Feed Salone Strategy

A Blueprint for Agricultural Transformation in Sierra Leone

2023 - 2028

Ministry of Agriculture & Food Security

OCTOBER 2023

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PRESIDENT'S FOREWORD

H.E. THE PRESIDENT
RTD. BRIG., DR. JULIUS MAADA BIO

Dear Sierra Leoneans and Esteemed Partners,

It is with a profound sense of commitment and duty that I undertake Feed Salone, which is an ambitious path toward food sovereignty, as the flagship programme for my second term. Agriculture is the lifeblood of our nation's economic vitality, embodying both our cultural heritage and the foundation of our national prosperity. From the rolling hills to lush plains, our land is blessed with natural resources, fertile soil and abundant rainfall. Agriculture provides employment, income, and sustenance to most of our citizens, making it the backbone of our economy.

In an era marked by evolving global challenges and rapid changes in the agricultural landscape, the need for a comprehensive and sustainable approach to food production, distribution and value addition has never been more pressing. Considering recent crises, embracing value chain diversification to achieve the goal of improving food security in the context of broader transformation is crucial to ensure that the sector acts as a buffer during external economic shocks, boosts much-needed foreign exchange earnings while stabilising the currency, and is adapting to the adverse impacts of climate change.

The Feed Salone Strategy is a well thought out plan, drawing from the learnings of the National Agricultural Transformation Programme and bringing purpose to every step we take towards an agricultural revolution. This document is more than just a strategy; it's a commitment. My government's commitment to the whole Agriculture sector, our people – and especially – to our children, who deserve to inherit a nation devoid of hunger. Finally, it is a demonstration to the world of the resilience and determination of Sierra Leone to become a food-secure and prosperous nation.

This document serves as a roadmap to lead our collective efforts towards achieving food sovereignty and inclusive economic growth for Sierra Leone. It showcases our intent to blend tradition with innovation, to embrace both our smallholder farmers and large-scale agricultural endeavours, and to collaborate closely with development partners, investors, and research institutions to foster an environment where the agriculture sector can drive growth. Our efforts will be intentional and centred on inclusivity, sustainability, and productivity to ensure that Sierra Leone not only feeds herself but also emerges as an example of agricultural excellence in Africa.

However, the success of any national strategy, regardless of its ambition, hinges on the collective resolve of the people. And so, I make this heartfelt appeal to every Sierra Leonean: let us unite and sow the seeds for a wealthier and thriving Sierra Leone that is self-reliant and proud; one where our farmers prosper and are equipped with the tools and knowledge they need; our women, the nucleus of our food system, are duly rewarded for their relentless contributions; and our youth see hope and opportunities in the fields.

Together, let us Feed Salone.

ACRONYMS

ACF	Agricultural Credit Facility
AfDB	African Development Bank
AgTech	Agricultural Technology
CSA	Climate Smart Agriculture
DFIs	Development Financial Institutions
DPs	Development Partners
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investments
FSC	Farm Service Centres
GDP	Gross Domestic Product
GEWE	Gender Equality and Women's Empowerment Act
GIEWS	The Global Information and Early Warning System on Food and Agriculture
GoSL	Government of Sierra Leone
HGSFP	Home Grown School Feeding Program
IFIs	International Financial Institutions
ILM	Integrated Land Management
IPCC	Intergovernmental Panel on Climate Change
IVS	Inland Valley Swamps
MAFS	Ministry of Agriculture and Food Security
MOPED	Ministry of Planning and Economic Development
NAMED	National Monitoring and Evaluation Directorate
NAT	National Agricultural Transformation Programme
NAFSL	National Association of Farmers of Sierra Leone
NAT	National Agricultural Transformation Programme
NGOs	Non-Governmental Organizations
NU	Njala University
OFSP	Orange Flesh Sweet Potato
SLARI	Sierra Leone Agricultural Research Institute
SMEs	Small and Medium Enterprises
SMP	Seed Multiplication Programme
WFP	World Food Programme
WTO	World Trade Organization

ACKNOWLEDGEMENTS

The Feed Salone Strategy has been formulated by the Ministry of Agriculture and Food Security in collaboration with various partners, and under the leadership of H.E. President Julius Maada Bio. This strategy embodies a synthesis of research, thorough consultations, and a profound grasp of both the challenges and opportunities present in Sierra Leone's agricultural sector today.

I extend my gratitude to all members of staff of the Ministry of Agriculture and Food Security particularly the senior management team, heads of various divisions, headquarter and field staff for the invaluable information, background research and support in the synthesis of this report and related materials. The dedication and guidance of the Agriculture Sector Donor Working Group and the private sector was also pivotal in the crafting of this strategy.

The Ministry's sincere appreciation goes to the members of the Presidential Initiative for Climate Change, Renewable Energy and Food Security, who not only served as peer reviewers but also provided invaluable insights and recommendations that have greatly enriched the content of this strategy. We also express our gratitude to sister Ministries, Departments and Agencies for their unwavering support which will increase as we move towards the delivery of this ambitious agenda in the coming months and years.

Our partnerships with members of the international community such as the UN Agencies, World Bank, African Development Bank, Food and Agriculture Organization, International Fund for Agricultural Development, Overseas Development Institute, and the Tony Blair Institute for Global Change have played a significant role in the formulation of the Feed Salone Strategy. We also extend our gratitude to the International Institute for Tropical Agriculture, Sierra Leone Agricultural Research Institute, Njala University, and a host of other partners who supported the development of this Strategy.

Lastly, we extend our gratitude to the countless individuals from Sierra Leone and around the world, encompassing government officials, private sector representatives, farmers, and community interest groups, who generously contributed their knowledge and insights during the formulation of the Feed Salone Strategy over the past months.

DR. HENRY MUSA KPAKA
MINISTER OF AGRICULTURE AND FOOD SECURITY

EXECUTIVE SUMMARY

Introduction

In 2018, the Government developed the National Agricultural Transformation Programme (NAT 2023), and implemented a private sector led approach dubbed 'The Agriculture Policy Shift'. This strategy laid the foundation for the prioritisation of agriculture – Feed Salone as one of the Big 5 Game Changers in the SLPP Manifesto.

This Strategy underscores the Government of Sierra Leone's steadfast dedication to agricultural transformation and the pursuit of food sovereignty. Recognizing the pivotal role that agriculture plays in the nation's economy, the Feed Salone Strategy aims to boost agriculture productivity to fuel inclusive growth, increase access and availability of locally produced nutrient dense and safe food, reduce our dependence on food imports, reduce hunger, increase export earnings, create jobs, and build resilient food system.

The Feed Salone Strategy is championed by H.E. President Bio, guided by the Presidential Council, and executed by the Ministry of Agriculture and Food Security.

The Impact of Prioritising Agriculture

Feed Salone is poised to significantly boost GDP growth through agriculture. The past decades saw agricultural growth rates of 3-5%; our ambition is to accelerate this pace, targeting an annual growth rate of 10% for the agriculture sector in the next five years.

Our Agriculture Potential at a Glance

The agriculture sector accounts for

57%

of the country's Gross Domestic Product (GDP)

Agriculture is the main source of livelihood for approximately

65%

of households

Women make up

70%

of the agricultural labour force and play a critical role in food production

Sierra Leone boasts a youthful population, with an average age of

19 YEARS

The country boasts of a wealth of natural resources:

- Of the 5.4 million hectares of fertile land available, only 15% is currently under cultivation.
- The nation gets an impressive 3000mm of rainfall over half the year.
- The landscape is enriched by seven major rivers that traverse the country.

Challenges

The twin crises of the COVID-19 Pandemic and the Russia – Ukraine conflict exposed key vulnerabilities in the Sierra Leone economy. As a country reliant on importing essential goods such as food and fuel, Sierra Leone is facing heightened challenges due to the volatility in international supply chains and surges in commodity prices. Global commodity inflation, coupled with rapid currency depreciation has made the macroeconomic and fiscal burden of food import even more acute. The country's dependency on importation of food and other essential commodities feeds a vicious cycle of limited fiscal space, inflation, underinvestment in the productive sectors, and unemployment, especially among youth in rural areas. Furthermore, these crises are taking place in the backdrop of increasing adverse effects of climate change on agriculture – Sierra Leone is among the countries most severely affected by climate change worldwide (World Bank, 2018).

Our Approach

The Feed Salone strategy focuses on boosting production for specific crops, value chains and geographies, strategic investments in infrastructure, targeted policy interventions to make local production more competitive across strategic value chains, and a blended financing model, where the government combines its own resources and that of the partners to attract private capital.

The Strategy prioritizes private sector-driven growth. It recognises the existing challenges to the sector, supports the expansion of existing businesses already participating in key value chains whilst also encouraging new players by fostering entrepreneurship through agri-business incubation. These platforms will offer training, seed capital, and financial tools for business readiness. The strategy also seeks to attract both local and foreign investments, with agro-industrial zones catering specifically to foreign direct investment for large-scale agriculture.

Feed Salone plans to establish a strong public policy framework that will facilitate the sector's expansion and the advancement of the prioritised value chains, foster collaboration between the other Big 5 Game Changers, and also incentivize private sector involvement and implementation of the plan.

The key value chains include rice, onion, poultry, cocoa, coffee, cashew, aquaculture, small ruminants like sheep and goats, cassava products such as gari and flour, and horticultural items including fruits and vegetables. To enhance productivity in targeted value chains swiftly and efficiently, this strategy will channel investments into districts with the highest potential for success and growth by leveraging each district's comparative advantage, while also introducing synergistic value chains through agro-industrial zones.

Leveraging the Synergies Between the Big Five Game Changers

Through the synergies between Feed Salone and the other four Game Changers, we will accelerate economic growth in Sierra Leone and contribute to most of the Sustainable Development Goals. The Feed Salone strategy interlinks with the other Big Five Game Changers in a number of ways, including:

01

Expand the homegrown school feeding programmes, ensuring that children remain healthy and active in their education journey.

02

Move the agriculture sector beyond traditional farming to one that will create opportunities for thousands of youths.

03

Through the creation of the Presidential Council, revamp the ministerial structures and build public service capacity and capabilities in key areas.

04

Tap into the transformative power of technology and innovation to better inform our agricultural interventions and ensure the optimal use of resources.

Getting closer to achieving the Sustainable Development Goals (SDGs)

Feed Salone Objectives

The Strategy aims to achieve the following objectives:

Import Substitution of Key Staples: 01

Sierra Leone spends approximately $500 million annually on food imports. Feed Salone targets a yearly reduction of 25% on food imports for key value chains over the next five years. The 2024 spotlight will be on promoting self-sufficiency in **rice, poultry, onions, and cassava flour** (as a complement to wheat flour).

Boosting Export Earnings from Agriculture: 02

The aim is for agriculture to substantially contribute to foreign exchange earnings; the focus will be on optimizing value chains like **cocoa, coffee, cashew and horticulture (fruits and pepper)** targeting a bold 50% yearly increase in the export of these commodities.

Job Creation and Income Generation 03

The objective is to create at least 35,000 formal job opportunities by 2028, with the potential for thousands more in the informal sector. This will be achieved through the development of agro-industrial zones dedicated to comprehensive production, processing, and marketing of key value chains. These value chains include **rice, cocoa, coffee, cashew, small ruminants like sheep and goats, cassava products such as gari and flour, and horticultural items including fruits and vegetables.**

Alleviating Hunger and Malnutrition: 04

To achieve food sovereignty, it is imperative that citizens have access to nutritious, locally produced food. Feed Salone aims to increase the acceptable Food Consumption Score (FCS) by 65%, cut chronic hunger by at least 50% and significantly reduce micronutrient deficiency among children by 2028. **Pulses, tubers (Orange Flesh Sweet Potatoes and cassava) and aquaculture** are the value chains that we will prioritise to achieve this.

Significantly Improve Climate Resilience: 05

Considering climate change, adopting sustainable and climate-smart techniques is essential for a resilient food system. Feed Salone will promote agriculture techniques that enrich soil fertility, improve water retention, diversify crop production, and encourage the cultivation of climate-resistant crop varieties. The programme also seeks to increase the green cover with **cocoa and cashew**.

Strategic Pillars

Feed Salone will be implemented based on the Six Strategic Pillars:

01 **Mechanization and Irrigation:**
Expanding rice production areas, including Inland Valley Swamps and irrigated rice fields, augmented by tractor and other mechanised services.

02 **Seed and Input Systems:**
Using research to ensure the delivery of high-quality inputs for optimal yields for key value chains.

03 **Aggregation, Processing, and Market Linkages:**
Streamlining processes for maximized profitability.

04 **Agricultural Finance:**
Tailoring financial instruments and solutions for the sector's unique needs, especially for women and youth.

05 **Ag-Tech & Climate Smart Agriculture:**
Leveraging technology, supporting agricultural research, promoting digitization and building robust data systems to inform decisions while safeguarding against climate change.

06 **Empowerment of Women and Youth:**
Ensuring their indispensable role in agricultural development is reflected and elevated across all Strategic Pillars.

Cross-Cutting Enablers

Feed Salone aims to revolutionize Sierra Leone's agriculture sector by identifying and leveraging key enablers.

Political Will

President Bio has demonstrated his commitment to prioritizing the sector as the engine of economic transformation by spotlighting Agriculture as the flagship for his second term in office.

To this end the President and government commit to:

- Increasing the budget allocation to the sector from approximately 3% to 10% in line with the Malabo recommendations.
- Using the President's political capital, which includes advocacy to attract additional resources to the sector.
- Together with the Ministry of Finance, establishing a dedicated fund for Feed Salone and allocating a predetermined portion of monthly revenue collected to this fund. This arrangement ensures timely and predictable financial support for the sector.

Policy Interventions

We will implement policies that make local production more competitive and attract investment – for rice and other key value chains. To achieve this, we will:

- Review our land laws to make them attractive for farming and even more amenable for investment, both locally and internationally, across values chains.
- Implement policies to encourage commodity importers to participate in local production of commodities.
- Together with Development Partners and International Financial Institutions, we will develop strategies to de-risk private investments with current and future funding. The COMPACT process with African Development Bank (AfDB) is an example of this approach.
- The National Investment Board will put investment in agriculture and food systems at the heart of their strategy and promotion efforts.

Infrastructure

Infrastructure plays a key role in transforming agriculture and has direct impact on all strategic outcomes. Government will therefore:

- Identify and create agro-industrial zones.
- Construct trunk and feeder roads, especially in targeted food cluster areas.
- Construct bridges, markets, and storage facilities to improve access and market linkages.
- Improve electricity access, especially to the agro-industrial zones.

Finance

Feed Salone will cost $1.6 billion by 2028 and around $257.3 million in 2024. These costs are driven by the scale and scope of interventions in each value chain and aim to remove key constraints to attract more private investment.

A blended financing approach, where the government combines its own resources and that of the development partners to attract private capital is the most promising and sustainable way to finance this plan. Every dollar of public financing should leverage between five to ten times more private capital. We will:

- Leverage development financing (over $350 million in the past eight years allocated to the agriculture sector).
- De-risk and provide incentive for private investment in the sector.
- Create a culture of trust for investors and businesses.

Institutional Arrangements & Delivery

The strategy aims to revamp the current configuration of the Ministry of Agriculture and Food Security (MAFS) and associated agencies to boost the delivery of Feed Salone. This strategy elevates the role of the private sector for their potential to efficiently deliver services, provide the core funding for most value chains and to act as conduits or agents of technology transfer and knowledge sharing.

The delivery mechanisms for the implementation of Feed Salone will be through the following:

- The Presidential Council guiding the delivery of the Feed Salone Strategy.
- Establishment of the Feed Salone Secretariate team to provide technical and administrative backstopping to the Council and the Ministry of Agriculture and Food Security.
- Systems and processes that encompass active advisory services to farmers, collaboration with the private sector, robust data collection mechanisms and reporting systems.

INTRODUCTION

Sierra Leone's Agricultural Landscape: Challenges and Potential

Richly endowed with the abundance of arable land, rainfall, and a youthful population, Sierra Leone is an agrarian society where the agriculture sector accounts for 57% of its Gross Domestic Product (GDP) and acts as a main source of livelihoods for over half of the population (World Bank, 2021). This figure is even higher in the rural areas where 86.1% of the households are classified as agricultural households (Statistics Sierra Leone, 2018). Additionally, women make up 70% of the agricultural labour force and play a critical role in food production and natural resource management (Statistics Sierra Leone, 2018). While the sector remains a key driver of economic growth and employment, its relative dominance and sheer size has not, however, matched its outputs.

Even though the sector employs over half of the country's workforce, it only contributes a meagre 7% to the country's total exports. Also, around 75% of its 5.4 million ha of arable land remains undercultivated. Low levels of productivity and high post-harvest losses remain pervasive across the sector, with labour productivity a third lower in the sector than the national average. In the agricultural sector, Sierra Leone lags behind its closest neighbours, Guinea and Liberia, with a productivity gap of 16% and 36% respectively (World Bank, 2020). While the country is among the highest per capita consumers of rice globally, its average rice yield per hectare of 1.9 metric tons over the last five years remains below the Sub-Sahara African average of 3 tons per hectare (USDA, 2023). The agricultural sector's inability to produce enough to respond to the local demand has led to the country turning to global markets for its food needs, with severe welfare and food security implications. It is estimated that around $500 million is expended on yearly food imports, with rice imports – the national staple – alone accounting for 38% of that total (Ministry of Agriculture and Food Security, 2023). The rising cost of food imports have contributed to food insecurity, with a recent World Food Program monitoring report concluding that a fifth of the country's population is severely food insecure (World Food Program, 2023).

The low level of productivity within the sector is, in part, linked to the absence of, or the underdeveloped nature of, the agricultural infrastructure required to enhance productivity. The irrigation infrastructure in Sierra Leone is among the lowest in world with an estimated average of around only 1% of the main crops cultivated under irrigation conditions in the country (African Development Bank, 2023). In the absence of a functioning irrigation system, farmers mostly rely on rainfed agriculture to grow their crops, leaving them at the mercy of weather variabilities. The dependency on rainfed agriculture is further compounded by the country's climate related vulnerabilities, having been identified among the top 10 countries most vulnerable to climate change (World Bank, 2018). With regional climate models predicting increased temperature and highly variable rainfall patterns, farmers' livelihoods are especially vulnerable to changes in precipitation and the increasing occurrence of extreme weather events across the country. Current changes in the global climate are, expected to worsen already low levels of production within farming communities in Sierra Leone, underscoring the need for a comprehensive climate mitigation and adaptation strategy.

Similarly, the low rate of mechanisation across the country further limits the size of land farmers cultivate, given that they rely on rudimentary equipment like hoes and cutlasses for clearing, planting, and harvesting. On top of that, the absence of a well-functioning extension service system that links research within the agricultural space to its release and subsequent adoption means that farmers are

mostly either not aware of the existence of the latest agricultural technologies and skills, or do not know how to use them. Furthermore, in Sierra Leone, the soils are naturally low in fertility, thus compounding the challenges in agriculture. Moreover, the application of fertilizers falls below the regional average, a situation worsened by either the high cost of these inputs or inadequate understanding of their effective utilization. Most often farmers use only one type of fertilizer for all soils and crops.

The current land governance and tenure system, particularly as it relates to customary land, poses significant challenges to the smooth transfer of large tracts of land among users. The existing land regulations, which impose limitations on the acreage that can be cultivated, along with the complex procedure requiring multi-party consensus for the approval of land transfers within traditional settings, increase transaction costs (Ochiai, 2017; Unruh, 2008). These factors serve as significant impediments to the expansion of large-scale mechanized agriculture.

While riddled with challenges, Sierra Leone's agricultural landscape presents vast opportunities. The size of underutilized arable land (5.4 million ha), abundant rainfall and youthful population offer a canvas for sustainable farming practices. The predominance of traditional farming methods signals room for the introduction of modern mechanization and innovative technologies, ensuring more efficient and productive agricultural outcomes.

In his second term, President Bio has spotlighted agriculture, demonstrating unwavering political commitment, a key component for agricultural transformation in any country. This renewed focus, drawing from the achievements of the National Agricultural Transformation Programme 2023 (NAT 23), is aimed not just at economic progress but also at ensuring that Sierra Leone achieves food sovereignty.

The robust political commitment of the President towards the agriculture sector is reflected in his flagship Feed Salone Programme that cements the government's determination to harness this potential and herald a new era of agricultural prosperity. The initial successes during President Bio’s tenure indicate that by reshaping agricultural practices and honing in on crucial value chains, we can increase food production, especially by modernising farming practices and empowering both the small-holder farmers and the private sector, among other interventions. By transitioning from subsistence to commercial farming, the sector promises enhanced job opportunities and incomes, especially for women and youth.

The Ministry of Agriculture and Food Security is executing the President's Feed Salone vision, steered by six strategic pillars. These pillars are a testament to Sierra Leone's commitment to modernizing its farming practices, enhancing productivity, and achieving food sovereignty. The pillars emphasize mechanization and irrigation, advanced seed and input systems, efficient processing methods and market linkages, accessible agricultural financing, innovative technological integration, and a pronounced emphasis on climate-resilient practices as well as the empowerment of women and youth.

