordination of various MDAs' efforts in such a multi-faceted sector as agriculture remains a challenge leading to duplication, lost opportunities and wasted resources
- The Government and donors are overly focused on development of small subsistence farms representing 54% of rural households, and on issues related to big foreign investment, ignoring the "middle of pyramid", i.e. SMEs involved in production, trading, financing and processing and linking the markets;
- Problems related to illegal, unreported and unregulated (IUU) fishing due to weak governance and the failure of the country's fisheries sector to meet its international responsibilities.
- Inadequate forestry and wildlife sector policy to address governance and management issues in the sub sectors;

b) *Finance and administration*
- Weak banking infrastructure in the districts; high percentage of non-performing loans in commercial banks; low credit culture; lack of bankable projects
- Administrative barriers for business and trade remain high with estimated loss of 1.5-2% of GDP and presenting a risk of crowding out investors
- Farmers are generally resource poor and lack financial capacity to acquire basic inputs (fertilizers, seeds, pesticides etc) or pay for services (tractor, machinery hire)
- Lack of farmer collateral to obtain credit

c) *Information management*
- No statistical data exist on SMEs in agriculture nor on the real levels of foreign and domestic investment preventing the Government from effective policy design and implementation for private sector development
- Lack of comprehensive M&E related to government and donor funded projects
- Extension services and R&D are weak and underfunded limiting the potential of VC actors to achieve the productivity potential and presenting high risks, particularly for livestock subsector

d) *Infrastructure*
- Very low utilization of water resources for Inland Valley irrigation
- Lack and unreliability of electricity is a huge obstacle to agri-processing
- Roads between urban and rural areas, particularly the agricultural productive regions, remain largely unpaved and of poor quality
- Air and sea transportation are constrained by inadequate infrastructure at Lungi Airport and at the Queen Elizabeth Port

- Connections to neighboring countries are also limited
- Limited storage and processing capacity and practices cause high post-harvest losses

e) Vulnerability

- Half of all farmers are smallholders. 98% of those annually experience extended hunger periods
- Low or even no skilled workforce in all subsectors;
- Youth have low levels of education and lack professional adequate skills
- Young people do not have facilitated access in the sector and / or incentives
- Women dominate the informal economy with
- No social protection and increased vulnerability to poverty for women and youth;
- Limited access of women to a whole range of critical productive assets and services;
- Alarming rate of loss of biodiversity

f) Food security and nutrition

- Widespread malnutrition of children (18.7% underweight, 34.1% stunted and 6.9% wasted or severely wasted);
- 45% of households are classified as food insecure facing seasonal food access issues;
- Regularly occurring localized disasters such as drought, floods, insect attacks, landslides, bush fires and livestock diseases leading to food insecurity and malnutrition.

g) Production and productivity

- The average sector productivity is about 20%-25% of the maximum attainable yields (particularly for staple crops including rice)
- Traditional farming systems are not competitive with modern large scale production and traditional livestock systems compete with traditional farming systems over resources (land and water) causing increasing tensions between crop and livestock farmers
- Up to 50% of economic informality in the sector results in lost growth potential and persistent poverty
- The low level of education and health prevent agriculture intensification and innovation
- Women have not yet been able to achieve equitable political representation at different levels of government
- On the other hand, the "feminization" of agriculture and youth migration to urban areas set physical limits on extensive agriculture
- Women market potential is huge which is demonstrated by market women. However, it is restrained by social and tradition norms

