



# Report on the unpacking of the food system transition challenge in Sierra Leone: ‘How to ensure that the Feed Salone Strategy contributes to healthy diets for the people of Sierra Leone?’

**Sustainable Agrifood Systems Intelligence  
(SASI)**  
Science Policy Interface (SPi)

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## Table of Contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Acronyms</b> .....	<b>6</b>
<b>Acknowledgements</b> .....	<b>8</b>
<b>1. Introduction</b> .....	<b>9</b>
<b>2. National context</b> .....	<b>9</b>
2.1 Agriculture and fisheries.....	9
2.2 Food security and nutrition .....	11
<b>3. Methodology</b> .....	<b>12</b>
<b>4. Territorial profiles</b> .....	<b>19</b>
4.1 Kenema .....	19
4.1.1 <i>Food security, nutrition and health</i> .....	19
4.1.2 <i>Main characteristics</i> .....	20
4.1.3 <i>SWOT</i> .....	23
4.2 Port Loko .....	25
4.2.1 <i>Food security, nutrition and health</i> .....	25
4.2.2 <i>Main characteristics</i> .....	26
4.2.3 <i>SWOT</i> .....	29
<b>5. Understanding the food system transition challenge in Kenema and Port Loko districts</b> .....	<b>31</b>
5.1 Food system drivers.....	31
5.1.1 <i>Socio economic drivers</i> .....	31
5.1.2 <i>Biophysical and environmental drivers</i> .....	34
5.1.3 <i>Territorial drivers</i> .....	40
5.1.4 <i>Infrastructure drivers</i> .....	41
5.1.5 <i>Technology drivers</i> .....	44
5.1.6 <i>Political and governance drivers</i> .....	47
5.1.7 <i>Demographic drivers</i> .....	49
5.2 Food system impacts .....	50
5.2.1 <i>Food security and nutrition impacts</i> .....	50
5.2.2 <i>Environmental impacts</i> .....	56
5.3 Trade-offs.....	57
5.3.1 <i>Should the focus be on maximising the production of the most widely consumed food items—particularly rice and palm oil— or on increasing the production of food products from groups often lacking in daily diets, such as fruits, vegetables, beans and pulses, fish and livestock?</i> .....	57
5.3.2 <i>Maximising incomes vs maximising the diversity of food produced by households themselves</i> .....	57
5.3.3 <i>Promote high input agriculture with quick results or promote more sustainable practices that generate slower returns, but are more resilient to shocks, and more favourable for high-value, international marketing strategies?</i> .....	58
5.3.4 <i>Produce more rice and firewood by cutting mangroves or increase marine fisheries resources by protecting and replanting them and reap climate credits?</i> .....	58
5.3.5 <i>National level value chain development vs. community level integrated development</i> .....	58
5.3.6 <i>High quality standards for school feeding vs local procurement</i> .....	59
5.3.7 <i>Livestock vs vegetables</i> .....	59
5.4 Political economy .....	60

5.4.1	<i>Stakeholders</i> .....	60
5.4.2	<i>Stakeholders' expectations</i> .....	63
5.4.3	<i>Power distribution and coalitions of stakeholders</i> .....	63
5.5	Potential for change.....	64
5.5.1	<i>Desire for change among stakeholders</i> .....	64
5.5.2	<i>Capacities for change among stakeholders</i> .....	64
5.6	Narratives and policy coherence.....	65
5.6.1	<i>Narratives</i> .....	65
5.6.2	<i>Policy coherence</i> .....	66
5.7	Potential for interventions and innovations to support the transition.....	67
5.7.1	<i>School feeding</i> .....	67
<b>6.</b>	<b>Conclusions and recommendations</b> .....	<b>70</b>
6.1	Understanding the food system transition challenge in Kenema and Port Loko districts.....	70
6.1.1	<i>Food system drivers</i> .....	70
6.1.2	<i>Food system impacts</i> .....	73
6.1.3	<i>Food system transition challenge figure</i> .....	75
6.1.4	<i>Trade-offs</i> .....	75
6.1.5	<i>Political economy</i> .....	77
6.1.6	<i>Potential for change</i> .....	78
6.1.7	<i>Narratives and policy coherence</i> .....	79
6.1.8	<i>Potential for interventions and innovations to support the transition</i> .....	80
	<b>Bibliography</b> .....	<b>82</b>
	<b>Appendixes</b> .....	<b>85</b>
	Appendix 1 – Projects and interventions.....	85
	<i>IFAD</i> .....	85
	<i>World Bank</i> .....	85
	<i>World Food Program</i> .....	86
	<i>FAO's Livestock and Livelihoods Development Project (LLDP)</i> .....	87
	<i>WHH</i> .....	88
	<i>Concern Worldwide</i> .....	88
	<i>Solidaridad</i> .....	89
	<i>SEND</i> .....	90
	<i>Mopanda</i> .....	91
	<i>Goal</i> .....	91
	<i>Focus 1000's interventions</i> .....	91
	<i>AAD-SL</i> .....	91
	<i>FoRUT</i> .....	92
	<i>Cotton Tree Foundation</i> .....	92
	<i>HKI's interventions</i> .....	92
	<i>ACF's/AAH's interventions</i> .....	92
	<i>Small machinery</i> .....	92
	<i>VSLAs</i> .....	93
	<i>Nyam Nyam Pap</i> .....	93
	<i>Bo Food Company's (BFC) Bennimix</i> .....	93
	<i>Community banks</i> .....	94
	Appendix 2 - Flipcharts from the Multi-Stakeholder Dialogues.....	95
	<i>Kenema</i> .....	95
	<i>Port Loko</i> .....	108

## Executive Summary

This report explores a key food system transition challenge in Sierra Leone: how the Feed Salone Strategy can contribute to healthier diets for the people of Sierra Leone. The research was conducted in Kenema and Port Loko districts, and it provides a comprehensive analysis of the food system from the perspective of the chosen transition challenge.

While the six different food groups identified in the 'Healthy Eating Plan' are mostly available and consumed throughout the year, some food groups are lacking in people's daily diets or during certain periods. Fruits are commonly consumed during peak harvest but are difficult to access at other times due to cost and availability. Vegetables are consumed year-round, though can be scarce during the dry season. Pulses are eaten infrequently and in small quantities, mainly during the harvest period. Animal protein consumption is primarily in the form of fish, with regular frequency but variable quantities. Fats, mainly from palm oil, are consumed regularly but not consistently throughout the year. Carbohydrates, primarily rice and cassava, are sufficient in people's diets, but targeted interventions and diversification can positively impact nutrition and improve household incomes. Recommendations include promoting fruit cultivation, continuing to promote Inland Valley Swamps for vegetable cultivation, promoting intercropping of pulses, boosting fish availability through aquaculture, promoting small-scale oil presses, and enhancing access to small-scale machinery for rice milling and cassava processing.

The report identifies several drivers impacting the food system from the perspective of the chosen transition challenge, including socio-economic, biophysical, environmental, territorial, infrastructure, technology, political, governance, and demographic factors.

Many households sell part of their production immediately after harvest to repay loans and cover expenses, leading to food shortages during the rainy season. The report recommends promoting savings options and appropriate storage solutions to help farmers manage their produce better. Awareness about the importance of diverse, balanced diets exists but is not always prioritised. Mothers prepare complementary foods for young children based on traditional practices, but these foods can vary in nutritional quality. The report suggests reinforcing awareness campaigns and providing adequate recipes and demonstrations for complementary foods.

Climate change, with more extreme weather conditions, complicates food production. Shifting cultivation practices contribute to deforestation and land degradation. The availability of quality seed material is also a significant challenge. The report recommends promoting climate-smart agricultural practices and training farmers to adapt to new climate realities. It also suggests promoting the use of improved fishing nets and protecting remaining mangroves to support fish stock regeneration.

Only 37% of households own land, making it difficult for young people and women to access land. Current heritage rules and practices disadvantage children who stay with their parents to continue farming. The report recommends promoting the registration of lands owned by households in the name of both men and women.

Poor road networks at the intermediate and local levels are hampering agricultural and fisheries development. Limited access to electricity affects agricultural processing and storage. The report recommends continuing efforts to improve road networks and electricity access.

The gradual adoption of small processing machinery, which reduces the labour burden on women and improves product quality. Mobile phones are important for communication, but their use is limited by network coverage and access to electricity. The report suggests

promoting small processing machinery and supporting local businesses that produce, sell, and repair these machines.

The Ministry of Health (MoH) and the Ministry of Agriculture and Food Security (MAFS) work to raise awareness about diverse, healthy diets and to improve the availability of diverse foods. However, coordination between them, as well as with representatives of NGOs, farmers, women and youth needs improvement.

If the report's recommendations are implemented, the Feed Salone strategy has the potential to significantly improve the diets of Sierra Leoneans, by supporting the transition towards a more sustainable and healthy food system, while reducing rice imports.

## Acronyms

AAD-SL	Action for Advocacy and Development – Sierra Leone
ABC	Agri Business Centre
ARI	Acute Respiratory Infection
CC	City Council
CFSVA	Comprehensive Food Security and Vulnerability Analysis (WFP)
CHW	Community Health Worker
CIRAD	Centre De Coopération Internationale En Recherche Agronomique Pour Le Développement / French Agricultural Research Centre for International Development
CW	Concern Worldwide
DC	District Council
DHS	Demographic and Health Survey
DO	Direct Observation
FBO	Farmer Based Organisation
FGD	Focus Group Discussion
FOCUS1000	Foundation for Collaboration on Universal Socio-economic Services
FoRUT	Foundation for Rural and Urban Transformation
FAO	Food and Agriculture Organization of the United Nations
FCWC	Fisheries Committee for the West Central Gulf of Guinea
FSRP	Food Systems Resilience Program
GAFSP	Global Agriculture and Food Security Program
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HI	Household Interview
HKI	Helen Keller International
ICRA	International Centre for development-oriented Research in Agriculture
IITA	International Institute of Tropical Agriculture
IRAM	Institute for Research and Applications of Development Methods
IE	Irish Embassy
KII	Key Informant Interview
MAFS	Ministry of Agriculture and Food Security
MBSSE	Ministry of Basic and Senior Secondary Education
MFMR	Ministry of Fisheries and Marine Resources
MFMR IDAS	Ministry of Fisheries and Marine Resources – Institutional Data and Assessment System
MLGCA	Ministry of Local Government and Community Affairs
MOGCA	Ministry of Gender and Children's Affairs
MoH	Ministry of Health
MSD	Multi-Stakeholder Dialogue
MWR	Ministry of Water Resources
NaFFSL	National Federation of Farmers of Sierra Leone
NaFRA	National Fertilizer and Regulatory Agency
PI-CREF	Presidential Initiative on Climate Change, Renewable Energy and Food Security
SASI-SPI	Sustainable Agri-food Systems Intelligence – Science-Policy Interface
SLARI	Sierra Leone Agricultural Research Institute
SLEPA	Sierra Leone Environmental Protection Agency
SLeCAD	Sierra Leone Chamber of Agribusiness Development
SUN	Scaling Up Nutrition
SUN&FS-CU	SUN and Food Systems Coordination Unit

SWOT	Strengths, Weaknesses, Opportunities and Threats
TC	Transition Challenge
UNICEF	United Nations International Children's Emergency Fund
VSLA	Village Savings and Loans Associations
WASH	Water, Sanitation and Hygiene
WHH	Welthungerhilfe

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Personal thanks are also due to the National Expert of SASI-SPI in Sierra Leone, Mr Vandy Amos Saati, who contributed in the data collection effort, and who played a key role in the organisation of the data collection mission, and the preparatory phases that paved the way for this work. Acknowledgements are also extended to Mr Abu Mortay Kamara, who participated in the data collection mission on behalf of SUN&FS-CU. Mr Sheikh Janneh of Agrinatura/ICRA is thanked for his contributions to the organisation of the Multi-Stakeholder Dialogues and Stakeholder Trainings in both Kenema and Port Loko districts. A big thank you is also extended to Ms Abibatu Amara of Kenema District Council, Ms Joycelyn Suale of MoH Port Loko, and Mr Abu Bakar Kanu of Action for Advocacy and Development – Sierra Leone, for their support in organising the MSDs and Stakeholder Trainings in the two districts.

## 1. Introduction

Building on Food Systems Assessments (FSA) and UNFSS pathways, the Government of Sierra Leone, the European Union, FAO, and Agrinatura are collaborating to implement the Sustainable Agri-food Systems Intelligence (SASI) initiative aiming to support countries in translating national goals and plans into operational programs, policies and investments that enhance the economic, environmental, and social sustainability of their agri-food systems. Sierra Leone is one of the five pilot countries of this global initiative. In Sierra Leone, Component 3 of the SASI initiative aims to contribute to the successful implementation of the Feed Salone Strategy through a medium-term action research approach that is grounded in the realities in the field. This research is carried out by Agrinatura and SLARI, supported by the SUN-FSCU within the OVP. It focuses on what has been identified through a series of consultations held in Sierra Leone (and in line with the country's policy agenda) as a key question for Sierra Leone's transition towards a more sustainable food system:

How to ensure that the Feed Salone Strategy contributes to healthy diets<sup>6</sup> for the people of Sierra Leone?

Alleviating hunger and malnutrition is Strategic Objectives 4 of the Feed Salone Strategy, and reaching the targets 2 and 3 of this strategic objective requires additional analysis and insights that will be provided by the proposed Agrinatura-led action research. Given the nature of the transition challenge, which requires working at the ministerial level at least with MAFS and MoH, the main institutional focal point of this component is the SUN and Food Systems Coordination Unit (SUN-FSCU), within the Office of the Vice-President (OVP).

## 2. National context

### 2.1 Agriculture and fisheries

Agriculture constitutes a critical component of Sierra Leone's economy, accounting for 57% of the nation's Gross Domestic Product (GDP). This sector not only underpins the livelihoods of approximately 65% of households but also highlights the significant involvement of women, who represent about 70% of the agricultural labour force and play an instrumental role in food production. Despite the availability of 5.4 million hectares of arable land, only 15% of this land is currently cultivated. This situation is notable given the country's robust annual rainfall, which averages 3000 cubic millimetres for over half of the year (World Bank, 2023, MAFS, 2023; Stats SL, 2023). The sector comprises crops, livestock, fisheries, and forestry and is predominantly smallholder-based, with little mechanisation and significant reliance on rainfall. According to Stats SL (2023), 48.3% of agricultural households depend on rainwater, and 75.6% of the agricultural land is owned by smallholder farmers. Post-conflict reconstruction and reform initiatives have sought to revitalise agriculture through policies emphasising food security, commercialisation, and value chain development. Nonetheless, persistent challenges, including low productivity; inadequate infrastructure constraining the access to markets; limited access to inputs, technology and finance; and weak extension services, continue to constrain the sector's growth and transformation (MAFS, 2023; FAO, 2022). The country's exposure to increasingly severe climatic hazards, combined with unsuitable and unsustainable farming methods, is weakening the sector, which is struggling to cope with the

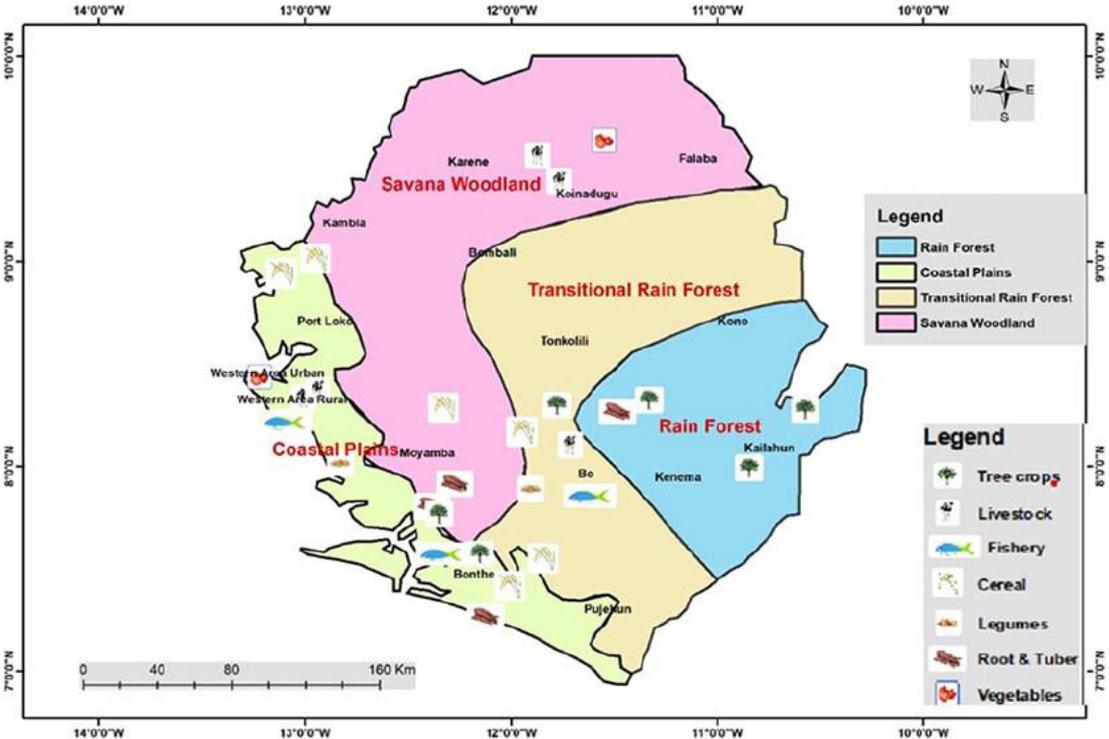
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<sup>6</sup> Healthy diets are defined as diets that meet the energy and nutrients requirements of all (and in particular children under five and pregnant and lactating women). Healthy diets are provided through consumption of diversified foods, and include appropriate cooking practices. They help to protect against malnutrition in all its forms.

effects of climate change. Small-scale rural farmers are particularly vulnerable to recurring shocks and price fluctuations.

The country has a diversity of production systems and crops, in line with the diverse agro-ecological zones of the country (Map 1). Crop production remains the predominant agricultural activity, representing approximately 75% of the agricultural Gross Domestic Product (GDP) (Stats SL, 2023). The major crops cultivated in the country include rice, which is produced by 44.6% of agricultural households; cassava, cultivated by 14.4% of agricultural households; and cocoa, grown by 9.6% of agricultural households (Stats SL, 2023). Rice is the country's essential staple crop, with nearly 85% of farming households engaged in its cultivation. The civil war had a considerable impact on cereal production, and its growth in the post-conflict period remains insufficient to meet the growing needs of the population (particularly urban growth), thus leading to high imports of rice (WFP, 2021). Self-sufficiency in rice has long been a government objective, but is hampered by the aforementioned characteristics of agriculture, with low yields resulting from a lack of mechanisation, inputs and use of improved varieties. Other significant crops include cassava, maize, sweet potatoes, groundnuts, and a variety of fruits and vegetables. The country's agroecological diversity facilitates the cultivation of both upland and lowland crops. However, productivity is hindered by inadequate seed quality, limited fertilizer application, and outdated farming practices. Recent interventions by the government and international donors have sought to promote climate-smart agriculture, improve seed systems, and empower farmer-based organizations as strategies to enhance resilience and food security (Stats SL, 2023; IFAD, 2021).

Map 1: Agro-ecological zones of Sierra Leone (Source: ICT Njala University in Oladele and Amara, 2024).



The livestock subsector in Sierra Leone is essential for enhancing food security and generating income, particularly in rural areas. The main species raised include cattle, goats, sheep, and

poultry, which are typically managed under extensive or semi-intensive systems. The most commonly reared livestock by agricultural holdings in Sierra Leone is poultry, especially chickens, with approximately 29% of agricultural households engaged in chicken farming. (Stats SL, 2023). However, the livestock sector's contribution to the national Gross Domestic Product (GDP) remains minimal, estimated at around 3% (Stats SL, 2022). This low contribution can be attributed to various challenges, including inadequate veterinary services, limited feed resources, high mortality rates, and restricted initiatives for breed improvement. Given the increasing demand for animal protein, driven by population growth and urbanisation, advancing the livestock value chain, particularly through enhanced breeding practices, disease control measures, and improved market access, has become a priority in policy discussions.

With 400 km of coastline, the fisheries sector is a vital pillar of Sierra Leone's economy and food system. With an estimated capitalised economic value of approximately USD 735 million, the sector contributes over 12% to national GDP and plays a crucial role in ensuring food and nutrition security by supplying up to 80% of the country's animal protein intake (FCWC, 2018; MFMR, 2020). Fish catches generate a first-sale value exceeding USD 200 million annually, underscoring the sector's economic significance (MFMR IDAS, 2019). Fisheries provide direct employment to an estimated 200,000 individuals and indirect livelihoods to about 600,000 people, nearly 10% of the national population. Employment is concentrated in the coastal districts of Western Area, Kambia, Port Loko, Moyamba, Pujehun, and Bonthe. In many of these communities, particularly in coastal areas, approximately 25% of the male working-age population engages in part-time fishing activities (MFMR IDAS, 2019). Sierra Leone's fisheries are organised into four sub-sectors: industrial, semi-industrial, marine artisanal, and inland aquaculture. Among these, the marine artisanal sub-sector dominates, accounting for approximately 150,000 tonnes of the estimated 228,000 tonnes of total annual fish production. Industrial catches contribute around 78,000 tonnes annually (MFMR IDAS, 2019), although overall industrial exploitation remains limited. The country is endowed with a wealth of marine and inland aquatic resources, including small pelagic species, demersal fish, and shellfish. Despite this, the sector faces persistent challenges, including high post-harvest losses largely due to inadequate processing and cold storage infrastructure, as well as the prevalence of illegal, unreported, and unregulated (IUU) fishing, which undermines sustainability and state revenues. To address these constraints, the Government of Sierra Leone, through the Ministry of Fisheries and Marine Resources (MFMR), has implemented a series of governance reforms, strengthened monitoring and surveillance systems, and pursued international cooperation to combat illegal, unreported, and unregulated (IUU) fishing. Simultaneously, there is increasing attention to aquaculture as a sustainable complement to marine capture fisheries, with pilot initiatives aimed at boosting domestic fish production while relieving pressure on wild stocks (MFMR, 2020).

## 2.2 Food security and nutrition

Despite a post-Ebola improvement between 2015 and 2018<sup>7</sup>, food security has deteriorated over the last decade, leaving 57% of the population food insecure<sup>8</sup> in 2020, 70% of whom live in rural areas (WFP and GoSL, 2021). Analyses show that the improvement in the situation between 2015 and 2018 was due to a cyclical improvement in people's living conditions, as opposed to a structural improvement (WFP and GoSL, 2021). The COVID 19 pandemic then

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<sup>7</sup> According to a food security monitoring survey carried out in September 2018, food insecurity affected 43.7% of the population, compared with 49.8% in 2015.

<sup>8</sup> Defined as households that are considered 'moderately food insecure' or 'severely food insecure' according to the Consolidated Approach for Reporting Indicators of Food Security (CARI) methodology

exacerbated living conditions and access to basic services, and in 2020, the global hunger index places the country in the category with an alarming level of hunger, ranking 101 out of 107 countries analysed, despite a fall in the same index since the early 2000s<sup>9</sup>. Between 2020 and 2022, according to the FAO's latest report on the world food situation (FAO, 2023), 89.2% of the population will be globally food insecure (including 31.9% in a situation of severe food insecurity), compared with 75.8% (including 26.7% in a situation of severe food insecurity) for the period 2014-2016. Malnutrition<sup>10</sup> is a crucial public health problem, despite the gradual improvement reported in the 2021 National Nutrition Survey. According to this document, the rate of stunting was 26.2%, compared to 31.1% in 2017, and the rate of global acute malnutrition was 5.2%, compared with 5.1% in 2017 (MoHS, 2021). Anaemia is widespread, affecting 44.8% of women aged between 15 and 49 (MoHS et al., 2015), a proportion that has risen slightly since 2012 (Stats SL and ICF, 2020).

The Sierra Leonean diet is highly dependent on staple products, with one of the highest levels of rice consumption in West Africa 104 kg of rice per person (FAO et al. 2022). Cassava is the second most consumed product (FAO, 2022). Dietary poverty is widespread in the country. With high rates of poverty and rising food costs, many households are unable to afford a diversified diet every day. Based on the household food consumption score, 27% of the population have a poor diet and 34% have a diet that is borderline acceptable (WFP, 2021). Promoting dietary diversification by introducing nutritious products, such as biofortified crops (yellow-fleshed cassava, orange-fleshed sweet potato, maize) and complementary foods for young children enriched with soybean or fortified with essential micronutrients, into local diets is essential to achieving food and nutritional security, and thereby meeting the Zero Hunger national target.

Proper hygiene (both personal and environmental), access to safe drinking water and proper sanitation facilities are critical to meeting nutrition needs of a population. Many people in Sierra Leone currently have inadequate access to sanitation and safe drinking water facilities, with only 14% and households having access to sanitation and 57% to safe drinking water facilities. Only 8% of people in rural areas have access to sanitation facilities (traditional latrines are more common in these areas) compared to 46% in urban areas with 46% (WFP, 2021). In rural areas 42% use unsafe drinking water. This is critical to address, because undernutrition is not only caused by a lack of adequate nutrient intake, but also due to nutrient loss during losses caused by food borne disease (diarrhoea) and exposure to unsafe foods (foods contaminated by toxins or chemicals).

### 3. Methodology

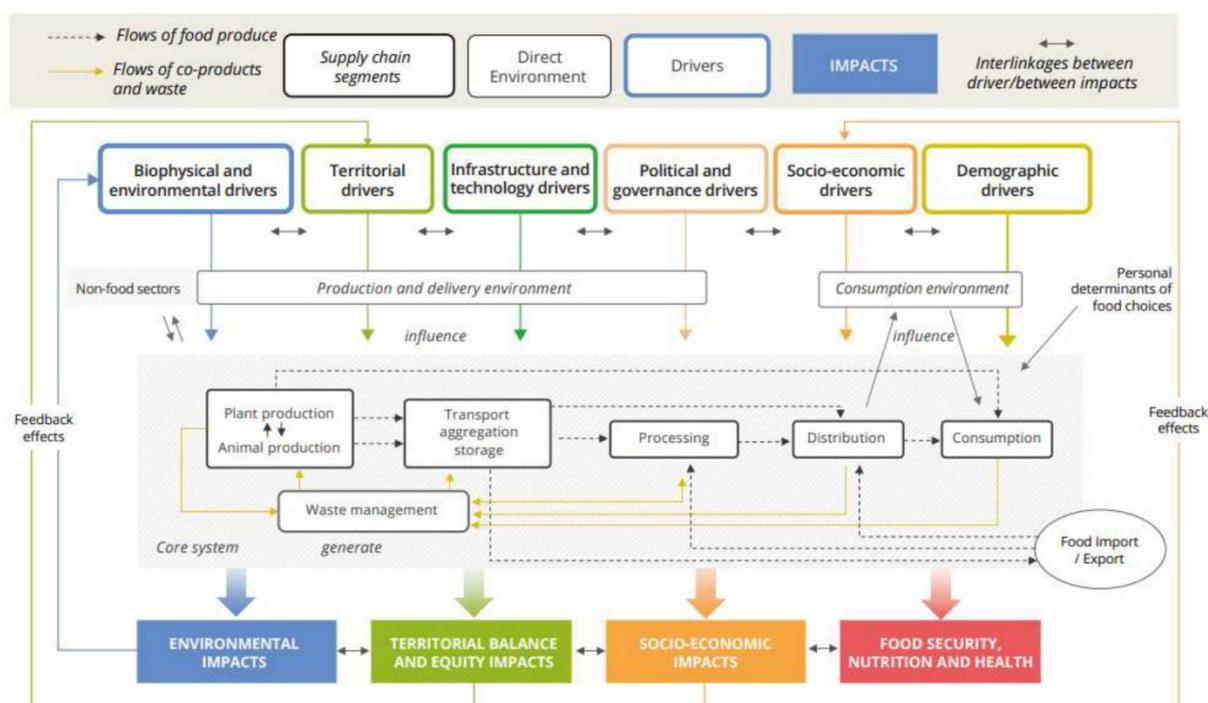
The methodology has its fundamentals in the analytical framework for the analysis of food systems that was developed as part of preceding phases of the SASI-SPI project. Notably, as part of the 'Catalysing the Sustainable and Inclusive Transformations of Food Systems Initiative' or 'Food Systems Assessments' project, the analytical framework for food system country assessments was developed, which is reflected by the following figure.