This strategy is reinforced by a supportive policy framework and vital infrastructure enhancements, tailored to amplify the growth of pivotal value chains. Furthermore, the strategy recognizes agribusinesses, both local and international, as essential drivers in actualizing the President’s vision. The ambition of the strategy is to cultivate formidable partnerships with the private sector, promote synergies between public and private entities, and mitigate risks associated with foreign direct investments, making the sector more appealing for entrepreneurs and businesses.

The Feed Salone Strategy draws from the learnings of the National Agricultural Transformation Programme and brings purpose to every step we take towards an agricultural transformation. But this document is more than just a strategy; it's a commitment. My government's commitment to the whole Agriculture sector, to our people – and especially – to our children, who deserve to inherit a nation devoid of hunger. Finally, it is a demonstration to the world of the resilience and determination of Sierra Leone in our pursuit of food security and national prosperity.

His Excellency Brig. Rtd.
Julius Maada Bio

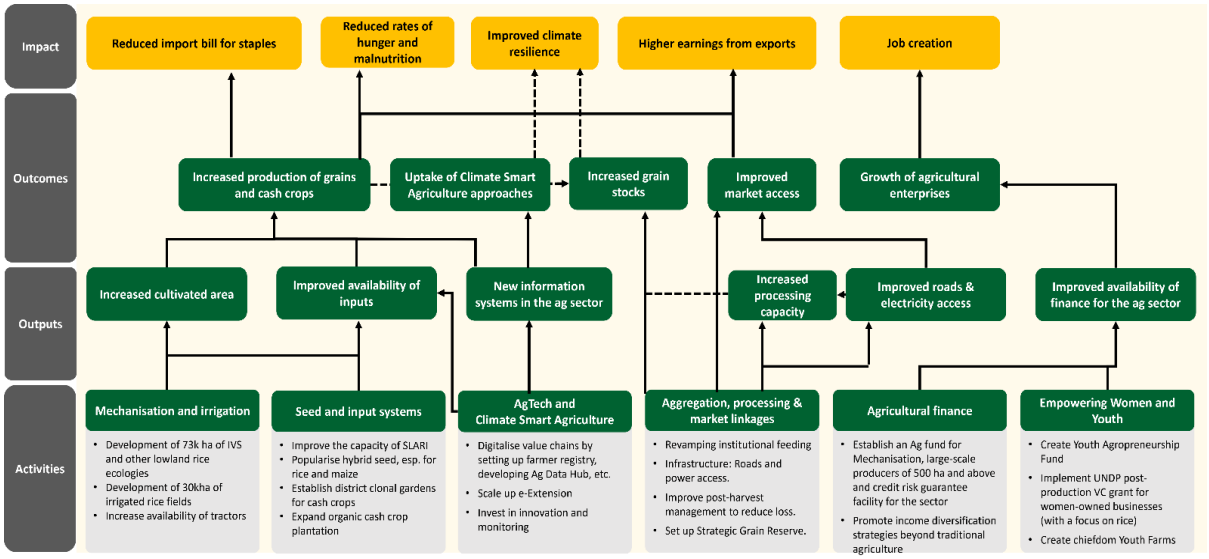
PRESIDENT | REPUBLIC OF SIERRA LEONE

THEORY OF CHANGE

Feed Salone's theory of change, shown in Figure 1 below, focuses on achieving the following objectives:

i. Reducing the import bill for staples to address rising import bills.
ii. Generating higher earnings from export commodities to address dwindling foreign exchange earnings.
iii. Creating jobs in the agriculture sector.
iv. Reducing the high rates of hunger and malnutrition.
v. Significantly boosting climate resilience.

Figure 1: Feed Salone Theory of Change



Source: Ministry of Agriculture and Food Security

The overarching theory of change sets out the individual impact pathways that are expected to lead from activity level to the high-level goals of the Strategy and marking the key underlying assumptions for those impact pathways. The change framework distinguishes between outputs, which are directly controllable by Feed Salone; and outcomes, representing broader changes influenced by various contextual and behavioural variables; and impact, signifying the end results.

At the activity level, it is anticipated that through increased **mechanisation and irrigation**, the cultivated area for staples and other crops will be expanded. Specifically, this expansion will occur through two main channels: firstly, through the direct enlargement of Inland Valley Swamps (IVS) and the development of irrigated rice fields, and secondly, by enhancing the efficiency of land preparation through the expansion of tractor services. Concurrently, we assume that through significant reform of the **seeds and inputs systems**, there will be a boost in the availability of essential inputs for agricultural production, including seeds, seedlings, fertilizer, and water. This boost will result from the reforms implemented at national agricultural research institutions across the country to increase the capacity required to develop seeds, increase the uptake of hybrid seeds, and develop clonal gardens that could

serve as sources of seedlings for local cash crop producers. Moreover, by transitioning agricultural input delivery from a government-led to private sector-led approach, fertilizer distribution will be improved through the creation of digital farmer IDs and the development of irrigation schemes.

In addition, **new information systems for the agricultural sector** will be created, both for the benefit of farmers (through digital extension) and of the government (through Ag Data Hubs and monitoring systems). It is further expected that activities such as developing roads and power infrastructure, improving post-harvest management through training, and building or rehabilitating aggregation and processing centres, and storage facilities will result in increased processing and production capacity. Furthermore, **climate resilience** will receive a substantial boost, emanating from a greater adoption of climate-smart agricultural practices, which will result in enhanced adaptive capacity. Additionally, the availability of grain reserves will mitigate the adverse impacts of weather-related harvest failures. Also, through the establishment of an agricultural fund to support mechanisation and a credit risk guarantee facility for the sector, it is expected that the availability and access to **finance in the agricultural sector will improve**. Lastly, it is anticipated that funds set aside for youth and women through a youth agro-preneurship and a UNDP post-production VC grant for women-owned business will also **empower women and youths.**

At the output level, activities related to mechanization and irrigation, and seeds and input systems are anticipated to have an immediate impact, primarily manifested as an expansion in the cultivated area for crop production, and an improvement in the availability of inputs. Other key outputs of Feed Salone will include an increase in processing capacity through the rehabilitation of rice mills and acquiring new ones, improved and new roads leading to the production clusters, electricity, through productive use of energy in irrigation systems, post-harvest processing, greenhouses, crop storage, among others. Feed Salone will also ensure a better access to agricultural finance, both through the **Agriculture Finance pillar** and by making additional financial resources available to support youth- and women-led initiatives.

At the outcome level, greater cultivated area, improved availability of inputs, and improved knowledge on how to use them (made available through new information systems in agriculture) should jointly result in higher production levels of staple and cash crops. In more broader terms, these new information systems should be used to convey critical information on climate risks to agriculture and what farmers can do to protect themselves against those risks, leading to an increased uptake of climate-smart agricultural practices. Setting up strategic grain reserves, boosting overall grain production and increasing processing capacity for rice milling will help the government assure increased grain stocks, to be drawn on in case of food shortages. A further expected outcome is improved market access, to be achieved through boosting public procurement of institutional feeding as well as improved roads. Finally, an increase in Government's expenditure on agriculture and improved access to finance being made available to the private sector involved in agricultural value chains will contribute to a growth in agricultural enterprises, covering both expansion of current operations and creation of new business entities.

At the impact level, the increase in staple production, coupled with improved road infrastructure to facilitate market access, will work in tandem to reduce the import bill for staple foods, and alleviate rates of hunger and malnutrition. The expansion of cash crop production and enhanced market access will enable higher export earnings. Moreover, strategic initiatives aimed at empowering women and

youth will foster the growth of agricultural enterprises, leading to increased labour demand and consequently contributing to the overarching goal of job creation.

It should be emphasised that the impact pathways outlined in the theory of change are subject to a set of key assumptions which will form the basis of monitoring and risk mitigation approach for Feed Salone.

We will be deliberate about changing the attitudes of farmers and incentives created for them to **undertake agriculture as a business**. Being a farmer used to be perceived as an esteemed vocation in Sierra Leone. Sowing seeds and reaping the fruits of hard work used to evoke respect and gratitude. Feed Salone is a call to **restore the dignity, pride and honour of farming our land**.

Dr. Henry Musa Kpaka

Minister of Agriculture and Food Security

STRATEGIC PILLARS

To address long standing challenges that continue to inhibit the optimal performance of critical value chains across the agricultural sector, the Feed Salone's strategic interventions will be implemented through the following six (6) pillars:

- Pillar 1: Mechanization and Irrigation
- Pillar 2: Seeds and Inputs System
- Pillar 3: Aggregation, Processing and Marketing
- Pillar 4: Access to Finance
- Pillar 5: Agricultural Technology (AgTech) and Climate Smart Agriculture (CSA)
- Pillar 6: Empowering Women and Youth

This strategy is premised on the belief that the interventions under the strategic pillars will improve the functioning and efficiency of the value chain of our priority crops, culminating in higher levels of productivity, increased export earnings, resilience to climate change, reduction in hunger and food insecurity, and job creation. This section provides an overview of the pillars and the specific interventions that will be undertaken under each pillar.

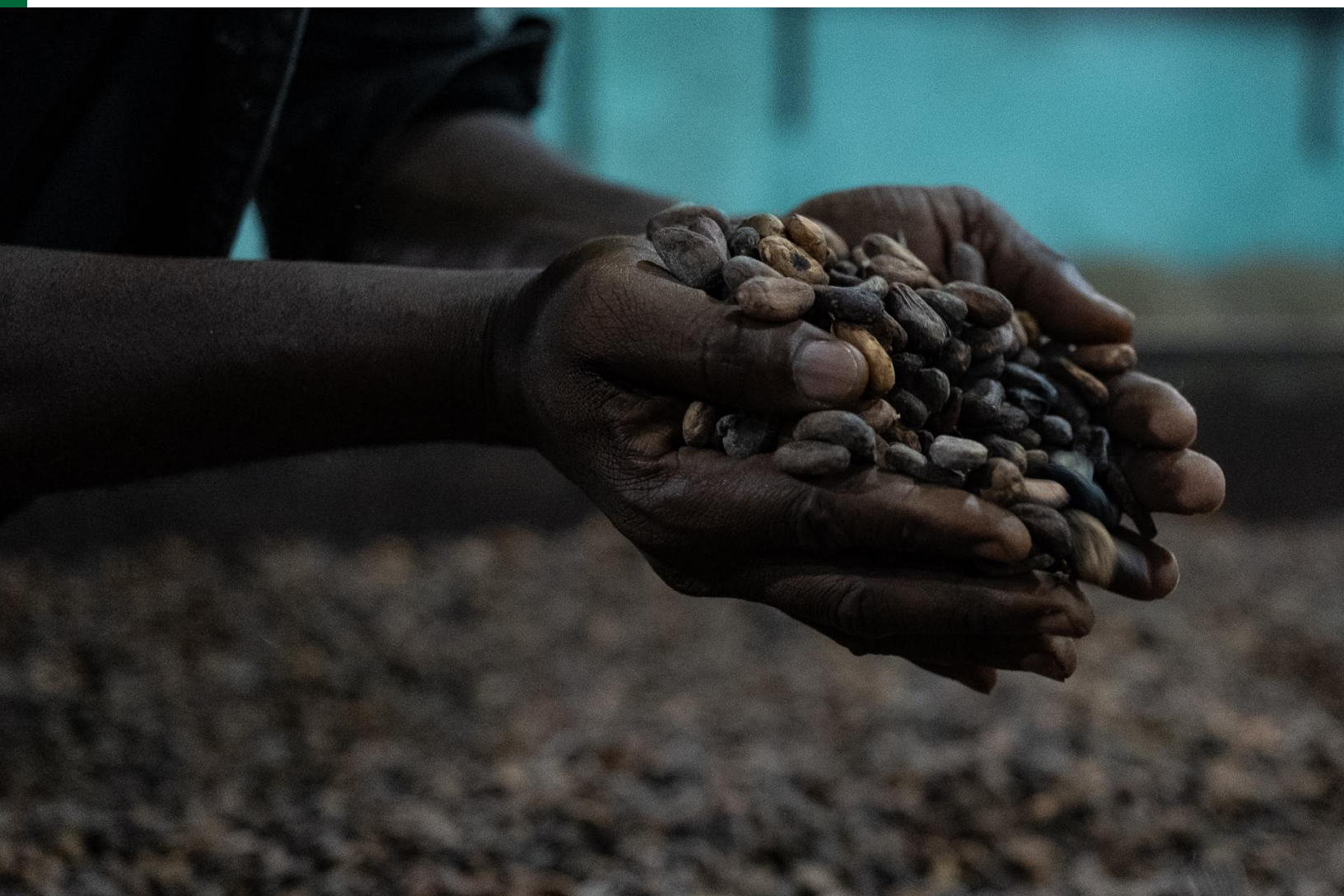


Figure 2: Strategic Pillars

01 MECHANIZATION AND IRRIGATION

Expanding rice production areas, including Inland Valley Swamps and irrigated rice fields, augmented by tractor and other mechanised services.

02 SEED AND INPUT SYSTEMS

Using research to ensure high-quality inputs for optimal yields for key value chains.

03 AGGREGATION, PROCESSES & MARKET LINKAGES

Streamlining processes for maximized profitability.

04 AGRICULTURAL FINANCE

Tailoring financial instruments and solutions for the sector's unique needs, especially for women & youth.

05 AG-TECH & CLIMATE SMART AGRICULTURE

Leveraging technology, supporting agricultural research, promoting digitization and building robust data systems to inform decisions while safeguarding against climate change.

06 EMPOWERMENT OF WOMEN AND YOUTH

Ensuring their indispensable role in agricultural development is reflected and elevated across all Strategic Pillars.

Strategic Pillar 1: Mechanization and Irrigation

Overview

Even though Sierra Leone is endowed with abundant natural resources, and climate to support agricultural production, the absence of the appropriate level of irrigation and mechanisation infrastructure continues to limit productivity levels in the sector. For instance, although over a quarter of the country's 5.4 million hectares of land have considerable potential for irrigation, less than 1% of it is supported by irrigation facilities. Consequently, most farmers in the country depend on rainfed agriculture which, with the changing climate and weather unpredictability, is presently having a negative impact on productivity levels, and could continue to do so.

Agricultural mechanisation is among the lowest in the African sub-continent, at 2%, contributing to agricultural activities being labour-intensive in the country (African Development Bank, 2023). In the last decade, the rising cost of labour primarily due to rural-urban migration of youth and the advent of new opportunities in non-farming job options, such as motorbike taxi riding, have negatively affected agricultural activities and made labour-intensive cultivation less reliable.

While successive governments have in the past provided machinery and relevant support to farmers through a public sector led model, in 2020, the Government as part of a policy shift, sought to develop agricultural mechanization across the country through a Public-Private Partnership arrangement with service providers that became known as "Machine Rings". Through this arrangement, centres were established in 14 agricultural districts to provide mechanized support to farmers, resulting in the provision of 210 tractors to farmers across the country. Despite the existence of these Machine Rings the expansion of mechanization services still presents a significant hurdle due to the sluggish pace at which the machine networks deliver services to farmers. The challenges persisting within these Machine Rings are compounded by the underdeveloped state of agricultural land throughout the country, a shortage of skilled machine operators, widely dispersed small farm holdings, lack of readily available spare parts and local repair services, and the rise in global fuel prices.

Areas of Intervention

To increase land under cultivation and ultimately production levels, the following key interventions will be undertaken;

1. Develop 73,000 ha of Inland Valley Swamps (IVS) and other low-land rice ecologies.
2. Develop 30,000 ha of irrigated rice and vegetable fields.
3. Increase the availability of tractors and other agricultural machinery through the Mechanisation Fund.

Strategic Pillar 2: Seeds and Inputs Systems

Overview

Increased agricultural productivity depends on the appropriate use of inputs ranging from seeds to fertilizer and pesticides, among other factors. The rudimentary state of the formal seeds system and the resulting lack of access to quality and viable seeds continues to be one of the main constraints to increasing agricultural productivity in Sierra Leone. In addition to the absence of improved variety of seeds in the market, their high cost, the generally low levels of income of smallholder farmers, and the absence of credit options to obtain seeds contributes to the use of poor-quality seeds. To address some of these challenges, in September 2023, leading researchers, scientists, policy makers, and international organisations in the seeds industry across the world converged in Freetown and developed a road map and a set of recommendations to address some of the major challenges in Sierra Leone's seeds industry.

Other important factors that limit productivity are the limited access to fertilizers, pesticides and other agrochemicals. To address these challenges, the National Fertilizer Regulatory Agency (NFRA) was established by an act of parliament in 2019 to regulate and control the manufacture, importation, distribution, sale, and use of fertilizers in Sierra Leone.

As part of the government's efforts to move away from a public sector led procurement and distribution of inputs, an e-voucher system was introduced in 2021 to deliver agricultural inputs (including fertilizers and other agrochemicals) to farmers in a transparent and efficient manner. In the context of the Feed Salone initiative, the government will continue to remove bottlenecks that hinder the private sector's participation in the inputs sub-sector through the provision of the Agricultural Credit Facility (ACF) scheme to agro-dealers and encourage SMEs/Agribusiness/Business Development Service Providers to serve as input dealers through the e-voucher system.

Areas of Intervention

To create a sustainable pipeline of high-quality seeds and other inputs required to increase production, the programme will focus on the following key areas of intervention:

1. Improve the capacity of SLARI to produce high-yielding seeds.
2. Build an agro-dealers' network across the country, with trained dealers interfacing with farmers.
3. Popularise hybrid seeds in the next 3 years, especially for rice and maize.
4. Support private sector to establish a fertiliser blending plant and explore large scale organic fertiliser manufacturing options.
5. Establish district clonal gardens for cash crops value chains.

Strategic Pillar 3: Aggregation, Processing and Marketing

Overview

There is a huge infrastructure deficit in the form of inadequate aggregation centres and ill-equipped storage and processing facilities that continue to hinder value addition to locally produced goods. These, together with poor road networks, unreliable electricity, and high transport costs are frequently cited as some of the perennial causes of post-harvest losses which can be between 30% – 40% of annual agricultural production (FAO, 2021).

Moreover, despite the significant potential demonstrated by the agro-processing sector over the past decade, particularly in the processing of commodities like oil palm and cashew, which together account for approximately 16% of agricultural value added (World Bank in 2016), the sector faces persistent limitations. These constraints include the inadequate capacity of processors and the absence of regulatory frameworks that establishes equitable pricing and quality standards, thereby impeding private sector engagement in this sub-sector. Additionally, challenges such as limited access to financial resources and the underutilization of technology for the distribution and processing of agricultural outputs further exacerbate the difficulties faced by the sector.

Areas of Intervention

As part of the effort to reduce post-harvest losses, increase value addition for key cash and food crops and link farmers to market, the key areas of intervention are as follows:

1. Rehabilitation of moribund rice processing mills across the country.
2. Establishment of rice production clusters across the nine (9) key districts.
3. Establishment of the Strategic Grain Reserve, that can also provide storage credit to support farmers to get the best price for their produce.
4. Adoption of policies to promote institutional buying of locally produced food for schools, military, police and correctional service centres.

Strategic Pillar 4: Agricultural Finance

Overview

Access to finance for the procurement of inputs, the expansion of mechanisation services and the provision of working capital for commodity trading is critical to attract investments in agricultural value chains. Despite the expansion of products and channels within the financial services sector, the accessibility to financial resources and services for the agricultural sector continues to be notably limited and constrained. The perceived riskiness of agriculture owing to the sector's exposure to frequent price fluctuations, threat of crop failure, diseases, and extreme weather events, plays a major role in limiting the access to finance within the sector. Another significant challenge within the sector pertains to the

viability of agricultural assets, specifically land titles and property rights. These assets often pose difficulties when used as collateral, particularly in rural areas because of the challenges associated with their verification. Agricultural businesses and farming typically have variable and seasonal income streams which can be associated in some instance with long crop maturation periods before investments start to yield steady or exponential returns. This is a major disincentive for lending in the sector, especially for the expansion of investment in cash crops.

Additionally, high interest rates, stringent collateral pre-requisites and the absence of insurance schemes are also barriers to accessing finance in the agricultural sector. The GoSL has in the recent past embarked on a series of programs to expand access to finance for actors within the sector. In 2020, the government set up an Agricultural Value Chain Financing (AVCF) model and established a $10m Agriculture Credit Facility (ACF) targeted at input providers in the country. The AVCF was specially designed to cushion the exchange rate variation risks by financing imports in United State Dollars, while allowing the input creditors to pay back in Leones. Although only two (2) input companies accessed the credit facility, the financing model proved quite effective in shielding the companies from the depreciation that has hit the Leone in recent times.

Areas of Intervention

To improve access to finance for smallholder and large-scale farmers, and de-risk private sector participation in agricultural finance, the programme will prioritize the following key areas of intervention:

1. Establish an Agriculture Mechanisation Fund and credit risk guarantee facilities for large-scale producers.
2. Promote income diversification strategies beyond traditional agriculture, such as agribusinesses, cottage industries, and non-farm value chain activities.
3. Develop rural financial services and access to credit for smallholder farmers and rural entrepreneurs.
4. In a Public Private Partnership arrangement (PPP), establish an Agriculture Investment Bank.

Strategic Pillar 5: Agricultural Technology (AgTech) and Climate Smart Agriculture

Overview

Agricultural technology (AgTech) tools have shown a lot of promise in responding to challenges facing the sector and they have been instrumental in addressing some of the perennial challenges. In 2018, DNA sequencing techniques were used to identify and control early Cassava Mosaic Disease that affect productivity in 12 Cassava plants (Directorate of Science, Technology and Innovations, 2019). In 2019, the Ministry of Agriculture introduced an e-Voucher scheme that involved the use of a technology platform

in the disbursement and transfer of value as well as liquidation of funds through the normal bank settlement systems.