Appendix 2. Indicative ICADEP Budget by Activities

Notes and Comments to the Indicative ICADEP Budget

1. The ICADEP Programme was designed for three fiscal years of 2018, 2019, 2020, 2021 and 2022. However, the health crisis situation as of October 2014, the related reorientation of the government and donor resources to combat EVD and its consequences in 2014-2015, as well as the election year 2018 will potentially delay the launch and implementation of some activities (e.g. institutional reforms) to mid-2018. Quarterly Budget reviews and updates will be necessary alongside with standard M&E activities.
2. The Government investment in agriculture is based on the demonstrated capability of the GOSL to fulfill the Maputo Declaration commitment to spend 10% of the overall government spending on agriculture. In fact, the spending on the sector went down from 9% in 2009 to 6.6% in 2012. However, if the Government is to implement the Agenda for Prosperity, it is to come back to the Maputo Declaration commitment. In absolute figures, the spending should be at least an equivalent of USD 27-30 million yearly, with recurrent, donor and infrastructure spending excluded. However, it would be fair to include the tax and other duties exempted to donors and investors.
3. With reference to the SME legislation, statistical data development, RIA and coordination measures the existing recurrent budgets of all key government agencies involved are proposed to cover the major part of the expense (with few exceptions where donors can help with funding of highly specialized international experts, e.g. Regulatory Impact Assessment).
4. The Local Content Policy should be applied to all donor and NGO projects. The employment of foreign workers and specialists must be justified. If not stipulated by intergovernmental aid agreements, the foreign personnel of aid projects should be subject to the Sierra Leone tax regulations. There must be a requirement that at least 60% of any donor project budget shall be spent in Sierra Leone and for Sierra Leoneans.
5. The donor contributions were estimated based on the aggregated data of the AgPER presentation on 30 June 2014. Upon finalization of a separate ongoing Agriculture Public Expenditure Review, it will be necessary to verify/adjust both the government budget and the donor funding levels. The donor commitment to the Plan will be secured by MAFFS through consultations with key donors.
6. The Budget includes some elements of humanitarian aid in the form of direct and free food supplies to support vulnerable groups or subsidized agricultural inputs for revitalization of the agricultural activities any other expected humanitarian and emergency aid.
7. The private sector contribution is mainly the investment in the sector: production, processing, out-grower schemes, trade, etc.
8. The mechanisms for the ICADEP funding can include government budget expenditure, direct budget support, sector-wide support, programme/project support, direct private investment and credit. GOSL is considering options to optimize the programme coordination, management and funding management efforts through establishing a unified Project Implementation Unit and account.

Appendix 3. Decent Work Agenda

The International Labor Organization (ILO) formulated the concept of decent work and developed a decent work agenda. The decent work agenda rests on four pillars, namely employment creation and enterprise development (Pillar I); social protection (Pillar II); standards and rights at work (Pillar III); and governance and social dialogue (Pillar IV). Decent work has been defined by the ILO and endorsed by the international community as being productive work for women and men in conditions of freedom, equity, security and human dignity. Decent work involves opportunities for work that is productive and delivers a fair income; provides security in the workplace and social protection for workers and their families; offers better prospects for personal development and encourages social integration; gives people the freedom to express their concerns, to organize and to participate in decisions that affect their lives; and guarantees equal opportunities and equal treatment for all. Given the nature of decent work as universal aspiration of people everywhere, the conceptual definition applies to all human beings, all countries and all socio-economic contexts. To facilitate the operationalization of the decent work concept to rural areas, and the agricultural sector in particular, the FAO developed an applied definition of Decent Rural Employment (DRE) with 6 main priority dimensions (see box below).

Priority Dimensions to Achieve Decent Work in Rural Areas

1) Respect the four core labour standards
   - Effective abolition of child labour
   - Elimination of all forms of forced or compulsory labour
   - Freedom of association and the effective recognition of the right to collective bargaining
   - Elimination of discrimination in respect of employment and occupation
2) Provide an adequate living income
3) Entail an adequate degree of employment security and stability
4) Adopt minimum occupational safety and health (OSH) measures, which are adapted to address sector-specific risks and hazards;
5) Avoid excessive working hours and allows sufficient time for rest
6) Promote access to adapted technical and vocational training