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<sup>9</sup> Source: <https://www.globalhungerindex.org/sierra-leone.html>

<sup>10</sup> Defined as deficiencies, excesses, or imbalances in a person's energy and nutrient intake (MoHS, 2021)

Figure 1: Food system conceptual framework (Source: David-Benz et al., 2022)

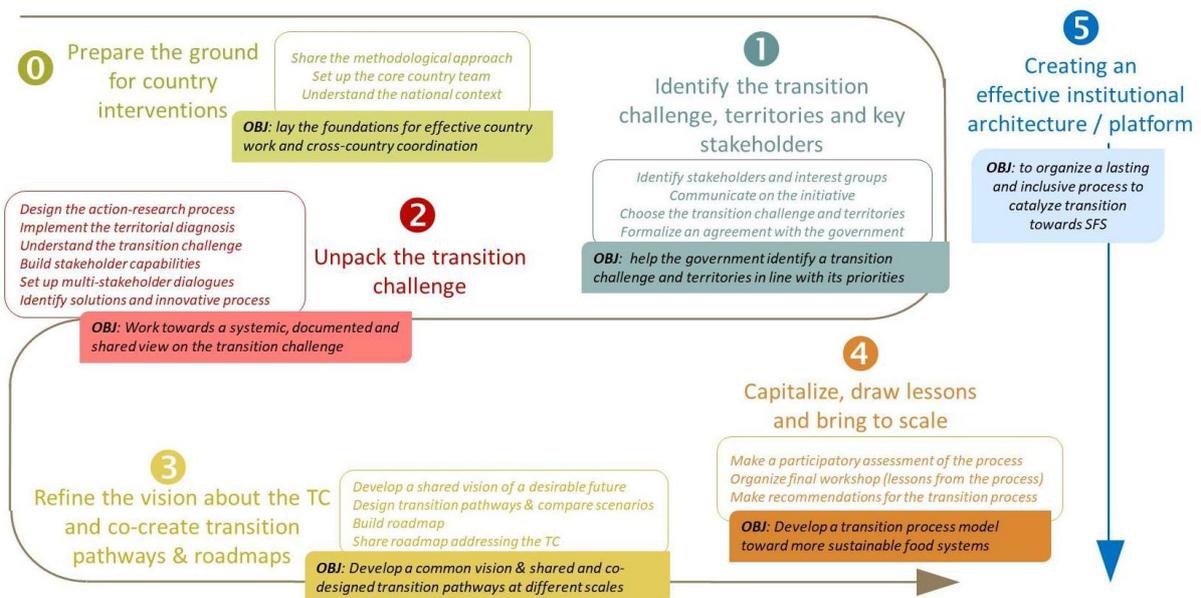


As part of the same initiative country level food system assessments were conducted with this analytical framework in more than 50 countries<sup>11</sup>, including Sierra Leone<sup>12</sup>. As part of the current SASI-SPI project, a methodology was developed to accompany country governments in their transition towards more sustainable food systems, by focusing one key food system transition challenge, and to analyse this key challenge at first at the territorial level. A methodology for that was developed by CIRAD at the beginning of the project, which is summarised by figure 1 below. It shows the general process that is being followed in the three pilot countries of SASI-SPI, which include besides Sierra Leone, also Bhutan and Colombia.

<sup>11</sup> See: <https://www.fao.org/support-to-investment/our-work/projects/fsa2021/en/>

<sup>12</sup> See: <https://openknowledge.fao.org/items/550e6b1a-e535-48ff-8722-aa3fbc6500f3>

Figure 2: Methodological itinerary Component 3 of SASI-SPI



In Sierra Leone, the transition challenge was analysed in Kenema and Port Loko districts (cf Map 2). These two districts were selected as target territories of SASI-SPI in Sierra Leone, in particular based on the following criteria:

- Worrying, contrasting situations in terms of food and nutrition security
- Ongoing relevant government, NGO and/or private sector initiatives
- Contrasting agro-ecological, social and economic conditions,
- Contrasting cultivation, marketing and processing practices

In the two target districts a multi-stakeholder consultative process is being followed, to formulate agri-food system transition pathways, and to co-create a transition roadmap with priority actions. The insights obtained through these processes, will help feed policy dialogues and debates at the national level, and to provide hands-on advice for the successful, evidence-based operationalisation and implementation of the Feed Salone strategy.

Map 2: Target districts of SASI-SPI in Sierra Leone (Source: Wikipedia)



Between 8 and 23 February 2025 data were collected, and Multi-Stakeholder Dialogues were conducted in the two focus districts of Kenema and Port Loko<sup>13</sup>. This report presents the findings of that mission, based on an analysis of the data that were collected. Some of the findings are also based on interviews that took place as part of a preparatory mission that took place between 30 September and 11 October 2024, and indirectly on the entire preparatory process of SASI-SPI in Sierra Leone.

The following methods were employed during the mission February 2025 mission:

- Focus Group Discussions
- Key Informant Interviews
- Household Interviews (qualitative)
- Direct Observations
- Multi-Stakeholder Dialogues

Data collection took place at the national, district, chiefdom and village level as shown in Table 1 below.

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<sup>13</sup> In addition to the authors of this report, data collection was also conducted by Vandy Amos Saati (Agrinatura/CIRAD/IRAM) and Abu Mortay Kamara (SUN&FS-CU). The MSDs and stakeholder training were organised by Sheikh Janneh (Agrinatura/CIRAD/ICRA), Abibatu Amara (Kenema District Council), Joycelyn Suale (MoH Port Loko) and Abu Bakar Kanu (Action for Advocacy and Development – Sierra Leone)

*Table 1: Levels at which the different data collection methods were employed*

	National	District	Chiefdom	Community
Desk review	✓	✓		
Secondary data	✓	✓	✓	
Focus Group Discussions				2 per community
Key Informant Interviews		✓	✓	✓
Household Interviews (qualitative)				2 per community
Direct Observations	✓	✓	✓	✓
Multi-stakeholder dialogues		1 per district		

Within the two target districts of Kenema and Port Loko, three chiefdoms were sampled, based on roughly the same criteria as were used for the selection of the districts:

- areas where oil palm and/or cassava are cultivated<sup>14</sup>, or where fisheries and/or aquaculture is an important part of people's livelihoods
- areas with worrying and contrasting situations in terms of food and nutrition security situation,
- areas where relevant government, NGO and/or private sector initiatives are ongoing
- areas with contrasting agro-ecological conditions

An additional criterion (which did not apply at the district level) was considered important for the sampling at the chiefdom level: accessibility as it is a central factor in communities agricultural, economic and social development. Considering this, we selected two mostly rural chiefdoms and one chiefdom that is at least partially peri-urban. In the rural chiefdoms one 'rural' village was selected relatively close to the road and one 'very rural' village was selected relatively far from the road. In the peri-urban chiefdoms at least one village was selected that is located in the vicinity of a sizeable urban area.

Within each chiefdom two communities were chosen. One of the two communities had a relevant intervention (by government/IO, NGO or private sector), and the other community was meant to be without significant interventions. At the same time, within the two rural chiefdoms of a district, one of the two communities was meant to be relatively well connected to the road network and the other one relatively badly connected. Within the peri-urban chiefdoms, at least one of the two communities was in the vicinity of an urban centre.

Due to logistical constraints during the mission, a few communities were chosen that were somewhat less remote than originally planned. However, it is believed that this did not bias the results of the research effort, as the researchers were still able to include quite remote communities in the sampling, in order to understand how accessibility affects the food system.

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<sup>14</sup> This criterion was added to make sure that the results of the study are relevant for the EU, whose bilateral support will focus on the cassava, palm oil and infant food value chains in the next years. However, the report not only focuses on these 3 value chains, but has a comprehensive, food systems approach, that seeks to cover all relevant sub-sectors and all crops.

Due to weather and road conditions, it also happened that both of the two communities in a chiefdom had significant interventions. It also happened that in communities that were originally targeted for interventions by one organisation, actually also benefited from significant interventions by another organisation. Nevertheless, a number of communities were covered that did not have significant interventions. Table 2 below provides an overview of the chiefdoms and communities that were sampled.

*Table 2: Chiefdoms and communities sampled for community and chiefdom level data collection*

District	Chiefdom	Community	Significant intervention	Rural/Very rural/Peri-urban
Kenema	Malegohun (oil palm and cassava, 77%-93% food insecure, rain forest zone)	Benduma	Yes (WFP)	Very rural
		Sembehun	Yes (AVDP, WFP)	Rural
	Niawa (oil palm and cassava, 41%-58% food insecure, rain forest / transitional rain forest zone)	Bandi	Yes (WHH/Mopanda, FSRP)	Rural
		Kponima	No	Very rural
	Small Bo (oil palm and cassava, 59%-76% food insecure, rain forest / transitional rain forest zone, including peri-urban communities)	Blama	No	Peri-urban
		Kpai	Yes (AVDP, Solidaridad, WHH/SEND <sup>15</sup> )	Very rural
Port Loko	Koya (oil palm and cassava, 41%-58% food insecure, coastal plains / savana woodland zone, including peri-urban communities)	Mamammah	No	Peri-urban
		Robis 1	Yes (AVDP)	Rural
	Loko Massama (oil palm and cassava, 77%-93% food insecure, coastal plains zone, including coastal fisheries communities)	Bailor (coastal village)	No	Very rural
		Kegbal	Yes (CW)	Rural
	Masimera (oil palm and cassava, 24%-40% food insecure, savana woodland zone)	Makulun	Yes (WB)	Rural
		Mamanso	No	Very rural

<sup>15</sup> There were also interventions by SLEPA and Goal in this community

Table 3 below provides a general overview of the number of interviews, Focus Group Discussions and direct observations that were collected as part of the research effort.

*Table 3: Numbers and types of data collected per district and in total*

	Kenema	Port Loko	Total
FGDs	12	12	24
HIs	11	12	23
KIIs chiefdom and community level	13	10	23
KIIs district level	14	9	23
Total KIIs	27	19	46
DOs	8	7	15
Total	58	50	108

For each of the data collection methods, specific data collection tables were developed, which were used as guides for semi-structured interviews and FGDs. These tables were derived from the general research matrix, which was developed using the Methodological Guide that was developed by CIRAD for the implementation of WorkStream 3 of the SASI-SPI project in the three pilot countries. After all the data were cleaned and organised, a detailed analysis was conducted. The analysis sought to triangulate evidence between the findings of the various methods, including secondary data sources and relevant literature. The report was structured around the research questions and sub questions of the research matrix mentioned above. The draft findings, conclusions and recommendations were presented and discussed with the key partner organisations for validation.

SWOT analyses were conducted by two groups during the Multi-Stakeholder Consultations in Kenema and Port Loko.

## 4. Territorial profiles

### 4.1 Kenema

#### 4.1.1 Food security, nutrition and health

**Food security.** In 2023, according to the Consolidated Approach for Reporting Indicators of Food Security (CARI)<sup>16</sup>, 57 % of the population of Kenema district was food insecure, including 3% severely food insecure. In Kenema, 71% of the population of Kenema had a poor Food Consumption Score (FCS) in 2022, compared to 37 % at the national level. However, this trend seemed to reverse in 2023 with only 12 % of the population of Kenema with a poor FCS, compared to 21% at the national level.

*Table 4: Proportions of the population according to Food Consumption Score (FCS) status in Kenema district and at the national level (Source: 2020, 2022 and 2023 WFP Food Security Monitoring System Reports. 2024: data collection for the FSMS report (February 2024))*

	Poor		Borderline		Acceptable	
	Kenema	national	Kenema	National	Kenema	National
2020	45%	27%	28%	34%	27%	39%
2022	71%	37%	21%	42.5%	8%	20.5%
2023	12%	21%	40%	51%	48%	29%
2024	29.5%	13.5%	63%	61.6%	7.5%	14%

**Food consumption.** The diet of the population is most often made up of rice and a sauce, which is mostly made of vegetables (upon availability), fish and oil. Rice is the main and preferred source of carbohydrates, but is often replaced by cassava, especially during the rainy season. Over the course of the year quite diverse foods are available, but during the rainy season many farming households struggle to feed themselves. Young child feeding practices are often sub-optimal. Although fish caught by people themselves from rivers and streams forms an important part of the diet, it is not always available throughout the year and is added in sauces in small quantities. Cash crops (in particular cocoa) are quite important in some chiefdoms of the district. When households earn significant income from cash crops, they do not have to sell so much of their rice harvest to cover their financial needs and can keep more of the rice for their own consumption. This was particularly the case in 2024 due to the rise of cocoa prices and good cocoa harvests.

**Food diversity. 6-23 months old children.** According to the national nutritional survey conducted in 2021 (MoHS, 2021), only 26 % of the 6-23 months old children reached the minimum dietary score. In 2021, based on the 24 hours recall, the consumption of legumes and nuts, eggs and dairy products was very poor for 10% of the 6-23 months old children, but

<sup>16</sup> Developed by WFP in 2023, this indicator considers 4 food security indicators: i. the food consumption score, ii. The reduced Coping Strategy Index (rCSI), iii. the Food expenditure share and iv. Livelihood coping. According to this consolidated indicator, 78% of the population of Sierra Leone was food insecure in 2023.

very similar to the national average. Less than half of the 6–23 months old children were consuming animal protein (fish or meat), vitamin A fruits or legumes and other fruits and vegetables, but the proportions were slightly higher than the national average. The situation has slightly improved since 2019 when only 5.8% of 6-23 months old children were meeting a minimum food diversity<sup>17</sup> (Stats SL and ICF, 2020). Vitamin A rich food and iron rich food were less consumed in the district compared to the national average with 43.3 % of 6-23 months old children having consumed it during the last 24 hours for vitamin A rich food compared to 62.3 at the national level and 37.9 % for iron rich food compared to 53.4% at the national level. **Adult women.** Food diversity was also very low for adult women according to the DHS 2019, with 43.1% of the 15-49 years old women reaching minimum diet diversity compared to 56% at the national level. In 2021, this proportion increased up to 71%, compared to 74% at the national level.

**Malnutrition.** Despite some improvements over the past years, chronic malnutrition remains among the highest of the country with 32.9% amongst the 6–59 months old children. In 2021, the global acute malnutrition rate was 5.5% (according to weight for height anthropometric measurement), which remains high compared to the national average, and higher than the rate in 2019 (Stats SL and ICF, 2020). The situation is also worrying for the adult population with 11.5 % of pregnant and lactating women suffering from global acute malnutrition according to MUAC (Mid Upper Arm Circumference) measurement, which represents the highest rate of the country. The global acute malnutrition rate of women aged 15-49 was also high in 2021 with 1.5% of this group being malnourished. The proportion of 15 -49-year-old women with anaemia was 49.4%, which is above the national average of 46.6%.

**Health.** The crude death rate was 0.18% in 2021 (MoHS, 2021) which was higher than the national rate of 0.14%. Diarrhoea and ARI incidence were also higher than the national incidence with 11% and 2.6 % compared to 2% and 7.1%. Antenatal health facility frequentation is reaching 100 % and is provided by a nurse or a midwife for 96.5 % of the women. The proportion of postnatal checks two days after delivery with a skilled provider is also high, applying to 90 % of the women who give birth. The proportion of 15-19-year-old women who had begun childbearing was among the highest of the country, reaching 27% according to the 2019 DHS, the median age at first birth was lower than the national average (18.7 compared to 19.6).

#### 4.1.2 Main characteristics

**Topography and climate.** The district lies on the border between rain forest and transitional rain forest zones (cf. Map 1). Except for a few mountain ridges, which are still mostly densely forested, most of the district's surface consists of hilly lands that are extensively cultivated. The valleys with swamps and streams allow for irrigated cultivation of rice and other crops, a potential that is currently only partly used. The uplands are used for cultivation among others of tree crops (such as cocoa, coffee and oil palms), upland rice, maize, millet and cassava. In general, in Sierra Leone the climate can be considered a tropical monsoon climate or a climate that is in between a continuous wet tropical rainforest climate and a tropical savanna climate. There are two main agricultural seasons: the rainy season from May to November, and the dry season from December to May. The average temperature is 26 °C (78.8 °F) and the average

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<sup>17</sup> Children received foods from five or more of the following eight food groups: a. breast milk; b. infant formula, milk other than breast milk, cheese or yogurt or other milk products; c. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; d. vitamin A-rich fruits and vegetables; e. other fruits and vegetables; f. eggs; g. meat, poultry, fish, and shellfish (and organ meats); h. legumes and nuts.

rainfall is the highest at the coast with 3000 to 5000 mm per year, which decreases moving inland, with average rainfall of 2000 to 2500 mm at the eastern border. (SLMET, 2025). In 2024 the average trend temperature in Kenema was 25.8 C, compared to an average yearly trend temperature of 24.9 C in 1979, so an increase of almost 1 C. The average yearly temperature in 2024 was exceptionally high with 26.7 C. The trend average total yearly precipitation has increased slightly over the same period with 2269 mm in 1979 and 2313 mm in 2024. At 2357 mm, the actual total precipitation in 2024 in Kenema was only slightly above the trend. (Meteoblue, 2025)

**Demography.** The population of Kenema district is 772 472 people according to the latest available census that was conducted in 2021 (Stats SL, 2021). This represents an increase of 26.7% compared to the 2015 census, showing a significant expansion of the population. The population figure has been in regular increase since 1963, with a population density reaching 121 inhabitants per km<sup>2</sup> in 2021, one of the highest of the country for rural districts. There are more women than men, with a sex ratio of 98.9. The district capital, Kenema city, represents more than a quarter of the district population with 255 110 people. Other chiefdoms are mainly rural with low population density. Many rural youths do not want to work in farming like their parents. They often migrate to the cities to work as motorbike riders. In all the villages visited, during chiefdom and district level interviews, the issue of youth moving to small cities to work in 'fast money' small businesses, was mentioned. Drug abuse is also a serious problem, both in the urban and rural areas.

**Economic activities.** Agriculture (crops, livestock and fisheries) is the most important sector of the economy of Kenema, with 51% of the households depending on it. (Stats SL, 2021) While cash crops like cocoa and coffee are important agricultural products of Kenema, the usual agricultural products for households' own consumption and for local consumption, like rice, cassava, maize and groundnut, are also widely cultivated (see Table 5 below). Fishing and livestock are important for the livelihoods of many rural households as well, with 12 % of the agricultural households mainly depending on livestock and 2% on fisheries<sup>18</sup>.(Stats SL, 2021) The following table shows the proportions of the 60,451 households depending on cultivation of crops in general in Kenema that are involved in the cultivation of different specific crops. Mining is also an important economic activity in the district, in particular diamond mining. At the national level only 2.6% of households depend on mining and quarrying for their livelihood, compared to 45.7% on agriculture, forestry and fishing. The extreme poverty incidence among households whose heads are working in mining and quarrying is 61.5% compared to 74.9% for households depending on agriculture, forestry and fishing. (Stats SL, 2019) No district level data on the proportion of households depending on mining and quarrying in Kenema district could be found. But it is expected to be considerably higher than the national average, because mining is considered to be relatively important in the district.

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<sup>18</sup> These percentages were calculated based on data from the draft report. Even though there is an incoherence between the totals of the agricultural households and the households depending on crops, livestock and fisheries, the percentages give an indication of the importance of the agricultural sub-sectors in the district.

Table 5: Percentage of households cultivating different crops, Kenema district (Source: calculated from Stats SL, 2021)

Crop	Proportion of households that cultivate it
Upland Rice	85%
Lowland Rice	72%
Maize	56%/61% <sup>19</sup>
Cassava	75%
Sweet Potato	51%
Citrus	13%
Groundnut	60%
Coffee	36%
Cacao	52%
Palm Oil	52%
Cashew	6%

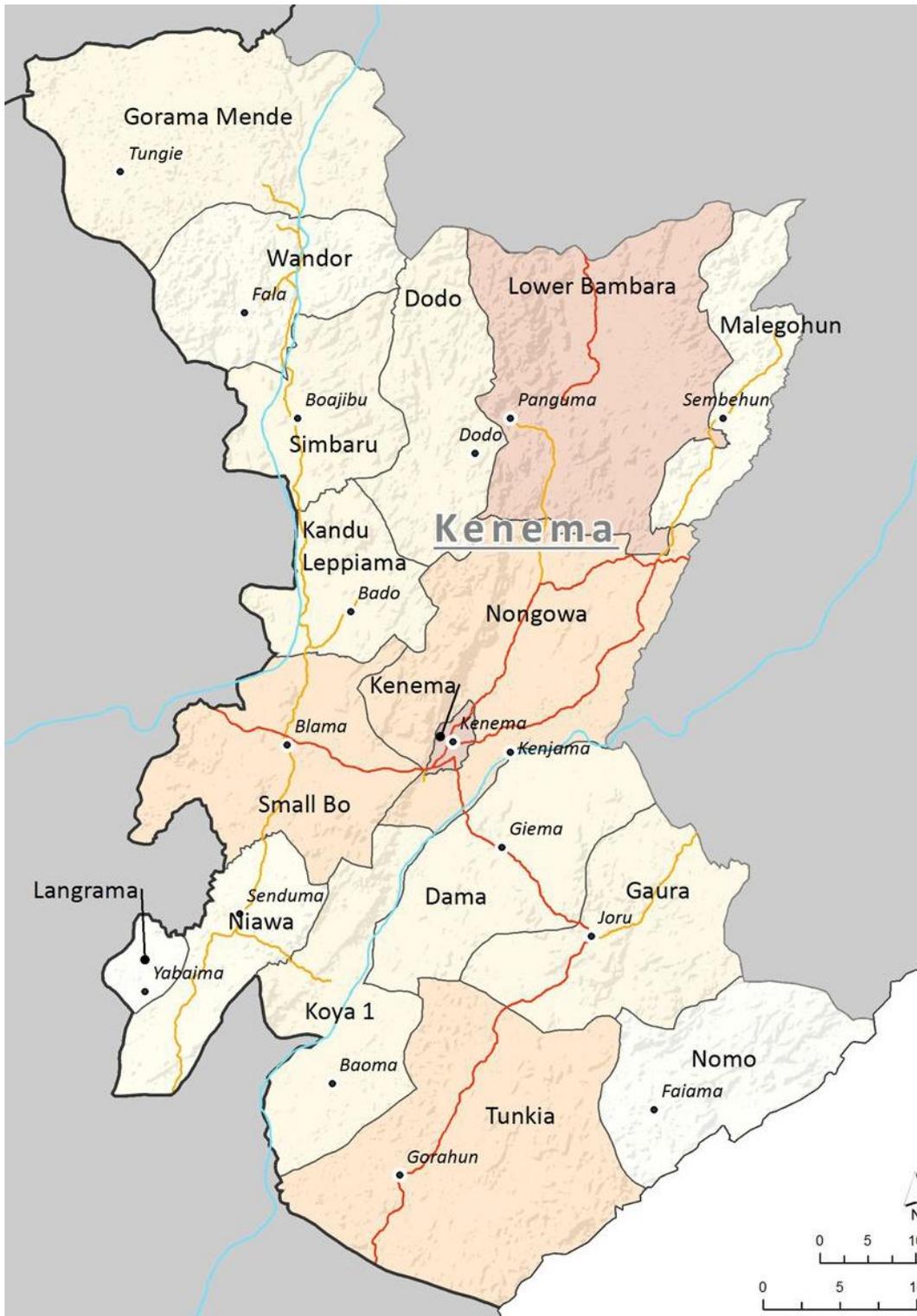
**Environment.** Between 2000 to 2020, Kenema lost 40 100 ha (6.8%) of its tree cover. Between 2002 and 2023<sup>20</sup>, Kenema lost 9 110 ha of humid primary forest. The total area of humid primary forest in Kenema decreased by 11% over the same time period. (UoM and WRI, 2025) The map below shows the primary forests and tree cover loss between 2001/2 and 2023. Both the primary forests and the secondary forests are progressively being cut. The main reasons for the loss of primary forest include a combination of wood production, charcoal production, and clearance for agricultural activities. The main reason for tree cover loss of secondary forests is probably a combination of clearance for agricultural activities (shifting cultivation) and charcoal. As part of shifting cultivation practices, abandoned fields are often allowed to reforest, but it appears that there is still a signification net loss of tree cover of secondary forests.

**Infrastructure.** Roads are important economic infrastructure for all sectors of the economy. The road infrastructure is still underdeveloped in Sierra Leone, in particular at the intermediary level (roads connecting communities) and local level (roads connecting communities to their fields). This is also the case in Kenema district. The map below shows the main road network and the chiefdoms of Kenema. It must me noted that only the red roads going west and north from Kenema town are tarred roads. The roads other than these roads are generally not well accessible during the rainy season.

<sup>19</sup> Two sets of data produced two different results for maize

<sup>20</sup> Methods behind the data have changed over time, resulting in an underreporting of tree cover loss in Kenema prior to 2015

Map 3: Kenema District - Main towns, roads and chiefdoms (Source: WFP, 2017, based on GAUL, UNGWIG, Sierra Leone SSL)



#### 4.1.1 SWOT

The strengths, weaknesses, opportunities and threats that are identified in this section originate mostly from the SWOT analysis that was conducted by two groups during the MSD in Kenema district, completed with the analysis of the research team itself. The flipcharts that were produced by the two groups during the MSD can be found in annex 2.