Given that Sierra Leone has been identified as one of the most vulnerable countries to climate change (The World Bank, 2018). Feed Salone plans to leverage AgTech tools to provide farmers with information about possible changes in weather patterns, climate smart agricultural practices and techniques that are needed to respond to these changes. This strategy will, therefore, scale up the current e-extension infrastructure, and train farmers in climate-resilient techniques. As part of the programme, technology will connect all actors in the value chain, improving relationships and creating links for farmers, extension workers, researchers, and processors, enhancing processing and marketing linkages.

Areas of intervention

As part of the programme to increase efficiency in the agricultural sector, the key areas of intervention are as follows:

1. Setting up of the National Farmers Registry and develop the MAFS Agriculture Data Hub.
2. Strengthening extension services to ensure that farmers have access to knowledge and information by scaling MAFS e-extension infrastructure by, for example, the creation of phone-based Apps to relay key information to farmers.
3. Investing in agricultural research and innovation to develop new technologies and practices.
4. Promoting climate smart agricultural practices, including promotion of organic fertiliser, and reducing waste through a circular economy approach in our farming systems.

Strategic Pillar 6: Empowering Women and Youth

Overview

Although women make up 70% of Sierra Leone's labour force in the agricultural sector (Statistics Sierra Leone, 2018), they have significantly limited access to land title as compared to men. Land inheritance rights were only recently extended to women in the 2022 Customary Land Act and Land Commission Act, and the full implementation and benefits of these changes are yet to materialize (Bankolay,2023). Women still face limited access to land title. Consequently, women are less likely to own economic assets and are less involved in decision making about land use within their communities. In Sierra Leone, women combine taking care of children and other household chores with rearing animals, and other activities on the farm that are not likely to be income generating. As a result, they are more likely to earn less, be more impoverished and vulnerable to climate change and other shocks in the agricultural sector. Similarly, youth who make up about a third of the country's population have remained largely on the fringes of the agricultural sector.

The National Agriculture Transformation Programme (NAT) 2023 acknowledges the marginalization of women and youths in the sector and underscores their ability of transforming the sector if they are

empowered to realise their full potentials. This dual focus on women and youth is a clear manifestation of the government's commitment to prioritizing these two vulnerable demographic groups, as also outlined in the National Development Plan (2019-2023). In line with the objective of mainstreaming the Gender Equality and Women's Empowerment bill, the Ministry of Agriculture is actively formulating a policy that places women at the forefront of all agricultural initiatives within the framework of the Feed Salone strategy.

Areas of Intervention

To build resilience and create wealth for women and youth, the key areas of intervention will be:

1. Supporting women and youth to cultivate high value cash crops.
2. Train and promote climate-smart agriculture to women and youth farmers.
3. Establish a Youth Agri-preneurship Fund.
4. Partner with TVET institutions to build skills linked to agricultural sector (mechanization, irrigation, processing, packaging etc) for women and youth.
5. Provide targeted access to finance for women, through matching grants and other guarantees.

STRATEGIC OBJECTIVES & VALUE CHAINS

This section provides comprehensive details on the alignment between strategic objectives, policies, and critical value chains in Feed Salone's programmatic landscape.

At the heart of the Feed Salone program lies five fundamental objectives to guide our efforts over the next five years:

1. **Import substitution of staples:** The programme aims to reduce the reliance on imported staples by bolstering domestic production, together with increasing the production of other food products we traditionally import.

2. **Boost Earnings from Agro-Commodity Exports:** In order to enhance our ability to withstand external economic challenges, bolster foreign reserves, and excel in the global market, the program aims to strengthen initiatives aimed at boosting agro-commodity exports. This involves optimizing production techniques to achieve higher yields, adding value to raw products, improving our supply chain efficiency, and ensuring that our products meet the quality standards demanded by international markets.

3. **Create 35,000 jobs:** This will be realized through the development of agro-industrial zones, promoting contemporary farming techniques, and nurturing the growth of agribusinesses among women and youth.

4. **Reduce hunger and malnutrition:** While increasing food production is vital, it's equally crucial to address the underlying causes of hunger. Programmatic efforts will be holistic, ensuring that food, including fish as a major protein source, isn't just available but is also accessible to all and affordable.

5. **Building a climate-resilient food system:** Recognizing the challenges posed by climate change, Feed Salone is committed to building a food system that can withstand its vagaries. The programme aims to safeguard the future by adopting climate-smart agricultural practices, investing in resilient infrastructures, and bolstering the adaptive capacities of farmers.

Objective 1: Import Substitution of Key Food Items

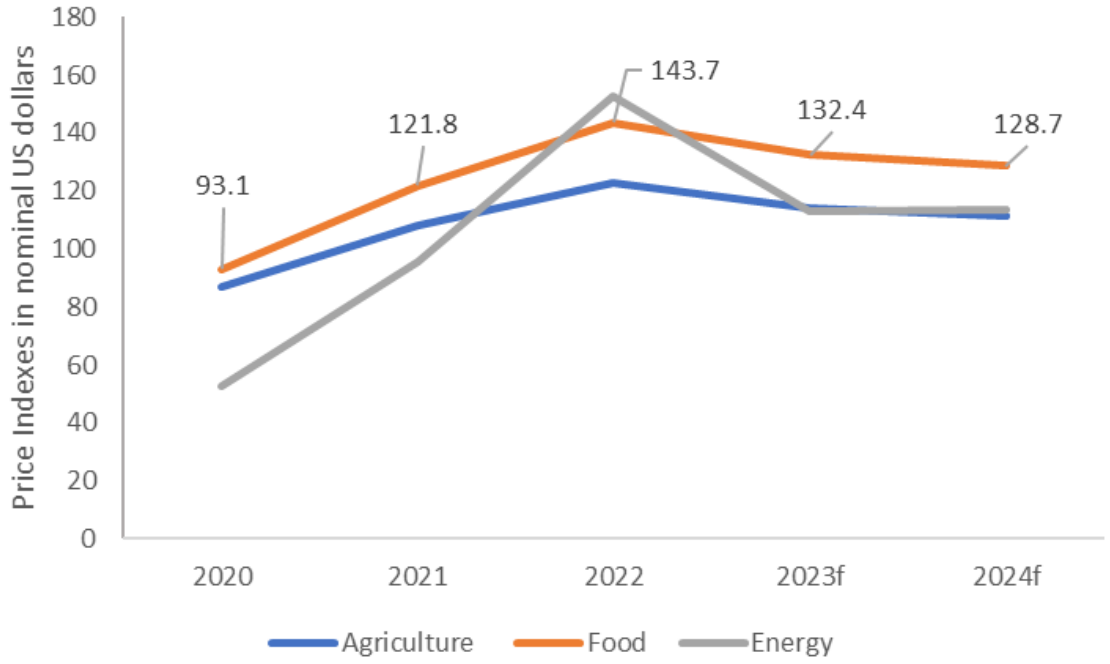
Sierra Leone relies heavily on importing essential food items to meet the demand of the growing population. However, recent crises such as the Covid-19 pandemic and geopolitical conflicts have impacted global supply chains and resulted in an increase in commodity prices. These shocks have affected the macroeconomic performance and raised new risks for the economy of Sierra Leone. High volatility and fluctuations in food commodity prices, historically elevated levels of inflation, and decreasing local currency value significantly hinder access to primary food commodities and exacerbate the urgency to decrease the dependence on imports.

According to the Commodity Markets Outlook from World Bank, as of February 2023, food prices worldwide are still higher than those seen during the food crisis of 2007-08. Domestic food prices in 146

countries have an annual inflation rate of 20%, which is the highest in the last 20 years. The overall food price index, as shown in Figure 3, has increased due to the impact of the Covid-19 pandemic on supply and demand chains. While the prices of some food items went up, the prices of others, such as grains, went down. Although the food price index is expected to decrease by 8% in 2023 and 3% in 2024, most food commodities are still expected to be more expensive than they were before the pandemic.

Disruptions at different stages of the value chain pose a high risk to food security in Sierra Leone. They not only lead to a decrease in the supply of essential items but also cause a surge in prices, further exacerbating food insecurity. To address this challenge, Sierra Leone aims to close import gaps by increasing domestic production and working towards self-sufficiency. To do that, Feed Salone prioritises rice, poultry, and onions over the next five years. This section will explore the strategic objective of import substitution by analysing these three value chains and the opportunities and targets proposed for them.

Figure 3: Price indexes in nominal US dollars (2020-2024)



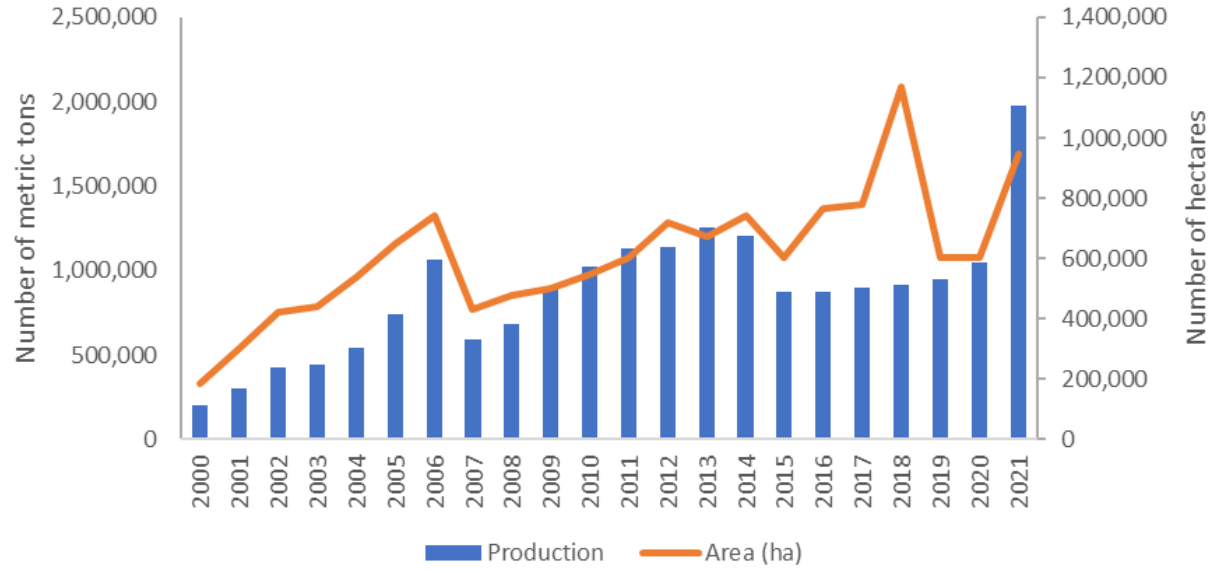
Source: World Food Program, 2023

Rice

Rice is the primary food consumed by over 90% of the population in Sierra Leone. The trends in rice production in Sierra Leone over the past two decades reveal several notable patterns. From 2000 to 2010, rice production increased fivefold, while the area harvested also expanded. Between 2010 and 2015, there was a fluctuation in production, with a peak in 2013. The Ebola Virus Disease (EVD) outbreak resulted in a severe shock to the agriculture and food sectors in 2014, where rice production was most affected, with an annual decrease between 2014 and 2015 of 28% in production and 18% in area harvested. Since 2016, there has been a gradual recovery and stabilization in rice production. In 2020 and 2021, there was a

remarkable surge in production, reaching 1.05 and 1.98 million MT, respectively. The area harvested also showed growth, reaching 944,447 hectares in 2021 as shown in Figure 4. This expansion of cultivated area and production signifies a positive trend in the rice sector, highlighting its potential for contributing to food self-sufficiency and improved rural livelihoods in Sierra Leone.

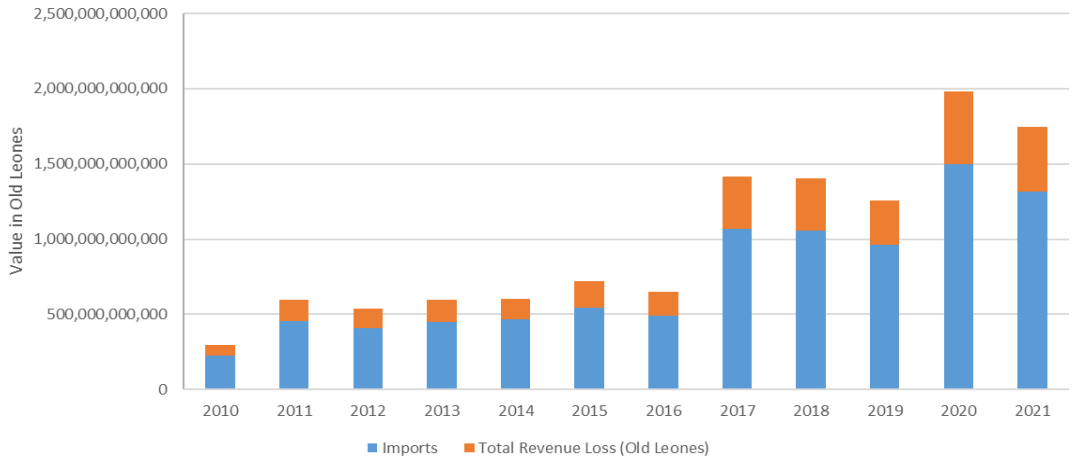
Figure 4: Production and rice harvested area (2000-2021)



Source: FAOSTAT, 2023

There is a significant dependence on imported rice and this pattern is not exclusive to Sierra Leone but extends across West Africa, driven by population growth and shifting dietary choices. This geographical area collectively contributes approximately 18% to the worldwide rice import market. According to data from the FAO (2022), in the West African region, imported rice might constitute roughly 34% of the total domestic rice supply.

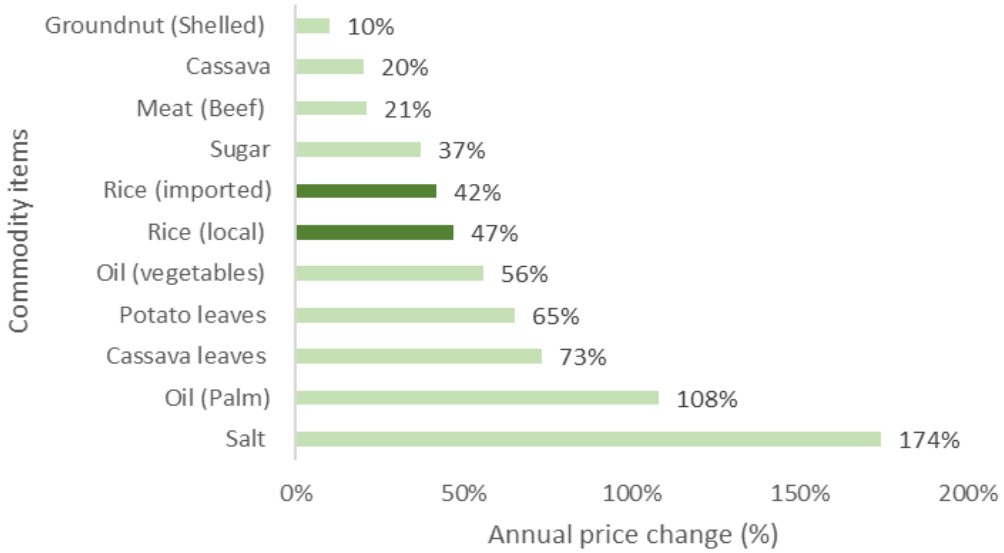
Figure 5: Rice imports (2010-2021), value in Old Leones



Source: Ministry of Trade and Industry, 2023

The FAO The Global Information and Early Warning System on Food and Agriculture (GIEWS) report (2022) shows that around 480,000 MT of rice was imported in 2022, between 2010 and 2021 as shown in Figure 5 the country has imported an estimated US$200 million worth of rice per year, an amount equivalent to one-fifth of its international foreign reserves (World Bank, 2020). Additionally, as shown in the Figure 6 the cost of rice increased by almost 45% in 2022, with a similar disparity between the prices of locally produced and imported rice; the former has seen a 47% increase while the latter has increased by 42% (WFP, 2023). The increase in rice prices both locally and internationally poses a significant socio-economic challenge, highlighting the need to increase domestic supply to stabilise the price of this essential food staple in the medium to long term.

Figure 6: Annual change in commodity prices (2021-2022)



Source: World Food Program, 2023

Sierra Leone went from being a net exporter in the mid-1950s to now a net importer, with a rice production that involves mainly smallholders whose yields have not improved in the last couple of years (Graham, 2020). Some of the major constraints limiting the realization of the full potentials of the rice value chains include:

a. **Inputs:** In Sierra Leone's rice value chain, most small farmers are resource-poor and unable to afford the cost of hiring agricultural equipment and inputs such as certified high-yield seeds, fertilizer, and crop protection chemicals. Similarly, the low use of fertilizer is caused by the poor input distribution system, high fertilizer prices, and inadequate education on application. Agricultural mechanization is also low, where access to machines remains insufficient due to the limited number of tractors and other equipment in the country.

b. **Production:** Over 90% of rice production in Sierra Leone comes from smallholder farmers who cultivate an average of 0.5 to 1 ha of land. In addition, Sierra Leone's abundant land and water resources for year-round commercial-scale crop production remains unutilized.

c. **Processing:** Rice processing in the country is primarily manual, with only two medium-scale processing facilities available. Farmers use traditional methods throughout the process of threshing, drying, pre-cleaning, and milling to process most locally produced rice. While small-scale processing technologies are occasionally employed, given their low quality, they cannot compete with imported foreign rice. Moreover, inadequate storage infrastructure is a pressing issue within the rice value chain, contributing to substantial post-harvest losses.

d. **Distribution, Retail and Consumption:** Distribution infrastructure within and around Freetown is quite well developed but gets weaker as one moves up country. A significant challenge actors face throughout the value chain is the limited access to trading capital, impeding the ability to expand supply chain operations.

Opportunity

The steady growth in Sierra Leone's population, as well as that of its neighbouring West African countries, is driving opportunities in the rice value chain. This demographic trend highlights the pressing need to improve domestic rice production to meet rising demand. Sierra Leone has the potential to take advantage of this growing market, which can boost economic growth and enhance food security.

Sierra Leone's geography provides several advantages for agriculture, with around 75% of its land being arable. It has a variety of lowland ecologies, such as upland, mangrove swamps, inland valley and riverine grassland which are highly suitable for multiple cycles of rice cultivation, allowing for increased yields and overall productivity (See Table 1).

Additionally, the country benefits from considerable rainfall, ranging from 3,000 to 5,000 mm per year on the coast and 2,000 to 2,500 mm in land. This combined with naturally fertile soils, sunlight, and river basins creates a climatic advantage for cultivating rice (Graham, 2020).

These ecologies provide the perfect environment for multiple cycles of rice production, which with proper irrigation infrastructure, these areas can become hotspots for rice cultivation, allowing for increased yields and overall productivity.

Table 1: Overview of Sierra Leone's rice ecologies

Rice Ecology	Approximate Size (ha)	Average Yield (mt/ha)
Upland	200,000-250,000	1.2-1.5
Mangrove Swamp	50,000-80,000	2.5-3.0
Boliland / Inland Valley	40,000-60,000	2.0-2.5
Riverine Grassland	20,000-30,000	1.8-2.2

Sources of Data: MAFS, SLARI, FAO, World Bank

Feed Salone Target for Rice

Sierra Leone's smallholder farmers face several challenges that have limited their ability to scale production significantly and this has been the case in the last decade. To close the import gap, there is a need to create enabling conditions for the emergence and growth of commercially oriented rice producers capable of mobilizing capital and appropriate technologies to drive productivity. Feed Salone's goal is to facilitate private investment in irrigated and non-irrigated commercial paddy production in the country's main lowland ecologies.

Feed Salone will attempt to close Sierra Leone's rising rice import gap by following a three-pronged approach involving:

1. Increasing the area under rice production through mechanisation. Feed Salone will target 73,000 ha of low-land rice ecologies.
2. Improving yield from the average 1.9 MT to 4.0 MT over the five-year period.
3. Reduce post-harvest loss through investment in processing.