Full info on the applied definition of decent rural employment:
http://www.fao.org/fileadmin/user_upload/fao_ilo/pdf/DRE_Applied_Definition.pdf

Appendix 4. Gross Domestic Product at Current Price (Million Leones) by Sector

	2007	2008	2009	2010	2011	2012	2013	2014
1. Agriculture, Forestry and Fisheries	**3,361,971**	**4,007,950**	**4,591,100**	**5,429,597**	**6,986,660**		**10,215,234**	**11,724,453**
1.1 Crops	2,218,474	2,669,483	3,133,423	3,508,077	4,349,157	5,020,506	6,292,560	7,165,022
1.11. Rice	854,546	1,166,414	1,451,411	1,607,426	2,028,262	2,164,606	2,639,445	3,088,453
1.12. Fruits and Vegetables	274,649	323,085	361,644	436,477	529,950	617,938	695,991	777,288
1.13. Cassava	402,572	382,575	466,829	542,114	665,472	806,662	1,319,634	1,522,369
1.14. Groundnut	435,821	495,757	496,507	506,282	617,072	750,199	803,593	848,965
1.15. Maize	94,197	106,003	124,345	151,863	196,204	270,768	304,914	347,954
1.16. Sweet Potato	38,896	35,424	39,816	40,261	57,019	118,113	203,017	231,049
1.17. Other crops	117,794	160,225	192,870	223,654	255,178	292,219	325,965	348,943
1.2. Livestock	163,768	185,182	204,849	294,397	373,838	463,642	509,855	539,209
1.3. Forestry	425,464	522,114	611,512	705,201	975,152	1,253,047	1,460,614	1,560,445
1.4. Fisheries	554,264	631,171	641,315	921,922	1,288,514	1,618,313	1,952,204	2,459,777
2. Industry	**622,787**	**585,221**	**543,946**	**798,027**	**1,007,125**	**2,400,415**	**4,728,821**	**6,147,497**
2.1. Mining and Quarrying	326,583	265,961	240,340,	410,642	528,777	1,831,856	4,130,680	5,490,088
2.11. Diamond	232,788	183,339	165,275	281,067	336,055	437,296	500,794	541,612
2.12. Iron Ore					29,933	1,129,025	3,366,239	4,733,198
2.13. Other minerals (rutile, bauxite, gold, etc)	58,878	55,121	50,274	87,415	112,381	199,941	188,528	133,317
2.14. Quarrying	34,918	27,501	24,791	42,160	50,408	65,594	75,119	81,242
2.2. Manufacturing and Handcraft	159,175	182,041	176,800	223,299	288,488	333,221	347,271	375,414
2.3. Electricity and Water Supply	22,237	16,912	17,512	24,443	30,237	37,805	43,890	60,457
2.31. Electricity	12,350	8,558	9,272	12,484	16,196	16,910	18,632	29,511
2.32. Water	9,887	8,354	8,240	11,960	14,040	20,895	25,259	30,946
2.4. Construction	114,791	120,307	109,294	139,643	159,623	197,533	206,980	221,537
3. Services	**2,237,853**	**2,622,216**	**2,874,672**	**3,616,772**	**4,466,937**	**5,313,745**	**5,919,626**	**6,409,560**
3.1. Trade and Tourism	562,171	655,359	738,286	941,678	1,206,762	1,454,240	1,684,715	1,872,958
3.11. Wholesale and Retail	534,948	626,234	709,290	905,194	1,157,426	1,386,646	1,610,887	1,792,717