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>- agro-ecological conditions are suitable for the cultivation of cash crops like coffee and cocoa;</li> <li>- agro-ecological conditions, soil and water resources (IVS and uplands) are suitable for the cultivation of food crops like rice, palm oil, rice, cassava and groundnut.</li> <li>- the district capital is a regional hub for agro-processing in the Eastern province and is the main centre for cocoa processing</li> <li>- abundant mineral resources (e.g., diamonds)</li> <li>- the district still has primary forests with a big biodiversity, including wild animals that are attractive for tourists</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>- Poor road network (esp. intermediate and local roads) makes it difficult and expensive for farmers to access their lands and to market their produce</li> <li>- Due to limited and erratic electricity supply (agro-)businesses must buy generators and fuel to provide electricity during power cuts.</li> <li>- Poor storage facilities (esp. cooling facilities)</li> <li>- Poor mechanisation at farm level</li> <li>- Poor quality of many agricultural products (due to poor post-harvest management practices) limits marketing opportunities</li> <li>- Poor coordination among farmers</li> <li>- Limited access to finance</li> <li>- Limited access to farming inputs (fertilisers, seeds, and tools). Shops are often far and the costs are high. the inputs distributed free of costs by the government / NGOs often arrive late.</li> <li>- Unequal land allocation in general and unfavourable land tenure practices for women</li> <li>- Limited access to clean water and sanitary facilities contribute to people suffering from diseases and malnutrition.</li> <li>- Limited implementation of policies.</li> <li>- Frequent thefts of agricultural produce in the fields sometimes pushes farmers to harvest their crops prematurely.</li> <li>- The rampant use of drugs reduces the productivity of addicted people, their mental well-being, and the social stability of families and society at large.</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>- High international coffee and cocoa prices (diseases in other countries, native wild variety of coffee)</li> <li>- current production of both cash crops is currently relatively extensive and low-input, which is a good starting position to aim for higher quality, higher value export markets.</li> <li>- Fish is widely consumed, high demand for fresh fish on the markets.</li> </ul>	<p><b>THREATS/CHALLENGES</b></p> <ul style="list-style-type: none"> <li>- Increasingly erratic weather (heavy rainfall, intense heat) due to climate change, combined with a reduced capacity of the land to retain water due to deforestation lead to floods that can damage IVS infrastructure.</li> <li>- Many young people do not want to work in agriculture like their parents and prefer jobs like motorbike driver. Others have been educated in traits like construction and commerce, but they often can't find a job after their graduation or they don't have the means to start their own business.</li> <li>- Some (foreign) businesses are allocated big land areas by local chiefs.</li> </ul>

## 4.2 Port Loko

### 4.2.1 Food security, nutrition and health

**Food security.** In 2023, according to the CARI used by WFP, 75 % of the population of Port Loko district is moderately food insecure and 14% is severely food insecure, meaning a big majority (89%) of the population is food insecure. The proportion of the population with a poor Food Consumption Score (FCS) had sharply decreased compared to 2020 and 2022, the proportion with an acceptable FCS also decreased since 2020, and more people were borderline FCS in 2023 and 2024, although the level of food insecurity was less acute than in 2020/ 2022. In 2023 and in 2024, the proportion of people with a borderline FCS was nearly 25% higher than for the national level.

*Table 6: Proportions of the population according to Food Consumption Score (FCS) status in Port Loko district and at the national level (Source: 2020, 2022 and 2023: WFP Food security Monitoring System Reports. 2024: data collection for the FSMS report (February 2024))*

	Poor		Borderline		Acceptable	
	Port Loko	National	Port Loko	National	Port Loko	National
2020	29%	27%	23%	34%	48%	39%
2022	56.5%	37%	36%	42.5%	7.5%	20.5%
2023	15%	21%	72%	51%	13%	29%
2024	11.5%	13.5%	79.5%	61.6%	9%	14%

**Food consumption.** The diet of the population is nearly the same as in Kenema district, with rice as the main source of carbohydrates and cassava as a distant second source. Vegetables are more frequently consumed compared to Kenema district as part of the district is involved in vegetable production and people tend to eat a small part of their production although it is perceived mainly as cash income with the majority of the production being exported to Guinea. Despite considerable challenges, coastal fisheries are an important provider of animal protein for the district and for the rest of the country.

**Food diversity. 6-23 months old children.** According to the national nutritional survey conducted in 2021 (MoHS, 2021), only 15% of the -6 – 23 months old children reached the minimum dietary diversity score. Lower consumption frequencies than the national level were observed for eggs, legumes and nuts, and fruits and vegetables. In 2019, according to the national demographic and health survey, the minimum diet diversity for 6-23 months old children were close to the national average, with 27% of the children meeting minimum dietary diversity. Vitamin A and iron rich food consumption was above the national average and among the highest of the country at the time of the survey (from mid-May to end of August). Adult women. In Port Loko district 83% of women of reproductive age reached the minimum dietary score in 2021. Based on the 24 hours recall asked to 15-49 years old women, only consumption in dairy products and eggs were lower than the national average, whereas consumption frequencies of other types of food were nearly the same or above the national level showing generally quite a diversified diet in this district. Although fishing is an important activity in the district, in particular in the coastal areas, the consumption of animal protein, including fish, was slightly lower than in other districts for women (80% versus 88 % at the

national level). According to 2019 Demographic and Health Survey, with 39 % the proportion of women consuming 5 or more than 5 food groups, was still lower than the national average, but showed an improvement of the situation.

**Malnutrition.** The level of chronic malnutrition is one of the lowest in the country, with 23.7 % of children under 5 being stunted according to the 2021 national nutritional survey, with a decrease compared to 2017 (27.7%). The acute global malnutrition rate was the same as in Kenema in August 2021 with 5.5 % of the children under 5 being wasted (including 1% severely wasted), which represents a small decrease compared to 2017 (5.7%). The situation is also worrying for the adult population with 7.1 % of pregnant and lactating women suffering from acute malnutrition according to their MUAC (Mid Upper Arm Circumference). For 15-49 year old women the global acute malnutrition rate was relatively low at 0.2%, compared to 0.5% at the national level in 2021. The proportion of 15 -49 old women with anaemia was 45.6%, which is similar to the national average of 46.6%.

**Health.** The crude death rate was 0.23% in 2021 (MoHS, 2021) which is nearly double the national rate of 0.14%. According to 2019 Demographic and Health Survey, diarrhoea and ARI incidence are also higher than the national averages with 12.9% and 4.3% compared to 7.1% and 2% for the national level. Antenatal health facility frequentation reached 88% and is provided by a nurse or a midwife for 58% of the women. The proportion of postnatal checks two days after delivery by a skilled provider is lower than the national average, with 22% who do not have this postnatal check. The proportion of 15-19-year-old women who have begun childbearing is among the highest of the country, reaching 24% according to DHS 2019. The median age at first birth is 19.4 years, which is nearly the same as the national average of 19.6.

#### 4.2.2 Main characteristics

**Topography and climate.** The district lies on the border between the coastal plains and the savanna woodland zones (see Map 1). The district is very diverse, stretching from the sea coast in the west with its mangroves, to the hilly areas further inland with relatively dry conditions. Like in Kenema, the hilly areas are extensively cultivated with irrigated rice and other crops at the bottoms of the valleys, and the uplands with among others of oil palms, upland rice, maize, millet and cassava. The district has also areas of grazing lands and 'boli'lands near Tonkolili and Bombali districts that are mainly used for the cultivation of rice. In 2024 the average trend temperature in Port Loko was 26.5 C, compared to an average yearly trend temperature of 25.8 C in 1979, so an increase of 0.7 C. The average yearly temperature in 2024 was exceptionally high with 27.1 C. The trend average total yearly precipitation has increased slightly over the same period with 2874 mm in 1979 and 2981 mm in 2024. At 3413 mm, the actual total precipitation in 2024 in Port Loko was substantially above the trend. (Meteoblue, 2025)

**Demography.** In 2021, Port Loko district counted 528 038 people (which represent a decrease of 0.5% compared to 2015. According to the different censuses, the population sharply increased between 1963 to 2004 (from 247 463 to 615 376 people), and then decreased. The population density is above the national average, with 113 people per km<sup>2</sup> and the sex ratio of 92.5 is one of the lowest in the country, meaning that the female population is nearly 10% bigger than the male population. The district includes several semi-urban chiefdoms, with high concentrations of people. While the district capital, Porto Loko city, has only 40,804 inhabitants, other chiefdoms also have big populations, such as Kaffu Bullom (107,402), Koya (86,543), Loko Massama (60,268) and Maramba (57,137). As in Kenema, many youths are not interested to have a career in farming, and are rather involved in motorbike riding for transportation of goods and people. The departure of young people from the villages is

facilitated by the proximity of medium sized cities and Freetown. Many people also commute between rural and urban areas on a daily basis or for a few days per week, often leading to the adoption of urban or semi-urban habits, which also affect food consumption habits. Particularly young women are moving out of the villages, while transferring childcare to the children’s grandmothers, sometimes for several days. They are also more likely to visit bigger markets with a bigger variety of products, especially processed foods, but also different kinds of fruits, pulses and vegetables.

**Economic activity.** Agriculture (crops, livestock and fisheries) is the most important economic sector in Port Loko, with 43% of the households depending on it (Stats SL, 2021). The usual agricultural products for households’ own consumption and for local consumption, like rice, cassava, oil palm, maize, groundnut and sweet potato, are widely cultivated throughout the district. Cashew nut is an important cash crop in the area, but only for a relatively small proportion of the households. Some areas also specialise in vegetable production for export to Guinea. Coastal fishing is important for the coastal communities, in combination with agriculture. 7 % of the agricultural households depend mostly on fishing for their livelihoods. Livestock is also important for the livelihoods of many rural households as well, with 17 % of the agricultural households mainly depending on livestock<sup>21</sup>.(Stats SL, 2021) The following table shows the proportions of the 29049 households depending on cultivation of crops in general in Port Loko that are involved in the cultivation of different specific crops.

*Table 7: Percentage of households cultivating different crops, Port Loko district (Source: calculated from Stats SL, 2021)*

<b>Crop</b>	<b>Proportion of households that cultivate it</b>
Upland Rice	74%
Lowland Rice	74%
Maize	50%/62% <sup>22</sup>
Cassava	82%
Sweet Potato	65%
Citrus	13%
Groundnut	75%
Coffee	3%
Cacao	4%
Palm Oil	41%
Cashew	9%

Mining is also an important economic activity in the district, in particular large-scale bauxite and iron ore mining. A rail track has been constructed by the mining company, to facilitate

<sup>21</sup> These percentages were calculated based on data from the draft report. Even though there is an incoherence between the totals of the agricultural households and the households depending on crops, livestock and fisheries, the percentages give an indication of the importance of the agricultural sub-sectors in the district.

<sup>22</sup> Two sets of data produced two different results for maize

transportation of the mining products to the coast. At the national level only 2.6% of households depend on mining and quarrying for their livelihood, compared to 45.7% on agriculture, forestry and fishing. The extreme poverty incidence among households whose heads are working in mining and quarrying is 61.5% compared to 74.9% for households depending on agriculture, forestry and fishing. (Stats SL, 2019) No district level data on the proportion of households depending on mining and quarrying in Kenema district could be found. But it is expected to be considerably higher than the national average, because mining is considered to be relatively important in the district.

**Environment.** Between 2001 and 2024, Port Loko lost 173 000 ha (44%) of its relative tree cover (UoM and WRI, 2025). It appears that this loss occurred mostly in secondary forests, as the district already didn't have any substantial areas of primary forests left in 2001. The few primary forests left in Port Loko are mangroves. Secondary forests are being cut progressively. The main reason for tree cover loss of secondary forests is probably a combination of clearance for agricultural activities (including shifting cultivation) and charcoal. As part of shifting cultivation practices, abandoned fields are often allowed to reforest, but it appears that there is still a signification net loss of tree cover of secondary forests. Between 2002 and 2024, Port Loko lost 91 ha of humid primary forest, which probably concerns almost entirely mangroves. The total area of humid primary forest (again mostly mangroves) in Port Loko decreased by 14% over this period (UoM and WRI, 2025). The main reason for the loss of mangroves is probably a combination of fire-wood production, charcoal production, and clearance for agricultural activities, in particular rice. Map 6 below shows Port Loko's mangroves in 2020 and the losses and gains of mangroves between 1996 and 2020.

Map 4: Mangroves of Port Loko district in 2020 and losses and gains of mangroves between 1996 and 2020<sup>23</sup> (Source: Global Mangrove Watch, 2025)



<sup>23</sup>Sierra Leone as a whole lost on balance 71.44 km<sup>2</sup> of mangroves between 1996 and 2020 (Global Mangrove Watch, 2025)



<p>regeneration of fish stocks on which its coastal communities depend for their livelihoods</p>	<p>the electricity grid. At the same time the supply of electricity for those who are connected is erratic, which often means for (agro-)businesses that they are obliged to buy generators and fuel to provide electricity during power cuts. (Port Loko has a hydro power installation, but it only generates electricity during the rainy season.)</p> <ul style="list-style-type: none"> <li>- Limited access to veterinary drugs: It is difficult for livestock keepers to access good quality veterinary drugs for their animals</li> <li>- Limited irrigation: A big part of the land is not irrigated and therefore depends on rain for its water supply.</li> <li>- Fishermen use unsustainable fishing techniques: Coastal fishermen mostly use fishing nets that also catch a lot of smaller fish and therefore hamper the regeneration of fishing stocks.</li> <li>- Limited access to quality seeds: It is difficult for farmers to obtain seed material of improved varieties.</li> <li>- Limited access to advisory services: It is difficult for many farmers to obtain high quality advisory services like extension services from the government</li> <li>- Poor storage facilities: There are few facilities to cool vegetables and other storage facilities for agricultural products</li> <li>- Limited mechanisation: Farming households have very few machines to facilitate their work, so a lot of the work has to be done by hand.</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>- Favourable conditions for expansion and cashew nuts: The main cash crop of Port Loko district, cashew nuts, are currently reasonably priced in international markets (LIFFT project, 2025).</li> <li>- Favourable conditions for expansion of aquaculture: Aquaculture could be developed in the district in integration with or separate from rice cultivation in IVS. Fish is widely consumed and there is high demand for fresh fish on the markets.</li> <li>- Opportunities to improve marketing of coastal fishing products: If coastal communities are better connected with roads and have reliable access to electricity, they could improve the marketing of their fishing products in Port Loko and elsewhere in Sierra Leone, as well as Guinea.</li> <li>- Favourable conditions for expansion of livestock: Livestock could be developed in the district, in particular linked to the grazing areas within the district. (However, participants in the MSD also noted frequent conflicts between farmers and</li> </ul>	<p><b>THREATS/CHALLENGES</b></p> <ul style="list-style-type: none"> <li>- Reduction of land available to agriculture: The land allocated to mines reduce the land that is available for agricultural activities</li> <li>- Land degradation: Due to unsustainable cultivation practices, soils are degrading, making them less productive or even unsuitable for cultivation</li> <li>- Frequent thefts: Theft of agricultural produce is an important challenge faced by farmers.</li> <li>- Outbreaks of plant pests and diseases: Outbreaks of plant pests and diseases can have severe negative impacts on the crop harvests.</li> <li>- Outbreaks of contagious diseases: As known from the Ebola epidemic and the more recent Covid pandemic, outbreaks of contagious diseases can have profound social and economic impacts.</li> <li>- Climate change: The increasingly erratic weather (including heavy rainfall and intense heat) due to climate change, is a big challenge for agricultural production in the district. Among other negative impacts, probably aided by a reduced capacity of</li> </ul>

<p>herders, when herds of livestock destroy crops.)</p> <ul style="list-style-type: none"> <li>- Opportunities to develop logistic and trade services: Port Loko city sits on the road that connects Freetown to Guinea, and which is also part of the Trans-West African Coastal Highway. Port Loko is around halfway between Freetown and the Guinean border and could become a hub for logistic and trade services, provided that a conducive investment environment is created.</li> <li>- Opportunities to increase vegetable sales: There is a high demand for vegetables in neighbouring Guinea, which is an important opportunity for farmers in Port Loko district. In addition, there are important markets in nearby Freetown and Port Loko itself. If investments are made in storage facilities, the production and trade of vegetables can be expanded.</li> </ul>	<p>the land to retain water due to deforestation, the heavy rainfall increasingly lead to floods.</p>
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## 5. Understanding the food system transition challenge in Kenema and Port Loko districts

### 5.1 Food system drivers<sup>24</sup>

#### 5.1.1 Socio economic drivers

**Household behaviour.** Many households sell part of their production immediately after harvest (when prices are low) to repay loans and cover expenses like social events, schooling, and medical fees. The rest of their production is set aside for their own consumption and as seeds for the next season. After using part of their stocks for planting and with increased energy needs to be able to work in the fields, during the rainy season many households need to buy rice, sometimes on credit. When incomes increase, people typically prioritise other expenses, such as house improvements, school fees, motorbikes, and medical fees. If they spend more on food, they tend to buy more rice, and sometimes eggs and meat.

**Markets.** While diets are mainly derived from agricultural production in both survey areas, markets are a second major source of supply. They represent an alternative supply when domestic stocks are exhausted, but they are not an option for introducing new or different products in the diet except for very specific products (see section on infant food). Generally speaking, products bought on the market are products that are also available at home from family's own production during a certain period of the year (or that were available in previous years), but that are no longer available. In this sense, the market does not appear to be a driver of innovation in food consumption when it comes to unprocessed products. Pulses are an exception, which are produced in small quantities in the two surveyed areas; some pulses are occasionally consumed because they are available at nearby markets.

There are several types of markets and shops where households can buy supplies:

- *village shops*: Some of the villages visited had small markets or shops where the

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<sup>24</sup> This section also contains elements that can be considered as corresponding to the core food system or to food system impacts, but they are included here for the sake of readability of the report

products required to make sauces could be bought (like fish, dried fruit, hot pepper (chillies), egg plants (aubergines), rice, etc.), but with little choice and at higher prices than at the weekly or permanent markets;

- *informal village markets* are mostly used for local produce, such as leafy vegetables. Exchanges or purchases between neighbours are more common in villages far from the larger markets.
- *weekly markets called 'Luma'*, located at varying distances, depending on the location of the villages. These markets are generally on main roads and offer a wide variety of products, with external traders bringing in products from other areas. These markets offer more processed products.
- *permanent markets in towns* of various sizes, generally located on main roads. The range of products available varies according to the size of the market, both in terms of diversity and quantity.

Weekly and permanent markets are often far from people's houses, sometimes up to 4-5 hours by foot, and the journey represents a significant additional cost for households. To overcome this constraint, communities use a number of strategies:

- Inter-household help: one person goes to the market and can buy products to bring back to other households;
- Food purchasing only when the market is visited anyway for selling purposes. This strategy is commonly used during the production period, when women regularly go to the market to sell their products and take advantage of the occasion to make up for any shortfalls.

During the rainy season, as accessibility to markets decreases due to bad road conditions, heavy rains and lack of time, supply from the market becomes more challenging. This period is characterised by a lack of food at the village level and greater reliance on market supply.

Finally, the market represents a source of supply for a limited number of processed foods that cannot be produced by the household. The products most commonly mentioned are maggie cubes (bouillon cubes) and salt, which are used in the daily preparation of sauces, followed by infant food preparations (see 'Food security and nutrition impacts' section) for some households, and are mostly only available at urban markets or periodic markets.

**Specific case of gari:** Gari is a processed product from cassava that is commonly purchased in markets when available (not available at village markets). Gari has been known for a long time and can also be produced locally in villages using traditional, labour-intensive methods. It seems that the interest in purchasing processed products is limited to well-known products made from local ingredients or produced locally and consumable for a long time (e.g. wheat-based bread). The popularity of this type of processed foods can be higher for younger people, especially when they regularly go to cities markets or are used to go to town for other activities and are more likely to test different types of processed food (see also section on demographic drivers).

**Healthy diet knowledge and awareness.** The surveyed communities did not seem to be familiar with the official healthy eating plan, which was observed during the focus group discussion and the household interviews. However, part of the population has been sensitised on the importance of food for their health, and on the different food groups that should be consumed in order to diversify their diet. The knowledge on food diversification and the healthy eating plan was discussed during 9 focus groups: 3 out of 9 did not know about it, whereas 6 out of the 9 mentioned a learning process provided by health centre staff and health radio campaigns. Health centres and the community health workers attached to them, are the major

actors involved in the sensitisation, which is mainly done as part of perinatal consultations. Women are asked to go to the health centre at an early stage of their pregnancy and start receiving advice on healthy diets for themselves and later for the child, with special attention for breastfeeding and weaning practices. Pictures of healthy food are shown and sometimes women can even benefit from cooking demonstrations at the health centres. When the community health worker is active in the village, the sensitisation is also done at the village level, allowing more women to be reached and even men. In some of the visited communities this was done with the support of an NGO, who was monitoring and supporting the community-based health workers. This can also be the case for sensitisation activities carried out in the health centres that are supported by an NGO. Health staff are trained and supported with materials and incentivised to implement sensitisation activities, including cooking demonstrations<sup>25</sup>. Awareness on diet diversification has been developed especially on the importance of fruits and vegetables. Fruits were clearly associated to health for most of the women interviewed individually or as part of focus group discussions.

**Sensitisation.** Participants to the FGDs with mothers with young children, mentioned different sources of sensitisation about the importance of healthy and balanced diets, as shown in the table below.

*Table 8: Source of sensitisation on health and balanced diets indicated during FGDs with mothers with young children*

Source of sensitisation	Health centre	Community health worker	NGOs/ project	Ministry of Agriculture staff	Don't have knowledge on healthy diet
Number of focus group discussion	4	3	3	1	3

The ministry of agriculture through their extension officers, is not directly involved in the sensitisation to healthy diets. MAFS staff were mentioned only once and in relation with agricultural practices for highly nutritious food. Moreover, the collaboration and coordination with health staff linked to the promotion of healthy vegetables and healthy crops was not mentioned.

Besides the government provided awareness-raising, women learn from other villagers, particularly elders who transfer traditional knowledge on the use of specific plants and food preparations. In the absence of other messaging, mothers still learn through such knowledge transfers, how to prepare porridge for young children. In that case traditional recipes based on local products are passed on, without the potential improvements. On several occasions, it was mentioned that knowledge and practices related to the preparation of local porridge were long-standing traditions. Certain projects have improved these practices by refining the composition and types of food included in the porridge, thereby enhancing its nutritional quality. These initiatives emphasise the link between the porridge, children's health, balanced and diversified diets and the use of the national guidelines for health eating.

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<sup>25</sup>Part of the food is supplied by the project and the other part by the communities depending on availability.

Whatever the level of intervention of the project, the type of awareness-raising provided, the association with the health or agricultural sector, or sometimes both, a notable difference in dietary practices was observed when a project had been or was still being implemented in the community. The surveyed people were more likely to make the link between food consumption and eating habits, and their health. They mentioned this link spontaneously, particularly in relation to the consumption of vegetables and fruit, which they consider important for their health. They often acknowledged that they learned this through the intervention of a project. In vegetable-growing areas, although vegetables were mainly produced for sale, women acknowledged that they kept a small part of the production for their own consumption and that of their children, which was often not the case previously.

Taboos tend to be less present than in the past. Some foods that were previously banned from consumption, particularly by pregnant women and children, because they were thought to cause illnesses or bad luck, are now eaten when they are available locally. This was found to be the case with eggs and squash, for example. This evolution in food taboos is recognised by the population, who acknowledge the impact of awareness-raising programs. However, certain taboos persist, especially for pregnant women. Plantains, snails and squash are foods that are still non consumed by pregnant women in some communities on the basis of beliefs and customs.

Generally speaking, although restrictions sometimes persist for certain communities on the consumption of wild foods, for both plant and animal products, wild foods are a poorly evaluated source of animal protein. The frequency with which wild foods are consumed varies widely, depending on food taboos and their evolution over time. Some interviews have highlighted the use of these types of food, but it has not been possible to assess its frequency.

**Theft.** Theft was frequently mentioned during the FGDs and the HIs and during the MSDs. Agricultural products are stolen in the fields, often just before the harvest when people do not have much to eat at home and have difficulties buying from the market due to the lack of cash. This practice was said to have increased in recent years. Some farmers implement pre-harvest surveillance measures, and some products are stolen even before they are fully ripe. The threat of theft stimulates the rightful owners of the crops and trees to harvest their produce prematurely, when their nutritional value is sub-optimal. This is particularly the case for fruits.

### **5.1.2 Biophysical and environmental drivers**

**Climate change.** Climate change has important impacts for farmers in Kenema and Port Loko districts. In Malegohun chiefdom in Kenema district and in Loko Massama, Masimera and Koya chiefdoms in Port Loko district, farmers reported extreme rainfall during the rainy season of 2024. Farmers of the FGD in Mamaso community in Masimera chiefdom said they had adapted their planting dates in order to cope with the resulting flooding. Farmers in in Makulun community in the same chiefdom said their rice yields were reduced as a consequence of the extreme rainfall in 2024 and that it even prevented them from working in the fields at times. Farmers in Robis 1 community in Koya chiefdom reported facing difficulties due to the early start of the rains. In all chiefdoms except Loko Massama, farmers reported more extreme droughts and/or heat. Farmers in Blama community in Small Bo chiefdom in Kenema district, indicated that they felt that the climatic system is changing. Farmers in Mamaso community in Masimera chiefdom and Mamammah community in Koya chiefdom in Port Loko district said that their peanut yields had decreased, because the rains stopped early, negatively impacting the growth of this crop that is planted towards the end of the rainy season. Farmers in Makulun community in Masimera chiefdom indicated that the availability of beans had decreased significantly, due to the droughts.

Key experts that were interviewed<sup>26</sup> also often mentioned climate change as a big challenge for farmers. The Block Extension Officer responsible for Malegohun chiefdom in Kenema district considered that some areas are receiving more rain during the rainy season and less rain during the dry season. The increased rains led to floods in IVS that were developed for cultivation. He also indicated that droughts cause problems for tree crops, in particular cocoa. And in some IVSs that used to have water throughout the year, there is not enough water anymore during the dry season. SEND promotes climate smart crops and techniques to help farmers adapt to the changing climate. Climate change and erratic weather were also mentioned as challenges by three out of four groups who conducted a SWOT analysis of their district during the MSDs. Sierra Leone's updated NDC mentions modelling projections forecasting increased temperatures with the increased occurrence of warm spells, and high variability in rainfall. As likely impacts it mentions increased incidence of pests and diseases, crop and livestock losses due to droughts, and floodings, all affecting food security. (GoSL, 2021) A study conducted by SEND in Kenema district in communities targeted for a project intervention, found that all respondents noticed changes in their crop yields and the quality of their agricultural products over the past decade, primarily due to climate factors like erratic rainfall and temperature fluctuations. They also indicated that these changes have negatively impacted their incomes. 75% of the respondent farmers also stated that the impacts of climate change have reduced the diversity of crops that they can grow. (SEND-SL and EWB-DK, 2025)

**Soil fertility.** Farmers in Malegohun chiefdom in Kenema district and in Masimera and Koya chiefdoms in Port Loko district, complained about low and/or decreasing fertility of their fields, probably referring in particular to their uplands. Farmers in Mamaso community in Masimera chiefdom in Port Loko district said they didn't need fertilisers before, but that now they do on part of their land. Farmers in Loko Massama and Koya chiefdoms indicated that access to fertilisers is a challenge for them. During the MSDs out of a total of four groups who did a SWOT analysis of their district, one group in Kenema mentioned fertile soils as a strength, while one group in Port Loko mentioned land degradation as a weakness. This doesn't attest to a difference in soil fertility between Kenema and Port Loko, but rather the coexistence of beliefs on the one hand that soils are fertile and on the other hand that soil degradation is prevalent. One Key Informant from an international NGO active in Kenema district, addressed this contradiction, indicating that many people say that soils are fertile in Sierra Leone, while actually they are not. The truth is probably more nuanced, depending on the various soil types. The different soil types that are identified often are uplands, IVS (irrigated low lands), 'boli' lands, mangroves and riverine (grasslands). A soil mapping exercise is currently being conducted by MAFS with support from the EU, but in the IHS 2018 75% of households cultivated uplands, 21 % IVS, 2 % boli lands, and mangroves and riverine grasslands both less than 1%. (Stats SL, 2019) (While households who cultivate IVS, probably also cultivate uplands, the opposite is probably not true.) And the soil degradation mainly affects the uplands that are cultivated by the far majority of the households, which is the reason why shifting cultivation is practiced so widely on these lands. This is a vicious circle that occurs in many developing countries whereby shifting cultivation practices accompanied by burning reduce the organic contents in the soil, and by consequence its ability to retain water and nutrients. Shifting cultivation practices were 'sustainable' in the past when population density was considerably lower, and lands were given a longer period to recuperate after a few years of cultivation. (FAO, 1995) In the earlier referenced study by SEND in Kenema, 25% of the

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<sup>26</sup> Including the Town Chief of Kpai community in Small Bo chiefdom in Kenema district, the Block Extension Supervisor responsible for Malegohun chiefdom in Kenema district, SEND in Kenema district, the District Administrator of Kenema district, the District Nutritionist for Port Loko district and Concern Worldwide in Port Loko.

respondents linked erosion to the increased rainfall due to climate change. (SEND-SL and EWB-DK, 2025). Through various donor supported initiatives, big quantities of synthetic fertilisers have been distributed to farmers over the last decades, often facilitated by MAFS. The efficacy of such support can be questioned, also because the fertilisers that are being provided through such schemes are often not specific to the needs of individual farmers and they promote the use of synthetic fertilisers above organic fertilisers. Under the FSRP financed by the World Bank, implemented in close collaboration with MAFS, farmers are provided with certain amounts of NPK (15-15-15) and urea<sup>27</sup>, that are the same for all beneficiary farmers. A key expert from an international NGO active in Kenema district, indicated that more research is needed, but he believes that some kind of nutrient booster is needed to maintain the fertility of uplands while they are being cultivated. IFDC is said to promote both quick, inorganic and slow, organic fertilisation through its trainings.