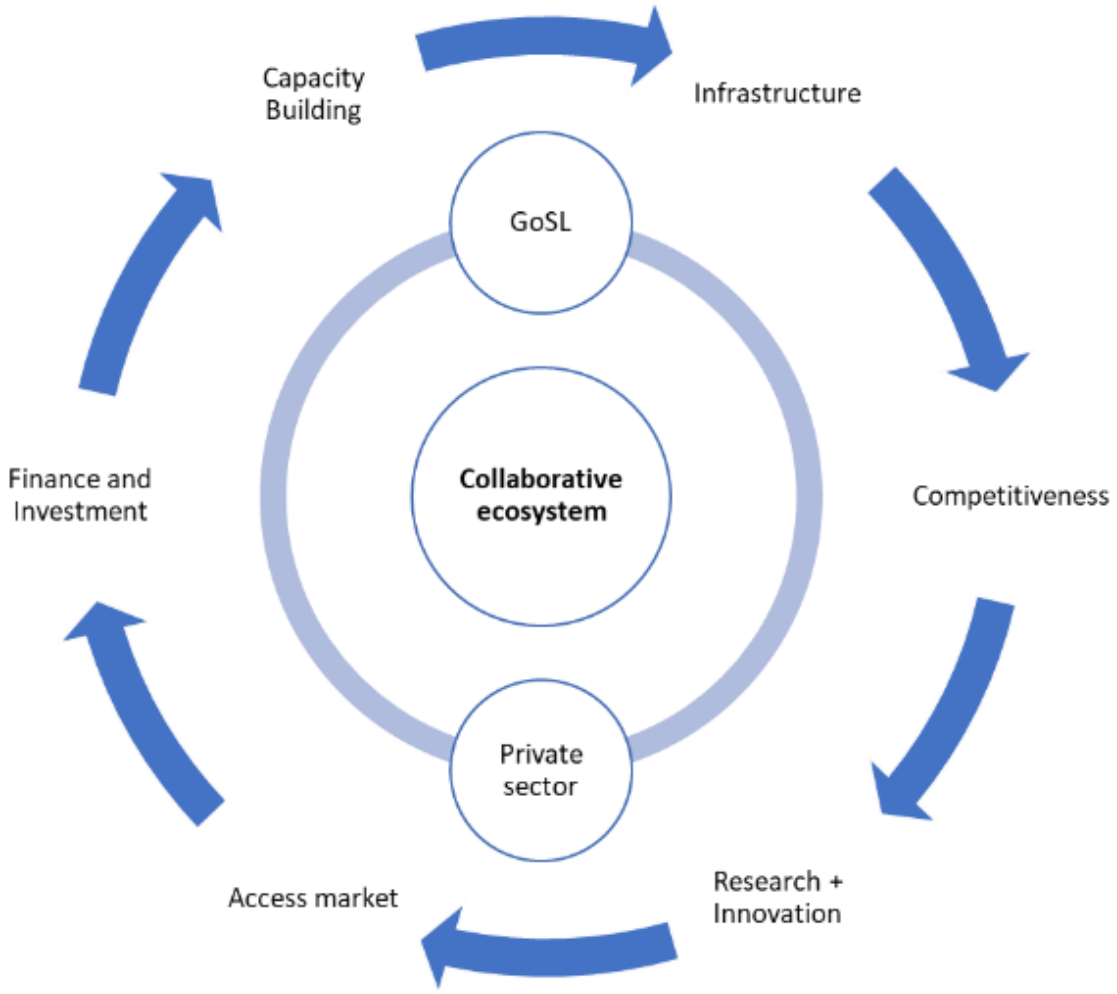
Feed Salone plans to invest in turnkey irrigation projects to unlock the vast potential of different districts and put under cultivation an additional 73,000 ha of lowland ecology as reviewed in Pillar 1. Additionally, it aims to increase the yield per hectare from the current 1.9 MT to 4 MT by combining hybrid seeds and other productivity-enhancing technologies. It is estimated that the production of 400,000 MT can be achieved after all the interventions above, thus significantly reducing the import gap in the next five years.

Development of Agro-Commodity Clusters

Feed Salone aims to enhance Sierra Leone's agricultural industry by establishing agro-commodity clusters aligned with agro-industrial zone policies. Developing clusters as a means of crowding in the necessary enablers will confer economies of scale thus resulting in a better competitive advantage for the value chain. These clusters will serve as a collaborative ecosystem that brings together various players, such as farmers, processors, input suppliers, and financial institutions, to develop sustainable value chains. The main objectives of these clusters are:

1. Promote productive specialization.
2. Generate local added value.
3. Foster interconnectedness along the value chain.
4. Drive innovation and agrotechnological advancements.
5. Attract investment.

Figure 7: Cluster concept description



Source: Ministry of Agriculture and Food Security

In the agro-commodity Cluster framework, resources such as roads, power grids, and investments will be concentrated in districts with the highest production potential. This ensures that the government, partners, and private sector resources are used efficiently to achieve significant results in local economic development. Feed Salone estimates to implement various clusters for different value chains over the next five years and will begin with the rice clusters.

Table 2: Major rice clusters targeted for development

FEED SALONE RICE CLUSTERS					CLUSTER HUB
No	**Districts**	**Rice Clusters**	**Ecologies**	**Lowland Potential**	**Location**
1	Bonthe	Torma Bum	Riverine, Boli	90,000 Ha	Torma Bum
2	Pujehun	Gbondapi	Grassland	41,100	Widaro
3	Tonkolili, Moyamba, Port Loko	Kumrabai Mamilla, Magbass, Makali, Kunike, Lokomassama, Kowa, Kori, Kamaje & Fakunya	Bolis, IVS	35,500 Ha	Mile 91
4	Kenema, Kailahun, Kono	Nongowa	IVS, Bolis	30,000 Ha	Lambayama (Nongowa)
5	Kambia	Mambolo Samu	Bolis, Mangrove	20,000 Ha	Samu
6	Moyamba	Senehun	Grassland/Secondary forest	19,000	Senehun Gola
7	Kambia	Rombe	Grassland/Secondary forest	14,700	Long Mange Bridge
8	Bombali	Rolakoh	Grassland/Secondary forest	5,100	Rolakoh

Source and Author: Ministry of Agriculture and Food Security, 2023

The rice clusters shown in Table 2 prioritizes promoting the best practices in rice farming, improving post-harvest processing, generating market access, and optimizing resource utilization, such as ecologies, lowland potential, and location. Torma Bum, Nongowa, Mambolo Samu, Kumrabai Mamila, Gbondapi, Senehun, Rombe and Rolakoh have identified the required investment from the hub and the chiefdoms for the development of clusters, which will be channelled through the implementation of this Strategy.

Poultry

Poultry production is limited in Sierra Leone due to insufficient domestic supply of animal feed, resulting in high import costs. Local production challenges and other supply side constraints remain the major impediments to local feed production. Specifically, the absence of large-scale local production of soya beans and maize- two of the main ingredients of poultry animal feed- means that either part or all of animal feed supplements are imported at exorbitant costs into the country. This has contributed to making

the cost of feed a significant portion of the running cost of poultry farms and continues to be leading cause of many poultry farmers exiting the industry.

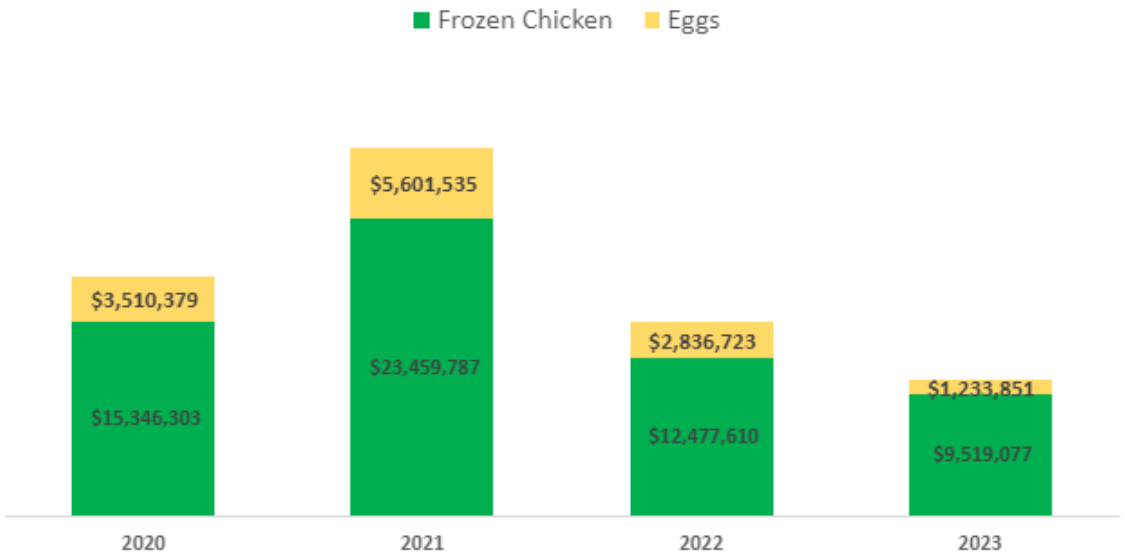
According to Invest Salone, 60% of poultry producers in Sierra Leone are small-scale, 35% are medium-scale, and only 5% are commercial-scale farmers. Despite the efforts, the poultry industry in Sierra Leone has not experienced significant growth. There are also other constraints that are holding back the rapid growth of this industry which include:

- **Access to Quality Chicks and Genetics:** The limited availability of high-quality day-old chicks and improved poultry breeds results in farmers relying on local or unimproved chicken breeds, leading to lower productivity.
- **Healthcare and Disease Management:** Outbreaks like Newcastle and avian flu threaten poultry production in rural areas with limited access to veterinary services, vaccines, and medications.
- **Inadequate Extension Services:** The lack of extension services hampers the ability to adopt modern and best practices in poultry management.
- **Limited Technical Knowledge:** Many poultry farmers lack the necessary knowledge and skills for proper poultry management, including feeding, housing, and disease control.
- **Poor Infrastructure and Housing:** Inadequate infrastructure and poorly designed poultry housing leads to stress and disease outbreaks among birds.
- **Market Access and Marketing Challenges:** Limited access to markets and price volatility can affect the profitability of poultry farming. The lack of organized marketing channels can result in low prices for poultry products.
- **Climate Change and Environmental Concerns:** There are unpredictable weather patterns, which can affect feed availability and bird health. Additionally, environmental concerns related to waste management on poultry farms needs to be addressed.
- **Lack of Processing Facilities:** There is a shortage of modern processing facilities for poultry products, leading to inefficient processing and limited value addition.

Opportunity

The demand for eggs in Sierra Leone is increasing, and local production can only account for 15% of the total annual demand while the remaining demand is met through importation. Between 2020 and 2023, Sierra Leone imported $USD 60.8 million worth of frozen chicken and $USD 13.2 million worth of eggs, as shown in Figure 8. Feed Salone aims to increase the production capacity and reduce imports by exploring opportunities to improve the supply of maize and soybean to the poultry sector which currently requires around 6.000 MT of poultry feed annually.

Figure 8: Poultry Products Imports (2020-2023) (USD)



Source: Ministry of Trade and Industries, 2023.

Feed Salone Target for poultry feed production

Feed Salone will attempt to close Sierra Leone's rising poultry products import gap by following a three-pronged approach involving:

1. Enhancing feed production, improving poultry breeds, and increasing access to high-quality day-old chicks to increase productivity in the poultry value chain.
2. Improving the resilience of poultry farming for disease management by increasing access to veterinary services, vaccines, and medications.
3. Increasing the area under commercially oriented maize and soybean production.

Onion

Onions are a crucial ingredient in Sierra Leonean cuisine. Even though domestic production estimates include over 2000 smallholder farmers in the value chain, Sierra Leone remains a net importer of onions. Onion farming mainly occurs in three districts: Port Loko, Koinadugu, and Falaba. Since 2015, onion farming has become increasingly popular during the dry season, particularly among female farmers. This has provided much-needed motivation for farmers to increase their income during this season.

Opportunity

Sierra Leone has been experiencing a rise in the demand for onions every year. According to the Ministry of Trade and Industry's import data shown in Figure 9, Sierra Leone imported onions and other vegetables worth $34.4 million and 27,000 metric tons of onions in 2020 alone. Sierra Leone has the potential to produce onions all year round due to its diverse agro-ecological zones, which offer favourable conditions for cultivation. The increasing global price of onions and the need to safeguard against supply chain disruptions has created domestic production opportunities.

Figure 9: Onion imports (2020-2023) (USD)

Source: Ministry of Trade and Industry, 2023

Feed Salone Target for Onion

Feed Salone will attempt to close Sierra Leone's onion import gap by following a four-pronged approach involving:

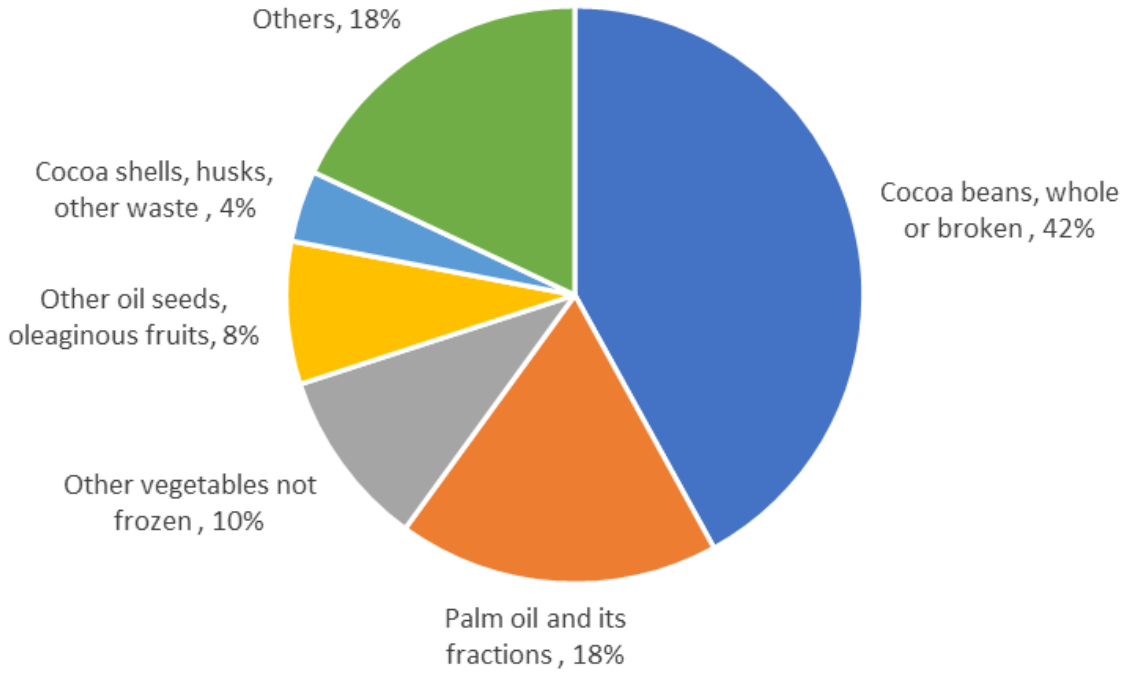
1. Increasing the area under commercially oriented onion production by 4,000 hectares.
2. Linking farmers to quality seeds and inputs for onion production.
3. Improving post-harvest processing and handling segments of the value chain.
4. Organise smallholder farmers by linking them to large scale commercial producers in an outgrower scheme model.

Objective 2: Boosting Export Earnings from Agriculture

Feed Salone's export-led growth strategy is premised on the now acknowledged role that commodity exports play in economic growth and development. The GoSL, in support of boosting export earnings from agriculture, has over the years pursued some initiatives. These include Sierra Leone's participation in various trade agreements such as the Economic Community of West African States (ECOWAS) Common Market, Africa Continental Free Trade Agreement, Everything but Arms, Africa Growth and Opportunities Act and the UK-Sierra Leone Bilateral Treaties. Through these strategic initiatives, the GoSL has expanded the opportunities for the export of products that originate from Sierra Leone to over 100 countries on duty-free basis or preferential duty. Despite these initiatives to expand access to market for Sierra Leone's exports, the country's agricultural commodities export performance has been unimpressive when compared against the country's potential and the export performance of counterpart African countries with similar natural endowments.

According to the latest World Trade Organization (WTO) Country Trade Profile for Sierra Leone, the agricultural exports for 2018 was $50 million while its agricultural imports amounted to $322 million resulting in a trade deficit of $272 million. The last updated data about the structure of exports shows that in 2018 Sierra Leone's primary export product was cocoa beans, accounting for 42% of its total exports and amounting to $21 million. The second largest export was palm oil, constituting 18% of the country's export revenue and generating $9 million. Other vegetables accounted for 10% of the total exports and brought in $5 million, while other oil seeds and oily fruits contributed 8% of the exports and $4 million in revenue. Developing value chains such as cocoa, cashew, oil palm, and coffee offers promising opportunities to diversify the economy, grow national incomes, and reduce the trade deficit.

Figure 10: Sierra Leone's Top Agricultural Export Products (2018)



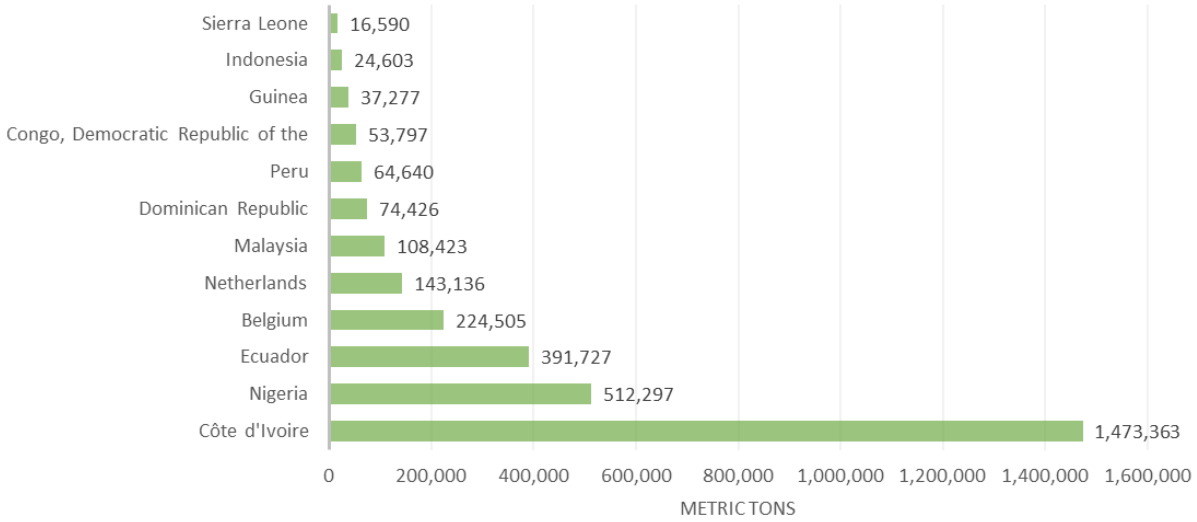
Source: World Trade Organization, Sierra Leone Trade Profile, 2018

This section presents cocoa, cashew and coffee as the prioritised value chains for boosting exports earnings.

Cocoa

Cocoa serves as Sierra Leone's main cash crop and the primary source of income for more than 13,000 smallholder farming households in the main cocoa producing districts of Kailahun, Kenema, and Kono. In 2020, farmers cultivated approximately 20,000 hectares of cocoa, with yields varying but averaging 0.4 MT per hectare, resulting in a total production of 19,000 MT (World Bank, 2022). In 2022, the country exported 16,590 MT of cocoa, ranking 12th worldwide in terms of volume.

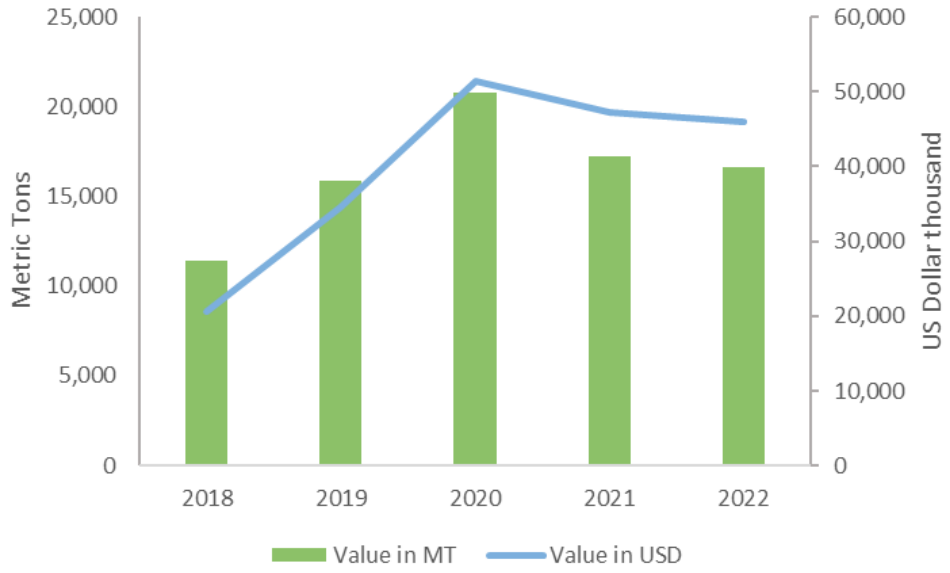
Figure 11: Exporters of cocoa beans in MT (2022)



Source: TRADEMAP, 2023

Sierra Leone's cocoa exports have exhibited fluctuations in recent years. In 2018, exports were valued at $20.6 million with a volume of 11,428 MT. Subsequently, there was a steady upward trajectory, reaching $51.4 million and 20,798 MT in 2020. However, in 2021, influenced by the global impact of COVID-19, exports declined to $47.2 million and 17,261 MT. The trend stabilized in 2022, with exports remaining at $45.9 million and 16,590 MT. Despite these fluctuations, the cocoa sector in Sierra Leone has witnessed overall growth in recent years, indicating a positive trend and a significant opportunity for this strategic objective.