3.12. Hotels and Restaurant	27,223	29,125	28,996	36,485	49,335	67,594	73,828	80,241
3.2. Transport, Storage and Communication	390,587	473,909	528,442	586,426	688,455	733,836	802,747	881,132
3.21. Transport	222,123	268,643	298,256	329,473	389,236	418,871	458,229	504,043
3.22. Communication	168,464	205,266	230,186	256,953	299,218	314,964	344,518	377,089
3.3. Finance, Insurance and Real Estate	327,860	359,467	384,955	479,134	583,534	684,079	751,284	820,567
3.31. Banking	100,971	113,506	137,786	171,506	207,396	246,566	274,141	300,114
3.32. Insurance	44,368	50,794	30,783	45,393	56,503	63,278	69,283	76,992
3.33. Real Estate	151,986	178,790	200,128	241,540	293,266	341,957	371,352	402,116
3.34. Other Financial Institutions	30,535	16,377	16,258	20,696	26,368	32,277	36,507	41,344
3.4. Administration and Public Services	258,301	259,292	292,214	421,261	582,853	768,132	871,506	1,002,069
3.5. Other Services	257,999	303,499	339,721	410,018	497,825	580,479	602,197	642,862
3.6. Education	137,794	214,918	203,609	237,666	290,722	350,979	379,766	411,435
3.7. Health	231,904	257,441	273,170	437,171	479,580	538,252	564,594	586,240
3.8. NPISH	71,237	98,331	114,276	103,417	137,208	203,748	262,817	192,296
4. FISIM	73,826	80,766	88,190	93,939	96,803	102,351	108,431	**115,087**
5. Total Value Added at Basic Prices (1+2+3)	5,730,367	6,038,914	6,231,915	6,565,135	6,957,146	8,051,014	9,727,633	**10,879,748**
6. Taxes less Subsidies on Products	303,418	319,755	329,974	347,618	367,675	387,306	408,611	**431,231**
7. Gross Domestic Product and Market Prices (5+6)	6,033,785	6,358,669	6,561,889	6,912,753	7,324,821	8,438,320	10,136,243	**11,310,979**

Source: Statistics Sierra Leone. https://www.statistics.sl/wp-content/uploads/2016/06/annual_statistical_digest_2007_2013.pdf

Appendix 5. Recent Production and Productivity of Key Agricultural Products

Crop	Rice	Sweet Potato	Cassava	Maize	Sorghum	Sesame	Cacao	Coffee	Oil Palm	Cashew	Pepper	Groundnut
Year	**Area (ha)**											
2014	712,498	19,565	180,493	9,904	63,714	17,501	110,138	51,238	86,265	3,822	23,374	37,759
2015	864,574	21,040	201,621	10,766	70,115	18,837	117,550	55,985	119,614	4,174	25,739	50,889
2016	936,774	16,559	195,824	5,625	75,547	20,275	133,314	64,854	648,570	4,682	12,133	85,908
2017	983,613	20,525	215,407	6,188	83,102	22,303	139,980	68,097	680,999	4,916	13,346	94,499
Year	**Productivity (mt/ha)**											
2014	1.15	7.10	12.84	2.10	0.65	0.30	0.40	1.70	7.50	0.36	0.26	0.61
2015	1.15	7.30	12.67	2.10	0.65	0.30	0.27	1.71	7.50	0.08	0.26	0.50
2016	1.24	9.08	15.70	2.23	0.65	0.31	0.43	1.71	7.50	0.34	0.96	0.77
2017	1.30	9.53	16.47	2.24	0.68	0.32	0.45	1.80	7.88	0.36	1.01	0.81
Year	**Production (mt)**											
2014	816,503	138,27	2,316,811	20,812	41,414	5,250	44,055	87,105	646,988	1,376	6,077	22,882
2015	995,360	153,298	2,557,588	22,619	45,554	5,775	48,461	95,816	897,103	1,514	6,686	25,169
2016	1,160,646	150,312	3,073,121	12,554	49,106	6,215	56,836	115,482	4,864,275	1,605	12,841	66,083
2017	1,279,612	195,600	3,547,746	14,479	56,509	6,852	57, 672	122,328	5,362,863	1,769	13,480	76,544
Source: PEMSD/MAFFS Annual Yield Studies for Food Crops												