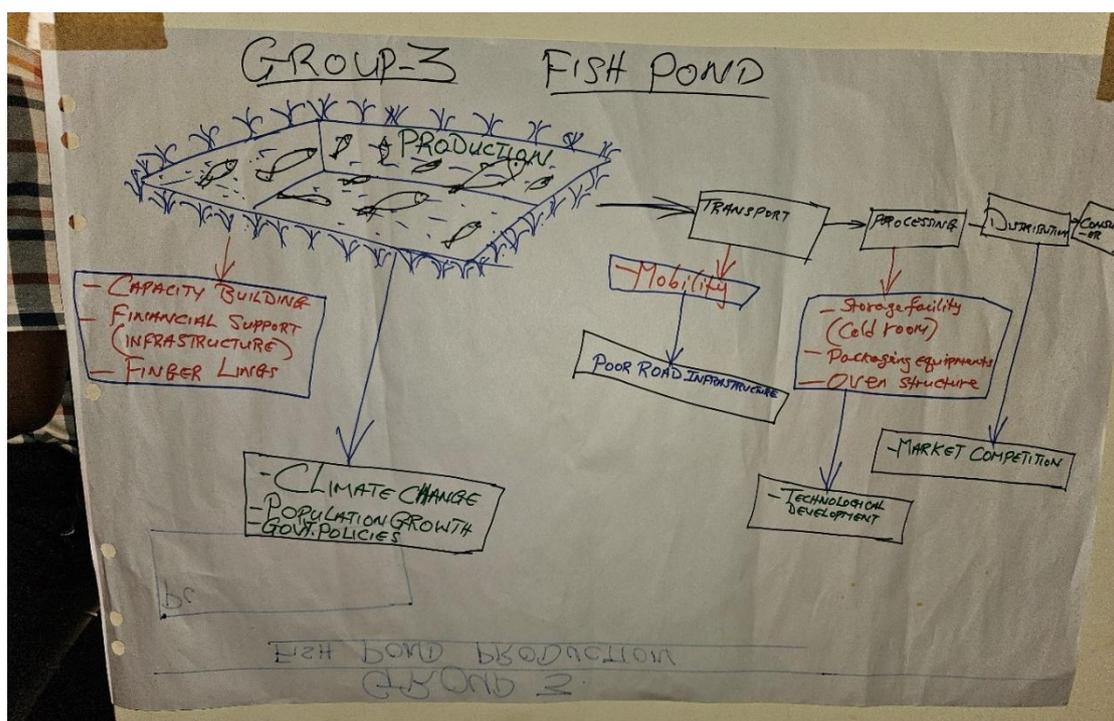
**Weeds.** Farmers in Blama community (Small Bo chiefdom, Kenema district) mentioned that weeds on their uplands was an important challenge for them. The uplands along the road near Kpomina community (Niawa chiefdom, Kenema district) looked very clean, but farmers in that community said they did not use any herbicides, just weeding. Farmers in Mamaso community (Masimera chiefdom, Port Loko district) indicated that they encountered more weeds than before on their field, taking them more time to control them. They linked this increase in weeds to the decrease of soil fertility. Weeds were not mentioned as a specific threat or weakness by the groups who conducted SWOT analyses during the MSDs.

**Inland fishing and aquaculture.** Fish is an important part of people's diets in the two districts, and these fish are mostly obtained through local fishing by members of the households themselves or bought on the market. The school staff near Kponima community in Niawa chiefdom in Kenema district and mothers of young children in Mamaso community in Masimera chiefdom in Port Loko district said people were able to fish only during the dry season, while farmers in the latter community indicated that they were fishing only during the rainy season. In general, the dry season is considered the main fishing season, because people can fish with nets and they have more time at hand to fish. Given the generally limited financial resources, and their distance from the markets, it is unlikely that households can buy fish from the markets as much as they would like to. Therefore, aquaculture seems to be a potential valuable complement to agriculture in IVSs, which could raise incomes and ensure access to fish year-round. When asked, farmers in Sembahun indicated that they would be interested in having fish ponds, indicating that they thought it could work in their community. Farmers in Makulun mentioned it spontaneously that they need fish ponds in order to increase the availability of fish for their own consumption. The school staff of the school near Kponima community in Niawa chiefdom in Kenema district also suggested that the government should provide fish ponds to people to improve the availability of fish as a source of protein that they considered to be lacking in people's diets. The ABC of Nongowa chiefdom (which includes Kenema city) has some fish ponds, which produces tilapia and catfish for the ABC's members own consumption and for selling. Fish ponds were identified as a strength by one of the groups of the MSD in Kenema district and one of the groups of the MSD in Port Loko district, but currently there are still few fish ponds in both districts. The MSD in Port Loko identified the development of fish ponds as a strategy to improve the consumption of animal protein, and one of the groups of the MSD worked on that (see picture below).

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<sup>27</sup> Farmers who want to benefit from this scheme need to provide a telephone number, through which they receive the codes that allows them to collect the fertilisers.

Picture 1: Food chain linked to fish ponds in Port Loko district, including required interventions and drivers of change, as developed by one of the groups during the MSD in Port Loko district



**Access to seed materials.** Farmers mostly used part of their harvest as seeds for the next season of their crops. This means that they were often using sub-optimal seeds. Farmers in Bandi community in Niawa chiefdom in Kenema district indicated that accessing quality vegetable seeds was a challenge for them, and that they would conduct casual labour in order to be able to pay for these seeds. A farmer in Bailor community in Loko Massama chiefdom in Port Loko district indicated that he bought certain vegetable seeds from a shop in Lungi town, quite far from his community.

- **Oil palms:** smallholder farmers mainly used traditional varieties (red palm oil) characterized by relatively high trees, and relatively low productivity. Farmers are able to propagate these traditional varieties themselves and they also replicate spontaneously. Improved palm oil varieties (more productive but also less tall, which makes them easier to harvest) have been introduced in the country. The improved varieties are also supposed to start producing at an earlier age. However, these improved varieties are very difficult to propagate<sup>28</sup> and it is difficult for smallholders to access seedlings of these varieties. Among the farmers who participated in the FGDs, only the farmers in Blama community in Small Bo chiefdom and Benduma community in Malagohun chiefdom in Kenema district, indicated that improved oil palm varieties were being distributed in their community<sup>29</sup>. Farmers in Kponima community in Niawa chiefdom and Sembahun community in Malegohun chiefdom in Kenema district and Bailor community in Loko Massama chiefdom in Port Loko district indicated that they

<sup>28</sup>Farmers themselves currently seem not able to propagate these varieties. Only a few entities in Sierra Leone are said to be able to propagate them, including Njala University and Gold Tree company.

<sup>29</sup> Blama: Gold Tree: this project provides improved oil palm seedlings of the Manecha variety, which starts producing after 2.5 years. IFAD/AVDP distributes improved Tenera variety, which can give higher yields and starts producing after 2.5 years

would be interested to access improved palm varieties. The seedlings of the improved varieties seem to be distributed to smallholder farmers currently only as part of development projects (including IFAD/AVDP and Goal), and a limited number of private sector initiatives. In Blama community (Small Bo chiefdom, Kenema district), farmers mentioned that Gold Tree successfully developed an nursery for improved oil palm variety seedlings. The improved Tenera variety grown in this nursery bears fruits after 2.5 years (instead 5-7 years for traditional varieties). Part of the palm oil of the traditional varieties is harvested from 'wild' trees, that grow on community lands.

- **Cassava** is propagated by farmers mostly through cuttings that they take from the old plants, to create the seedlings for the next season. The common varieties used by most farmers seem to be vulnerable to mosaic virus. Farmers in Kponima community in Niawa chiefdom in Kenema district were buying cuttings of the improved 'world vision', 'blue booth' or 'bomba' variety from fellow farmers<sup>30</sup> in a neighbouring community, who received the variety through a World Vision project. Farmers from Kponima said they experienced no disease problems with these improved cassava varieties. The farmer interviewed in Bailor community (Loko Massama chiefdom, Port Loko district) indicated that Silka 4 and Silka 6 cassava varieties are being cultivated in the area, but that he has not acquired them yet. SLARI and Njala university are working to develop a biofortified cassava variety with increased levels of beta-carotene/vitamin A, but this variety is not yet ready for distribution to farmers.
- **Rice:** farmers are mostly using the seed from their previous harvest. The traditional varieties that they keep on using in this way are often not the most optimal ones in terms of productivity and maturing period. SEND is providing communities in Lower Bambara and Nongowa chiefdoms (Kenema district) with the Nerica variety, which matures in 3 months instead of 6 months for traditional varieties. WFP is also providing this variety at its IVS interventions throughout the country. Nerica is a rice variety for wetlands (IVS) that has been developed by SLARI. The variety is considered palatable and sweet, and therefore popular with farmers. However, one expert of MAFS said that 'improved' varieties like Nerica have been developed 20 years ago and are kind of outdated with a production of only 2.5 metric tons per hectare if fertiliser is applied. What is needed according to him are new varieties that can harvest 4 to 5 metric tonnes per hectare and he hopes that the Feed Salone strategy will take care of that<sup>31</sup>. A former expert of SLARI conceded that many rice varieties developed by SLARI are not accessible to farmers, because there are no multipliers of certified seeds. One of the two groups of the MSD in Port Loko mentioned the low quality of seeds as a weakness in their district, while one of the two groups of the MSD in Kenema mentioned the limited availability of inputs in general. As part of the 2018 IHS, data was collected about farming households' adoption of the Nerica variety, but the report didn't specify adoption proportions.

**Plant pests and diseases.** Farmers in Blama community (Small Bo chiefdom) and Benduma community (Malegohun chiefdom) in Kenema district and Bailor community in Loko Massama chiefdom, Makulun community in Masimera chiefdom, and the 2 communities in Koya chiefdom in Port Loko district mentioned plant pests and diseases as a challenge that they face. Farmers in Bailor and Robis 1 mentioned that grasshoppers affected their crops, in particular cassava. A farmer from Bailor believed that the chemical pesticide treatment advised by MAFS, would probably be effective against the grasshoppers, but would be very costly to apply to the big area to be covered. The MAFS Extension Officer who was present at the

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<sup>30</sup> At 35 – 40 NLE per bundle

<sup>31</sup> Average rice productivity in 2023 was 2 ton per hectare (Stats SL, 2023)

interview for translations, advised to apply an organic pesticide against grasshoppers, by mixing a few dead grasshoppers with water. The same organic pesticide is used by a group of cassava farmers in Port Loko district, and who indicated it to be effective. The mosaic virus affecting cassava was only mentioned by the farmer who was interviewed in Bailor community (Loko Massama chiefdom, Port Loko district). However, as mentioned under the seed subsection above, farmers in Kponima community (Niawa chiefdom, Kenema district) no longer suffered from diseases in their cassava since they used improved varieties that are meant to be resistant to mosaic virus. The farmer in Bailor community also mentioned termites as another pest, probably also linked to cassava. Farmers in Makulun community (Masimera chiefdom) and in Mamammah community (Koya chiefdom) in Port Loko district also mentioned that their cassava crops were affected by pest and diseases, without specifying which ones. Stemborers, which affect in particular rice, were mentioned as a pest by farmers from Robis 1 community (Koya chiefdom, Port Loko district). Pest and diseases were also mentioned by three out of the four groups that conducted SWOT analyses during the MSDs. Farmers from Kponima community in Niawa chiefdom, Kpai community in Small Bo chiefdom and Sembehun community in Malegohun chiefdom in Kenema district and Bailor community in Loko Massama chiefdom in Port Loko district also mentioned wild animals affecting their crops. One key expert from an international NGO active in Kenema district, estimated that 90% of the production was grown without pesticides. Nevertheless, he believes that pesticide residues in food are an important health concern.

**Marine fisheries.** The fishermen that participated in the FGD in Bailor community (Loko Massama chiefdom, Port Loko district) mentioned that 2024 was a bad year. Due to exceptionally heavy rain, they were able to catch far less fish than usual<sup>32</sup>. When asked, the farmers acknowledged that the cutting of mangroves in the area<sup>33</sup> probably had a negative impact on the fish stocks. Farmers within the community didn't cut down mangroves to grow rice<sup>34</sup>, but it was observed that mangrove wood, among other wood, was being used to smoke fish. At the time of the data collection in February 2025, coastal fishing by small scale fishermen<sup>35</sup> like those in Bailor community, was prohibited for the entire month, in order to allow the fish stocks to regenerate. However, the fishermen seemed not well informed about the reasons behind the month-long fishing ban. The fishermen indicated that they are using old fashioned nets, which result in a lot of small fish by catch, which is thrown overboard and doesn't survive. The fishermen explained that modern fishing nets exist that let the smaller fish escape. They would be eager to obtain such fishing nets, also because these nets are thought to be stronger, but the costs of these nets was considered too high. In general, a lot of firewood is being used to smoke fish. The community itself doesn't produce enough firewood, so it is being imported from other communities, both by boat and by road. The chairperson of the fishmongers' association indicated that they would be eager to stop smoking fish, but that they are obliged to do so in order to conserve the fish. They would prefer to sell the fish fresh, but the community doesn't have an electricity supply and they don't have the cooling infrastructure to preserve the fish without smoking. Also the fishermen association was said to be interested to invest in a shared cooling facility to preserve their fish.

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<sup>32</sup> It was unclear whether this was mostly due to reduced stocks or to reduced ability to fish due to rough weather

<sup>33</sup> Mangroves are important places for spawning and early growth of many coastal fish species

<sup>34</sup> The fishermen (some of whom are also part-time farmers) indicated that the community didn't grow rice in fields where previously there were mangroves. On the way to Bailor community such fields were observed, but they seemed to belong to other communities, further from the coast line.

<sup>35</sup> It is not clear to what extent domestic and foreign large fishing boats are contributing to reduced fish stocks and whether or not they are subject to the same month-long fishing ban

**Livestock.** Only a small proportion of the farmers that took part in the FGDs kept livestock other than a few chickens. Farmers were interested to increase their livestock holdings, seeing it primarily as a way to increase their incomes, and to a lesser degree for their own consumption. Calculations based on figures in the draft Thematic Report on Agriculture of the 2021 Mid Term Population And Housing Census, show that 12% of farming households in Kenema district and 17% in Port Loko district depended on livestock, with a national average of 15%<sup>36</sup>. However, these figures do not consider dependency on both crops and livestock, which is probably the case for many farming households. As everywhere, animal diseases are an important challenge for livestock in Sierra Leone. In Kponima community (Niawa chiefdom, Kenema district), the community was due to receive goats under a FAO project, but the goats died in quarantine before arriving at the community, possibly due to PPR. Under some of its interventions in Port Loko, Concern Worldwide provides vaccines, in collaboration with MAFS. During the MSD in Port Loko district, one of the two groups who did a SWOT analysis, mentioned the limited access to veterinary drugs as a weakness of the district. Participants also mentioned the frequent damages to crops caused by mobile herds of livestock.

**Forest products.** According to the 2023 Annual Agricultural Survey, by far the main forest product collected by households in terms of the number of households involved in it, is firewood. Other important products included other wood products, coconuts, honey, palm wine, medicinal plants, tea leaves, snails and sand. There was also a significant number of household collecting unspecified other non-wood forest products<sup>37</sup>. One key informant from an INGO active in Kenema district indicated that households collect a bigger part of their diet from the forest during the lean, (mostly) rainy season, when they run out of stocks. This is in line with the belief of another key informant from an INGO active in Kenema that the quantity of people's diet generally decreases during the rainy season, while the nutritional quality of their diets increases. Many forest products are nutrient dense foods, which underlines the importance to preserve forests. Concern Worldwide, as part of some its interventions in Port Loko district, facilitates community-level forest management committees, which are task to manage forest reserves in the concerned communities.

### 5.1.3 Territorial drivers

**Land tenure.** According to the 2018 Integrated Household Survey, only 37% of the households owned land, while 63% of the households do not<sup>38</sup>. (Stats SL, 2019) A key informant from Kenema district indicated that land owners frequently imposed tough conditions on their land leases (e.g., high upfront payments), which made it particularly hard for young landless people to lease land. One key informant from an NGO active in Kenema district asserted that traditional land tenure practices deprived women of access to land. *Concern Worldwide* as part of some of its interventions in Port Loko district, supports women to improve their access to land. Another key expert in Kenema district said that although a law was adopted to enable women to own land as well, the reality on the ground is still that most of the land is registered in the name of men, as the land registration records are not being modified pro-actively to include women. Another issue with land tenure are the practices that govern heritances of land. The basic rule is that land is shared equally between children. One key informant indicated that the practices often disadvantage children who chose to stay in their community to farm

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<sup>36</sup> As part of the same census, data were collected about the prevalence of the different kinds of livestock kept by households, but the data presented in the report didn't allow for calculating the proportions of households keeping different kinds of livestock.

<sup>37</sup> One important non-wood forest product collected by households is probably palm oil from wild palm oil trees

<sup>38</sup> It must be noted that this concerns both agricultural and non-agricultural land

and take care of their parents. But when the parents die, other children may demand an equal share of the land, even asking particularly the most developed plots of land. This despite the fact that these plots are partly so well-developed thanks to the time and other investments made by the sibling who stayed in the community and farmed these plots.

**Territorial balance.** Whereas the currently ruling party is known to have its power base rather in the south of the country, the main opposition party is known to have its power base rather in the northern areas of the country. This may have an impact on the level of support that is provided to different parts of the country, but it is beyond the scope of this report to analyse that in Sierra Leone. Nevertheless, western international donors generally try to be balanced in the development support they provide and probably insist on a balanced repartition of their aid projects and programmes between the various parts of the country.

#### 5.1.4 Infrastructure drivers

**Road infrastructure.** Farmers in almost all communities indicated that poor road infrastructure (including bridges and culverts) complicated the transportation of agricultural products from the fields to their houses, as well as from their communities to markets. Farmers in Blama community (Small Bo chiefdom, Kenema district) and from Mamammah community (Koya chiefdom, Port Loko district) said that whilst their own communities were well connected by road, nearby communities were not. Farmers from Makulun community district (Masimera chiefdom, Port Loko district) explained how their road connection had improved over recent years, substantially facilitating the marketing of their agricultural produce (not only by making it easier for them to transport their produce, but also by providing better access for buyers to their community). They also mentioned that better road connections enabled them to buy food items from the market more easily. Farmers in Mamoso community (Masimera chiefdom, Port Loko district) described the opposite situation: some households preferred to consume their agricultural products because transporting them for marketing was just too complicated/costly. In Kpai community (Small Bo chiefdom, Kenema district), farmers indicated that their fields could only be accessed by foot whilst crossing a stream without a bridge, so the harvested products had to be carried by hand from the fields to their houses. They indicated that if access to their fields were easier, they would produce more. One older man who was not able to transport his harvest himself, indicated that he would lose less produce to theft if he could access his fields with a hired car. The head teacher of the school near Sembahun community (Malegohun chiefdom, Kenema district) said that the considerable improvement of the (main) road to the community, led to increased incomes as people spent less to transport their products. Farmers in the same community said that their fields could be accessed by motorbike during the dry season. But only one out of the group of five farmers had a motorbike himself. The other four hired motorbikes with drivers to transport their agricultural products from their fields. The chairperson of the fishmongers' association in Bailor community indicated that the poor road connection of her community, sometimes prevent the transportation of their smoked fish to the markets because the roads were not accessible. The main paved roads that connect the different parts of the country together and with neighbouring countries, are of quite good quality and it is thought that the quality of this main road network has increased considerably over the last few decades following the civil war. For the remaining primary forests that are mainly located in the south-eastern part of the country (including in Kenema district), poor road access is probably an effective protection against faster deforestation<sup>39</sup>.

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<sup>39</sup> See territorial diagnosis sections for more information on deforestation

**Market infrastructure.** Many households depend for an important part of their food on markets. The accessibility of these markets and the availability of affordable, diverse food products on these markets, thus has an important influence on people’s access to diverse foods and the quality of people’s diets. Sizeable fresh markets were observed in Kenema city and Port Loko city. The fresh market of Kenema also disposed of collective cooling facilities that allowed traders to preserve fish, meat and vegetables. The market of Port Loko doesn’t have such cooling facilities, which was reflected in the products that were available on this market. At the chiefdom level there is generally also at least one market, which are generally ‘luma’ or weekly markets. It is a long-standing policy of the government to expand the network of these local markets. People and communities are generally eager to be in the vicinity of markets, making it easier for them to sell their products and to buy food and other products. The town chief of Sembahun community in Malegohun chiefdom in Kenema district listed the development of a market in his community as one of its development priorities. See also the sub-section on markets under the socio-economic characteristics section.

**Electricity.** It was observed that access to electricity was mostly limited to communities along the main roads. Farmers in Sembahun community (Malegohun chiefdom, Kenema district) and in Robis 1 community (Koya chiefdom, Port Loko district) expressed that they needed electricity for the development of their communities. In Robis 1 community they saw electricity as a way to power irrigation systems and vegetable cooling facilities, both of which they do not have yet. A processor and trader of agricultural products in Kenema district indicated the need for solar panels in order to have a stable electricity supply to power her vegetable storage facility, for which she now uses a generator for which she has to buy fuel. As mentioned earlier, the development of the small-scale marine fisheries sector could also benefit from access to (stable) electricity for preservation of fish. Access to electricity seems also closely correlated to access to mobile telephones, which will be discussed later in the section on technology drivers.

**Irrigation.** Irrigation infrastructure is very important for agriculture, even more so in the context of climate change, which is resulting in Sierra Leone in increased average temperatures and more erratic rainfall<sup>40</sup>. MAFS has long promoted the development of irrigated IVS as an alternative or complement to the often non-irrigated uplands. As mentioned earlier, the IVS infrastructure is also more at risk of being damaged by more frequent floodings, which in turn can be attributed to climate change and deforestation. Table 11 below indicates the water sources of land parcels in Kenema and Port Loko districts, and the national averages. Probably the plots that rely on ponds and streams correspond mostly to the IVS lowlands, while the rainfed plots probably correspond to the uplands. The difference between these percentages and the percentages of IVS and uplands mentioned under ... could be explained by upland plots being generally bigger than IVS plots, which are farmed also more intensively.

*Table 9: Percentage of parcels by district and water source for agriculture, 2023 (Source: Stats SL, 2023)*

	Well	Borehole	Lake/pond	River/ stream	Rain	Others
Kenema	7.3%	9.1%	1.7%	27.9%	53.9%	0.0%
Port Loko	21.2%	7.0%	19.9%	10.2%	20.5%	21.1%
Sierra Leone	8.1%	5.6%	3.8%	20.3%	48.3%	13.9%

During the MSDs in Kenema and Port Loko districts, one of the two groups who conducted a

<sup>40</sup> See territorial diagnosis sections for more detailed information on the impacts of climate change

SWOT analysis for their district, mentioned the limited irrigation infrastructure as a weakness or a threat.

**Water and sanitation.** While the availability of clean drinking water often does not directly affect the availability of diverse foods for healthy diets, having access to clean drinking water significantly risks the prevalence of certain contagious diseases. And the reduced prevalence of these diseases, enables the bodies of people to better absorb the nutrients in the food that they are eating. The availability and access to clean drinking water is still compromised in many communities in Sierra Leone. Farmers and mothers of young children mentioned the absence of clean drinking water in Kponima community (Niawa chiefdom) and in Sembahun community (Malegohun chiefdom, Kenema district) and in Bailor community (Loko Massama chiefdom) and Makulun community (Masimera chiefdom, Port Loko district). Pump wells were observed in most communities that were sampled, but some of those pump wells were not functioning, either because they had broken down, or the pump only functions during and right after the rainy season. A key information from an international NGO active in Kenema, mentioned that the installation of pump wells not always works well as part of their interventions, for instance when the person trained to maintain the pump well, leaves the community.

*Table 10: Percentage of Main Source of Water for Household use in the dry season*

	Piped	Tube well/Borehole	Protect ed dug well	Unprot ected dug well	Protect ed Spring	Unprot ected Spring	Rain water	Surfac e Water	Bottle/s achet water	River/ stream	Other
Kenema district	0.0	0.0	23.3	11.9	0.5	0.3	0.0	0.0	0.0	64.1	0.0
Port Loko district	0.0	5.7	14.0	9.9	0.0	4.1	3.1	0.0	0.0	63.2	0.0
Sierra Leone	8.2	2.5	21.0	8.8	2.0	5.2	0.2	0.6	0.2	51.0	0.2

The low availability of adequate sanitation facilities indirectly impacts the people’s nutritional status. Similarly, inadequate sanitation facilities lead to a higher prevalence of contagious diseases that can compromise the absorption of nutrients from the food people consume. Sanitation facilities are still lacking or sub-optimal in many communities. Concrete latrines were observed in some of the sampled communities, but not in all. In some cases, they seemed to be out of order or unfrequently used.

Table 11: Percentage of type of toilet used by households (Source: Stats SL, 2019)

	flush to piped sewer system	flush to septic tank	flush to pit (latrine)	flush to some where else	ventilated improved pit latrine (VIP)	pit latrine with slab	pit latrine without slab / open pit	composting toilet	hanging toilet / hanging latrine	no facility (bush, field, waterside)	other
Kenema district	0.5	2.1	3.3	0.0	1.7	57.0	14.1	0.0	4.0	17.3	0.0
Port Loko district	0.0	2.8	2.0	0.0	0.7	27.1	32.8	0.3	18.4	15.8	0.1
Sierra Leone	1.5	4.7	4.9	0.4	3.0	38.0	19.7	1.6	6.1	20.0	0.2

Certain NGOs have included the establishment of clean drinking water infrastructure and awareness raising activities on hygiene in their interventions, in addition to the agricultural development and nutrition focused activities. Obviously, water and sanitation infrastructure development needs to be combined with awareness raising for the activities to be effective. A relevant link between the agricultural development and hygiene awareness raising activities that is made by certain organisations, is to promote the production of soap with the raw materials of certain crops. For instance, WHH does this in part of its targeted communities in Kenema district. As part of its planned interventions in the palm oil value chain, the EU intends to also support the production of soap based on palm oil cholesterol. During the MSD in Kenema, one of the two groups who did the SWOT analysis for their district, mentioned the poor access to water and sanitation as a weakness.