Figure 12: Exports of cocoa beans, whole or broken, raw or roasted (2018-2022)



Source: TRADEMAP, 2023

Overall, Sierra Leone's performance of its export crop sector has been poor, and several factors account for this performance. These binding constraints include:

- **Low Input Use:** Limited availability and affordability of organic fertilizers often restricts farmers in the agricultural sector from accessing them.
- **Low Access to Finance:** The lack of access to certified planting materials and other farm inputs is exacerbated by a lack of financing for farmers to purchase recommended farm inputs.
- **Technical Knowledge of Farmers:** The low technical knowledge of most cocoa farmers hinders their productivity. Training in understanding and adopting good agronomic practices is essential but grossly limited.

Opportunity

Between December 2022 and January 2023, cocoa prices increased by 11%, which is more than 5% higher than the average for 2015-2019. It is projected that global cocoa production will increase by 3% during the current 2022-23 season. However, there has been an even faster increase in consumption which has supported cocoa prices. This has also resulted in a depletion of inventory levels, which have dropped from 1.97 million MT in 2020-21 to 1.78 million MT in 2022-23. It is expected that cocoa prices will continue to rise and will average at 13% higher in 2023 before easing in 2024. With continuing trends such as this, Sierra Leone can boost its exports, capitalize on the increasing prices, and help fill a portion of the global demand shortfall (World Bank, 2023).

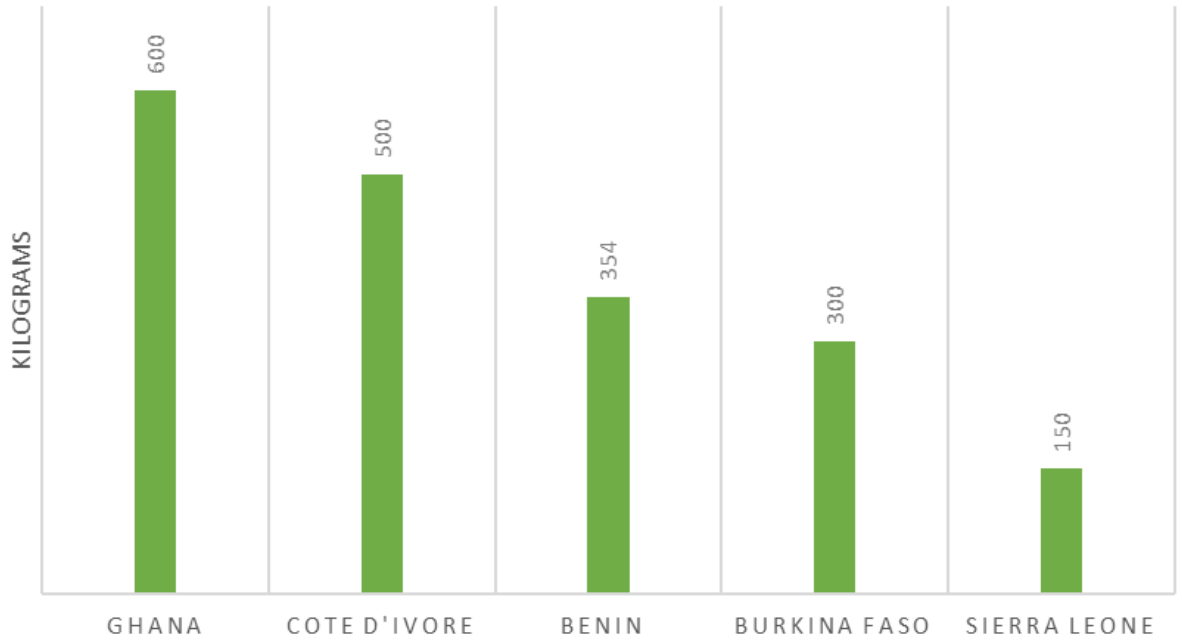
Moreover, Sierra Leone has the potential to tap into the growing international demand for organic cocoa by securing certification for its organic cocoa production and strengthening the organisation along the value chain, fostering collaborative initiatives aimed at knowledge-sharing and capacity-building among smallholders. This presents a huge opportunity for the country as it can naturally produce organic cocoa thanks to favourable weather and soil conditions. By increasing the share of exports in organic cocoa, Sierra Leone can capture a niche market and boost its economy.

Cashew

The cashew sector in Sierra Leone has reached a crucial stage in its development. Although cashew cultivation has a long-standing history in the country, substantial growth has only occurred in recent times. One of the primary challenges is the low cashew yields when compared to other West African countries, which can be up to 3.5 times higher. Theoretically, there should be over 5,000 MT of cashews available in the country, but according to the Invest Salone from 2021, the calculated availability is only 772 MT.

Over the past couple of years, noteworthy investments have poured in through various donor funded programs (such as ComCashew) aimed at encouraging small-scale farmers to establish cashew orchards. However, the low level of productivity remains a major limiting factor to the rapid growth of cashew production.

Figure 13: Average raw cashew yield per Ha across West Africa



Source: ComCashew, 2018

The cashew sector in Sierra Leone faces several challenges that have impeded its potential for growth and profitability. The central concern, low yields, are attributable to a range of factors. Firstly, farmers are increasingly abandoning their cashew fields due to various constraints, including inadequate access to resources and market opportunities. Additionally, frequent wildfires pose a significant threat to the sector, often leading to substantial crop loss and further exacerbating low yields. Poor crop husbandry practices and inadequate fertility management strategies have resulted in suboptimal productivity. The use of unsuitable cashew varieties and planting in climatically unsuited zones have hindered the sector's performance. The insufficient application of fertilizers further compounds yields issues. Furthermore, the disorganized state of the cashew value chain, characterized by farmers selling their produce to traders at the farm gates, perpetuates inefficiencies and undermines the potential for value addition. Addressing these different dimensions of the value chain will revitalize the cashew sector in Sierra Leone, ensuring sustainability, increased yield, and improved livelihoods for farmers (Woord en Daad, 2023).

Opportunity

The cashew sector in Sierra Leone presents promising opportunities on several fronts. Firstly, the country boasts abundant natural resources, particularly cashew trees, with the last three years witnessing a noteworthy increase in the volume of cashew farms. With approximately 22,600 hectares of cashew farms currently available, this resource abundance positions Sierra Leone well for a prosperous future in the cashew sector. Moreover, there is a strong and shared commitment among stakeholders, reflecting a collective dedication to cultivating a resilient and sustainable cashew sector. For farmers, the prospects are encouraging as improved farm management practices hold the potential to significantly boost yields, making it easier for them to sell their cashew nuts to traders and processors, thereby increasing their income. Furthermore, the existing governance and policies, supported by the government and other

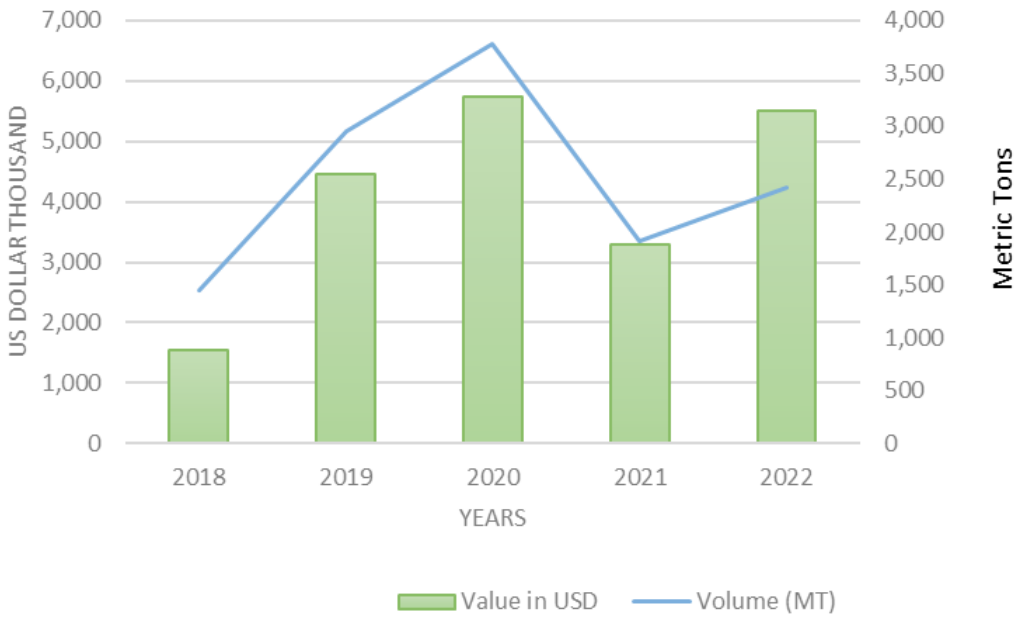
stakeholders, create a favourable environment for sustainable growth in the cashew sector (Woord en Daad, 2023).

Coffee

Coffee is mostly grown in the Southern and Eastern regions of the country, in tropical rainforest areas with Moyamba and Kailahun districts being the major coffee-growing areas. Currently it is believed that most of the coffee harvested from Sierra Leone grow in the wild thus making it a viable candidate for the niche organic coffee market.

Sierra Leone's coffee exports have fluctuated over the past five years, following a similar trend to cocoa. In 2018, the country exported coffee worth $1.5 million (1,450 MT). By 2020, coffee exports peaked at $5.7 million (3,776 MT) but declined to $3.3 million (1,918 MT) in 2021 as the effect of COVID-19. However, in 2022, exports rebounded to $5.5 million (2,424 MT), making Sierra Leone the 84th largest exporter of coffee by volume in the world. In the same year, coffee was the 19th most exported product in Sierra Leone. Despite the fluctuations, Sierra Leone's coffee sector has experienced periods of growth, indicating potential for further development and market stability in the years ahead.

Figure 14: Coffee exports (2018- 2022)



Source: TRADEMAP, 2023

The war affected the value chain quite significantly dramatically reducing Sierra Leone coffee production from approximately 15,000 MT per year to about 2,000 MT annually. Many people have returned to coffee farms, but like the cocoa sub-sector, the need for rehabilitation is quite high thus accounting of the low production of the crop. There are other challenges against the growth of the value chain including a shortage of labour and lack of technology to improve production and process methods.

Opportunity

Climate change has been identified as a major threat to the production of Arabica coffee globally and this has necessitated the need to look for viable alternatives. The opportunity for Sierra Leone's coffee lies in the fast-growing organic coffee market of Europe and North America. The Netherlands was the top destination for coffee exports from Sierra Leone in 2018, followed by Belgium, South Africa, and Senegal, the increase of exports and the production of new varieties might create new demand from other countries.

Currently, the country grows and exports the Robusta coffee variety which can withstand higher temperatures and weather variabilities making it an excellent crop choice for climate resilience. Sierra Leone's Robusta coffee beans can be grown at temperatures higher than the 19 degrees Celsius required for the Arabica coffee variety which therefore creates a natural comparative advantage for the country. Additionally, more recently, the re-discovery of the Stenophylla coffee, which has been shown to have both great taste and great climate resilience, has revived the global focus on Sierra Leone's coffee industry.

Feed Salone Targets for Cocoa, Cashew & Coffee

Sierra Leone possesses over 4 million hectares of upland ecology, providing a significant opportunity to boost cash crop production. The objective of Feed Salone is to increase Sierra Leone's agro-export earnings by expanding its exports of cocoa, cashew, and coffee. The following are the targets:

1. Increasing the productivity of existing plantations through a gradual rehabilitation programme.
2. Support farmers to replace old plantations.
3. Expanding national production through the development of new cash crop clusters.
4. Establish cooperatives to help organize smallholder farmers to secure better price and promote branding of these crops.

Objective 3: Job Creation and Income Generation for Women and Youth

Sierra Leone's population is estimated at over 8 million, with approximately 60% under the age of 25 and women making up about 51% of the population. Despite being a significant part of the population, women and young people often face significant disparities in terms of access to education, healthcare, and economic opportunities. Sierra Leone's youth bulge presents both an opportunity and a challenge that needs to be addressed simultaneously.

Sierra Leone's largest employer of labour is the agricultural sector, employing 65% of the population living in rural areas. This includes forestry and fisheries, which together employ 75% of the overall population (World Bank, 2022). In 2021, MAFS initiated its policy shift program to support women and youth, starting with Chiefdom Youth Farms. With this policy shift, the Ministry aims to provide additional support to youth enterprises beyond just seeds and fertilizers. To support the growth of women and youth-led agribusiness SMEs, Feed Salone will focus on five value chains: Horticulture, Small Ruminants, Poultry, Cashew, and Cocoa through the following key initiatives:

- **Business Development Services support to scale up and promote innovation in existing SMEs.** The focus is on generating jobs for young people through new initiatives and best practices, supporting Small and Medium Enterprises (SMEs) with Business Development Services.
- **Access to domestic and export markets for new and existing agro-businesses** By intensifying commercial agriculture, processing, and packaging crops from out-grower schemes, and retailing final products, value-added chains are developed.
- **Public-Private Partnerships** Collaboration with the private sector is crucial to identify job creation opportunities and address skill gaps.

Horticulture

Horticultural crops are widely consumed in Sierra Leone and are commonly used to prepare popular local dishes as part of a nutritious diet. Although not all horticultural crops are high value, chili pepper and tomatoes present great opportunities for small and medium-sized enterprises (SMEs) led by women and youths. Feed Salone aims to support the expansion of women and youth-led businesses in producing chili peppers, tomatoes, and onions for both domestic and export markets.

In Sierra Leone, the horticulture sector plays a vital role in the agricultural landscape, with a significant proportion of smallholder farmers dedicating their land, typically ranging from 0.1 ha to just over 1 ha, to the cultivation of horticultural crops. Recent years have witnessed substantial growth in vegetable production, as the cultivated area expanded from 50,000 ha in 2011 to 125,000 ha in 2020. Concurrently, the harvest tonnage surged from 325,000 MT to 475,000 MT, showcasing the sector's resilience and potential. On the other hand, fruits maintained a stable 60,000 ha of cultivated land, yet tonnage increased by 9%, rising from 34,000 MT to 37,000 MT during the same period (World Bank, 2022).

Opportunity

The horticulture value chain is yet to witness a surge in business-led, diversified, and demand-driven investments. This is a sector that mostly comprises women and youth participants and harbours untapped potential. Unlocking this potential through strategic investments and targeted support can boost agricultural productivity and provide opportunities for economic growth and empowerment within the country (World Bank, 2022).

An assessment of chili pepper exports from neighbouring West African countries such as Ghana and Nigeria indicate that there are good opportunities for agribusiness SMEs in Sierra Leone to gain from the production and export of different varieties of chili.

Supporting investment in drying facilities can unlock horticulture sector potential and address constraints limiting value addition along the chain, such as:

- Limited access to inputs
- High Cost of labour
- Lack of access to finance
- High transport costs

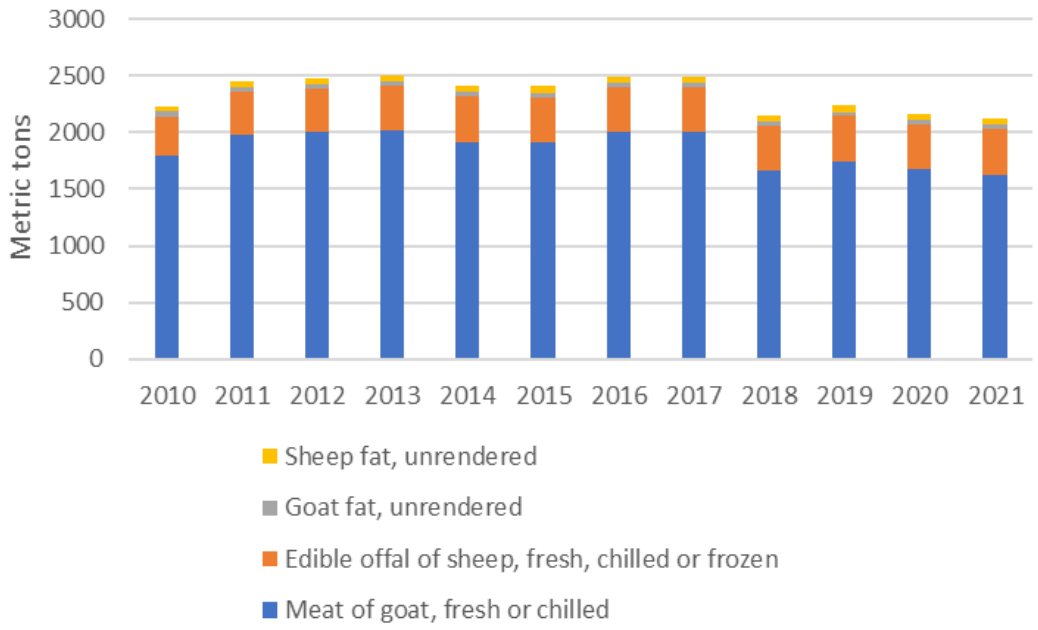
- Poor access to land

Small Ruminants

Sheep and goat production is one of several minor farm enterprises that lend a measure of diversity to the larger agriculture economy and represent a sector activity with potential for the participation of women and youth. Unlike large-scale farming, which often demands significant capital and resources, small ruminants require less initial investment, thus offering an accessible entry point for women and young people into the agricultural sector. Aside from being involved in primary production, women and young people can explore value additional opportunities such as processing and marketing of goat or sheep products, leading to the development of small-scale agribusinesses, contributing to economic growth and job creation within communities.

The production of goat meat, sheep and goat unrendered fat and edible offal has followed a similar trend in recent years. The production in MT has gradually increased since 2010, reaching a peak in 2013 with a total production of 2,503 MT. However, the trend has been declining since 2018, with production decreasing to 2,123 TM in 2021. Although there were occasional variations in these figures, the overall trajectory indicates that the small ruminant meat production sector has faced some volatility and challenges during this period.

Figure 15: Goat and Sheep Production in Sierra Leone (2010-2021), in MT



Source: FAOSTAT, 2023

Feed Salone Targets for Horticulture and ruminants:

1. Increasing the production of small ruminants and high-value horticulture crops, such as chilli peppers, onions, and tomatoes to create 35,000 jobs for women and youth.
2. Improving the performance of critical dimensions of chilli peppers, onions and tomatoes value chains.

Objective 4: Alleviating Hunger & Malnutrition

According to the Food Consumption Score (FCS), an indicator developed by WFP to assess the quality and quantity of diets consumed by households, 21% of households in Sierra Leone fall under the poor food consumption score category as of February 2023. This represents a 15% and 14% deterioration compared to 2022 and 2019, respectively. The acceptable category has also declined, with only 29% of households having good quality and quantity of diet in 2023, a 6% decrease from 2022.

The root causes of the poor food consumption status are multifaceted, stemming from high food prices, inflation, currency depreciation, low agricultural productivity, and poor farming practices, which indicate the urgent need for targeted interventions.

To this effect, Feed Salone will focus its intervention on intensified all-year-round availability, of nutrient-dense crops, such as biofortified crops, fruits, and vegetables, at affordable prices. Hence, Feed Salone has prioritised, in its first stages, increased production of three food items: vitamin A fortified cassava, orange fleshed sweet potato and pulses. Furthermore, it will provide support to the aquaculture sector, which is a rich source of animal protein and can play a significant role in malnutrition and food insecurity.

The prioritization of value chains aligns with the goal of expanding the Home-Grown School Feeding Program (HGSFP). The HGSFP aims not only to improve the education of children but also to enhance their nutritional, health, and cognitive development. Moreover, it seeks to establish an organized market, as an off-taker, of rice and other food crops from small-scale farmers, as well as large-scale farmers. This will boost agricultural productivity and create economic growth opportunities for the present and future players in the sector (WFP, 2021).

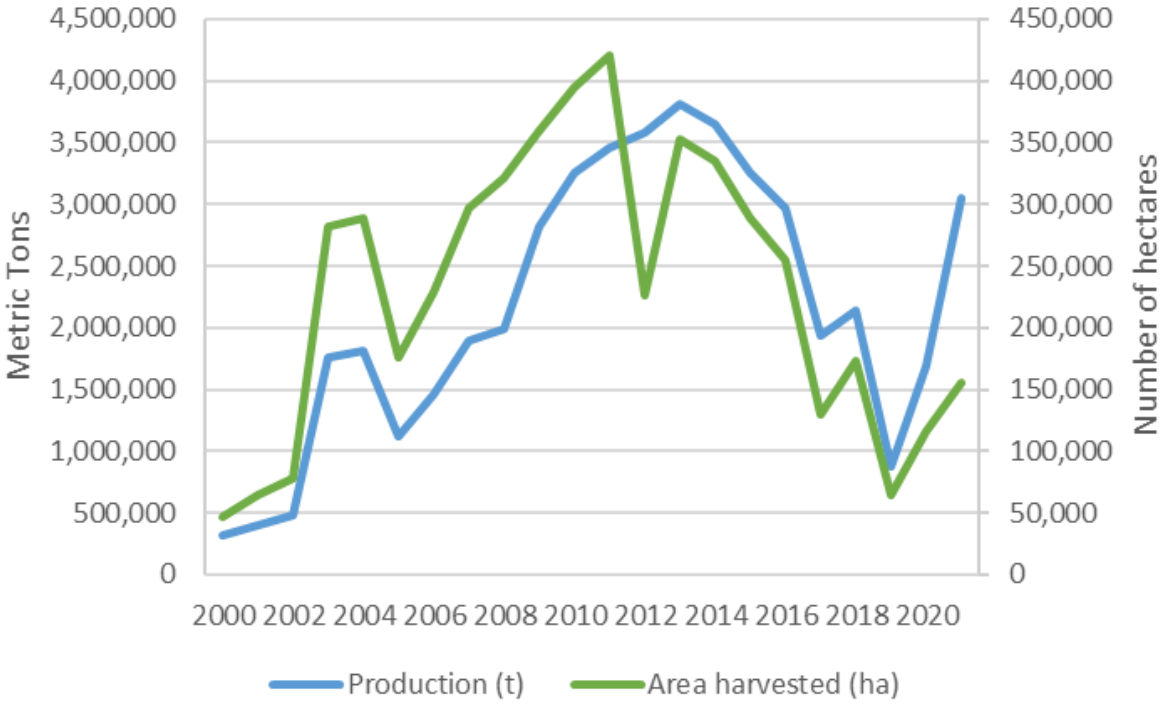
Cassava

Cassava is the second major staple crop in Sierra Leone after rice, celebrated for its resilience against climate shocks and adaptability to challenging environments. Its versatility is unmatched, finding use in animal feed, high-quality flour, industrial starch, and bio-fuel production. Dense in calories, cassava offers significant energy, making it essential for communities' dietary needs. Despite being a primary carbohydrate source, it also offers vital nutrients like Vitamin C and folate. The recent introduction of Vitamin A fortified cassava further enhances its nutritional value. Beyond consumption, cassava presents economic opportunities, with increasing trade in products like gari.