Appendix 6. Distribution of Livestock Production (Number of heads) by Districts (2015)

No	District	Cattle	%	Sheep	%	Goats	%	Pigs	%	Chicken	%	Ducks	%
1	Bo	15,376	6.3	35,872	3.7	100,781	6.4	10,208	8.2	932,509	6.3	81,650	7.1
2	Bombali	26,681	10.9	51,444	5.3	117,366	7.5	2,705	2.2	919,064	6.2	79,168	6.9
3	Bonthe	3,166	1.3	14,350	1.5	33,728	2.2	5,462	4.4	585,364	4.0	20,745	1.8
4	Kailahun	12,936	5.3	106,075	11.0	173,860	11.1	10,350	8.3	903,470	6.1	154,714	13.5
5	Kambia	27,377	11.1	172,691	17.9	192,172	12.3	2,931	2.3	703,470	4.8	94,243	8.2
6	Kenema	3,081	1.3	46,218	4.8	55,458	3.5	4,033	3.2	789,313	5.4	129,402	11.3
7	Koinadugu	61,561	25.1	101,806	10.6	142,940	9.1	5,612	4.5	862,146	5.9	72,371	6.3
8	Kono	51,785	21.1	83,195	8.6	170,211	10.9	4,471	3.6	813,872	5.5	81,498	7.1
9	Moyamba	8,999	3.7	37,120	3.9	104,800	6.7	13,190	10.5	763,032	5.2	83,990	7.3
10	Port Loko	17,021	6.9	163,578	17.0	205,356	13.1	9,758	7.8	960,297	6.5	88,200	7.7
11	Pujehun	3,631	1.5	22,824	2.4	22,046	1.4	5,236	4.2	392,415	2.7	52,132	4.6
12	Tonkolili	13,467	5.5	117,352	12.2	205,856	13.1	11,837	9.5	886,996	6.0	105,333	9.2
13	W/Area	655	0.3	10,476	1.1	43,215	2.8	39,271	31.4	5,209,770	35.4	100,179	8.8
	National	**245,736**	**100**	**963,001**	**100**	**1,567,789**	**100**	**125,064**	**100**	**14,721,718**	**100**	**1,143,625**	**100**

Source: PEMSD/MAFFS

Appendix 7. Production (Number of heads) of Key Livestock

Livestock	Cattle	Sheep	Goat	Pigs	Chicken	Ducks
Year						
2011	568,700	750,200	883,300	52,100	10,406,000	882,768
2012	625,570	825,220	971,630	57,310	11,446,800	971,044
2013	688,127	907,742	1,068,793	63,041	12,591,260	1.068,147
2014	241,153	945,047	1,538,557	122,925	12,781,575	1,122,301
2015	245,736	963,001	1,567,789	125,064	14,721,718	1,143,625
Source: PEMSD/MAFFS						

Appendix 8. Trend in Rice Production and Productivity, 2001-2017

Year	Area (Ha)	Productivity (Mt/Ha)	Production (Mt)
2001	258,850	1.20	310,620
2002	343,142	1.23	422,065
2003	356,506	1.25	445,633
2004	426,772	1.27	542,000
2005	427,907	1.29	552,000
2006	422,556	1.33	562,000
2007	432,356	1.36	588,004
2008	475,592	1.43	680,097
2009	499,111	1.78	888,417
2010	549,022	1.87	1,026,671
2011	603,924	1.87	1,129,338
2012	717,872	1.59	1,141,417
2013	671,422	1.87	1,255,559
2014	712,498	1.15	816,503
2015	864,574	1.15	995,360
2016	936,774	1.24	1,160,646
2017	983,613	1.30	1,279,612

Source: PEMSD.