### 5.1.5 Technology drivers

**Food processing technologies.** Food processing technology is an important driver for food system development in Sierra Leone. While some of the farming households benefit from rudimentary processing equipment, in general households still spend a lot of time on processing of agricultural products by hand. Whereas men are often responsible for harvesting (in particular of palm oil fruits), the processing tasks are mostly carried out by women. (In addition to these and other tasks linked to the farming activity, women are also mostly responsible for food preparation and child care within the household.) Besides the precious time spent on manual processing, the quality of the processed products is often also inferior to products processed with machinery, and the post-harvest losses are also often higher.

**Palm oil and palm kernel oil.** The default method employed by farming households for processing palm oil is to pound the fruits with wooden mortars and pestles, and then to boil the crushed fruits for a long time to let the oil separate from the water. After letting the pot cool down, the oil can be sieved from the top. Boiling the thus retrieved oil again allows for remaining water to evaporate. After that the oil is generally put in plastic containers of varying sizes for storage. The improved processing technology that has been adopted by part of the households is a big metal pot in which the fruits are squeezed by two people (often men) turning with a long metal or wooden pole, the vertical axis that is connected to a blade in the pot. Within the pot the juice is immediately separated from the solids through an in-built sieve. Before squeezing, the pots are heated on a fire, to loosen up the fruits. The kernels or nuts of the palm

fruits are a valuable side-product. People either sell the nuts or they press the oil out of the nuts themselves like in Blama community in Small Bo chiefdom in Kenema district where they have a machine for that. In Bandi community in Niawa chiefdom in Kenema district farmers extracted the oil with their feet, because they could not afford to buy a machine.



*Photo 1. Juice of palm fruits that have been squashed manually, cooking in order to separate the oil from the juice in Kponima community (Niawa chiefdom, Kenema district)*



*Photo 2. Pot used for improved method to process palm oil in Loko Massama chiefdom in Port Loko district*



*Photo 3. Palm nuts drying on the ground in Kponima community in Niawa chiefdom in Kenema district*

**Rice.** The default option for processing rice for farming households<sup>41</sup> is also pounding (or ‘milling’) with pestle and mortar, in order to be able to remove the husk. Farmers in Blama community in Small Bo chiefdom in Kenema district and in Kegbal community in Loko Massama chiefdom in Port Loko district said they were milling rice by hand in that way, because they didn’t have access to a milling machine, which were said to be very expensive by the

<sup>41</sup> After drying and threshing manually

farmers in Blama. The farmer in Bailor community in Loko Massama chiefdom in Port Loko district also said there was no rice mill available in his community, and that therefore he would first pound the rice by hand, followed by parboiling<sup>42</sup> the rice, before taking it to another community for additional milling. In Sembahun community in Malegohun chiefdom and in Loko Massama chiefdom, defunct ABCs<sup>43</sup> were observed that were said to have contained relatively big-scale rice milling machinery. A trader and processor from Kenema district, who is also chairing an ABC, said that a rice mill was lacking in her ABC. For her own company she had received a mill from MAFS through NaFFSL. In contrast to the ABCs mentioned before, the ABC of Nongowa chiefdom around Kenema city has functioning rice processing equipment, which was supported by WFP. They have a generator, a milling machine, a thresher, a destoner, storing facilities and a drying floor.

**Cassava.** Cassava is being processed by farming households into various products, including gari, fufu, powder and simply peeled cassava. The processing involves in all cases peeling of the cassava roots<sup>44</sup>, which is generally done by hand and involves considerable losses. Gari is basically fermented cassava granulate precooked and mixed with oil and other ingredients, so that it becomes a rough powder or granulate that can be easily prepared for consumption by simply adding hot water. It is a popular staple food in Sierra Leone and a product into which farming households often process their cassava in order to preserve and add value to their product before selling. One of the two households that was interviewed in Kponima community in Niawa chiefdom in Kenema district, was processing part of its cassava harvest into garri by hand, assisted by a casual worker who is skilled in the process. The farmers in the same community who participated in the FGD said they would pay for the services of people in a nearby community with a grating machine, to grate their cassava at a price of 40 SLE per bag.

**Mobile telephone technology.** Access to mobile telephone technology is closely linked to access to electricity. People who do not have access to electricity in their own house, may resort to charging their phones at shops with electricity, as was observed in Blama community (Small Bo chiefdom, Kenema district). People also use small solar panels to charge their mobile telephones. But the coverage of mobile networks also limits the access that people may have to this technology. During data collection, it was observed that mobile network coverage sharply declined when traveling from the main roads to the communities. The number of mobile connections in Sierra Leone amounted to 99% of the total population in January 2025. As many people have multiple numbers, it can be assumed that a sizeable part of the population who does not have a mobile telephone. Between early 2024 and early 2025, the number of mobile connections increased by 7.4% (GSMA Intelligence according to Datareportal, 2025). 79% of the mobile connections in Sierra Leone can be considered 'broadband', meaning that they connect via 3G, 4G, or 5G mobile networks. However, many of these devices are not actually connected to internet, because their subscription plans do not provide for it. Sierra Leone's internet penetration rate was 20.7% of the total population at the start of 2025 (GSMA Intelligence and Kepios according to Datareportal, 2025). Telephones are mainly used for voice communication, but also to transfer money through mobile money providers like Orange Money and Africell. In Sembahun community (Malegohun chiefdom, Kenema district), 4 out of

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<sup>42</sup> Parboiling of rice in Sierra Leone typically means rice being a few times soaked and boiled followed by removal of the cooking water, and drying. The result is considered to be lower in starch than ordinary rice, and therefore in particular a good option for diabetic people. Imported rice in Sierra Leone is also frequently parboiled.

<sup>43</sup> Agro-Business Centres were developed in the past by MAFS with donor support, in particular the EU, as installations at chiefdom level to facilitate processing and marketing of farmers' produce, in particular rice.

<sup>44</sup> The peels are usually fed to livestock

the 5 farmers who participated in the FGD had a mobile telephone. They used their telephones to obtain market information to help them decide when to sell their produce. In Kegbal community (Loko Massama chiefdom, Port Loko district), farmers used Orange Money to receive money from relatives elsewhere. In Blama community (Small Bo chiefdom, Kenema district), one farmer sent her vegetables by bus to Kenema to be sold on the market and was paid through Orange Money by her customer in Kenema city. Dedicated farmer applications with services specifically targeting farmers did not seem widely used in Sierra Leone (none of the farmers who participated in FGDs mentioned them). According to one key expert, a few farmer applications are operational in Sierra Leone.<sup>45</sup> The limited adoption rate of farmer apps and other internet-based services by farmers may be explained by the limited data coverage (Map 6 shows the coverage of Orange, the operator with the widest data coverage in Sierra Leone).

Map 6: Data network coverage of Orange in Sierra Leone (Source: nPerf, 2025)



**5.1.6 Political and governance drivers**

**Ministry of Agriculture and Food Security.** The *Feed Salone strategy* is one of the flagship initiatives of the current government, which gives an indication of the high importance that the government attaches to agricultural development. From the strategy document itself, as well as the communication around it, it appears that the main focus of the Feed Salone strategy is on producing more rice<sup>46</sup> in order to reduce imports, to improve the country’s trade balance.

<sup>45</sup> The Feed Salone strategy mentions ‘the creation of phone-based Apps to relay key information to farmers’ as part of an areas of intervention under Strategic Pillar 5.

<sup>46</sup> An agricultural extension worker of MAFS in Kenema district acknowledged that due to the Feed Salone strategy, the focus of AVDP was shifting even more to IVS, and less so on tree crops like oil palm

Although 'Alleviating Hunger and Malnutrition' features as one of the Strategic Objectives of the strategy, in practice healthy diets and nutrition do not seem strongly integrated in the planning and implementation of the strategy. International development projects and programmes implemented by MAFS like the Food System Resilience Programme financed by the World Bank, the Agricultural Value Chain Development Project (AVDP) financed by IFAD existed before the strategy, but can be seen as the current main sources of funding for the implementation of the strategy. The FSRP and AVDP projects and programmes have only limited nutrition components; the main focus is on increasing agricultural production and processing. MAFS also implements a sizeable programme for WFP, which has a relatively stronger nutrition component<sup>47</sup>. It must be acknowledged though that MAFS has a unit dedicated to nutrition and women in agriculture, and that in each district level office of MAFS, there is a staff member who is tasked specifically with these issues. At the local level, the MAFS is represented by a Block Extension Supervisor and a Block Extension Assistant, who together usually cover around 3 chiefdoms. This seems like a lot of farmers to cover spread over a large area for 2 extension workers, while facing the usual constraints of agricultural extension services in developing countries, with lack of motorbikes and fuel to travel to the various communities they are meant to cover. One key informant of an international NGO mentioned that the collaboration between MAFS and international organisations and donors does not always produce the right results. Project funding from some donors is sometimes constrained by time limitations of 1-2 years, which is often insufficient to implement certain planned activities. For instance, the development of IVS should take at least 3 to 4 years according to the key informant, in order to be able to do a proper assessment of the situation of targeted sites. Another example is when donors provide funding for inputs like fertilisers and seeds. Due to donors' time constraints, it happens that these inputs reach the farmers at the wrong period of year —after the appropriate stage in the production cycle has already passed. Farmers often use these inputs immediately, instead of keeping them for the next season.

**Ministry of Health.** Nutrition is generally still seen as the preserve of the Ministry of Health (MoH) with its Food and Nutrition Directorate at the national level, its District Nutritionists in all its district level offices, and its health centres and Community Health Workers at the local level. The main policy framework for the MoH' and the wider government's interventions in the field of nutrition is the Multisectoral Strategic Plan to Reduce Malnutrition (2019-2025). This plan includes 'nutrition-sensitive' interventions for which the agricultural sector<sup>48</sup> and the education sector<sup>49</sup> needs to be involved. It also includes interventions to ensure 'functional multisectoral platforms at community level'<sup>50</sup>.

**Collaboration and coordination between MAFS and MoH.** Despite policy commitments made by both MAFS and MOH to collaborate and coordinate with each other, only limited evidence was found of strong structural collaboration and coordination between the two ministries at the local level. The people from SEND's office in Kenema indicated that they collaborated with MAFS to provide technical expertise for the establishment of gardens in the direct vicinity of MoH's local health centers<sup>51</sup> (e.g., on bedding, seeds, and organic pest

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and cocoa.

<sup>47</sup> Some NGO projects in the two districts have strongly integrated agricultural development and nutrition, but this will be discussed later under the section on potential interventions and innovations.

<sup>48</sup> In particular SD3: Improve household food security especially of households with multiple overlapping factors influencing their food security status

<sup>49</sup> In particular SD 4: Rapidly increase access to adequate nutrition among target groups by leveraging existing efficient education and social sector service delivery platforms

<sup>50</sup> Key Action 3.4.1

<sup>51</sup> Such a garden was observed at the health center that covers Sembahun community and other

control). The people who were interviewed at MoH' local health centre in Blama community (Small Bo chiefdom, Kenema district) acknowledged the importance of diverse food production for healthy diets, but they did not know MAFS's agricultural extension workers responsible for Small Bo chiefdom (who were also only recently stationed there). A CHW in Masimera chiefdom (Port Loko district) provided climate smart seeds to farmers but it was not known whether this was done in collaboration with MAFS.

**Scaling Up Nutrition and Food Systems Coordination Unit within OVP.** The Scaling Up Nutrition and Food Systems Coordination Unit<sup>52</sup> (SUN-FSCU) within the Office of the Vice-President (OVP) has a mandate to coordinate the different government entities in the fields of nutrition and food systems<sup>53</sup>. The unit has appointed 'SUN Focal Points' among the government staff in each district<sup>54</sup>. These Focal Points organise coordination meetings, to which government staff from the different relevant district level government authorities are invited, as well as staff of NGOs working on nutrition. However, these meetings seem to depend a lot on donor/NGO funding. In Kenema district WHH is known to sponsor the organisation of the coordination meetings and in Port Loko district the coordination meetings are sponsored by Concern World Wide through AAD-SL. Therefore, it is not likely that regular coordination meetings are held in all districts, and the continuation of the meetings after the sponsoring projects come to an end, is doubtful.

**Presidential Initiative on Climate Change, Renewable Energy, and Food Security.** The Presidential Initiative on Climate Change, Renewable Energy, and Food Security (PI-CREF) is meant to ensure that climate resilience is prioritised across key sectors and that coherent policies are being put in place. Coordination and reporting mechanisms for all climate-related activities and projects in the various Ministries, Departments and Agencies are planned. (African Business, 2023) PI-CREF is existing by default only as part of the current presidential mandate. PI-CREF has developed its own strategy and PI-CREF was also the government focal point for the GloPAN initiative<sup>55</sup>.

**International commitments.** The Sierra Leonean government has also taken significant commitments in the fields of nutrition and in the wider food system, in the framework of the UNFSS and its follow-up summit two years later, as a member of the Alliance of Champions for Food Systems Transformation (ACF) was launched during the COP 28 summit in December 2023, and most recently in the framework of the Nutrition for Growth (N4G) summit that was held late March 2025 in Paris, France. The SUN-FSCU is currently working on a plan for the implementation of the food systems 'pathways' to which Sierra Leone has committed itself in the UNFSS framework.

### 5.1.7 Demographic drivers

The population of Sierra Leone is relatively young, with 67.9% of the population being less than 25 years old in 2017 (GoSL, 2019). Although population growth has slowed, at an average of 1.04 % between 2015 and 2021 (Stats SL, 2022), Sierra Leone's population is still growing steadily. This is putting additional pressure on the limited natural resources on which the food

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communities in Malegohun chiefdom in Kenema district, and where a KII was conducted

<sup>52</sup> Previously the SUN Secretariat

<sup>53</sup> The Hon. Minister of State – OVP, H.E. Ms. Manty Tarawalli, who also serves as Sierra Leone's National Food Systems Convenor within the framework of the UNFSS

<sup>54</sup> For instance, in Kenema district the SUN Focal Point is the Gender Officer within the District Council and in Port Loko district the SUN Focal Point is the District Nutritionist of MoH' district office.

<sup>55</sup> For more info see : <https://www.glopan.org/brief/africareilience/>

system depends.

Many young people jobs outside of farming, such as working as motorbike drivers transporting goods and people. They often commute or move to the towns. As a consequence, the agricultural work force is decreasing, leaving old people with the hard labour in the fields. This can be a constraint to the development of farming, especially during the peak labour season (rainy season). While it is a normal development that a larger part of the workforce shifts to work in the secondary (manufacturing) and tertiary (services) sectors as a country develops, job opportunities are often limited in the cities, according to key informants representing youth in Kenema. This migration to urban areas migration was also confirmed at the community and chiefdom level. Respondents mentioned that teenagers are leaving the communities to attend secondary schools and some then university. Many of them are not coming back to their communities afterwards. Observations in the communities also confirmed this migration trend, with young population seemingly being less represented. Young people are drawn to jobs other than farming because they can earn money faster. Farming requires a long-term investment and hard work before seeing any income. As a result, they rely on daily wages to buy food from the market. This often leads them to simplify their diet, purchasing food daily based on their earnings and paying little attention to food variety. This lack of diversity in their diet can also affect the nutrition of their young children. Considerable numbers of people also work in the mining sector, where access to healthy, balanced diets is also more difficult.

Population movements can also impact food consumption patterns in different ways:

- *access to urban or peri-urban markets offering different types of products*: it was reported several times that women commuting to larger cities often brought back from urban markets certain food items (e.g. certain types of beans, fruits or processed foods like biscuits and weaning food);
- *new food consumption habits*: pupils who left the village to attend a secondary school and other people sometimes brought back new habits and create new demand for certain products in the village. This eventually had an impact on food consumption patterns when local markets responded to these demands.
- *weaning food prepared by grandmothers*: grandmothers often end up being young children's caregivers and in charge of their food preparation. Grandmothers are often guardians of traditional weaning food preparations, which can include good practices, but often need some improvements. However, they can be less receptive to sensitisation efforts aimed at improving traditional practices. On the other hand, while young mothers tend to buy biscuits or basic dry porridge on the markets (with poor nutritional value), grandmothers might prepare more affordable and more nutritious porridge with local food.

Drug abuse is a significant problem in both in urban and rural areas, further contributing to the shortage of labour in the agricultural sector. Drug addiction also puts more pressure on households' economic resources, with less resources left for food. Drug addiction is also making people less interested in their food consumption in general, and less receptive to sensitisation on the importance of healthy diets.

## 5.2 Food system impacts

### 5.2.1 Food security and nutrition impacts

**Overview of diets.** In the two districts, diets are mainly based on what people produce and

depend on the specific production system in place. Most of the food consumed comes from farm production for a large part of the population, but market dynamics are also important drivers of dietary patterns. As most of the population relies on farming, with diversified production through intercropping in the uplands, and for some additional products from both rainfed and irrigated land, diets are quite diverse for many households. As a result, women report a broad range of foods as part of their daily diet.

- Rice is the major staple food used, but mothers also mentioned cassava, sweet potatoes, yam and banana (plantain but mainly sweet banana) as sources of carbohydrates.
- Vegetables are always mentioned but tend to include only leafy vegetables, which are consumed on a daily basis throughout the year. Whereas other types of vegetable (tomatoes, eggplants, onion, okra, cucumber, pepper) are consumed more occasionally, except for pepper (chili) which also tends to be part of the daily diet.
- Fish was regularly mentioned as part of meals with different levels of frequency and a minimum consumption frequency of twice a week. Fish is traditionally consumed in both territories surveyed though the aquatic food system is quite different, which attest to the long and strong habits of fish consumption. Fish is consumed fresh, dried or smoked, as part of the sauce consumed with the staple food, especially rice. Daily sauce preparation involves using fish and pepper, which are both highly sought-after and popular ingredients. Some women said they could not imagine making sauce without fish. Despite being highly appreciative of this ingredient, other families do without it for a few days each week, especially during times when fish is scarce.
- Oil was also mentioned as part of the daily meal preparation, but its importance in the sauce depends on the carbohydrates sources of the meal. For some dishes it seems more feasible to prepare a sauce without oil than for others.
- Other foods are part of the diet but were not mentioned spontaneously by the population as they are not consumed on a regular basis (see later on the detailed analysis of food group consumption). These include fruits (banana, mango, oranges, pineapple), beans (cowpea, broad beans), and different types of cereals (sorghum, millet and corn).

**Seasonality.** There is a marked evolution in food consumption patterns over the course of the year, driven by household level food availability and households economic strategies. Farmers sell part of their production and keep the other part for their own consumption. They also tend to first eat what they have in stock before buying food on the market, which influences the composition of the meal. Hence, rice is consumed in important quantities after the harvest from November to April (depending on the amounts produced), and is then often replaced by cassava, yam or sweet potatoes. Tubers are therefore the staple food traditionally consumed during the rainy season. They are locally available and harvested especially during the rainy season. Whereas rice often needs to be purchased during the rainy season, which is generally constraining due to low market accessibility, time constraints and high prices during that period. People also mentioned that tubers are a better source of energy compared to rice, making them a more adapted staple food during the labour-intensive rainy season. The vegetables that are used in the sauce are also seasonal: leafy vegetables are widely used during the rainy season, but tend to be less consumed during the dry season. Seasonality is less pronounced for other vegetables like eggplants, okra and pepper, which can be produced in the home garden (or the swamp) during the dry season. Meals are more diversified during the dry season due to better availability of vegetables. Fruit consumption also varies along the year (see details below).

**Consolidated information per food group.** The following information is mainly based on the

Household Interviews and enriched with information from the FGDs and KIIs. As an overview on food group analysis, all the groups are present in the diet, but irregularly and in inadequate quantities for in particular three food groups: pulses, fruits and vegetables.

*Carbohydrates.* Rice was the major source of carbohydrates of all the households interviewed. Out of 21 answers related to this food group, 12 mentioned other regular alternative sources of carbohydrates (cassava, potatoes, yam, plantain). These are eaten mainly during the rainy season and came mainly from farm production or from fellow villagers. Five households mentioned eating rice every day and twice a day and used other sources only during the rainy season when they had no other choice. Other households frequently prepared one meal with rice and another one with cassava, potatoes, banana or yam, even during the dry season. Buying rice on the market is mainly considered when household stocks are depleted. All types of carbohydrates are consumed after some form of processing. Cassava is consumed as tubers with sauce. Cassava processing into gari is not done systematically at the village level, although gari is much appreciated.

*Vegetables.* Mainly leafy vegetables are consumed. 63% of the households mentioned a regular consumption of leaves, and nearly 50% of the households reported eating them every day (the other half ate leaves frequently, depending on the type of sauce). Though vegetables were consumed regularly throughout the year, consumption increased during the rainy season. Cassava leaves and sweet potato leaves were the most consumed, as well as krain krain (mainly during the dry season). Some wild leaves (indigenous vegetables) harvested in the bush were also mentioned. 70% of the households mentioned other types of vegetables besides leaves, depending on the sauce they prepared. Among them, 37% mentioned eggplants, and 25% mentioned pepper (chili). However, pepper is considered to be used more frequently than that, as a basis for sauce preparation, even if it is used in relative small quantities.

*Fruits.* None of the 23 households who mentioned fruit consumption have access to fruits throughout the year. Consumption of fruits is irregular, with seasonal peaks during one to two months depending on the fruit species and the localisation. The majority of the population do not purchase fruits, or only occasionally. Mangoes and oranges were the most mentioned fruits. They can be harvested from trees in the village and therefore do not need to be purchased. People are used to buying them just before and after the production peak, when they are not abundantly available. Banana is the only fruit consumed along the year (56 % mentioned it), but the production in the village and more specifically in the household, is often not sufficient to provide it on a regular basis. However, people can buy some fruits in their vicinity. Pineapple is produced at household level in the two surveyed territories. In general they are produced only in small quantities, but they are generally reserved for selling as they represent a good source of income. Pawpaw and avocado are also consumed occasionally during harvesting time, the harvest being also destined primarily for sale. In general, fruits were mentioned as being unaffordable for the population in rural areas, except at the peak of the production when some of them can be consumed for free (e.g. mangoes and oranges)<sup>56</sup>.

*Pulses and beans.* This food group is less consumed, and people are traditionally not used to produce and cook them on a regular basis. Planted in association with others crops, the production is often rather erratic, and the consumption is based on the level of production as it is not considered as essential in the diet. Only four households out of 17 mentioned eating it regularly like 2 or 3 times a week in small quantities and especially during the dry period after

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<sup>56</sup> Most fruits are ripe in the rainy season (March -November), with the exception of banana/plantains and coconuts that are available year round

the harvest. For other households, the consumption is irregular, like once a month or every two weeks. Cowpea and broad beans are the most consumed. When they are available at household level, people tend to use them in the sauces as an alternative for leafy. Beans and pulses preparation is underlined as a barrier to their consumption, as they take usually more time to be cooked. Some of them need specific preparation to avoid stomach-ache, making them less attractive.

*Animal proteins.* All of the 21 answers related to animal protein consumption mentioned fish. 20% of the households mentioned eating fish on a daily basis. The others (80%) consumed fish frequently or at least regularly, depending on availability and on the type of sauce prepared in association with other ingredients. Fish is used dry or fresh depending on the availability. In the two territories surveyed, fishpond production is very scarce and fish is sourced through fishing or from the market. Fishing is often seasonal, depending on the water level in the rivers or streams. People (both men and women) tend to fish mostly during the dry season, when they have more time. But in some areas water levels are not sufficient, and as a consequence fish is more likely to be available during the rainy season. In other areas people are not able to fish during the rainy season, as the water level is too high and traditional fishing techniques are not adapted to that. Fish is often available in the local market, even at village level, but mainly dry fish and in small quantities. Due to the seasonality of fishing from streams and rivers, the quantity of fish that is consumed, varies along the year. During the rainy season, when people have to supply it from the market, people more frequently cook without fish if they cannot afford it. Meat (mainly chicken) is only consumed linked to big events, and is not considered to be part of the regular diet. Eight households out of 21 (38%) mentioned eating eggs, but only in small quantities. However, there has been a slight change in egg consumption. Previously eggs were often considered as taboo food, especially for children and women. People are now consuming them more thanks to sensitisation efforts.

*Oils and fats.* This group includes oils and nuts, in particular groundnuts which are also considered as a major source of fatty acids. In the two areas surveyed, oil and especially palm oil is the predominant source of this food group in people's diet. Out of the 15 households who mentioned this food group, only one consumed groundnut oil, 10 consumed palm oil every day and 5 regularly but not on daily basis, depending on the sauce and on the type of carbohydrates that is consumed. Communities across the districts face constraints at every stage of the process, from harvesting to processing. Although palm trees can be harvested several times a year, the quantities that are produced are often insufficient to meet household's needs. Therefore, people are often required to purchase also from the market. Households who have larger plantations<sup>57</sup> can use palm oil production as a cash crop and sell part of their production, even if this sometimes means buying small quantities of oil later on for their own consumption.

***Food consumption of vulnerable groups.*** The families that were surveyed give different types of foods to children aged 6 to 24 months. Most mothers/caregivers refer to the rice based complementary foods they prepare and give to children as 'benni mix' even though benni (sesame seed) is absent from the recipe. This is because the cooking demonstrations, health talks and campaigns initiated by the Directorate of Food and Nutrition within the Ministry of Health, and their partners, are inspired by the benni-mix food produced by the benni-mix company, which is the oldest complementary food factory in the country.

***Composition of weaning food.*** Porridge preparations are based mainly on local food sourced in priority from household production, but can also be based on products sourced from the

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<sup>57</sup> This is mainly the case with improved oil palm varieties.

market if available. It includes between 1 and 5 food items, including rice, fish, oil (mostly palm oil), sesame, beans, groundnuts, vegetables (leaves and sometimes pumpkin), eggs, sugar and corn.

*Table 12: Food items consumed as part of weaning food by children between 6 and 24 months old as mentioned by mothers during the Household Interviews.*

Food items	Rice	Fish	Oil	Sesame	Beans	Groundnuts	Sugar	Corn	Eggs
% of mothers mentioning the item	93%	57%	43%	43%	29%	29%	29%	7%	7%

Out of the 14 mothers explaining the preparation of the weaning food, 55% reported using 4 items, including rice. Oil is not systematically included (only 43%). The mixed porridge is locally made: rice is soaked, dewatered, pounded, sieved, pot roasted before blending all the items together or stored separately until they are ready to be cooked. The preparation is then stored and used during several days (between one weekend and one month), just mixing it with water before feeding it to the child, twice or thrice a day.