Figure 16 illustrates the production and area harvested trend for fresh cassava from 2000 to 2021. During this period, the cassava production and land use showed fluctuations. The area harvested ranged from 46,490 ha in 2000 to a peak of 420,457 ha in 2011. After a sharp decline, it recovered to 155,706 ha in

2021. Cassava output in metric tons steadily increased from 314,400 MT in 2000 to a record high of 3,810,418 MT in 2013. In 2021, the production reached 3,047,589 MT.

Figure 16: Cassava fresh production and area harvested in Sierra Leone (2000-2021)



Source: FAOSTAT, 2023

Opportunity

The assessment of the value chain by WFP has identified cassava as a local commodity that has the potential to improve child nutrition by diversifying the HGSFP food basket. Cassava's drought-resistant characteristic makes it highly suitable for a variety of HGSFP meals. However, one of the major challenges faced by the cassava value chain is the lack of appropriate machinery and tools for processing (WFP, 2021). This presents an opportunity to be addressed through Pillar 1 presented in this Strategy.

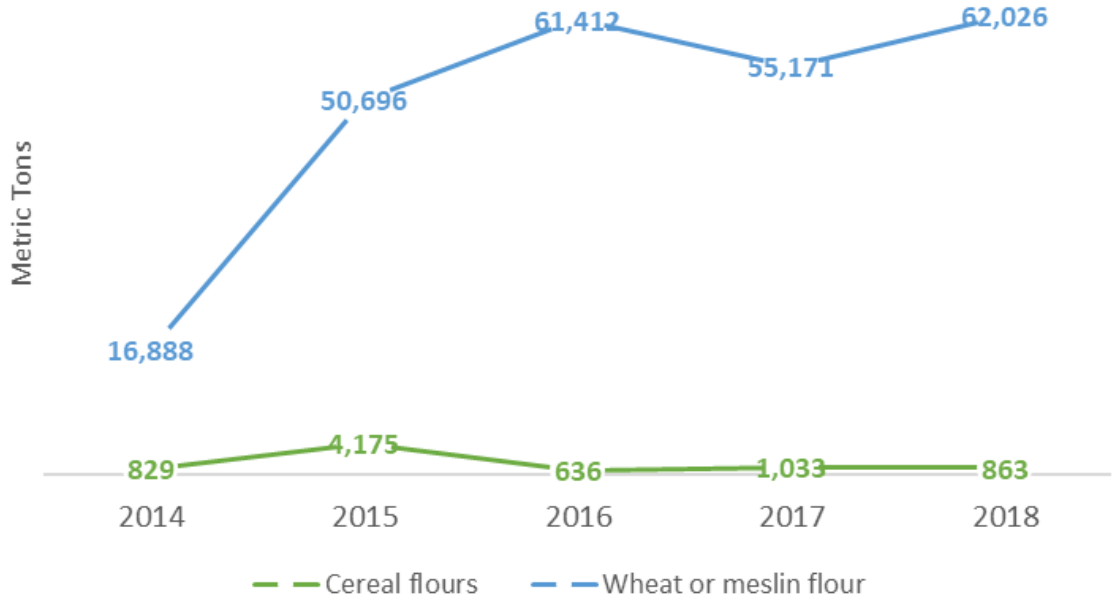
Scaling Production of Vitamin A Cassava Products

In 2014, Harvestplus introduced the Vitamin A-enriched cassava variety SLICASS 12 (TMS 06/1635) to Sierra Leone. This biofortified variety contains significant amounts of provitamin A carotenoids. While many countries use supplements and fortified foods to combat vitamin A deficiencies, there's a growing consumer preference for foods naturally rich in vitamins, avoiding synthetic additives (Harvest Plus, 2023).

Production of High-Quality Cassava Flour

Sierra Leone currently imports a large amount of wheat flour, which results in significant foreign exchange expenses. Figure 17 indicates that wheat imports have increased from 16,888 MT in 2014 to 62,026 MT in 2018, while the import of cereal flour has decreased to 863 MT during the same period. This highlights a clear opportunity to seek out alternative and cost-effective sources of flour, such as cassava flour.

Figure 17: Wheat and cereal flours Imports into Sierra Leone (2014-2018)



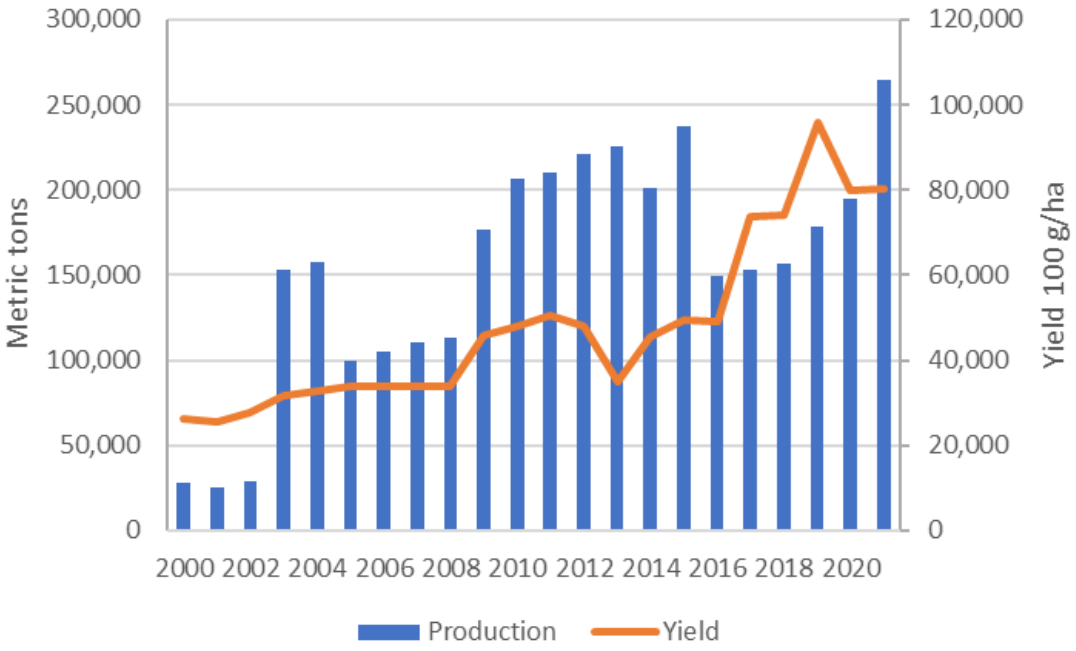
Source: TRADEMAP, 2023

Sweet Potato

Sweet potatoes with white flesh are a popular source of starch in Sierra Leone. This popularity is due to the crop's relative ease of production, higher output per hectare when compared to crops like rice, and ease of preparation and consumption. Additionally, like in other West African countries, sweet potato leaves are widely used as greens and cooked as a nutritional stew.

The production of sweet potatoes increased from 2016 onwards when the yield followed a similar pattern, Figure 18 depicts the positive figures in the last five years.

Figure 18: Production of sweet potato in Sierra Leone



Source: FAOSTAT, 2023

Opportunity

In recent years, Orange Flesh Sweet Potato (OFSP) has been introduced in Sierra Leone to address the nutritional challenges faced by many Sierra Leoneans, especially women and children. Recognizing the urgency to curb the rising cases of stunted growth and Vitamin A deficiency-related illnesses and due to its rich Vitamin A content, OFSP is an optimal alternative to the traditional white variety.

The OFSP is a versatile crop that can be cultivated up to three times a year in all of Sierra Leone's agro-ecological zones. Although still in the process of establishing its market presence, the OFSP is already included in the food basket of HGSFP. This presents an excellent opportunity to increase market demand by incorporating OFSP into HGSFP meals.

Pulses

Pulses are a specific type of legume that are part of the crop plant family Leguminosae. They produce edible seeds and include lentils, beans, peas, and chickpeas. Pulses are a crucial component of a nutritious diet as they provide essential plant-based proteins. It is important to note that only legumes that are harvested for their dry grain are classified as pulses (FAO,1994).

Pulses are a crucial and cost-effective source of plant-based proteins, vitamins, and minerals. They have a low-fat content, contain zero cholesterol, and are an excellent source of dietary fibre. Additionally, they are gluten-free and rich in minerals and B vitamins, all of which are essential for maintaining good health.

Opportunity

Pulses have an enormous potential not only for nutrition outcomes but also for sustainable agriculture and agroecology, and income. Incorporating pulses in multiple cropping systems can boost soil fertility, improve crop yields, and promote sustainability in food production. One remarkable feature of pulses is their low water footprint compared to other protein sources. Moreover, they can thrive in nutrient-deficient soils that would not support other crops. Additionally, pulses produce residues that can be used as animal feed, thereby increasing the nutritional value of animal diets (FAO,2016). The farmers can diversify their crops and use pulses to increase the yield of other crops such as maize. According to Giller (2023), pulses are more profitable than cereals and have a longer shelf life. This means that farmers can consume or sell them during times of low market demand, benefiting their families and their businesses.

With increasing production, there is an opportunity to raise the local demand for pulses. By highlighting their health and environmental benefits and promoting their consumption, we can encourage more people in Sierra Leone to include this nutritious food item in their diet. The HGSFP has played a crucial role in introducing pulses into the food baskets that children receive, thereby boosting their nutritional value. In addition, grain legumes have a multifaceted role in Sierra Leone's agricultural systems, with potential to provide a vital source of income as they can be sold in local or international markets at high prices.

Feed Salone aims to increase the production of nutrient-dense food by scaling up the cultivation of cowpea, pigeon pea and groundnut at the community and household levels. This approach will help ensure that these crops are accessible to everyone, thereby promoting good nutrition and food security within communities.

Aquaculture

According to the latest FAO report in 2023, fish constitutes a substantial 80% of the nation's animal protein consumption, with an average annual per capita fish consumption of approximately 17 kg. Aquaculture prospers in distinct areas of Sierra Leone, with thriving operations in the southern provinces, notably Bo, and the northern provinces, primarily Tonkolili, while also encompassing the eastern region, including Kailahun, Kenema, and Kono.

Opportunity

To decrease malnutrition, Feed Salone will intensify the production of animal sourced foods with an emphasis on fishery products. Aquaculture development in Sierra Leone offers a compelling solution to improve food security and nutrition. By providing fresh fish to rural populations, aquaculture significantly contributes to Sierra Leoneans dietary protein needs. A 100g serving of most fish and shellfish offers approximately 18-20g of high-quality protein, which accounts for about one-third of the recommended daily protein intake. This protein is particularly valuable due to its rich content of essential amino acids and digestibility across all age groups which are vital for overall health and nutrition (Ariño et al., 2013).

Sierra Leone benefits from suitable climate conditions that maintain stable water temperatures for catfish farming. Its coastline is equipped with an extensive network of rivers and lakes, providing numerous

opportunities for fish farming. Feed Salone has identified the potential of this sector to increase household incomes and generate employment opportunities in rural areas and will align its efforts with the Ministry of Fisheries and Marine Resources to make this a multifaceted solution that can significantly enhance food security and nutrition in Sierra Leone.

Feed Salone Targets for Nutrition and Hunger:

1. Improving the performance of critical dimensions of the cassava, sweet potato, and pulses value chains.
2. Increasing Sierra Leone's acceptable Food Consumption Score to 65%.
3. Cut chronic hunger by half, child stunting by 30% and significantly reduce micronutrient deficiency among children by 2030.
4. Contributing and aligning policies to enhance the aquaculture sector.

Objective 5: Building a climate-resilient food system

The agriculture sector in Sierra Leone is severely affected by climate change, resulting in unpredictable seasons, longer dry spells, later rains, and flooding. As presented in pillar 5, the Feed Salone Strategy will implement AgTech to revolutionise food systems and boost agriculture through climate resilience practices. Investing in technology, research, and innovation in partnership with the private sector, will enhance productivity, reduce hunger, and mitigate climate change.

Additionally, considering the different pillars and strategic objectives, this strategy focuses on sustainable practices like cover crops, crop rotation, organic farming, and improved post-harvest practices to enhance carbon capture and minimize disturbances.

Opportunity

Agroforestry, particularly within the cocoa value chain, stands as a crucial opportunity for climate-resilient agriculture. Mixed agroforestry systems offer a well-suited response to the challenges posed by climate change. In these systems, forests are selectively thinned, and economically valuable fruit trees like oil palm, avocado, and citrus are cultivated alongside cocoa trees. This system provides essential shade for cocoa trees and offers an additional source of food and income for farming households. Moreover, it exemplifies the potential of improved and climate-friendly cocoa production technologies, including the distribution of resilient seedlings and adopting climate-smart production methods (World Bank, 2023).

In the same vein, Feed Salone aims to integrate cashew cultivation with other tree species or crops to create a more diversified and resilient agricultural system. Agroforestry systems can provide the ideal ecosystem to cashew production and reduce soil erosion. By introducing these practices to smallholder farmers, agroforestry promotes sustainability, enhances climate resilience, and offers a holistic approach to improving livelihoods.

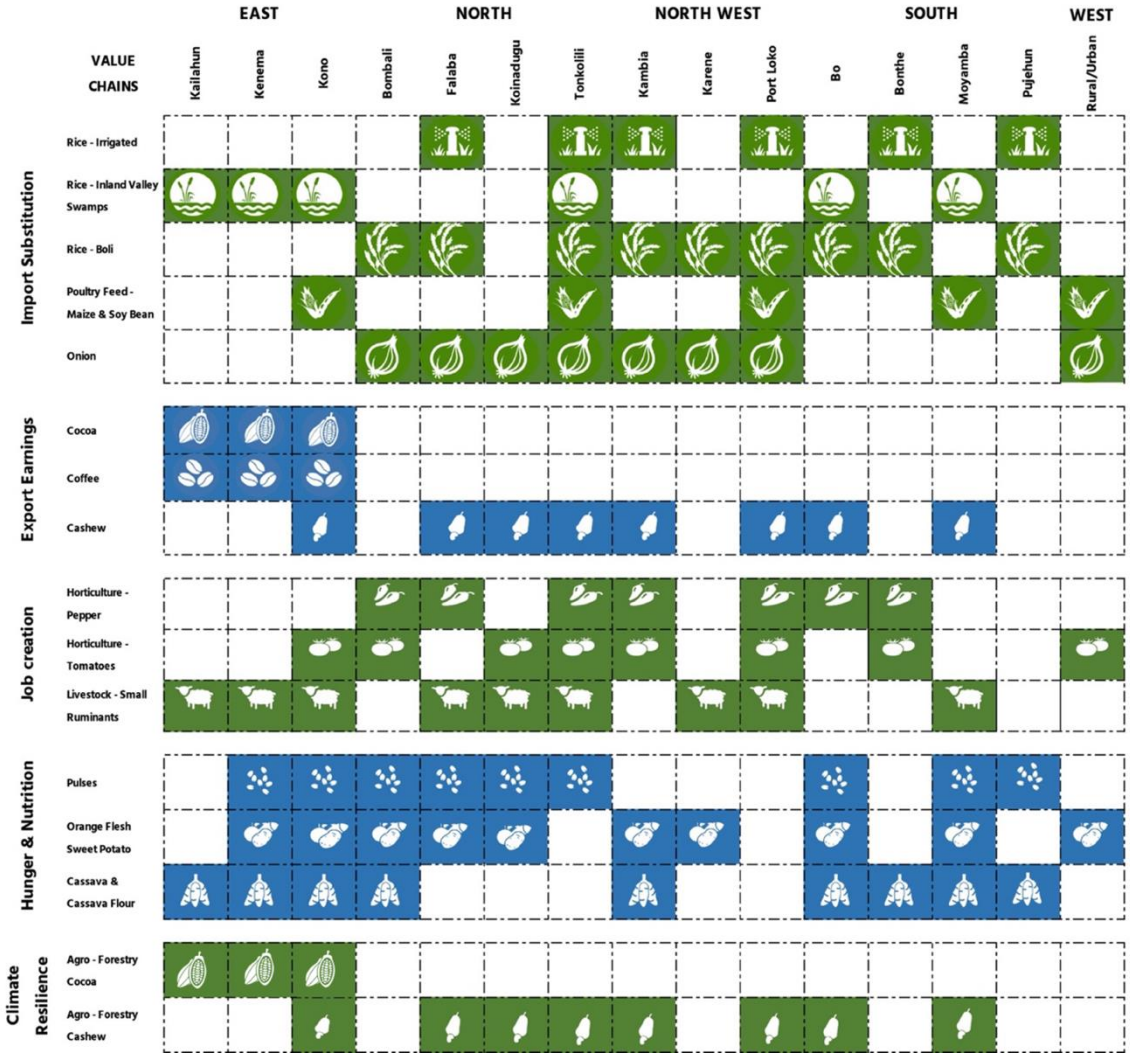
Feed Salone Targets for climate resilient food system:

1. Adopt climate smart technologies and approaching in our farming systems.
2. Improving the performance of critical dimensions of agroforestry for climate resilient food systems.
3. Increasing the green cover with cocoa and cashew.
4. Introduce policies and incentive to reduce slash and burn cultivation practice.

Geographic Targeting by Comparative Advantage

To quickly boost productivity in these selected value chains, Feed Salone will be deliberate in directing limited public sector investments to unlock immediate value for the country. For each value chain, investments will be directed to districts where conditions for success and productivity gains are highest based on their comparative advantage. Feed Salone will emphasize the production of each of the commodities highlighted for the strategic objectives per district and will be shown in the Figure 19.

Figure 19: Geography Vs Value Chain Targeting



Source: Feed Salone Strategy

CROSS-CUTTING ENABLERS

Policy Interventions

The Feed Salone strategy is intentionally designed with a coherent policy that promises to leverage synergies across the government's other Big 4 Game Changers. This provides the right incentives for private sector players to actively participate in implementing the plan, where the Presidential Council on Agriculture will play a crucial role in policy coordination to achieve the plan's objectives.

The delivery of Feed Salone will be in a robust public policy environment aimed at strengthening the sector for both short-term gains and long-term sustainability. In this regard, government policy to support the sector's growth over the next five years will focus on making local production more competitive and attracting investment for the prioritised value chains. To achieve this, several policy areas have been identified including:

- Agro-industrial zones
- AgTech, research and innovation
- Commodity Exchanges/Boards
- Agricultural Advisory Services
- Land Policy

Agro-industrial Zone Policies

Feed Salone aims to establish agro-industrial policies that foster a cooperative environment between the Government of Sierra Leone (GoSL) and the private sector. The potential of agro-industrial zones to attract large-scale commercial investments in agriculture makes them essential. Undertaking end-to-end interventions on a large scale would facilitate knowledge transfer and innovation, enhance competitiveness, and build capacity through regulatory frameworks, tax incentives, and infrastructure development.

AgTech, Research and Innovation

The implementation of Feed Salone will be driven by policies on research, technology, and innovation. These policies will include investments in agricultural research facilities, the development of innovative farming techniques, and the promotion of technology adoption among farmers. Technological information will play a crucial role in improving agricultural productivity and building resilience to climate change within the sector. Digitization of value chains and investment in building data systems to inform decisions and track progress will be instrumental in the success of the Feed Salone Strategy. Furthermore, this will promote investments in digital infrastructure across value chains, empowering farmers with real-time information, streamlining decision-making processes, and generating new data for evidence-based policies.

Commodity Exchanges/Boards

A critical bottleneck for productivity growth in most value chains in Sierra Leone is that they are disaggregated. The absence of middle value chain actors that aggregate commodities and link producers to markets also inhibit market linkages in the sector. Feed Salone will establish commodity exchanges boards, to fill this gap, fortifying the connections across the value chain, help drive aggregation and improving market accessibility and linkages in the sector.