Appendix 9. Trend in Cassava Production and Productivity, 2001-2017

Year	Area (Ha)	Productivity (Mt/Ha)	Production (Mt)
2001	61,768	12.00	741,216
2002	68,909	13.00	895,817
2003	83,936	13.00	1,091,168
2004	134,404	13.00	1,758,004
2005	175,923	13.00	2,287,000
2006	228,700	13.00	2,973,100
2007	297,310	13.00	3,865,030
2008	312,176	13.00	4,048,288
2009	327,785	13.00	4,261,205
2010	344,175	13.00	4,697,992
2011	361,384	13.00	4,474,275
2012	379,453	13.00	4,932,892
2013	398,426	13.65	5,438,515
2014	180,493	12.84	2,316,811
2015	201,621	12.67	2,557,588
2016	195,824	15.70	3,073,121
2017	215,407	16.47	3,547,746

Source: PEMSD.

Appendix 10. Trend in Cacao Production and Productivity, 2001-2017

Year	Area (Ha)	Productivity (Mt/Ha)	Production (Mt)
2001	30,333	0.36	10,920
2002	35,135	0.37	13,000
2003	42,105	0.38	16,000
2004	49,762	0.42	20,900
2005	57,226	0.42	24,035
2006	73,576	0.42	30,902
2007	84,578	0.42	35,523
2008	97,265	0.42	40,851
2009	106,992	0.87	93,083
2010	117,691	0.91	107,099
2011	123,576	0.91	112,450
2012	129,755	0.96	123,981
2013	136,243	1.01	137,333
2014	110,138	0.40	44,055
2015	117,550	0.27	48,461
2016	133,314	0.43	57,672
2017	139,980	0.45	63,583

Source: PEMSD.

Appendix 11. Production of Marine Capture Fisheries Catch (MT) - 1971-2013

Year	Industrial Fisheries	Artisanal Fisheries	National Total	% Industrial Contribution	% Artisanal Contribution
1971	7836	22764	30600	25.6	74.4
1972	7881	43129	51010	15.4	84.6
1973	14031	52669	66700	21.0	79.0
1974	8274	59465	67739	12.2	87.8
1975	6652	61945	68597	9.7	90.3
1976	19022	50275	69297	27.4	72.6
1977	33361	46772	80133	41.6	58.4
1978	75865	41881	117746	64.4	35.6
1979	112168	45166	157334	71.3	28.7
1980	122862	31544	154406	79.6	20.4
1981	122862	31600	154462	79.5	20.5
1982	100820	34616	135436	74.4	25.6
1983	78851	47247	126098	62.5	37.5
1984	135044	43272	178316	75.7	24.3
1985	156065	43704	199769	78.1	21.9
1986	156702	44142	200844	78.0	22.0
1987	182100	44500	226600	80.4	19.6
1988	176000	46350	222350	79.2	20.8
1989	184520	48200	232720	79.3	20.7
1990	180000	50000	230000	78.3	21.7
1991	75237	48071	123308	61.0	39.0
1992	31424	47477	78901	39.8	60.2
1993	21828	46928	68756	31.7	68.3
1994	18341	46779	65120	28.2	71.8
1995	16100	46708	62808	25.6	74.4
1996	16597	46673	63270	26.2	73.8
1997	11137	46656	57793	19.3	80.7
1998	14190	46648	60838	23.3	76.7
1999	15569	46420	61989	25.1	74.9
2000	14345	45910	60255	23.8	76.2
2001	22598	39950	62548	36.1	63.9
2002	13595	55659	69254	19.6	80.4
2003	17165	65458	82623	20.8	79.2
2004	14237	106216	120453	11.8	88.2
2005	15797	116614	132411	11.9	88.1
2006	13645	120490	134135	10.2	89.8
2007	15863	126597	142378	11.1	88.9
2008	19061	171126	190187	10.0	90.0
2009	19658	243633	263291	7.5	92.5
2010	20421	0	20421	100	0
2011	23594	0	23594	100	0
2012	6816	0	6816	100	0
2013	21661	0	21661	100	0

Source: MFMR Statistics Unit.