Beans are not regularly used in porridge preparations. Soybeans were not mentioned during the interviews (this crop is not much cultivated in Sierra Leone), however sesame is added in the preparation quite regularly, be it in small quantities. The use of beans, sesame, cow peas and soybean in local infant food preparation is widespread in developing countries and is a major source of protein, especially the soybeans (Kanu, 2024). The quantity and the quality of pulses food group added in infant food seems not appropriate to meet the daily needs of protein required for 6-23 months old infants<sup>58</sup>, but this is compensated by adding fish, which adds good quality proteins and is also a source of diversified amino acids and micronutrients. However, the quantity of fish that is added, is not regular as it depends on the season and the purchasing power of the family when they have to prepare the porridge. The quantities of the different products used to prepare local infant food could not be assessed as part of the survey. Proteins and micronutrients and fatty acid supplies from fish (mainly dried) depend on the amount, but also on the type of fish, as their nutritional values are not all equivalent (Leape et al., 2023). Dried and smoked fish are most commonly used. Whereas fish is an essential source of animal protein and micronutrients in many rural communities, they can also be a source of toxins with health consequences, due to significant microbial growth during the drying process, (Abdollahi et al., 2018). The food safety of prepared porridges is crucial, as they are intended for an at-risk age group and can cause diarrhoea or other diseases if the sanitary quality of the porridge is not good. Mothers prepare the porridge individually, using only a mortar and sun drying. There was no exchange or sale of locally produced porridge within the village.

*Ready-to-use infant flour.* The use of ready-to-use infant flour purchased on the market was also mentioned (although less frequently) in a few individual interviews and during focus group discussions with mothers. These were mainly Bennisix and WFP infant food, other products

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<sup>58</sup> The quantities of the various ingredients used in the preparation of the porridge could not be accurately determined by weighing, but the mothers mentioned small measurements (or just a few seeds) for the pulses category when these were present in the porridge. The exact formula of this porridge is not known, as it was not possible to monitor its preparation (by weighing the ingredients).

such as glucose biscuits, corn meal, Milcolac, non-diary milk (Gbokugboku milk), and MilCow were also mentioned. The use of BFC's Bennimix and a WFP supported infant food named Nyam Nyam pap was more common in Porto Loko district. In this district, the proximity of secondary towns and Freetown influences the frequency of market visits and the eating habits of certain communities. This was not observed for all mothers, however, some mothers said they only used this type of flour. The irregular availability of Bennimix was mentioned several times. Moreover, these two products are only available on certain markets and are not accessible to everyone, both in terms of availability on the local market and affordability. Nyam Nyam pap costs 50 leones for one week of consumption. In rural areas, mothers who choose to use only this type of flour are rather rare and they have to procure it from urban or occasional markets. When they go to the markets for different reasons, they have to buy the number of bags required to feed their child for the number of days needed until the next trip to the market, which is not always fixed, especially in the rainy season.<sup>59</sup>

**Other groups with specific needs.** Apart from young children aged between 6 and 24 months, there is very little change in the eating practices for other groups with specific needs. They indicated eating the same meal as the rest of the family. Pregnant women's diets sometimes differ, with certain dishes traditionally prepared for this specific group, in particular the preparation of leaves with very rapid cooking to avoid micronutrient losses, and a more marked consumption of fruit by some of them. Folic acid and iron supplements is provided to pregnant women through the health centres and the local mobilisers attached to the health centre that work at community level. Nursing mothers did not report changing their eating habits. Most children over the age of 2 years were reported eating the same as the rest of the family. During the individual interviews, a few mothers mentioned preparing porridges or other dishes for children aged 2 to 5. But for them the choice of ingredients was guided more by the taste and availability than the nutritional value of the dish.

**Food preparation and food safety.** The way in which food is preserved and processed, and the way in which meals are prepared, have a crucial impact on the health and nutritional quality of the dishes consumed, and therefore on food consumption in general. They are the result of several superimposed factors already mentioned above in the analysis of drivers, such as lack of knowledge and awareness, lack of appropriate equipment and techniques for post-harvest treatment, preservation and processing, and culinary habits.

Consumption of raw products is essentially reserved to fruit. All vegetables are traditionally eaten cooked, thus altering their vitamin content. This is particularly true for tomatoes and onions, which are used to prepare sauces but not consumed raw. This form of consumption is beginning to appear sporadically, influenced by more urban consumption patterns and certain projects, but remains exceptional. This is mainly the case in the households selling these vegetables and consuming the vegetables that are not appropriate for sale.

In addition, vegetables, including leafy greens, are cooked for a long time, which also alters the vitamin content. This practice was observed during the village visits and was also reported by some of the resource persons and households interviewed. However, the cooking times for each type of ingredient could not be measured. During the dry season, leafy vegetables are also used in dried form, which again reduces the vitamin content even before cooking. However, the existence of a cooking practice specifically dedicated to the diet of pregnant women and reducing cooking time to preserve vitamins illustrates women's knowledge on this subject and the possibility of consuming leafy vegetables barely cooked. However, this practice was rarely mentioned. Finally, fruits are also picked and eaten before ripening, which alters the

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<sup>59</sup> The prices of other locally produced infant foods range from 8 to 150 leones per 50 to 750 grams.

vitamin content.

Post-harvest practices, particularly drying as described above, as well as village and market storage infrastructures, have a major impact on food quality. Harvested products are generally dried in the open air, often on the ground, exposed to dust and exposed to bacteriological contamination. Fish is one of the products particularly affected by this exposure and is used in the preparation of weaning porridges for children aged 6 to 24 months, a particularly sensitive age group (see the section on infant food above). For the time being, there is far too little awareness of the sanitary quality of these preparations, nor any monitoring of the quality at village or market level.

### 5.2.2 Environmental impacts

**Deforestation**<sup>60</sup>. The shifting cultivation practices<sup>61</sup> on uplands seem to contribute to deforestation and land degradation. Cultivation of lowlands or Inland Valley Swamps (IVS)<sup>62</sup>, which is widely promoted by MAFS and its international partners, is a relevant complement and/or alternative to upland farming, even though it is considered labour intensive<sup>63</sup> and increasingly at risk of flooding damage due to climate change. Probably the increasing deforestation of surrounding uplands (see economy sections of the territorial diagnoses), also contribute to enhanced risks of flooding, as forests generally have a higher capacity to retain water than fields. One of the reasons why people cut trees, is the use of wood as a source of energy, either in the form of firewood or charcoal. Rural households themselves mostly use firewood for cooking, but the processing of wood into charcoal is an important opportunity to generate cash income. Urban households rather use charcoal as a source of energy for cooking.

*Table 13: Proportion of population with primary reliance on fuels and technologies for cooking, by fuel type (%) (Source: WHO, 2024)*

	Rural	Urban	Total
Kerosene	0.0%	0.0%	0.0%
Gas	0.0%	1.4%	0.7%
Electricity	0.0%	0.1%	0.1%
Biomass	93.9%	19.6%	59.9%
Charcoal	5.4%	76.7%	38.0%
Coal	0.1%	0.6%	0.4%

<sup>60</sup> Deforestation is both a food system driver as well as an impact

<sup>61</sup>Whereby farmers switch to a different plot of land every few years, when the fertility of the current plot diminishes. The trees on the new plot are usually cut down and fire is used to clear other vegetation and provide short term fertility through the ashes. The new plot may be previously unused forest land or a plot that was used multiple years ago and was given time to regenerate.

<sup>62</sup> IVS farming requires significant investments to develop the fields with dykes and canals to manage the water in the fields. IVSs are being developed with the idea that the fields can be farmed without time limits after that. Depending on the nature of the streams that run through an IVS, it can be farmed throughout the year or only during the rainy season.

<sup>63</sup> According to a key expert who works for an INGO in Kenema

## 5.3 Trade-offs

### ***5.3.1 Should the focus be on maximising the production of the most widely consumed food items—particularly rice and palm oil— or on increasing the production of food products from groups often lacking in daily diets, such as fruits, vegetables, beans and pulses, fish and livestock?***

As mentioned earlier, the Feed Salone strategy has a strong focus on rice. Vegetables and cash crops are mentioned briefly under the *Strategic Pillars* as well<sup>64</sup>. Under the Strategic Objectives (SOs) onions and poultry are mentioned along with rice under SO1 (import substitution). Cash crops such as cocoa, cashew and coffee are mentioned under SO2 (export promotion), horticulture and small ruminants are mentioned under SO3 (Job Creation and Income Generation for Women and Youth) and cassava, sweet potato, pulses and aquaculture are mentioned under SO4 (Alleviating Hunger & Malnutrition). The effective implementation of the strategy largely depends on funding from international partners and donors. While the AVDP and FSRP projects and programmes focus on rice through IVS, and to a lesser degree on tree crops like palm oil, new donor funding seems to focus more on the SOs and their areas of intervention. The upcoming AfDB project is expected to put their efforts on SO1 and especially on rice again. The upcoming EU programme will focus on three value chains: palm oil, cassava and infant foods. In contrast, several NGOs place a stronger emphasis on the food groups that are commonly lacking in people's diets, which is coherent with the strong nutrition orientation of their projects. This trade-off is strongly linked to the narrative that prioritises carbohydrates and in particular rice, which will be discussed later in the section on narratives. This trade-off is probably the most central to the food system transition challenge<sup>65</sup> at the heart of this initiative.

### ***5.3.2 Maximising incomes vs maximising the diversity of food produced by households themselves***

An often-heard slogan in Sierra Leone is 'Eat what you grow', which has been promoted by the government for years, even before the launch of the Feed Salone strategy. Nevertheless, the slogan is often associated to the Feed Salone strategy. This despite the fact that the Feed Salone strategy strongly promotes cash-crops, as a strategy to earn foreign exchange and improve Sierra Leone's trade balance. The slogan was probably originally devised to encourage farming households not to sell all their higher- value food products, but also to consume them themselves in order to enhance the diversity of their diets. While this approach makes sense, some critics argue that if farmers can earn a good income by selling cash crops, they can use part of that income to buy diverse food products, which probably makes sense for certain households. However, when households earn more money, it is by no means automatic that they will spend that money on improving their diets, as documented in various studies and confirmed by the data from this research. An informant of WHH in Kenema district confirmed that people only use a small portion of increased incomes to improving their diets, even when awareness-raising about the importance of healthy diets is part of the intervention. Therefore, WHH complements its interventions on cash crops, with the promotion of diversification through other food crops.

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<sup>64</sup> The Implementation Plan for Pillar 3 of the Feed Salone strategy prioritises rice, onions, poultry, cassava, cocoa and cashew

<sup>65</sup> How to ensure that the Feed Salone Strategy contributes to healthy diets for the people of Sierra Leone?

### ***5.3.3 Promote high input agriculture with quick results or promote more sustainable practices that generate slower returns, but are more resilient to shocks, and more favourable for high-value, international marketing strategies?***

This trade-off is between an approach that focuses on quick results in terms of increases of productivity per hectare and total production of food crops, by promoting the use of synthetic fertilisers and pesticides. This approach is often the dominant development model that is presented to farmers in developing countries, as a solution to their difficulties in making a decent living from their agricultural activities. It is often fuelled by agro-chemical companies and their short-term interests. However, the downside of this approach is that harvests often increase the first years, but then start decreasing as the soils get exhausted and the soil biomes fray. As the harvests start going down, farmers double down on inputs, further indebting them. The health of farmers, their families and consumers is also often endangered, as farmers end up using chemicals without following the required safety measures. This approach also continues the common practice in Sierra Leone to burn land, in order to get rid of weeds, bushes and trees, and to generate short-term fertilisers for the crops in the form of ashes. The alternative is an agricultural development approach, that focuses on longer term returns by promoting organic fertilisation and pest and disease control strategies, that enhance the long-term productivity of soils. Such strategies often implicate more work for farming households, with returns that become visible only after years. The approach requires a deeper understanding of the biological processes that underly agricultural production. In the case of export products, when they are produced more sustainably, in theory they can fetch a higher price. However, it is difficult and expensive to obtain relevant certifications and to reach the buyers who are interested to pay a higher price for higher quality.

### ***5.3.4 Produce more rice and firewood by cutting mangroves or increase marine fisheries resources by protecting and replanting them and reap climate credits?***

This trade-off is on the interface between agriculture and fisheries: Should Sierra Leone continue allowing mangroves to be cut down for firewood and to clear the land for rice production, or should it effectively enforce the ban on cutting mangroves, so as to protect the coastal fish stocks, which depend on the mangroves for their regeneration? It can even go a step further by actively replanting mangroves on the places where they were previously cut down. Mangroves are known as one of the most efficient ecosystems to fix carbon, and as such this activity has a high potential to generate climate credits. However, the climate credit business is poorly regulated, and it is a big challenge for Sierra Leone's government to do so effectively, therefore creating high risks of abuse and corruption. It is not just a trade-off between agriculture and fisheries. As was witnessed in the coastal fishing community of Bailor in Loko Massama in Port Loko district, fish mongers use large quantities of firewood, including from mangroves, in order to smoke the fish to be able to conserve the fish.

### ***5.3.5 National level value chain development vs. community level integrated development***

Should donors finance work on the national level on the development of a certain agricultural value chains, or rather focus on integrated development at the community level, combining agriculture and value chain development with other aspects, notably nutrition, finance, and water and hygiene? Many international organisations and donors often have their own practices and approaches, which preclude already to a large extent the choice that they make in this trade-off. Some international organisation and donors are more flexible in the kinds of

projects and programmes that they finance, in which case it depends for a non-negligible part on the experiences and preferences of the staff and consultants of those organisations involved in the formulation of their interventions. Of course, the Sierra Leonean government also influences these decisions to a large extent, as they communicate their priorities and steer their partners in certain directions.

### ***5.3.6 High quality standards for school feeding vs local procurement***

Should the Ministry of Basic Education and its partners in the school feeding programme (WFP, Plan International and CRS), maintain the high-quality standards for the food that they provide to schools for their school meals, or should they reduce their standards somewhat to make it possible to procure more of the products at the national and local level? The current high-quality standards employed by the ministry and its partners are understandably meant to make sure that the school meals that are provided to children are safe. However, the consequence is that certain products are imported from abroad, notably palm oil, as was observed in a school near Kponima community in Niawa chiefdom in Kenema district. There may also be a cost consideration in these choices. Nevertheless, it seems to go against the spirit of the Feed Salone strategy to import food products from abroad for government-run programmes. This trade-off is somewhat intertwined with the trade-off between providing products for school meal in kind or providing funding to school for them to procure the products themselves.

### ***5.3.7 Livestock vs vegetables***

Proteinic animal products are one of the six food groups of the 'Healthy Eating Plan' of MoH, which is based on the dietary guidelines. Vegetables are a food group as well. Promoting livestock production in communities can have a negative impact on the amount of vegetables that are available in those communities. Livestock can damage vegetable gardens, and the fact that livestock is being held in a community, can already dissuade people from cultivating vegetables in the vicinity of the animals, which are generally kept (at least for part of the day) near people's houses. To illustrate this, the farmers in Kponima community in Niawa chiefdom in Kenema district said they produced a lot of leafy vegetables and cassava leaves, because they didn't hold livestock.

*Picture 2: Sheep eating vegetables in a vegetable garden in Bailor community, Loko Massama chiefdom, Port Loko district.*



## **5.4 Political economy**

### **5.4.1 Stakeholders**

The categories of stakeholders that were identified in the methodology and which were invited to the MSDs were the following: farmers, women, youth, local government authorities, private sector, NGOs, international organisations. Following a recommendation from participants to the stakeholder training in Port Loko district, the following two additional categories were invited also to the MSD in Port Loko: religious organisations, drivers. We discuss below each of these categories.

**Farmers.** At the national and district level in Sierra Leone, there is only one farmers' organisation: the National Federation of Farmers of Sierra Leone (NaFFSL). This organisation is meant to be an independent organisation to advocate for the interests of farmers, but the organisation is still partly depending on the government for its funding, which compromises its independence to a certain degree. Also, operationally the organisation is still closely linked to

MAFS. For certain interventions by MAFS, NaFFSL is used as a conduit, for instance for the distribution of processing machinery. Also, the office of NaFFSL in Port Loko is in the same building as MAFS' district office. At the local level there are groupings of farmers, like cooperatives, ABCs, and farmers' associations/Farmer Based Organisations (FBOs). These groupings in turn are often also organisational members of NaFFSL, and their individual members by extension as well. The mainstay of these groupings is economic collaboration and not policy advocacy. FBOs generally have around 30 members. Two or more FBOs can combine to form a cooperative, which requires official registrations at various government entities. ABCs are also a kind of cooperatives, although MAFS retains the ultimate control over them. Around one ABC was originally set up in each chiefdom, but many of the ABCs are now defunct. (See also the earlier sub-section on rice under the technology drivers' section for more information on ABCs.) Whereas the ABCs were created rather top-down, the farmers' associations and cooperatives have often been created in a more bottom-up way.

**Women.** At the national level there is the Women in Agriculture Network (WiAN) as an advocate for the interests of women in the agricultural sector. The organisation was not set up by the government and doesn't depend on the government for its funding. Therefore, it is rather independent, but its capacities are also quite limited. However, it does have district level satellite representatives in each district. A WiAN representative in Kenema did participate in the MSD in Kenema. In addition to WiAN, local level women groupings exist, which have varying focuses on either economic cooperation and/or advocacy. Some of these groupings are in turn member of WiAN.

**Youth.** There are so called 'Youth Councils' at the national level, provincial level, district level, chiefdom level and community level. It is a centralised organisation, whereby an issue involving youth at community level is first addressed by the community level youth council. If they can't address it, they forward it to the chiefdom level. If the chiefdom level youth council can't address it, it is forwarded to the district level youth council, and so on. The organisation has been created originally by the government, but operates quite independently from the government. They don't depend on the government for their funding, executive members of the youth council exercise their functions mostly without remuneration. In addition, some local groupings of youth exist, but these grouping mostly have economic objectives, like FBOs or cooperatives.

**Local government authorities.** Decentralised government authorities exist at the provincial and district levels. SASI-SPI chose to intervene at the district level, because the provinces are considered too big to be considered as a territory with relatively homogenic circumstances. The central government authority in a district is the District Council, which is closely linked to the Ministry of Local Government and Community Affairs (MLGCA). Key positions within the District Council are the District Administrator and the Planning Officer. Besides the District Council, different sectoral ministries have their district level offices, often in separate buildings for each ministry. From the perspective of the chosen food system transition challenge, the key sector ministries that were identified are the following:

- Ministry of Agriculture and Food Security (MAFS)
- Ministry of Health (MoH)
- Ministry of Basic and Senior Secondary Education (MBSSE)

**Private sector.** The private sector are the companies that are part of the food system, either at the beginning of the chain, selling inputs to farmers for their agricultural activity (eg fertilisers, seeds, machinery, pesticides), further down as essential elements in the food chain between the farmers and the consumers, notably traders, processors and retailers. In the context of Sierra Leone at the district level, in particular input providers, and traders/processors/vendors

of agricultural produce were identified as important private sector actors. Because many people have multiple functions, one person may at the same time be a farmer and leading an ABC, as well as a trader and processor. At the national level, agribusiness is organised through the Sierra Leone Chamber for Agribusiness Development (SLeCAD). This is also an organisation that is closely linked to the government. SLeCAD has district level representatives, who generally are district-level staff of MAFS. In Kenema, the same MAFS staff member who is the focal point for nutrition and women in agriculture, acts also as the district level representation of SLeCAD.

**NGOs.** Table 14 below lists the international and national NGOs with relevant development interventions focused on healthy diets and/or agricultural development in the two target districts.

*Table 14: NGOs with relevant development interventions focused on healthy diets and/or agricultural development*

Kenema	Port Loko
WHH	Concern Worldwide
SEND	AAD-SL
Focus 1000	Cotton Tree
Mopanda	SEND
Solidaridad	Focus 1000
Goal	FoRUT
	Cotton Tree Foundation

Other notable NGOs who work on these issues, but not in the two target districts are ACF and HKI.

**International organisations.** The following relevant international organisations have been identified with interventions linked to healthy diets and/or agricultural development: IFAD (AVDP project), World Bank (FSRP programme), WFP, UNICEF, FAO. At the national level UN Nutrition should be added to this list.

**Religious organisations.** Religious organisation from different faiths collaborate and dialogue with each other through so called 'interreligious councils', which exist at the national, provincial, district and chiefdom level. The executives of a district level inter-religious council usually consist of one Muslim and one Christian leader. In Port Loko district both were invited to join the MSD, but only the Muslim executive of Port Loko's inter-religious council was able to join.

**Drivers.** Drivers of motor-bikes, trucks and other vehicles play an important role in the functioning of the food system<sup>66</sup>. Motorbike drivers are federated at the district and national level in motor-bike drivers' associations. Drivers of truck and other big vehicles are federated at the district and national level in driver associations. In Port Loko mistakenly only a

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<sup>66</sup> See the earlier subsection on road infrastructure under the infrastructure drivers section for more information on the importance of motor bike drivers

representative of the drivers' association was invited and participated<sup>67</sup>.

#### **5.4.2 Stakeholders' expectations**

Some of the farmers that took part in the FGDs were aware of the Feed Salone strategy, and they mostly linked it to the 'Eat what you grow' slogan. Among local government authorities the Feed Salone strategy is well known as one of the flagship initiatives of the new government. The importance of healthy, balanced diets is also known, but it is not seen as part of the Feed Salone strategy. NGOs are more focused on combining agricultural development with the promotion of the healthy, balanced diets.

MAFS could lend more priority to healthy diets, by asking its development partners to include stronger components on the promotion of healthy, balanced diets, in their programs that are implemented by MAFS with financing from its development partners.

International development partners' practices over the past years have created expectations by the government as well as beneficiaries that development projects should include the provision of items and services free of cost. These expectations seem to hamper beneficiaries' willingness and capability to think of solutions that they conceive and pay for themselves.

#### **5.4.3 Power distribution and coalitions of stakeholders**

Farmers, women and youth are not very well organised and lack capacities and independence. Therefore, until now they don't have strong influence on policy development at the national level and the sub-national level, even though they are consulted as part of certain policy development processes by government authorities at various levels. SUN coordination meetings at the district and national level could be an additional valuable platform where these stakeholders voice their interests and positions, but currently they are often not invited to these meetings as far as known. They are also not being invited to the national level Food Security Working Group coordination meetings, organised by MAFS in collaboration with FAO.

The SUN Focal Points at district level and the district level coordination meeting that they organise, could also be an entry point for enhanced coordination between agriculture and health authorities and NGOs at district level. However, SUN's district level coordination mechanisms currently depend on external financing, which makes them vulnerable. (see also section on SUN-FSCU under the political and governance drivers section)

In terms of funding for development initiatives, the most important sources are development projects and programmes. As explained earlier, the focuses and the approaches of these interventions depend largely on the common practices of the respective international organisations and their staff, and the priorities expressed by their government counterparts with whom they generally work closely together. It is up to the government to steer the international partners and donor funding in a way that best contributes to the realisation of the priorities set by the government.

The development projects and programmes implemented by NGOs (and funded by international governmental donors, NGOs own resources, and/or other sources) are often somewhat more independent from the government, although they often still collaborate with MAFS and/or MoH on certain aspects. The focuses and approaches of these interventions are equally mostly influenced by their own common practices and their donors' priorities, but they

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<sup>67</sup> For the second round of MSDs it is intended that representatives of both the drivers association and the motor bike drivers association will be invited

generally seek to work in coherence with government policies as well.

As explained earlier, district councils have a bottom-up approach for identifying the priorities of the people in their districts. However, the regular funding controlled by District Councils is only limited. Most of the government(-linked) funding in the areas of agricultural development and nutrition goes through big development projects and programmes, which are mostly centrally managed by MAFS and MoH, and their district level offices.

Coalitions exist between farmers, processors and traders, who often overlap in the same people. All stakeholders seem to agree quite a lot on the issues that need to be solved, but for the solutions farmers look mainly at the government, international organisations and donors, and not a lot at themselves and the private sector. Also, the government and international organisations, still have mostly a rather classic approach to their development interventions, whereby their projects and programmes provide direct support to farmers and the private sector, instead of creating the conditions in which the private sector can develop itself to provide the services that farming households need.

## **5.5 Potential for change**

### ***5.5.1 Desire for change among stakeholders***

Quite some people have notions of the importance of diverse and balanced diets, and they appreciate being able to put diverse food on the table. In practice, however, people do not always prioritise dietary diversity due to competing financial demands and the limited availability of products from all food groups throughout the year.

Additionally, while stakeholders in general acknowledge that the current situation is not good and they want it to change, some believe that people first need to have 'sufficient' access to carbohydrates, before working on the availability and access to other food groups.

A few key informants indicated that the situation in terms of food diversity has improved somewhat in recent years. Apparently, this was also confirmed in a recent survey on women empowerment.

Finally, a lack of awareness remains a significant barrier to improving diet diversity. Indeed, many people are unaware that the current situation is not optimal for their own health and productivity, as well as for the health and productivity of their children. As a consequence, they might not be convinced that their food and nutrition security situation need to change.

### ***5.5.2 Capacities for change among stakeholders***

MAFS extension officers are spread thin and mostly work on government implemented development projects/programs, financed by international development partners. The means and manpower are missing to carry on regular field visits with wider coverage.

MoH' Community Health Workers have a stronger presence locally and facilitate important awareness raising. However, many of them don't have the capacities themselves to provide adequate awareness raising, but instead rather encourage people to receive support at the local government health centres. Also, they don't provide the agricultural development solutions for people to be able to change their farming practices.

Communities with support from NGOs have the potential to create better conditions for households to provide healthy diets, notably through nutrition education and mentoring (in collaboration with MoH) in combination with VSLAs.

Local providers of farming inputs, including small-scale farming and processing machinery can be an important stakeholder in the transition, but currently these stakeholders are under-developed and by-passed by development initiatives

## 5.6 Narratives and policy coherence

### 5.6.1 Narratives

There are few existing and new narratives around the link between agricultural development (as planned under the Feed Salone strategy) and the consumption of more healthy diets by the people of Sierra Leone.

*'The government should first address hunger, i.e. promote production of rice and cassava, before addressing malnutrition'*

According to this narrative people should first have first have 'enough to eat', before they are ready to think about whether what they eat is healthy. According to this narrative, also the government should have as its first priority to make sure that people have enough carbohydrates to eat to meet their energy needs. Ensuring that people's diets are balanced between the different food groups is only a second priority, to be addressed only once the people are no longer 'hungry'. This narrative is told by some of the staff of MAFS and agronomists working for other organisations.

*'Eat what you grow'*

As mentioned earlier under the section on trade-offs, this is a slogan that has been disseminated by the government for a number of years. Even though it predates the Feed Salone strategy, it is currently closely associated with it. This narrative says that agricultural households should not sell off in particular the higher value, higher nutritional value products, but consume them themselves, as a way to improve their diets.

*'My grandparents ate like this and they became very old'*

This narrative is heard frequently when different organisations try to raise awareness among people about the importance of balanced diets and encourage them to shift to change their dietary habits towards consuming products from all the different food groups every day. Some experts believe that in fact diets were more balanced at the time that people's grandparents were young.

*'Increasing rice imports in Sierra Leone should be replaced by increased domestic rice production'*

This is the dominant narrative that forms an important element of the logic of the Feed Salone strategy. It is widely accepted among government staff, in particular staff of MAFS. A few international experts question the competitiveness of Sierra Leone's rice production, and whether it wouldn't be better to focus on products where the country has a comparative advantage.

*'By focusing on healthy, balanced diets and promoting diversification of staple foods (cassava, plantain, yam), rice consumption, and therefore also rice imports, can be reduced.'*

This is a new narrative that combines the ultimate objective of the Feed Salone strategy (reduce rice imports in order to improve the country's trade balance), with the objective of improving the nutritional status of Sierra Leoneans. It partly rests on the assumption that by

eating more products from the other five food groups, people will reduce their consumption of carbohydrates, which is probably valid.