Agricultural Advisory Services

Additionally, Feed Salone will implement comprehensive agricultural advisory services and support capacity-building programs, fostering a supportive ecosystem that empowers local businesses and entrepreneurs to thrive in international trade.

Land Policy

Land policy for agriculture development is crucial for ensuring sustainable and equitable use of land resources. Feed Salone will focus on policies and regulations for zoning, registration, and titling to improve the performance of the sector.

Infrastructure

Given the interdependence between the pillars and the objectives of the initiative, investment in infrastructure has a critical role to play in the realisation of the objectives of the Feed Salone initiative. Therefore, one of the priorities for this strategy is to facilitate infrastructure that includes the following:

- **Transportation Networks:** Transportation networks such as roads and bridges will connect remote areas to markets and urban centres. This will enable farmers to transport their products efficiently, reducing post-harvest losses and costs along the value chain, as well as increase income.
- **Access to Reliable Electricity:** It will support the growth of local businesses, ensuring the quality and lifetime of inputs and products.
- **Irrigation Facilities:** Feed Salone will implement the National Irrigation Masterplan to manage water resources and provide reliable water resources for crops.
- **Telecommunication Infrastructure:** It will improve connectivity and access to telecommunications to digitalise the sector.

Investing in rural infrastructure is essential for promoting economic development and reducing the disparities between urban and rural regions. By creating an environment that facilitates economic acceleration, we can create new opportunities for growth.

For example, necessary infrastructure requirements have been identified which will be included in the policies that aim to establish agro-industrial zones. In selecting the commodity clusters in Torma Bun, Gbondapi, Kumrabia Mamila, Senehun, Rombe and Rolakoh, factors such as proximity to Freetown, market accessibility, and the availability of resources, including water were considered (See Appendix 12).

Meeting these needs will require the mobilisation of resources from development partners, private investors, and the public sector. By working together, Feed Salone can make a positive impact on the lives of people living in rural areas and create a more prosperous future for all.

FINANCING

To address the financial requirements along the prioritised value chains in the programme, and to address the needs of the enablers, it is estimated that Sierra Leone needs a total of over $1.6 billion over a five-year period for the country to close the gap between production of the major staples and local demand, increase export earnings and ensure a sustainable food and nutrition-secure nation (see Table 3). To achieve this, a multi-stakeholder approach is essential. The success of the Feed Salone Programme relies on several crucial actors, including the strong political will of the government, a dynamic private sector, the empowerment of women and youth, the financial and technical support of Development Financial Institutions (DFIs) and International Development Partners, a robust civil society, as well as the involvement of large-scale producers and smallholder farmers.

The Government is responsible for budget allocations that would ensure the availability of resources for the successful implementation of this strategy. The main commitment outlined in the Malabo Declaration, which was adopted 20 years ago, stated that African governments pledged to allocate at least 10% of their national budgetary resources to agriculture and rural development within five years of the declaration. Successfully, the Ministry of Finance has given indications of the government's intention to meet this target within the next five years.

To ensure a sustainable funding pool, Government will strengthen partnerships with international bodies, NGOs, and the private sector to promote food security and nutrition. The Ministry of Finance plans to set aside a weekly amount of generated revenue for the agricultural sector, making it readily available whenever needed. MAFS has also proactively put together an agricultural donor group and organised a development partners and private sector round table that included the traditional development partners and international financial institutions. The involvement and endorsement of renowned DFIs and international development partners will act as a catalyst, encouraging other institutions and investors of the programme's viability. Furthermore, partnering with international DFIs and international development partners can foster stronger diplomatic and economic ties with other nations and global institutions, facilitating mutual benefits.

Table 3: Cost of financing Feed Salone (2024-2028)

Support for Value Chain Development & Enablers (USD)				
Value Chain/Activity	**Cost 5 Year**	**Cost 2024**	**Available Project Funding**	**Funding Gap**
Mechanization & Irrigation	109,896,873	21,761,757	17,261,757	4,500,000
Seeds & Inputs Systems	68,002,795	13,465,900	10,063,400	3,402,500
Aggregation, Processing and Markets	128,912,017	25,527,132	19,577,132	5,950,000
Access to Finance	167,186,310	33,106,200	3,106,200	30,000,000
AgTech and CSA	81,100,475	16,059,500	10,825,500	5,234,000
Youths and Women Empowerment	26,431,700	5,234,000	-	5,234,000
Rice (Irrigated)	363,869,277	33,119,277	33,119,277	
Rice (Non-Irrigated)	93,962,738	24,870,434	2,911,500	21,958,934
Poultry Feed	334,128,260	3,378,260		3,378,260
Onions	7,200,000	10,125,000	2,700,000	7,425,000
Cross-cutting enablers	20,778,730	4,114,600	4,114,600	
Bridges (market access)	30,000,000	30,000,000	30,000,000	-
Roads (market access, rice clusters focus)	7,448,750	1,475,000	-	1,475,000
Monitoring, Evaluation and Statistics	25,358,575	5,021,500	3,021,500	2,000,000
National Agriculture Census	151,500,000	30,000,000	4,000,000	26,000,000
TOTAL	**1,615,776,499**	**257,258,560**	**140,700,866**	**116,557,694**

Source: Ministry of Agriculture and Food Security, 2023.

According to the Sierra Leone's Medium Term Development Plan (2029-2023), domestic revenues have grown in recent years but have not kept pace with rising spending; public debt levels meanwhile have risen. In absolute terms, fiscal space remains low – tax revenues equate to just 1 million leones (US$120) per person (IMF, 2023). As such, although public finance remains the largest resource in the financing landscape, there is limited space for a significant increase in investment in line with Feed Salone. Increasing domestic revenue mobilization is a high priority, and the government has shown strong commitment to reforms, including steps to modernize tax collection and remove costly tax exemptions. It is in this direction that the government has improved on automated tax collection processes and procedures through the adoption of the Integrated Tax Administration Systems, the Automated System for Customs Data, electronic cash registers for Government Service Tax, and the Automated Payment Gateway and Reconciliation Systems. These are starting to bear fruit, and the Development Finance Assessment emphasizes the importance of these reforms well, while also highlighting further steps such as the creation of a tax lottery system, which can be considered within the overall push to boost tax revenue.

The Feed Salone Strategy approach is holistic, combining domestic resources, international aid, private sector engagement, and community involvement. This strategy would explore emerging opportunities to diversify the development partner base, notably through joint resource mobilization with the Government and all development partners operating in the agricultural space in this country. The plan calls for sustained funding from traditional contributing partners, non-traditional donor sources, the diaspora and

innovative financing mechanisms (see Appendix 13). This will also support Feed Salone's goal of moving beyond the current food crisis response towards investment in resilience building and capacity strengthening aimed at addressing the root causes of hunger and malnutrition.

INSTITUTIONAL ARRANGEMENTS & DELIVERY

The newly formed Presidential Council for Delivering Feed Salone, chaired by President Bio, is responsible to provide strategic guidance and support to the Ministry of Agriculture and Food Security (MAFS), secure support and convening development partners and key actors, and enlist the commitment of vital national stakeholders within and outside the agricultural sector. In addition, it will actively attract foreign and local investments to bolster the agriculture sector, promote the development of critical value chains, ensure policy coherence to increase sector productivity, and oversee and monitor agricultural service delivery by the MAFS and related agencies.

The MAFS will be the main implementor of the strategy based on the six Strategic Pillars and five Strategic Objectives, as explained in the sections above. To facilitate the delivery of Feed Salone, the Feed Salone Secretariate will be established to provide technical and administrative backstopping to the Council and the MAFS.

Feed Salone Strategy aims to enhance the performance of the MAFS and its related agencies by improving their organisational framework through:

- **Building a robust monitoring & evaluation system** which will hinge on precise data collection, research activities, and the tracking and reporting of results, among other essential functions. It includes the development of a new National Agriculture Census, as a primary source of information. The system will be aligned with the Medium-Term National Plan (2024-2028), national policies, plans, and strategies through close coordination with the National Monitoring and Evaluation Directorate (NAMED) and the Ministry of Planning and Economic Development (MOPED).

- **Improving the Ministry's ability to develop investment ready projects**, project financing, and other general investment support including engaging private investors, formulating investment-ready projects, and delivering post-investment support.

- **Implementing a delivery system that encompasses active advisory services to farmers.**

- **Elevating the role of the private sector**, especially for their potential to efficiently deliver services, provide the core funding for most value chains and to act as conduit or agent of technology transfer and knowledge sharing.

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APPENDIX

Appendix 1: Current Machinery Distribution across Sierra Leone

District	Type of Machine				
	SONILIKA DS 35	MERSEY FERGUSON 75	CASE 90	POWER TILLER 15	TOTAL
Bonthe	-	5	20	10	35
Pujehun	-	15		14	29
Bo	10	5		12	27
Moyamba	10	5	5	12	32
Kenema	7	-	-	25	32
Kailahun	8	-	-	25	33
Tonkolili	10	6	-	12	28
Kono	10	4	-	12	26
Bombali	10	6	-	12	28
Karene	10	4	-	12	26
Port Loko	10	5	5	14	34
Kambia	10	5	-	10	25
Koinadugu	10	-	-	18	28
Falaba	15	-	-	12	27
Grand Total	120	60	30	200	410

Source: MAFS

Appendix 2: Ecological Distribution of Arable Land in Sierra Leone (Ha)

No.	District	Upland	Boliland	IVS	Riverain	Mangroves	Total
1	Bo	452,514.0	6,950.0	62,422.5	2,523.5	0.0	**524,400**
2	Moyamba	493,272.0	11,300.0	68,031.5	18,332.5	61,264.0	**652,200**
3	Pujehun	305,579.0	1,900.0	42,682.4	27,266.0	6,173.0	**383,600**
4	Bonthe	146,813.0	1,700.0	10,288.0	104,165.0	60,634.0	**323,600**
5	Kailahun	35,3347.0	0.0	43,494.5	658.5	0.0	**397,500**
6	Kenema	543,977.0	0.0	64,997.0	1,314.0	0.0	**614,800**
7	Kono	504,150.0	0.0	46,847.0	3.0	0.0	**551,000**
8	Bombali	606,847.0	80,166.0	54,170.5	13,924.5	0.0	**755,100**
9	Kambia	209,458.0	15,689.0	19,968.0	20,359.0	35,932.0	**301,400**
10	Tonkolili	534,507.0	28,929.0	54,646.5	4,117.5	0.0	**622,300**
11	Port Loko	446,189.0	18,589.0	62,309.0	22,338.0	66,772.0	**616,200**
12	Koinadugu	1,070,302.0	0.0	116,816.0	6,280.0	0.0	**1,193,398**
13	Western Area	59,651.0	0.0	3,005.0	1,962.0	9,082.0	**73,700**
Total	**5,726,606**	**165,223**	**649,677.9**	**223,243.5**	**239,857**	**7,009,198**	
% Total	**81.7**	**2.4**	**9.3**	**31.9**	**3.4**	**100.0**	

Source: MAFS, 2023

Appendix 3: Mechanization Intervention Areas

No.	Intervention Area	Strategy
1.	**Upscaling and transformation of current Machine Rings**	• Increase the number of Machine Rings in the country based on targeted ecology, crop type and targeted area. • Establish the Mechanization Fund to support acquisition of tractors and implements by farmers cooperatives and commercial farmers. • Review existing Machine Ring contract and base repayment on rice productivity. Production targets of 1000/year ha rice farming will be set and robustly followed upon which will be a key trigger in making payments to them for services rendered. • Aggregate farmers into producer groups with contiguous land to address demand side constraints. • Create enabling policies for the entry of agTech companies such as Hello Tractors.
2.	**Establishment of Farm Service Centres**	• Establishment of Farm Service Centres (FSC) equipped with light bulldozers, mulchers and other equipment to extend Land Development as a Service to commercially oriented farmers undertaking large projects of 100 Ha and above.

Appendix 4: Irrigation Intervention Areas

No.	Intervention Area	Strategy
1.	**Support to Small-scale Irrigation Development**	• Small-scale Inland Valley Swamp (IVS) rehabilitation/development targeting eight (8) districts. • Popularize small-scale drip irrigation system in Bolis and riverine to support vegetable and legume production in ten (10) districts. The emphasis will be on assessing and selecting potential sites, surveys and designs, installation and testing; trainings; technical backstopping and supervision
2.	**Rehabilitation/Development of Medium-scale IVS for selected areas (Tonkolili, Kenema, Kambia, Port Loko, Western Area)**	• Medium-scale IVS Rehabilitation/Development for selected areas Makali, Lambayama, Kobia, Ogoo Farm. 400 ha of land will be targeted under this program, and this will cover assessment, designs, installation and testing; training; technical backstopping and supervision.
3.	**Develop Large Scale Irrigation in Flood Plain Ecologies (Bonthe, Pujehun, Tonkolili, Bombali)**	• This activity targets 30,000 ha with 9,000 ha to be implemented over the five years (2024 - 2025: 9,000; 2026-2027: 21,000) in Torma Bum, Gbundapi, Rolako, Rhombe, Kumrabai Mamilla. It will include a Rokel River Basin Integrated Land Management Scheme (ILM).
4	**Enhanced Irrigation Support Services (to enhance sustainable irrigation development, and land and water resources management)**	• IVS inventory and Mapping survey • Inventory and mapping of idle irrigation infrastructure locations for possible rehabilitation • Supported by MAFS, Projects (AVDP), WFP, FAO, NNGOs, private investors

Appendix 5: Seeds and Input Systems Intervention Areas

No.	Intervention on Area	Strategy
1.	**Development of a National Agricultural Inputs Strategy**	• Develop of a national seed strategy/road map of the important value chains • Identify and evaluate key stakeholders with definite roles and functions. • Conduct seed and input requirement for major staples based on the Feed Salone targets for 2024 – 2028. • Conduct soil studies to understand Sierra Leone's soil properties and the nutrient management requirements to guide fertilizer recommendations.

2.	**Capacitate the Sierra Leone Agricultural Research Institute (SLARI) and Njala University (NU) for hybrid seeds production**	• Conduct assessment of SLARI and NU to determine their capacity to produce breeder and foundation seeds for both crops and livestock.
		• Build the capacity of SLARI and NU to produce the required amount of breeder and foundation seeds
		• Build the capacity of SLARI and NU to produce **hybrid seeds**
		• Provide SLARI with a genetic bank for crops and livestock development to promote:
		  ○ the development of draught resistant crop varieties.
		  ○ the development of flood resistant crop varieties.
		  ○ the developing pest and disease resistance crop varieties.
		  ○ the Intellectual property rights of breeders.

3.	**Establishment of Districts Crops Variety Maintenance Farms**	• Capacitate Seed Multiplication Programme (SMP) and MAFS crops division staff in seed production. • Conduct refresher training on variety maintenance.

		• Support SLARI, NU, SMP and the crops services division to establish crops variety maintenance farms of our major food staples. • Commercialize the variety maintenance farm
4	**Establishment of Private Sector Lead and Community Seed Production Sites**	• Link seed companies and SLARI and NU for the supply of foundation seeds • Ensure that SMP and the crops services division assist seed companies, the National Federation of Farmers, to establish private sector led and community seeds production sites. • Train staff of seed companies and community farmers on new technologies of seed production of major staple food • Transfer technologies on seed production of major staple food to seed companies and communities
5.	**Development of policies to create market outlets for seeds, grain and food producers**	• Develop policies to open up the market space of farmers, (domestic, Sub-regional. Regional, and Global market). • Provide important market information services to seed, grain and food producers. • Provide access to financial services to seed, grain and food producers
6.	**Intensification of Integrated Pest Management, Climate Smart Agriculture and Good Agricultural Practises in Seed Production**	• Train seed, grain and food producers on international sanitary and phytosanitary and food safety standards • Provide sanitary and phytosanitary services to seed, grain and food producers. • Provide sanitary and phytosanitary monitoring and surveillance information to seed, grain and food producers

7.	**Establishment of Tree Crops Commercial District Clonal Gardens**	• Procure high quality tree crops planting materials (cocoa, coffee, oil palm, cashew, coconut, mango, citrus • In collaboration with SLARI, manage the clonal gardens • Train communities on the establishment and management of tree crops nurseries. • Training communities on the establishment and management of tree crop plantations • Train communities on the management of clonal gardens, • Train communities on budding grafting and other technologies to produce improved tree crop varieties

Appendix 6: Processing Intervention Area

No.	Intervention Area	Strategy
1.	**Establish, rehabilitate and strengthen existing processing facilities.**	• Rehabilitate rice processing mills across the rice bowl • Establish processing mills in the 5 Agro-industrial clusters (Bonthe, Pujehun, Kambia, Bombali, Port Loko, and Tonkolili). • Establish Oil Mills in Mattru, Kenema and Kailahun • Establish coffee processing facility in one of the coffee producing areas • Establish curing facilities for Onions in Port Loko and Koinadugu • Establish processing facilities for sweet potatoes in Bo and Bombali

2.	**Establish and strengthen the up and down stream linkages in the agribusiness ecosystem**	• Form and strengthen Commodity Cooperatives and Associations
		  ○ Establish and strengthen 'ingrower and outgrower' schemes for the Feed Salone commodity clusters.
		  ○ Establish commodity platform

3	**Industrialize cassava production**	• Convert the multiple products from Cassava including flour, and cassava-based food like bread to industrial products
4	**Build the capacity of Processors**	• Facilitate study tours and exchange visits to countries in the global south e.g., Vietnam, Korea etc • Provide trainings on modern processing techniques and business development services
5	**Intensification of Livestock Production and Value Addition** **Provide Technical Assistance**	• Support Sierra Akar Livestock processing facility to make it functional. • Strengthen feed mills at Njala University, Western Area, Bombali and Kenema • Provide supportive supervision, incubation, mentorship and coaching

Appendix 7: Aggregation Intervention Area

No.	Intervention Area	Strategy
1.	**Support to aggregation centres**	• Establish 5 strategic grain reserves in the regions (Bo, Kenema, Bombali, Kambia and Koinadugu) • Establish warehousing Stores in nine Agro-industrial clusters in production areas (Bonthe, Pujehun)
2.	**Industrialization of cassava**	• Establish five cassava aggregation centres in Pujehun, Moyamba, Bonthe, Kono and Bombali.

3.	**Intensification of livestock production and value addition**	• Provide five refrigerated trucks for the transportation of poultry products. • Provide five Vehicles for the transportation of animal feed.

Appendix 8: Marketing Intervention Area

No.	Intervention Area	Strategy
1.	**Provide support to market infrastructure**	• Establish nine markets stalls in agro-industrial clusters • Provide storage facility for periodic market
2.	**Provide support to marketing / Market links initiatives**	• Support programs that organise Agribusiness pitch, online marketing, field days, international trade conferences, national agribusiness conference and provide market information
3	**Undertake capacity building**	• Provide training on marketing, sales and business development services, aftersales services and closing the deal.

Appendix 9: Agricultural Finance Intervention Areas

No.	Intervention Area	Strategy
1.	**Support to the production, processing and marketing of rice and other targeted crops under the Feed Salone Program**	• Facilitate access to land in partnership with the Ministry of Local Government and local chiefs. • Undertake land development where required for ease of mechanized production. • Establish an agriculture credit facility operated by the banks for interested participants.
2.	**De-Risking Agriculture for improved and sustainable lending**	• Establish the Sierra Leone Incentive-Based Risk-Sharing System for Agricultural Lending (SLIRSAL) like what has

		been done in Ghana and Nigeria for Credit Risk Guarantees (CRG) • Establish the Sierra Leone Credit Bureau for ease of ascertaining credit worthiness of borrowers. • Expand the scope of insurance products to cover other classes of risks.
3.	**Value Chain Financing**	• Establishment of a Development Bank for Sierra Leone • Support the banks to create specialized desks for agriculture offering fit-for-type financial products e.g Mechanization Financing, Commercial Agriculture Credit Scheme (CACS) et cetera.
4	**Deepening Financial Inclusion especially for women and youth**	• Creation of National Farmers database/directory for ease of identification and verifications • Promotion of Farmers Producer Organization and innovation platforms to improve lending to smallholder farmers. • Establish the Women and Youth Agribusiness Facility • Expand the capital base of the APEx bank to increase its lending to agri-SMEs and farmers.
5.	**Development of policies to support the growth of credit in the sector**	• Reform of land laws to address the challenges associated with land acquisition for agriculture.

Appendix 10: AgTech and Climate Smart Agricultural Areas of Intervention

No.	Intervention Area	Strategy
1.	**Digital System Integration**	1. Assessment of currently siloed systems to identify data overlaps and gaps in line with the agricultural data (agdata) blueprint. 2. Design and development of agdata hub B.