### 5.6.2 Policy coherence

As mentioned earlier in the section on political and governance drivers, even though alleviating hunger and malnutrition are explicitly mentioned in Strategic Objective 4 of the *Feed Salone Strategy*, the strategy's priority focus seems to be on rice production. This risks giving insufficient attention to foods from other food groups to enable the goals<sup>68</sup> linked to reducing malnutrition being reached<sup>69</sup>. Moreover, as mentioned as well, the Feed Salone strategy and nutrition policies seem to operate somewhat in isolation of each other. The Ministry of Fisheries and Marine Resources (MFMR) has recently published its Strategy for the Fisheries and Marine Resources Sectors in Sierra Leone as part of the Feed Salone initiative, and which focuses both on fisheries and aquaculture development. Similar to Feed Salone strategy of MAFS, strong coordination with MoH may contribute to the Feed Salone strategy of MFMR also making a bigger contribution to healthier diets for the people of Sierra Leone.

As mentioned earlier, the coordination platform operated by the SUN and Food Systems Coordination Unit within the Office of the Vice-President, and the Food Security Working Group facilitated by MAFS and FAO, also seem to operate somewhat in isolation of each other. The OVP is mandated to coordinate the different government entities in the areas of nutrition and food systems. However, there is some ambiguity about the exclusivity of that role, because there is also the Presidential Initiative on Climate Change, Renewable Energy, and Food Security (PI-CREF) under the President's Office<sup>70</sup>.

As explained earlier in the section on trade-offs, the high quality standards for the food products that are supplied to the schools by MBSSE and its international partners and the centralised procurement of the products are not fully coherent with the objectives of the Feed Salone strategy to stimulate domestic production.

Road infrastructure, including bridges and culverts, are important for the transition toward more sustainable food systems, facilitating trade in agricultural products as well as inputs. This is well acknowledged in the Feed Salone strategy. Work on this driver depends on interventions by the Sierra Leone Roads Authority and the Ministry of Works and Public Assets, in collaboration with the district councils.

International trade policies obviously also have an important impact on the food system, and the food system transition challenge that was chosen for Sierra Leone. Rice imports in Sierra Leone were supposed to be subject to a 5% import tax that was announced in 2024, but the measure hasn't been implemented yet. (The receipts of that measure were announced to be used for the implementation of the Feed Salone strategy.) (MoF, 2024) The Sierra Leonean government does not apply VAT on its rice imports. (ECOWAS, 2019) For exports Sierra Leone is also obliged to abide by ECOWAS rules, which prescribe in principle a free circulation of goods within the regional collaboration area. However, in reality governments in West Africa

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<sup>68</sup> Increase the acceptable Food Consumption Score (FCS) by 65% and significantly reduce micronutrient deficiency among children by 2028.

<sup>69</sup> Under SO4 the Feed Salone strategy prioritises vitamin A fortified cassava, orange fleshed sweet potato, pulses, aquaculture and expansion of the Home-Grown School Feeding Program (HGSFP). However, these priorities don't come back clearly under the pillars of strategy. The interventions being planned with the support of international partners seem to be structured around the pillars rather than the SOs.

<sup>70</sup> See relevant section on this entity under the section on political and governance drivers

frequently apply measures that restrict trade in certain agricultural products with their neighbours. In itself the administrative hassle and corruption that often emerge at borders, discourage small traders from passing through official border crossings with their products. In Port Loko several respondents mentioned with scorn the fact that many vegetables are being exported informally from Port Loko district to Guinea. They consider that as a consequence it is difficult for people in Port Loko to buy good vegetables at a decent price.

Concerning the coherence between agricultural development, healthy diets and Sierra Leone's environmental policies, reference is made to the trade-offs section<sup>71</sup>.

## **5.7 Potential for interventions and innovations to support the transition**

### **5.7.1 School feeding**

The government of Sierra Leone has run school feeding programmes for numerous years, even before the current ruling party came to power in 2018. After the current ruling party came to power in 2018, significant changes were made to the school feeding programme, including to provide the main food products for the school meals in kind, instead of providing a certain budget with which school buy all the products themselves, as was the case before 2018. Expansion of the school feeding programme was also an important election commitment of the current ruling party during the 2023 elections. The target for the 2022/23 academic year was to reach 800 000 pupils in 15 out of 16 districts, representing around 60% of pupils<sup>72</sup>(Calabash, 2022). In the framework of the Nutrition for Growth (N4G) summit in Paris in March 2025, the Sierra Leonean government also made commitments to:

- 'progressively scale-up the home-grown school feeding programme from covering 25% of pre-primary and primary school students to 100% by 2030'
- increase 'local and fortified content in school meals to 50% in 2030'
- ensure 'at least 50% of school feeding interventions use clean cooking interventions and integrate complimentary activities by 2030 (prioritizing the most vulnerable areas)'
- 'explore different school and institutional feeding models for improved sustainability' (GoSL, 2025)

The coverage of the school feeding programmes has always been partial so far. Currently, a certain number of rural chiefdoms in each district is selected for school feeding. Chiefdoms that are considered urban, typically the chiefdom in which the district capital is, are excluded. All of Freetown's urbanised area is excluded as well. In the case of Kenema, 350 (pre)primary schools in 15 chiefdoms (out of 16<sup>73</sup>) are benefiting from school feeding. In the case of Port Loko, there are 9 out of 13 chiefdoms that are covered<sup>74</sup>. A vulnerability assessment was conducted before the start of school feeding programme of the current ruling party in 2019, based on which the beneficiary chiefdoms were selected.

For the school feeding programme(s) under the governments of the current ruling party,

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<sup>71</sup> In particular the subsections 'Promote high input agriculture with quick results or promote more sustainable practices that generate slower returns, but are more resilient to shocks, and more favourable for high-value, international marketing strategies?' and 'Produce more rice and firewood by cutting mangroves or increase marine fisheries resources by protecting and replanting them and reap climate credits?'

<sup>72</sup> Western Urban district not being covered.

<sup>73</sup> The only chiefdom of Kenema not covered is the 'urban' chiefdom of Nongowa, which includes Kenema city

<sup>74</sup> School feeding in Port Loko started in 2019 with five chiefdoms, later in 2021 four chiefdoms were added. Kaffu Bullom, Maforki, Maconteh, Tinkatopa chiefdoms are not covered.

partnerships have been set up with three international organisations: WFP<sup>75</sup>, Plan International<sup>76</sup> and CRS<sup>77</sup>. These organisations pre-finance the procurement and distribution of a fixed set of products, at a fixed set of quantities per child. The School Feeding Secretariat of MBSSE monitors the distribution of the products by the partner organisations and manages the register of schools that are eligible. The partner organisations are reimbursed afterwards by the government for the distributions that they realised. Distribution of the products to the schools mostly takes place quarterly. The products that are being provided in Port Loko are the following:

- Rice<sup>78</sup>
- Beans
- Oil
- Salt

In Port Loko, before the start of the school feeding programme in a chiefdom, the government holds discussions with the respective chiefdom authorities, to agree with them on the distribution of the products and the contributions that parents will have to make themselves to complement the products that are being provided. Typically, this means a certain financial contribution per child by the parents to the school, which will allow the school to buy additional products, like condiments (eg salt, maggi, and 'pepe'/chili), vegetables. In the beneficiary school in the coastal fishing of Bailor in Loko Massama chiefdom in Port Loko, parents contribute 5 NLE per week per child for condiments, vegetables and firewood. Each child also brings some smoked fish at the beginning of the week.

Some schools also operate school gardens, although the majority of the schools that were observed in Kenema and Port Loko district seemed not to. Nevertheless, school gardens are part of the government campaign since 2019. District covered by CRS have put particular emphasis on school gardens. Plan International is said to have started working on it as well.

The Home Grown School Feeding (HGSF) programme can be seen as a sub-programme within the wider school feeding programme of the government. HGSF started 4 years ago and is meant to provide diverse, locally produced food, in line with local food preferences. For instance, gari and beans are more predominant in the southeast. Karene district is said to be now fully homegrown and in Kambia also many schools are reported to be fully homegrown. Kenema district also has schools covered by WFP that are fully homegrown. The schools covered by CRS are also reported to be fully homegrown, with a lot of OFSP being used in the school meals. The school that was interviewed near Kponima community in Niawa chiefdom in Kenema district (but located itself just over the district border in Pujehun district, is beneficiary to the HGSF (sub)programme. In their understanding, the difference with the regular school feeding programme is that they were given an ecostove to prepare the school meals, and that they are being provided also with money by WFP in order to buy leaves as vegetables.

It was observed in the same school that the vegetable oil that is being provided by WFP, originates from Indonesia. The other products in the storage facility didn't seem to be imported. Other Key Informants in Kenema indicated that they sell part of their rice production to WFP.

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<sup>75</sup> Covering 5 districts, including Kenema

<sup>76</sup> Including Port Loko

<sup>77</sup> Covering 2 districts (Falaba and Koinadougou)

<sup>78</sup> At some point also gari was provided as a source of carbohydrate, but this was later stopped because some children were not used to it

Overall, it seems that the school feeding programme of the government is providing quite balanced food to a large number of school children in Sierra Leone, but certain districts and chiefdoms are not covered as explained earlier. Part of the head teachers of the beneficiary schools that were interviewed, indicated that the school feeding increases enrolment and that children are more concentrated after having consumed their school meals at lunch time.

In Port Loko there was also a long period during which schools didn't receive food, probably due to payment issues between the government and Plan International.

At school the children also learn about the importance of balanced diets as part of their curriculum.

## 6. Conclusions and recommendations

### 6.1 Understanding the food system transition challenge in Kenema and Port Loko districts

#### 6.1.1 Food system drivers

##### *Socio-economic drivers*

Many households sell part of their production immediately after harvest (when prices are low) to repay loans and cover expenses like social events, schooling, medical fees. The rest of their production is set aside for their own consumption and as seeds for the next season but is not covering food consumption for the whole year. During the rainy season many households need to buy rice and other food items, sometimes on credit.

**Recommendation 1:** It is recommended that the government, its international partners, donors and NGOs promote savings options that help farmers set aside money when selling agricultural produce.

**Recommendation 2:** It is recommended that the government, its international partners, donors and NGOs (continue to) promote appropriate and affordable storage solutions for agricultural produce. Such storage solutions can help farmers keep their produce with less losses, for personal consumption and seed use, while allowing them to sell later in the year, when prices are higher

Most people have a certain level of awareness about the importance of diverse, balanced diets, and they generally like it to be able to put diverse food on the table, but in practice they don't always give priority to these considerations. Nevertheless, people's still limited awareness is also an important limiting factor to improved diet diversity. (See recommendation 29 under 'Potential for interventions and innovations to support the transition' section)

Mothers know that they have to prepare complementary foods for their young children as weaning food. They also learn how to prepare it locally based on traditional practices. Weaning porridge can be more or less complete depending on the seasonal availability of the different ingredients and mothers practices and knowledge. Beside these complementary foods (for children aged 6-24 months), no specific foods are prepared for older children or pregnant and lactating mothers. Different initiatives exist to help mothers prepare adequate complementary foods for their young children, but they are mostly small scale.

**Recommendation 3:** Together with the reinforced awareness raising on the importance of diverse, healthy diets as described in recommendation 29, the importance of preparing adequate complementary food for young children should be explained to young mothers and other caregivers (eg grandmothers who take care of grandchildren). Adequate recipes, based on locally available products and seasonality, should be provided and demonstrated, and the negative impacts of harmful practices should be explained. This sensitisation should build on the existing practices and awareness already developed and progress made through the different projects and programmes. While referring to recommendation 12 on improved coordination between MAFS and MoH, the association between food/ food production and health should be developed and guide awareness campaigns and intervention, in order to change diet perceptions and reinforce the link between local food

production and utilisation, and the general health of the population.

### *Biophysical and environmental drivers*

Climate change in the form of more extreme climatic conditions, is making the production of food more complicated. Namely, last year's extreme rainfall during the rainy season had an important impact on agriculture and coastal fisheries. The shifting cultivation practices on uplands seem to contribute to deforestation and land degradation. IVS farming is a relevant complement and/or alternative to upland farming, but it is labour intensive and at risk of flooding damage.

**Recommendation 4:** As already planned by the government as part of the Feed Salone strategy and Sierra Leone's commitments for the N4G summit, the use of climate-smart agricultural practices/approaches should be promoted. At the same time, farmers should be trained in how to adapt their practices to the new climate realities.

The availability of quality seed material is also seriously hampering the production of agricultural food stuffs.

**Recommendation 5:** It is recommended that the government, its international partners, donors and NGOs promote local accessibility of improved varieties of palm oil, cassava (including bio-fortified), OFSP and others, by training selected motivated farmers to replicate seed material and market these to fellow farmers in their vicinity.

Aquaculture could be a potential valuable complement to agriculture in IVS, which can raise incomes and ensure access to fish year-round. (See recommendation 16 on animal protein)

Cutting of mangroves for rice fields and firewood is very likely to reduce the regeneration of marine resources. Small scale fishermen are also using sub-optimal nets, which catch also smaller fish, again undermining regeneration of fish stocks.

**Recommendation 6:** The use of improved fishing nets should be promoted and the remaining mangroves should be better protected, in order to support the regeneration of fish stocks. Restoration of mangroves for climate credit can contribute to that as well, but the market for these credits should be effectively regulated to avoid abuse.

### *Territorial drivers*

Only 37 % of households own land. For young people who don't own land, it is particularly difficult to lease land from landowners. Unequal land ownership practices between men and women are contributing to unequal access to diversified foods. A law has been adopted allowing women to own land, but the reality on the ground is often still that the land is in the name of the men. Current heritage rules and practices are disadvantageous for children who stay with their parents to take care of them when they grow old and continue the farming activity.

**Recommendation 7:** It is recommended that local authorities pro-actively promote the registration of lands owned by households, both in the name of the men and the women. It is also recommended that large landowners are encouraged to sell or donate part of the land that they don't farm themselves, to landless farmers, to make it more attractive for them to make long term investments on these lands.

### *Infrastructure drivers*

Poor road networks at the intermediate level (from the main road to the communities) and at the local level (from the communities to the fields) are seriously hampering the development of agricultural and fisheries activities.

**Recommendation 8:** Ongoing efforts to improve the road network should continue and be reinforced, because this is an important driver that facilitates trade in agricultural and fisheries products and farming inputs, enhancing the availability and accessibility of diverse food at affordable prices, among other beneficial impacts

Poor access to electricity is also considered to seriously hamper agricultural and fisheries, and development more widely.

**Recommendation 9:** Ongoing efforts to improve the electricity network should continue and be reinforced, because they will make it easier to process agricultural produce and make it possible to store products like fruits and vegetables, and fresh fish (without having to resort to smoking with firewood), among other beneficial impacts.

### *Technology drivers*

The gradual adoption of small processing machinery by some rural households has been a significant innovation. It reduces the labour burden on women, who are typically responsible for preparing food for the entire household. It also improves product quality, reduces losses, and ultimately enhances both food availability and household incomes. While local providers of farming inputs, including small-scale farming and processing machinery could play a major role in the transition, they are currently under-developed and by-passed by development initiatives.

**Recommendation 10:** Promote small processing machinery by supporting small businesses that produce, sell and repair small processing machinery at the local level. Ideally parts of these machinery would be made of stainless steel when this has a beneficial effect on the food safety of the products, but that is probably not yet affordable for the majority of households and groups of farmers. Nevertheless, people should be informed about food safety risks in general, and how these risks can be reduced.

Mobile phones are important for communication. However, their use is still limited due to the lack of network coverage and limited access to electricity. Farm apps are not yet widely used. Mobile money is an important tool used by many people, in particular in urban and peri-urban areas. Such innovations and use of new technologies while modernising the value chains, have a potential to make agriculture also more attractive for the youth.

**Recommendation 11:** The government should continue to facilitate and support the expansion of the networks of the mobile telephone operators active in the country. (See also recommendation 9 on expansion of the electricity grid.)

### *Political and governance drivers*

A lot is already done by the MoH (local health centres, Community Health Workers, local mobilisers) to raise peoples' awareness on the importance of diverse and healthy diets. MAFS and its international partners are also working to increase awareness, often in collaboration with MoH.

**Recommendation 12:** It is recommended that this important work continues and gets reinforced. MAFS internationally funded projects and programmes should include more substantial activities aimed at increasing awareness about diverse, healthy diets. MAFS' extension officers should work in closer collaboration with health centres as per recommendation 3. MAFS should demand that its international partners include substantial components on nutritional messaging in collaboration with MoH, which may also include cooking demonstrations and nutrition camps

The coordination platform operated by the SUN Secretariat and the Food Security Working Group facilitated by MAFS and FAO, seem to operate somewhat in isolation of each other.

**Recommendation 13:** It is recommended to maintain the Food Security Working Group and the SUN coordination platform as they are, but with a clearer delineation of who does what, and clear processes in place to make effective links across the two platforms, whenever necessary. The Scaling Up Nutrition and Food System Coordination Unit within OVP as the government entity mandated to coordinate on food systems across the government, should play a central role in this. It is also recommended to strengthen SUN Focal Points at the district level to enhance the coordination between agriculture and health authorities and NGOs. (see also recommendations 3 and 12)

### *Demographic drivers*

Although population growth has slowed, at an average of 1.04 % between 2015 and 2021 (Stats SL, 2022), Sierra Leone's population is still growing steadily. This is putting additional pressure on the limited natural resources on which the food system depends.

**Recommendation 14:** It is recommended that the government and NGOs reinforce efforts to reduce teenage pregnancies, both as a way to limit population growth, and increase chances that mothers are able to provide adequate care and healthy diets to their children.

A part of the youth prefers to do other jobs than farming. It is a normal development that a bigger part of the workforce is being employed in the secondary (manufacturing) and tertiary (services) sector as a country develops. However, there are not many jobs available in the cities. Many young men work as motor bike riders. Drug abuse is a big problem, both in urban and rural areas. Considerable numbers of people work in mining, where access to healthy, balanced diets is more difficult.

**Recommendation 15:** Reference is made to recommendation 10, because small-scale mechanisation of food production and processing can make the farming activity more attractive for young people. Producing, selling, and repairing small-scale machinery and other farm inputs can also be an interesting and valuable alternative employment for young people.

## **6.1.2 Food system impacts**

### *Food security and nutrition impacts*

While the six different food groups identified in the 'Healthy eating plan' (based on the dietary guidelines of the government) are mostly available and consumed on a yearly basis, some food groups are lacking in people's daily diets and/or during certain periods of the year. Fruits are commonly consumed at the pick of the harvest but are difficult to access at certain times of the year, partly due to their cost. On the other hand, vegetables –e.g., egg plants, onions, sweet potatoes, chili, cassava leaves, sweet potato leaves, and other leafy vegetables– are

consumed year-round even though leafy vegetable can be scarce during the dry season. Pulses are eaten in small quantities and infrequently, mainly during harvesting period.. Animal protein consumption is mainly in the form of fish, with regular frequency but variable and sometimes reduced quantities when it has to be purchased on the market. Fats (mainly from palm oil) are consumed very regularly. The overall consumption of oil is satisfactory for most of the people, thanks to the widespread availability of palm oil, but it is not regular for all people along the year and sometimes consumed in small quantities or regularly absent from the diet for people who do not have palm oil tree and limited purchasing power. Carbohydrates intakes, primarily rice and cassava, are sufficient in people's diets, but targeted interventions and diversification in this area can still positively impact nutrition, while at the same time improving households' incomes.

**Recommendation 16:** A stronger focus on healthy and balanced diets, as well as on the diversification of staple foods (cassava, plantain, yam) by MAFS and its international partners would help to improve nutrient intakes, while reducing both rice consumption and rice imports. More specifically for the six different food groups of the national healthy eating plan, it is recommended to:

- **Fruits:** Promote fruit cultivation by improving access to fruit tree seedlings. This might be achieved by training a selected group of motivated farmers in seedling propagation and marketing. These farmers could sell a variety of fruit tree seedlings with different maturing periods to farming households in their community and neighbouring communities, ensuring a more consistent and diverse fruit supply throughout the year. Promote improved harvesting and post-harvesting methods through sensitisation, including on fruit maturity and the optimal harvesting period.
- **Vegetables:** Continue to promote Inland Valley Swamps as a way to enhance the availability and accessibility of vegetables throughout the year. IVSs that have a sufficient flow of water in the dry season, can be used to cultivate vegetables after the harvest of the rice crop. This work should continue, with due attention for the cultivation of vegetables. At the same time, farming households in the concerned communities, who don't have access to IVS lands, could be trained to improve the cultivation (and marketing) of vegetables on their uplands and backyard gardens during the rainy season.
- **Beans and pulses:** Promote intercropping of different kinds of pulses with cassava and oil palms on the uplands to increase the availability and accessibility of pulses. This is practiced already, but could be expanded. Further investigate and (where feasible) promote the cultivation of certain pulses after the rice crop on IVS lands with sufficient water.
- **Animal protein:** Boost the availability and access to fish throughout the year by: investigating the feasibility of creating fish ponds as part of IVS development for agricultural purposes; creating fish ponds in IVS or other sites that are not used for agricultural purposes; and/or integrating aquaculture and rice production in the same (IVS) fields<sup>79</sup>. Once the feasibility of these different options is better understood, suitable options can be promoted in communities depending on their needs throughout the year, accompanied by technical support.
- **Fats and oils:** Promote the availability and access to small scale oil presses, so women will spend less time on the processing into palm oil, and have more time for food preparation, child care and other important tasks. It is also likely to enable rural households to produce more palm oil and thus sell more. This enhanced income may be used also to buy other food products and improve their nutrition, even though this is not automatic, and therefore needs to be combined with enhanced nutrition

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<sup>79</sup> A pilot on 'intercropping' of rice with fish by AfricaRice is being conducted in Liberia

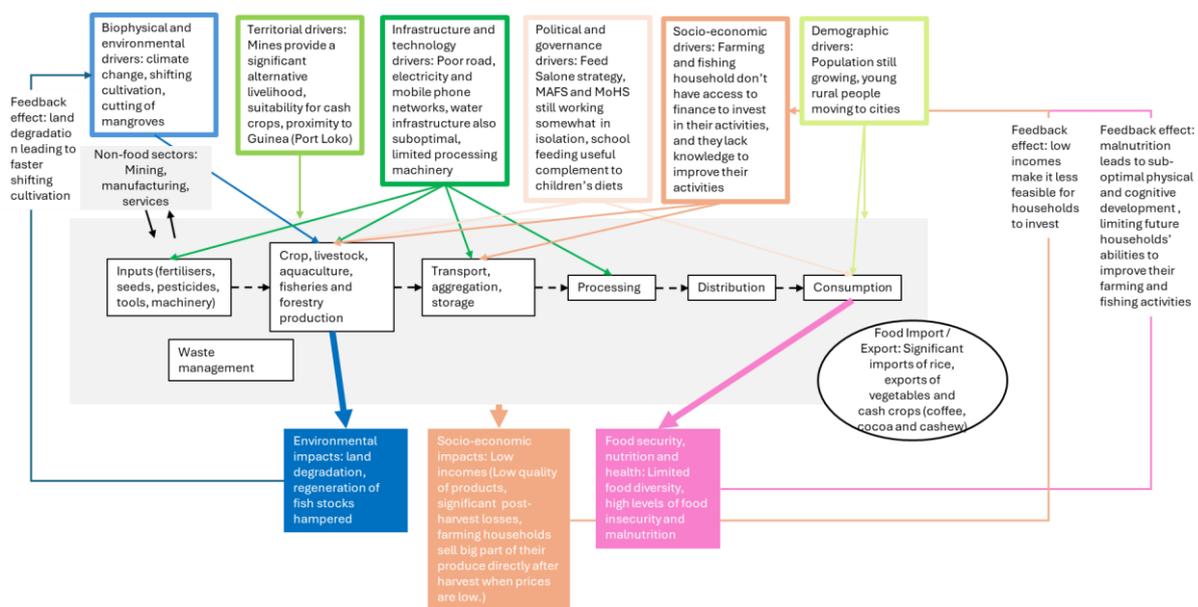
messaging, which is being discussed below.

- Carbohydrates:** Promoting access to small scale machinery and equipment for rice milling and cassava processing, as well as spare parts and repair services. This can help women save a lot of time otherwise spent on processing rice by hand, which they will be able to spend instead on food preparation, child care and other important tasks. In addition, the reinforced development, promotion and dissemination of biofortified varieties of both rice and cassava, could reduce certain micronutrient deficiencies, notably vitamin A, zinc and iron. Food diversification with other sources of carbohydrates, like yam and sweet potatoes (even non-biofortified varieties) will also improve micronutrient and proteins intakes, enhance resilience, and decrease dependency on rice and rice imports.

### 6.1.3 Food system transition challenge figure

The different food system drivers and impacts that characterise the food system transition challenge as described in the corresponding sections, have been summarised in the figure below.

*Figure 3: Key food system transition challenge in Sierra Leone: 'How to ensure that the Feed Salone Strategy contributes to healthy diets for the people of Sierra Leone?' (Source: Adapted by authors, based on David-Benz et al., 2022)*



### 6.1.4 Trade-offs

The following main trade-offs have emerged from the research and stakeholder dialogues. For each of them a recommendation has been formulated to deal with them.

Maximise production of the most consumed food items (in particular rice and palm oil) or maximise production of food products from the food groups that are often lacking in people's daily diets (like fruits, vegetables, beans and pulses, fish and livestock)?

**Recommendation 17:** It is recommended that MAFS and its international partners integrate in their projects and programmes a stronger side focus on the food groups other than carbohydrates and oils. Partly this is done already by promoting IVS that are also used to produce vegetables. However, an even wider focus on all the food groups, through a comprehensive food systems approach that considers all steps of value chain, could

increase the contribution of the Feed Salone strategy to healthier diets. Reference is made to recommendation 16 with specific recommendations for all food groups. This broader focus should ideally also be accompanied by enhanced awareness raising about the importance of balanced diets (see recommendation 29).

Maximise income vs maximise diverse food produced by households themselves

**Recommendation 18:** Government and NGOs should make sure that farming households have the right knowledge about what constitutes a balanced, healthy diet. And let them decide by themselves to which degree they would like to focus on (cash) crops for selling. But nevertheless, when promoting cash crops to farming communities, this should be combined with awareness raising about the nature and importance of healthy diets, and households should be encouraged to also continue growing an important part of their food themselves, in particular from the food groups that are often lacking in people's daily diets. This is also an important way to enhance resilience to shocks, when for instance the harvest of a cash crop fails or prices collapse. Trainings on household economy and gender transformative approach should be integrated in agricultural development projects and programmes, especially when there is a shift towards more cultivation of cash crops.

Promote high input agriculture with quick results or promote more sustainable practices that generate slower returns, but are more resilient to shocks, and more favourable for high-value, international marketing strategies?

**Recommendation 19:** Burning of vegetation in preparation of the next season is deeply ingrained in Sierra Leone's agricultural practices and it will be understandably difficult to convince farmers to do otherwise. Nevertheless, research should be conducted in the development of new agricultural techniques in the Sierra Leonean context, such as conservation agriculture and agroforestry that enhance the content of organic matter in the soils, and hence their ability to retain water.

Produce more rice and firewood by cutting mangroves or increase marine fisheries resources by protecting and replanting them and reap climate credits? (See recommendation 6 under the biophysical and environmental characteristics section.)

National level value chain development vs. community level integrated development

**Recommendation 20:** Value chain development needs to happen at the same time at the community level, at the territorial level and at national level. The challenge, especially for MAFS, is to make sure that the interventions by different partners complement each other and collaborate effectively with each other. This requires active oversight and strong coordination. For the latter reference is made to recommendation 13.