		3. Testing and implementation of the agdata hub for seamless data flow.
2.	**National Farmers Registry Establishment**	1. Surveying to gauge the total number of farmers and their specific needs. 2. Creation of a digital registration platform for farmer data collection. 3. Outreach campaigns to promote farmer registration and database completion.
3.	**E-Extension Infrastructure Scaling**	1. Evaluation of the current e-extension system's capacity and reach. 2. Technology upgrade to support increased user access and content delivery. 3. Onboarding and training sessions for farmers to utilise the e-extension resources.
4	**Organic Cash Crop Expansion**	1. Establishment of organic crop farmers association under the umbrella of the National Farmers Federation of Sierra Leone 2. Conduct training on organic crop traceability and certification process 3. Mapping of organic crop fields 4. Certification of 25,000 organic cash crop farmers and link to the global organic market 5. Organize national and participate in international exhibitions or trade fair events for organic crops.
5	**Climate-Smart Agricultural Training**	1. Review of the Climate Smart Extension Manual for Frontline Extension Workers, Private Sector and Smallholder Farmers 2. Training of Frontline workers, private sector, and Smallholder Farmers on Improve Climate Smart Practices 3. Organizing workshops and training sessions in farming communities. 4. Providing digital resources and support for ongoing farmer education.
6	**Sustainability and Resilience**	1. Establishment of the strategic reserve for grains at the regional and district level 2. Establishment of seed stores along major value chains for easy access during crisis period 3. Establishment of the ago-forestry zone in each of the agricultural districts (this should go under the cash crop expansion component)

Appendix 11: Empowering Women and Youth Areas of Intervention

No.	Intervention Area	Strategy
1	Establish the "Women and Youth in Agribusiness" Credit Facility	• Solicit support for women and youth for access to grants for agri-business development opportunities for 210 women • Advocate and solicit funding for industrialization of women and youth owned cottage industries • Promote access to financial literacy, financial services and credit facility for 1500 women & youth agropreneurs.
2	Advocate cabinet approval of the Gender in Agriculture Policy	• Facilitate the approval of the Gender in Agriculture Policy
3	Popularize the Gender Equality and Women's Empowerment Act (GEWE)	• Popularize the gender bill, to facilitate gender inclusion and women's rights in collaboration with National Association of Farmers of Sierra Leone (NAFSL) and Women Groups
4	Establish Legal Platforms for the Protection of Women and Youth in Agriculture	• Facilitate access to legal aid for handling land claim disputes through public and private partners.

Appendix 12: Rice Clusters Infrastructure

Ecology	District	Town	Land Size Hectares	GPS Coordinate	Vegetation	Water Source	River	Distance to Freetown (Km)	Traveling Time	Distance to Asphalt Road (km)
Riverine	Bonthe	Torma Bun	51,300	(7.245754, -12.02359)	Grassland	River	Sewa	246	6 HOUR	90
Riverine	Pujehun	Gbondapi	41,100	(7.191078, -11.51001)	Grassland	River	Waanji	325	7 HOURS	19.2
Boli/Riverine	Tonkolili	Kumrabia Mamila	35,500	(8.743244, -11.531506)	Grassland/Primary forest	River/ underground	Pampana	137	3 HOURS	17
Boli	Moyamba	Senehun	19,000	(8.132728, -12.132267)	Grassland/Secondary forest	River/ underground		197	3 H 13 MINS	6
Boli/Riverine	Port Loko	Rombe	14,700	(8.922646, -12.860112)	Grassland/Secondary forest	River/ underground	Little Scarcies	110	3 hours	64
Boli	Bombali	Rolakoh	5,100		Grassland/Secondary forest	River/ underground	Tabai	195	3 H 53 MINS	

Appendix 13: Feeder roads

District	Road	Length (Km)	Chiefdom	Justification
Bo	Kpetema Junction to Yoni Boli	10.0	Bumpeh Ngao	Highly productive for rice and other crops like cassava and groundnut.
Bo	Mamboima to Mano Bembemteh	12.0	Tikonko	Highly productive for rice and other crops like cassava and groundnut.
Bo	Ngalu to Kpetema	8.0	Bagbwe	Highly productive for rice and other crops like cassava and groundnut.
Bo	Kpetema to Benduma	4.0	Bagbwe	Vast land with water source for potential irrigation work.; Suitable for tractor operations.
Bo	Koribondo to Torma Bum	64.0		
Bo	Gbaiima songa Junction to Dodo	8.0	Gbo	Vast boli land, Water source for potential irrigation
Bonthe	Bawuya to Bendu Che	112.0	Nongoba Bullum	
Bonthe	Mattru to Mikeh	80.5	Nongobabullom	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Mattru to Tormabum	56.3	Bum	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Tormabum to mikeh	20.9	Nongobabullom	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Mattru to Talia yawbeko	35.4	Yawbeko	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Talia to Nguworbu	8.0	Yawbeko	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Mattru to Yengesa	11.3	Jong	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Yengesa to Sortogie	4.8	Jong	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Mattru to Tissana	8.0	Jong	Highly productive boli land ecologies for rice cultivation in the District

Bonthe	Mattru to Bandama	16.0	Jong	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Mattru to Moyorgbor	16.1	Sogbini	Highly productive boli land ecologies for rice cultivation in the
Bonthe	Mattru to Tihun	9.7	Sogbini	Highly productive boli land ecologies for rice cultivation in the District
Bonthe	Tihun to Moyorbgor	6.4	Sogbini	Highly productive boli land ecologies for rice cultivation in the District
Pujehun	Blama Puya-Bathoi	10.0	Kpanga	Leading to a productive riverrine/Boli
Pujehun	Blama Puya-Sundu	5.0	Kpanga	Leading to a productive Boli land
Pujehun	Yonni-Sawulla	7.0	Kpanga	Leading to a productive Boli land
Pujehun	Benga Junction-Gbondapi	16.5	Kpanga	Leading to a productive riverrine/ Boli
Pujehun	Massahun fortune-Kalu	15.0	YKK	Leading to a productive riverrine/ Boli
Pujehun	Kalu-Matakan	4.0	YKK	Leading to a productive Boli land
Pujehun	Massahun Kpaka-Nyanyahun	5.0	Kpaka	Leading to a productive Boli land
Pujehun	Massahun Kpaka-Matengbema	8.5	Perri	Leading to a productive Boli land
Pujehun	Blama Massaquoi-Blama Peri	10.0	Perri	Leading to a productive Boli land
Pujehun	Blama Massaq-Bumpeh Perri	13.0	Perri	Leading to a productive Boli land
Pujehun	Gendema-Tindor	15.0	Sorogbema	Leading to a productive Boli land
Pujehun	Gendema-Lattu	16.5	Sorgbema	Leading to a productive Boli land
Pujehun	Massahun Fortune-Mandu-1	7.0	Kpanga Krim	Leading to a productive Boli land

Pujehun	Massahun Forune-Mandu-2	7.0	Kpanga Krim	Leading to a productive Boli land
Kenema	Borbu Junction to Kortimahun	7.0	Nongowa	IVS development /cultivation in progress
Kenema	Combema to Bendu Junction	8.0	Nongowa	Highly productive if all agronomic practices observed , Water source suitable for potential irrigation work.
Kenema	Ngiehun to Mamboma	8.0	Lower Bambara	IVS Development/rehab
Kenema	Tongola to Gendema	8.0	Lower bambara	Vast land with water source for potential irrigation work.; Suitable for tractor operations.; Water source for potential Irrigation work.
Kenema	Tongo to Majeibu	7.0	Lower bambara	Productive land for rice cultivation.
Kenema	Bendu Junction to Yumbuma	6.0	Lower bambara	Water source for potential Irrigation work.
Kenema	Lowoma to wiyehun	9.0	Lower Bambara	Water source for potential Irrigation work.
Kenema	Geima to Torkponbu	6.0	Dama	Water source for potential Irrigation work.
Kenema	Panguma to Gualla	8.0	Dodo	Water source for potential Irrigation work.
Kenema	Dodo to Ddabu	8.0	Dodo	Water source for potential Irrigation work.
Kenema	Ngiehun Konjo to Sembehu njeigor	10.0	Malegohun	Water source for potential Irrigation work.
Kenema	Sembehun to Manjama	7.0	Malegohun	Water source for potential Irrigation work.
Kenema	Joru to Sandaru	7.0	Guara	Water source for potential Irrigation w
Kenema	Taninahun to Niagorehun	9.0	Kandu lekepiama	Water source for potential Irrigation work.
Kono	Senehun-Kurankor	9.3	Lei	Highly productive boli land ecologies for rice cultivation

Kono	Gandorhun-Bandama	7.5	Gbane	Highly productive boli ecologies for rice cultivation
Kono	Yormadu-Memeseya	4.3	Sandor	Highly productive boli land ecologies for rice cultivation
Kono	Kaadu - Boroma	9.6	Mafindor	Highly productive boli land ecologies for rice cultivation and Linking ABCs to market
Kono	Whyma-Bendu Soa	6.2	Fiama/Soa	Highly productive IVS , boli land ecology for rice cultivation
Kono	Sewafeh - Peiya	7.6	Nimiyama	Highly productive boli ecologies
Kono	Woma-Swendar	12.5	Sandor	Highly productive boli land ecologies for rice cultivation
Kono	Sukudu junction-Levuma	6.3	Soa	Highly productive IVSs for rice production
Kono	Bongema – Woordu Sandor	13.8	Sandor	Highly productive boli land ecology for rice production
Kono	New Kenema-Gbayor	10.6	Lei/Soa	Highly productive boli land ecology for rice production
Kono	Yormadu-Bongema	14.7	Sandor	Highly productive boli land ecology for rice production
Kono	Kissi town –Sooma	6.3	Lei	Highly productive of IVSs ecology for Rice production
Kono	Kissi town-Bomboroh	6.3	Lei	Highly productive of IVSs ecology for Rice production
Kono	Kenewa- Woma	9.4	Lei/Sandor	Highly productive of IVSs and boli land ecology for Rice production
Kono	Tuiyor-Bandasuma	9.5	Fiama	Highly productive of IVSs and boli land ecology for Rice production
Kono	Kombayendeh-Yengemakensay	15.6	Lei	Highly productive of IVSs and boli land ecology for Rice production
Kono	Kanekor-Njagbwema Fiama	18.8	Fiama	Highly productive of IVSs and boli land ecology for Rice production
Kailahun	Koindu to Sombodu	8.0	Kissi Teng	Linking Koindu to highly productive Boli-land and IVS for rice production

Kailahun	Koindu to Makor	16,09	Kissi Teng	Highly productive Boli-land for rice cultivation
Kailahun	Bunumbu to Tombogboima	4.8	Peje west	Highly productive boil land and IVS ecologies for rice cultivation in the chiefdom
Kailahun	Bunumbu to Manowa	24.0	Peje west	Highly productive boil land ecologies for rice cultivation and Linking ABCs to market
Kailahun	Kailahun to Ngainga	24.1	Luawa	Highly productive IVS ecologies for rice production
Kailahun	Koindu to Kpayeh	9.6	Kissi Teng	Highly productive IVS ecologies for rice production
Bombali	Mayamberay - Magbaikolie	8.0	Makarie	Highly productive boli land ecology for rice production
Bombali	Makarie Junction-Makarey	4.8	Makarie	Highly productive boli land ecology for rice production
Bombali	Masongbo Junction -Makeh	8.8	Makarie	Highly productive boli land ecology for rice production
Bombali	Thonkomba-Mabaibana	6.4	Makarie	Highly productive boli land ecology for rice production
Bombali	Makarie -Makaray	8.0	Makarie	Highly productive boli land ecology for rice production
Bombali	Konsow Junction-Maliliyahun	9.6	Makarie	Highly productive boli land ecology for rice production
Bombali	Mabaibunda Junction – Mabuya Kafana	4.8	Makarie	Highly productive boli land ecology for rice production
Bombali	Kalangba junction-Maharie	22.4	N'gowahun	Highly productive boli land and IVS ecologies for rice production
Bombali	Kalangba Junction-Mayoke	24.0	N'gowahun	Highly productive boli land and IVS ecologies for rice production
Bombali	Makambie - Mamulaeuy	8.0	N'gowahun	Highly productive boli land and IVS ecologies for rice production
Bombali	Rosint Junction-Konta	16.0	Bombali Siari	Highly productive boli land and IVS ecologies for rice production
Bombali	Matene Junction-Mankeneh-Loli	11.2	Bombali Siari	Highly productive boli land and IVS ecologies for rice production

Bombali	Rosint Junction-Mamanso	6.4	Bombali Siari	Highly productive boli land and IVS ecologies for rice production
Bombali	Teko Barracks Junction- Masingbi	10.4	Paki Masabong	Highly productive boli land and IVS ecologies for rice production
Bombali	Mayagba Junction-Masabong Pile	20.8	Paki Masabong	Highly productive boli land and IVS ecologies for rice production
Bombali	Grace Land-kamoria	16.0	Gbanti	Highly productive boli land and IVS ecologies for rice production
Bombali	Konsow Junction-Gbobana	16.0	Gbanti	Highly productive boli land and IVS ecologies for rice production
Bombali	Gbendenbu - Makokoi	14.4	Gbendembu	Highly productive boli land and IVS ecologies for rice production
Bombali	Manyeh-Mapayonwa	8.0	Gbendembu	Highly productive boli land and IVS ecologies for rice production
Bombali	Mangua-Gbeuwolo	6.4	Gbendembu	Highly productive boli land and IVS ecologies for rice production
Bombali	Makai - Mabgoema	6.4	Gbendembu	Highly productive boli land and IVS ecologies for rice production
Bombali	Machapa --Mahai	4.8	Gbendembu	Highly productive boli land and IVS ecologies for rice production
Bombali	Mosory - Benkia	3.2	Bombali Sebora	Highly productive boli land and IVS ecologies for rice production
Bombali	Mosory - Roputhor	4.8	Bombali Sebora	Highly productive boli land and IVS ecologies for rice production
Bombali	Teko Veterinary – Pate Bana Marank	6.4	Bombali Sebora	Highly productive boli land and IVS ecologies for rice production
Tonkolili	Makali – Masaba	8.0		Highly productive IVSs and boil land ecologies for rice cultivation.
Tonkolili	Rowaka – Simbeck	8.0		Highly productive IVSS and boil land ecologies for rice cultivation
Tonkolili	Makoni Line – Kenema	24.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Makoni Line – Mafolka	19.2		Highly productive IVSs and boil land ecologies for rice cultivation.

Tonkolili	Masaba – Maconteh	24.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Makah – Makong	16.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Makali – Gbomgbanday	24.0		Highly productive IVSs and boil land ecologies for rice cultivation.
Tonkolili	Makarrbai – Masang	1.6		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Maraka – Ropoli	11.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Royeama Maruba Yainkassa-Yainkassa Junction	4.0		Highly productive IVSs and boil land ecologies for rice cultivation.
Tonkolili	Rononla line – Masori*e*	6.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Rothawa – Makoblo	3.0		Highly productive IVSS and boil land ecologies for rice cultivation
Tonkolili	Magbokeh Junction – Magbokeh	4.0		Highly productive IVSs and boil land ecologies for rice cultivation.
Tonkolili	Moyamba Junction – Rogbai	4.0		Highly productive IVSSs and boil land ecologies for rice cultivation
Tonkolili	Rorainka – Makoya	2.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Romonkoro – Madina	5.0		Highly productive IVSs and boil land ecologies for rice cultivation.
Tonkolili	Matamp – Masorie	6.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Mamurie – Maconteh	8.0		Highly productive IVSs and boil land ecologies for rice cultivation
Tonkolili	Mamurie – Ropity	11.3		Highly productive IVSSs and boil land ecologies for rice cultivation.
Tonkolili	Magburaka - Magbass	8		Highly productive IVSSs and boil land ecologies for rice cultivation.
Koinadugu	Bendukoro-komonkalia	58.0	Diang	Linking to Kono and highly productive Boli land and IVS ecology for rice production

Koinadugu	Alikalia- Borekoro	5.4	Kalian	Linking to highly productive Boli land ecology for rice production
Koinadugu	Foria- Solia	7.0	Diang	highly productive Boli land for rice and pineapple production
Koinadugu	Tilikoro- kulanya	6.3	Nieni	Linking to Kono and highly productive boli land for rice production
Koinadugu	Tilikoro-Soya	9.0	Nieni	Linking to Subaria and Tokolili, and highly productive boli land for rice production
Koinadugu	Fadugu-Kasanikoro	79.2	Kasunko Kakellian	Linking to highly productive IVS for rice production
Koinadugu	Fadugu –kagbasia	16.0	Kasunko Kakelian	Linking to highly productive IVS for rice production
Koinadugu	Kathawuya-bafodia	36.0	Wara Wara Bafodia	Linking to highly productive IVS for rice production
Koinadugu	Malaforia-Koinadugu	24.0	Sengbeh	Linking to highly productive IVS for rice production
Koinadugu	Malaforia-Bendugu	4.8	Sengbeh	Linking to highly productive IVS for rice production
Falaba	Seria to Gbarefeh	43.2	Mongo - Morinfidugu	IVS, boli and upland ecology suitable for rice, vegetables and other food crops
Falaba	Gbarefeh to Serekolia	19.2	Morinfidugu	IVS, boli and upland ecology suitable for rice, vegetables and other food crops
Falaba	Kaliyereh Junction to Kaliyereh	6.4	Mongo	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Firawa Junction to Firawa	11.2	Mongo	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Trimafeh Junction to Trimafeh	6.4	Mongo	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Mongo Police station to Gbongbondor	11.2	Mongo	IVS, boli and upland ecology suitable for rice, vegetables and other food crops
Falaba	Koindukura to Kambaya	16.0	Sulima	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Koindukura to Kaliyereh	32.0	Sulima	IVS and upland ecology suitable for rice, vegetables and other food crops

Falaba	Gbarefeh to Serekolia	57.6	Morifindugu-Koinadugu	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Falaba Town to Sonkoya	11.2	Sulima	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Seria to Dakokalia	6.4	Mongo	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Bumbukoro Junction to Bumbukoro	11.2	Nyedu	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Firawa to Malafolia	81.6	Wolley Barawa-Koinadugu	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Gbarefeh to Firawa	33.6	Morifindugu-Wolley Barawa	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Mongo to Baflaben	20.8	Mongo	IVS and upland ecology suitable for rice, vegetables and other food crops
Falaba	Mongo to Dankawali and Kabala	72.0	Mongo, Morifindugu, Kamadugu Yiraia and Koinadugu	IVS, boli and upland ecology suitable for rice, vegetables and other food crops
kambia	Barmoi Luma – Katic Junction	16.3	Masungbala	Linking Katic junction ABC to Barmoi Luma International Market, also link to highly productive IVS for rice production
Kambia	Mabonkaya-Barmoi Bana	3.7	Munuthala	Highly productive IVS ecologies for rice cultivation
Kambia	Layadde-Kurada	2.2	Khonimaka	Highly productive boil land ecologies for rice cultivation in the District
Kambia	Sumbuya Junction – Kukuna	40.0	Bramaia	Highly productive boil land ecologies for rice cultivation and Linking ABCs to market
Kambia	Robana – Macoth	7.0	Mambolo	Highly productive Mangroves , boli land ecology for rice cultivation in the Distrct
Kambia	Matham – Barmoi Munu	16.7	Masungbala	Highly productive IVSs and boli and ecologies, linking Tawopaneh ABC to market
Kambia	Gbonkomaria– Royark	4.0	Magbema	Highly productive mangroves ecology for rice production and linking farmers to Barmoi Luma Market

Kambia	Rokupr-Robombeh	4.0	Magbema	Highly productive IVS and Mangroves for rice production and linking Takorodi ABC to market
Kambia	Rofunk- Thabana	7.0	Mambolo	Highly productive Mangroves ecology for rice production
Kambia	Bankamapulor-Madina	17.6	Tonko Limba	Highly productive boliland ecology for rice production
Kambia	Kabbia Junction-Layadde	10.6	Khonimaka	Highly productive boliland ecology for rice production
Kambia	Gkobkormaria-Kathakera	3.0	Magbema	Highly productive mangroves ecology for Rice production
Portloko	Mange-kenthebana1	27.4	Bureh	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Mange- Kethabana 2	29.4	Bureh	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Lunsar- Msemira	19.3	Masimera	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Gbonku Junction - Ronthun	12.1	Bureh	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Lunsar – Mange acre	27.4	Maranpa	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Gbonko Junction-Mangara	22.3	Bakeh Loko	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Loko Masama-Kikam	19.3	Kamasondo	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Gbonko Junction-Workifor	14.3	Bakeh loko	Highly productive boli land ecologies for rice cultivation in the District
Portloko	Gbonko Junction-Kasankoh	10.1	Bakeh loko	
		2,430.2		

Appendix 14: Resource Mobilization Strategy

INITIATIVE	EFFECT ON FSP
PUBLIC FINANCE	
Fiscal tax base enhancement	Potentially increasing income receipts, a portion dedicated to FSP.
PRIVATE PARTICIPATION IN PUBLIC INVESTMENTS	
PPPs promotion	Allows risk sharing with the private sector and bridges investment gaps.
Diaspora agricultural investment	Enhances commercial investment in Sierra Leone's agriculture.
DEVELOPMENT COOPERATION	
Traditional and non-traditional donor support	Organize a donor conference tailored for FSP.
South-South Cooperation (SSC) engagement	Collaborate with assistance providers like Brazil, Vietnam, and Egypt.
Development impact bonds	Collaborate with partners to utilize these bonds for FSP's objectives.
Untapped thematic funds	Access potential funds like Green Climate Funds for FSP's climate goals.
PRIVATE SECTOR INVESTMENT AND FINANCIAL SERVICES	
Long-term business lending promotion	Regulate lending to vital FSP value chain businesses.
Increase private sector lending by public banks	Encourage these banks to prioritize SMEs and strategic FSP sectors.

Source: Adapted from the Sierra Leone's Medium Term Development Plan (2029-2023)

FEED SALONE

Ministry of Agriculture and Food Security