High quality standards for school feeding vs local procurement

**Recommendation 21:** It is recommended to lower the standards somewhat to a level that is attainable for Sierra Leonean farmers and companies, accompanied with technical support. It is expected that this will be a strong catalyser for increasing the capacities of Sierra Leone's agricultural sector to produce higher quality products, which would be a very valuable outcome for broader agricultural development.

## 6.1.5 Political economy

### *Stakeholder identification*

The following categories of stakeholders were identified and were invited to the MSDs:

- Farmers
- Women
- Youth
- Local government authorities
- Private sector
- NGOs
- International organisations
- Religious organisations
- Drivers

### *Stakeholders' expectations*

The Feed Salone strategy is well known among local government authorities as a flagship initiative of the new government. The importance of healthy, balanced diets is also known, but not seen as part of the Feed Salone strategy. NGOs are more focused on combining agricultural development with the promotion of the healthy, balanced diets.

International development partners' practices over the past years have created expectations by the government as well as beneficiaries that development projects should include the provision of items and services free of cost. These expectations seem to hamper beneficiaries' willingness and capability to think of solutions that they conceive and pay for themselves.

**Recommendation 22:** International development partners, NGOs and the government should try to reduce the provision free of cost of products and services to beneficiaries as part of development projects and programmes, and try to gradually switch to supporting the emergence of small businesses that provide these products and services at the local level, at affordable costs. This may be accompanied by credit provided by private and government banks (in particular the 'Community Banks') with (partial) guarantees for these loans provided by international development partners, NGOs and the government to stimulate the banking sector to develop itself in this direction.

### *Power distribution and coalitions of stakeholders*

Farmers, women and youth are not very well organised and lack capacities and independence. Therefore, until now they don't have much influence on policy development at the national level and district level. SUN coordination meetings could be a platform where these stakeholders voice their positions.

SUN Focal Points at district level are a good entry point for enhanced coordination between agriculture and health authorities and NGOs at district level. However, district level coordination mechanisms led by SUN Focal Points currently depend on external financing, which makes them vulnerable.

**Recommendation 23:** Regular SUN and food systems coordination meetings should be held in all districts. Trials should be conducted whereby no donor funding is used to finance the meetings. Participants and their respective organisations could be expected to participate as part of the normal tasks of their positions.

The most important driver of change are development projects and programmes. As explained

earlier, the focus and the approach of these interventions depend largely on the international organisations and donors that finance these interventions and the priorities expressed by their government counterparts with who they generally work closely together. Development projects and programmes implemented by NGOs are often somewhat more independent from the government. The focus and approach of these interventions are equally mostly influenced by their own common practices and their donors' priorities, but they seek to work in coherence with government policies as well.

As explained earlier, district councils have a bottom-up approach for identifying the priorities of the people in their districts. However, the regular funding controlled by District Councils is only limited. Most of the government(-linked) funding in the areas of agricultural development and nutrition goes through big development projects and programmes, which are mostly centrally managed by MAFS and MoH, and their district level offices.

Coalitions exist between farmers, processors and traders, who often overlap in the same person. All stakeholders seem to agree quite a lot on the issues that need to be solved, but for the solutions farmers look mainly at the government, international organisations and donors, and not so much at themselves and the private sector.

### **6.1.6 Potential for change**

#### *Desire for change among stakeholders*

Most people are aware of the importance of diverse and balanced diets, and they appreciate being able to put diverse food on the table. In practice, however, people do not always prioritise dietary diversity due to competing financial demands and the limited availability of products from all food groups throughout the year. Additionally, while stakeholders in general want the situation to change, some may feel that people first need to have 'sufficient' access to carbohydrates, before working on other food groups. Finally, a lack of awareness remains a significant barrier to improving diet diversity. Indeed, many people are unaware that the current situation is not optimal for their own health and productivity, as well as for the health and productivity of their children. As a consequence, they might not be convinced that their food and nutrition security situation needs to change. (See recommendation 29 on awareness raising)

#### *Capacities for change among stakeholders*

MAFS' extension officers are spread thin and mostly work on government implemented development projects/programs, financed by international development partners. The means and manpower are missing to carry on regular field visits with wider coverage. MoH Community Health Workers have a stronger presence locally and provide important awareness raising. However, they don't provide the agricultural development solutions for people to be able to change their farming practices. Communities, with support from the government and NGOs, have the potential to create better conditions for households to provide healthy diets, notably through nutrition education and mentoring in combination with VSLAs. Another valuable vehicle for change can be Farmer Field Schools, which are already quite widely promoted as part of various development projects and programmes.

<p><b>Recommendation 24:</b> As planned as part of the Feed Salone strategy, it is recommended that the number of agricultural extension officers should be increased substantially. As mentioned under recommendation 12, it is recommended that agricultural extension officer and local health services could work more closely together so they use each others' coverage of communities to provide relevant advice linked to agricultural development and</p>
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healthy diets. Trials could be conducted to use leaders of FFSs as the community level representatives of MAFS extension officers, even when there is no specific development project/programme.

### 6.1.7 Narratives and policy coherence

#### Narratives

There are few existing and new narratives around the link between agricultural development (as planned under the Feed Salone strategy) and the consumption of more healthy diets by the people of Sierra Leone:

- 'The government should first address hunger, i.e. promote production of rice and cassava, before addressing malnutrition'
- 'Eat what you grow'
- 'My grandparents ate like this and they became very old'
- 'Increasing rice imports in Sierra Leone should be replaced by increased domestic rice production'
- 'By focusing on healthy, balanced diets and promoting diversification of staple foods, rice consumption, and therefore also rice imports, can be reduced.'

#### Policy coherence

Even though alleviating hunger and malnutrition are explicitly mentioned in Strategic Objective 4 of the Feed Salone Strategy, the strategy's priority focus seems to be on rice production, which risks giving insufficient attention to foods from other food groups. Moreover, the Feed Salone strategy and nutrition policies seem to operate somewhat in isolation of each other. The Sierra Leonean government has taken significant commitments in the fields of nutrition and in the wider food system, in the frameworks of the Nutrition for Growth (N4G) summit, the UNFSS, and as a member of the Alliance of Champions for Food Systems Transformation (ACF) that was launched during the COP 28 summit.

**Recommendation 25:** In line with Sierra Leone's international commitments, it is recommended to bring the Feed Salone strategy and nutrition policies (notably the Multisectoral Strategic Plan to Reduce Malnutrition) under a single food systems policy framework together with relevant environmental policies to enhance coherence and collaboration between different government services. A first step in that direction has already been taken with the planned development of a National Food Systems Coordination Strategy by SUN-FSCU/OVP with support from GIZ C4N.

Centrally led international development projects/programs, which play a crucial role in implementing the strategy, often fail to fully engage district-level authorities. Food quality standards for institutional feeding, trade policies, road infrastructure and environmental policies are also important policy areas for the transition to more sustainable food systems.

**Recommendation 26:** It is recommended that MAFS and MoF contemplate again the feasibility to introduce import tariffs on rice as a way to stimulate the local production of rice. Sierra Leone's rice sector is in an early stage of development compared to its foreign competitors, and therefore a protection through import tariffs seems justified to help the rice sector in Sierra Leone to catch up. A flexible import tariff may be considered, also in order to keep prices more stable for producers and to limit negative impacts on consumers when international market prices are high. In addition, as announced by MoF last year, the funds

generated by these import tariffs could be used to contribute to the implementation of the Feed Salone strategy.

### **6.1.8 Potential for interventions and innovations to support the transition<sup>80</sup>**

School feeding and school gardens are an effective way of providing balanced, healthy meals to young children. They also stimulate enrolment and help children learn about the importance of balanced diets. However, due to budgetary limitations the roll out is not entirely uniform, as certain rural chiefdoms are not yet covered. (Urban chiefdoms are excluded for understandable reasons). Procurement is rather centralised, with three international organisations/NGOs assisting the government in implementing the school feeding program, except for a few items like condiments and a few other products depending on local agreements. The Sierra Leonean government has committed itself to increasing coverage of pre-primary and primary school students from 25% to 100% by 2030, as part of its commitments for the Nutrition for Growth summit.

**Recommendation 27:** It is recommended for MBSSE to experiment with local procurement of more foodstuffs, while reinforcing the financial control measures to monitor the school's handling of such funds. Local procurement for school feeding can catalyse the production of more nutritious foods and food with higher quality standards.

A limited number of schools have their own school garden.

**Recommendation 28:** Encourage schools to establish their own school gardens as a means to provide nutritious foods for school meals, and teach children and their parents, about innovative ways to grow crops.

There are big number of interventions by international organisations in collaboration with the government and NGOs that are relevant for the food system transition challenge. The main ones are the following:

- IFAD's Agricultural Value Chain Development Project (AVDP, 2018 – 2025)
- WB's Food Security Resilience Programme (FSRP, 2022-2027)
- WFP's interventions
- FAO's Livestock and Livelihoods Development Project (LLDP)
- WHH
- Concern Worldwide
- Solidaridad
- SEND
- Mopanda
- GOAL
- Focus 1000
- AAD-SL
- FoRUT
- Cotton Tree Foundation

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<sup>80</sup> The conclusions and discussions in this section are also based on the findings in Annex 1– Projects and interventions.

- HKI
- ACF/AAH

Including nutritional messaging in support of healthier diets in agricultural projects, as practiced by several NGOs, is a good way of ensuring that enhanced incomes through improved agricultural practices, are also used by households to improve their nutrition. Some health-focused projects have incorporated agricultural elements, such as the establishment of gardens at health centres to demonstrate the cultivation of various trees and crops in the SEND project. MAFS has provided technical support for these initiatives. Nutritional messaging will also encourage households to grow more diverse, nutritious foods themselves.

**Recommendation 29:** It is recommended to continue promoting people’s awareness about the importance of diverse, healthy diets through MoH’ local health centres and their Community Health Workers (CHWs) and local mobilisers. MAFS’ internationally funded projects and programmes should include more substantial activities aimed at increasing awareness about diverse, healthy diets

As mentioned already under the technology drivers section, the gradual adoption of small processing machinery has also been an important innovation for rural households.

Promoted by NGOs as part of their projects in the agricultural sector, Village Savings and Loans Associations (VSLAs) are often adopted enthusiastically and sustainably by communities. Although VSLAs may not directly impact diets, they play a crucial role in improving access to finance for investments; empowering individuals (in particular women), households and communities to be more entrepreneurial; and reducing stress on households, which can help prevent unhealthy coping strategies. VSLAs can serve as a foundation for farmer groups and cooperatives, as they require the same accounting and governance skills as these organisations.

**Recommendation 30:** Promote the creation of VSLAs more widely as part of agricultural development projects and programmes. And support VSLAs by providing essential training and mentoring to enable them to become self-reliant. (Refrain from providing starting capital, which risks creating the wrong incentives for people to take part and may therefore undermine their sustainability)

## Bibliography

Abdoulahi, H.O. et al, 2018, Technologies, quality and socio-economic importance of dried fish in Africa, *Rev. Sci. Technol.*, Synthèse 37: 49-63 (2018)

African Business, 2023, Sierra Leone's President Julius Maada Bio on Scaling up Adaptation Panel Discussion at Africa Climate Summit, Explains Food Security, Climate Financing as Priorities. Internet article published on September 5th, 2023, retrieved 9 May 2025

Calabash, 2022, Western Area Rural District to Benefit from Ongoing School Feeding. Retrieved from website 17/06/2025: <https://thecalabashnewspaper.com/western-area-rural-district-to-benefit-from-ongoing-school-feeding/>

CIRAD, EU and FAO, 2024, Methodological Guide – Science-Policy interface for food systems transformation

Datareportal, 2025, Digital 2025: Sierra Leone. Retrieved 30/05/2025: <https://datareportal.com/reports/digital-2025-sierra-leone>

David-Benz, H., Sirdey, N., Deshons, A., Orbell C. and Herlant, P. 2022. Conceptual framework and method for national and territorial assessments– Catalysing the sustainable and inclusive transformation of food systems. Rome, FAO, Brussels, European Union and Montpellier, France, CIRAD. (<https://doi.org/10.4060/cb8603en>)

ECOWAS Commission - Directorate of Agriculture and Rural Development, The ECOWAS Rice Factbook, 2019 (1st Edition)

FAO, 1995, The conservation of lands in Asia and the Pacific

FAO, 2022, Sierra Leone Country Programming Framework 2022–2026

FAO, 2023, Statistical Yearbook 2022. <https://openknowledge.fao.org/items/ffc06bd1-b7e9-4b94-a6a7-9ba45352976b>

FAO, CIRAD and EU, 2022, Food Systems Profile - Sierra Leone - Catalysing the sustainable and inclusive transformation of food systems

FAO, 2024, 'Sierra Leone: new investment to enhance livestock production for food security and encourage meat consumption for nutrition'. Retrieved from website 16/05/2025: <https://www.fao.org/investment-centre/latest/news/detail/sierra-leone--new-investment-to-enhance-livestock-production-for-food-security-and-encourage-meat-consumption-for-nutrition/en>

FCWC, 2018, Eleventh FCWC Ministers Conference strengthens regional fisheries cooperation for improved management and control. 14th December, 2018. <https://stopillegalifishing.com/news/eleventh-fcwc-ministers-conference-strengthens-regional-fisheries-cooperation-for-improved-management-and-control/>

FSRP, 2025, Programme Profile. Retrieved from website 15/05/2025 : <https://www.fsrp-sl.org/program-profile>

Global Mangrove Watch, 2025, Sierra Leone. Retrieved from website 21/05/2025: [https://www.globalmangrovetwatch.org/country/SLE?bounds=\[\[22.394525242858464,3.2261414526576004\],\[4.255911696644034,11.084251410671072\]\]](https://www.globalmangrovetwatch.org/country/SLE?bounds=[[22.394525242858464,3.2261414526576004],[4.255911696644034,11.084251410671072]])

GOAL, 2025, Sierra Leone. Retrieved from website 19/05/2025: <https://www.goalglobal.org/countries/sierra-leone/>

GoSL, 2019, Sierra Leone's Medium-term National Development Plan 2019–2023, education for development, volume1.

GoSL, 2021, Updated Nationally Determined Contribution (NDC)

Government of Sierra Leone, 2025, Sierra Leone Nutrition For Growth (N4G) Commitments 2025

GoSL, 2025, Implementation Plan For The Operationalization Of The Feed Salone Strategy Pillar 3: Aggregation, Processing And Market Linkages

GoSL, 2025, Feed Salone - Strategy for the Fisheries and Marine Resources Sectors in Sierra Leone. International Bank for Reconstruction and Development / The World Bank

IFAD, 2021, Rural Development and Agricultural Transformation in Sierra Leone: Lessons and Prospects

Kanu, P.J., 2024, Complementary Food Situation in Sierra Leone : Nutrition problem and possible strategies – A review. Food and Nutrition Sciences 15, 113-128

Leape J, Micheli F, Tigchelaar M, et al., 2023, The Vital Roles of Blue Foods in the Global Food System. In: von Braun J, Afsana K, Fresco LO, et al., editors. Science and Innovations for Food Systems Transformation [Internet]. Cham (CH): Springer; 2023.

LIFFT project, 2025, Cashew Market Information (last updated 11/03/2025) Retrieved from website 17/06/2025: <https://liffproject.com/cashew-market-information/>

Meteoblue, 2025, Climate Change Kenema. Retrieved from website 19/05/2025: [https://www.meteoblue.com/en/climate-change/kenema\\_sierra-leone\\_2407790](https://www.meteoblue.com/en/climate-change/kenema_sierra-leone_2407790) and [https://www.meteoblue.com/en/climate-change/port-loko\\_sierra-leone\\_2404433](https://www.meteoblue.com/en/climate-change/port-loko_sierra-leone_2404433)

MFMR IDAS, 2019, Statistical Report. Freetown, Sierra Leone.

MFMR, 2020, Fisheries Management Plan of Sierra Leone Marine Fisheries Sector 2020 – 2025. 7th Floor, Youyi Building, Brookfields, Freetown. chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://faolex.fao.org/docs/pdf/sie214135.pdf

MoF, 2024, Blog - <https://mof.gov.sl/the-5-import-duty-on-rice-will-support-and-promote-local-rice-production-minister-of-finance/>. Retrieved from website 01/07/2025: <https://mof.gov.sl/the-5-import-duty-on-rice-will-support-and-promote-local-rice-production-minister-of-finance/>

MoHS, UNICEF, Helen Keller International, and WHO, 2015, SLMS - Sierra Leone Micronutrient Survey 2013. Freetown, Sierra Leone; 2015

MoHS, 2021, Sierra Leone National Nutrition Survey 2021

nPerf, 2025, Orange Mobile's 3G/4G/5G coverage map in Sierra Leone - Orange Mobile cellular data network. Retrieved from website 30/05/2025: <https://www.nperf.com/en/map/SL/-/220702.Orange-Mobile/signal?ll=7.38425782830926&lg=-12.144863828454012&zoom=7>

Oladele, O.I. and Amara, A., 2024, Farmers' use of Indigenous knowledge on climate change adaptation across farming systems and agroecological zones of Sierra Leone, AlterNative (<https://journals.sagepub.com/doi/10.1177/11771801241251862>)

SEND-SL and EWB-DK, 2025, Climate-smart agriculture practices for rural women farmers in 15 communities in the Kenema district, Sierra Leone

SLMET, 2025, Sierra Leone Climate. Retrieved from website 19/05/2025 :

<https://slmet.gov.sl/our-services/climate>

Solidaridad, 2025, personal communication

Stats SL, 2019, Sierra Leone Integrated Household Survey (SLIHS) Report 2018

Stats SL and ICF, 2020, Sierra Leone Demographic and Health Survey 2019. Freetown, Sierra Leone, and Rockville, Maryland, USA: Stats SL and ICF.

Stats SL, 2021, Sierra Leone 2021 Mid Term Population And Housing Census - Thematic Report on Agriculture (draft). Sheriff, M.A., Davowa, S.K. and Karama, M.M.

Stats SL, 2022, Preliminary report of the Final Results of the first digital census in Sierra Leone - 2021 Mid-Term Population and Housing Census

Stats SL, 2023, 2023 Sierra Leone Annual Agricultural Survey Report. [https://www.statistics.sl/images/StatisticsSL/Documents/2023 Sierra Leone Annual Agricultural Survey Report.pdf](https://www.statistics.sl/images/StatisticsSL/Documents/2023_Sierra_Leone_Annual_Agricultural_Survey_Report.pdf)

University of Maryland and World Resources Institute, 2025, Global Primary Forest Loss. Accessed through Global Forest Watch - Sierra Leone – Eastern – Kenema – Forest Change on 20/05/2025:

<https://www.globalforestwatch.org/dashboards/country/SLE/1/2/?category=forest-change&lang=en&location=WyJjb3VudHJ5liwiU0xFlwiMSIsIjliXQ%3D%3D>

WFP, 2017, Sierra Leone - Kenema District: Main Locations and Chiefdom Boundaries, 28 November 2017. Based on GAUL, UNGWIG, Sierra Leone SSL. Retrieved from website 20/05/2025: <https://reliefweb.int/map/sierra-leone/sierra-leone-kenema-district-main-locations-and-chiefdom-boundaries-28-november>

WFP and GoSL, 2021, State Of Food Security In Sierra Leone 2020 - Comprehensive Food Security and Vulnerability Analysis

WFP, 2025, Sierra Leone Annual Country Report 2024

WHO, 2024, Proportion of population with primary reliance on fuels and technologies for cooking, by fuel type (%). Retrieved from website 20/05/2025: <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/proportion-of-population-with-primary-reliance-on-fuels-and-technologies-for-cooking-by-fuel-type>

World Bank, 2023, World Bank Annual Report 2023: A New Era in Development (English). Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/099092823161580577>

## Appendixes

### Appendix 1 – Projects and interventions

#### **IFAD**

##### *Agricultural Value Chain Development Project (AVDP, 2018 – 2025)<sup>81</sup>*

This project is implemented through MAFS and supports the creation of Inland Valley Swamps (IVS) rice fields and provides/subsidies machinery for the processing of particular rice. Palm oil, cocoa, and vegetables are covered as well according to the IFAD website. Vegetable cultivation is promoted in the rice fields after the rice harvest. AVDP has a nutrition component similar to the WFP project, but AVDP doesn't buy back rice. AVDP has farmer field schools at each site with a facilitator (MAFS extension staff). AVDP in Kenema promotes food security and nutrition through various activities in targeted chiefdoms. Activities are structured around 4 components: 1. Crop Diversification and Intercropping, 2. Farmer Field Schools (FFS), 3. Market Linkages and Production Expansion, and 4. Community Empowerment.

In Kpai community (Small Bo chiefdom, Kenema district) farmers indicated that AVDP supported them to improve their IVS, and they were supported to plant vegetables and other crops, which they considered has improved their food intake. In Sembehun community (Malegohun chiefdom, Kenema district) farmers indicated that AVDP will be constructing an earthen dam for their IVS. A farmer in Robis 1 community (Koya chiefdom, Port Loko) district indicated that AVDP has provided him with improved oil palm seedlings.

The Block Extension Supervisor of MAFS responsible for Malegohun chiefdom among others, mentioned that AVDP is also working in Bambara chiefdom and Dodo chiefdom. He indicated that in communities benefiting from their oil palm interventions, they give out for free 50 to 100 improved oil palm seedlings to farmers, depending on the acreage to be planted, as well as tools. He mentioned that AVDP also sometimes implements a few activities on nutrition<sup>82</sup>, but that the project is mostly focused on agriculture. He also mentioned that AVDP provides rice processing machines to big rice farmers.

#### **World Bank**

##### *Food Security Resilience Programme (FSRP, 2022-2027)<sup>83</sup>*

The World Bank's and GAFSP's \$135 million Food Security Resilience Programme (FSRP), like AVDP, is implemented in close collaboration with MAFS. It provides support to farmers for land preparation with machinery. In collaboration with FAO it is also providing support for the rehabilitation of IVS. Machinery is being provided to the private sector. The main components of the programme are 1. Digital Advisory Services for Agriculture and Food Crisis Prevention & Management, 2. Sustainability and Adaptive Capacity of the Food System's Productive Base, 3. Regional Market Integration & Trade, and 4. Contingent Emergency Response Component. (FSRP, 2025) The programme also has a sub-project with nutrition work, which includes work on cassava, OFSP and other interventions.

In Bandi community (Small Bo chiefdom, Kenema district), farmers indicated that they received small ruminants from FSRP. In Makulun community (Masimera chiefdom, Port Loko district),

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<sup>81</sup> See also <https://www.ifad.org/en/w/projects/2000001544>

<sup>82</sup> Including as part of trainings for Farmer Field Schools

<sup>83</sup> <https://www.fsrp-sl.org/program-profile>

farmers indicated that with the support of FSRP (from land preparation to harvesting) they were able produce more rice and cassava.

### ***World Food Program***

WFP utilises 'cash-based transfers' (CBT) under its School Feeding and Asset Creation and Livelihoods (ACL) activities to support smallholder farmers and local procurement for school feeding. With the CBTs schools benefitting from the Home-Grown School Feeding (HGSF) (sub-) programme can purchase fresh vegetables from local farmers. CBTs also support farmers to access agricultural inputs and improve productivity. (WFP, 2025) The activities are implemented in collaboration with MAFS. The interventions include support for the development of IVSs that are suitable for two crops per year (rice and vegetables) and the provision of high-yielding seeds, fertilisers, and trainings on composting and organic farming to enhance productivity.

Kenema district is covered by these interventions, but Port Loko is not. The Block Extension Supervisor of MAFS responsible for Malegohun chiefdom among others, mentioned that WFP is doing more on nutrition than AVDP. He estimated that WFP's interventions on OFSP and school feeding had an important impact. Not all farmers in the targeted communities are practicing OFSP he said, but those who do appear to be healthier. They process OFSP into flour, by drying and then pounding. The flour can be used for cooking pure or mixed, also for children. The machinery provided by WFP are also given to big rice farmers, through a kind of contest.

Farmers in Benduma community in Malegohun chiefdom in Kenema district mentioned that WFP is buying the rice from their IVS at a relatively good price. Vegetables they also sell to WFP or on the local market. They also mentioned support they received from WFP to improve their diets. In Sembehun community in the same chiefdom farmers mentioned that WFP's interventions finished 6 months ago, which focused on OFSP and also created Village Savings and Loans Associations (VSLAs) and women groups. Through the VSLA they were able to hire labour to do the work more easily, and cover school and medical fees. Only the sweet potato groups received trainings on nutrition.

In Benduma community the school that was interviewed also benefitted from the school feeding programme through WFP. It was indicated that WFP provides rice, vegetable oil, soybeans and salt. WFP provides both imported rice as well as locally procured rice. Children prefer the imported rice. Sometimes there are shortages of rice. The vegetable oil is sometimes supplemented with local palm oil, in particular when the stocks are low. WFP tried to replace the soybeans with pigeon peas produced in Sierra Leone, but children did not like it. Parents provide for 'pepe' (chili), firewood, water and volunteer cooks. Some days vegetables are being bought with money managed by the School Management Committee. Before WFP stopped supporting the women group for OFSP production that was established, the group was supplying OFSP for the school meals. They continued for a little while after the support stopped, but now the group stopped cultivating OFSP altogether, because of lack of demand. Besides the children in school, people are not eating OFSP in their community.

In Sembehun community, the school is also receiving rice, beans, vegetable oil and salt for its school feeding from WFP. The schooling feeding program also supports the buying of certain products from the community. Parents are also asked to contribute 1NLE per child per week, which is used to buy the products needed to be able to cook healthy meals (potato leaves, fish, sawa-sawa, krain-krain, maggie), the head teacher said. He suggested that more money be provided by the government/WFP, so the school can buy more protein food products, without having to ask parents to contribute more. As the number of pupils has increased

significantly, they sometimes run out of food, in which case they stop providing the school meals.

### ***FAO's Livestock and Livelihoods Development Project (LLDP)<sup>84</sup>***

The USD 105.5 million, eight year project was approved end of 2024. The project has three main activities that are implemented in close collaboration with MAFS:

- 'Supporting smallholder livestock production and productivity, by building farmers skills, enhancing animal disease control and mainstreaming the consumption of locally produced protein, while managing the externalities related to climate change and environmental degradation.
- Strengthening micro and small livestock enterprises, through business development and marketing.
- Supporting the policy and institutional environment to attract public and private investments in the livestock sector.' (FAO, 2024)

As part of the project (small) livestock is being provided to communities. The project is implemented in 8 districts, including Kenema and Port Loko. Because the project has only started very recently, it was not considered as a major intervention for the sampling of the chiefdoms and communities. However, in Bandi community (Niawa chiefdom, Kenema district), a few improved race chickens were provided already. In Kponima community in the same chiefdom, a few chickens were provided as well. The farmers said they would only sell and eat them until the chicken have multiplied. The community was also supposed to receive goats, but they died from a certain disease, possibly PPR, in quarantine elsewhere. It was observed that the community had already constructed elevated sheds for the goats, for which they were trained.

*Picture 3: Elevated sheds for goats constructed by the community of Kponima in Niawa chiefdom in Kenema district*



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<sup>84</sup> <https://www.fao.org/investment-centre/latest/news/detail/sierra-leone--new-investment-to-enhance-livestock-production-for-food-security-and-encourage-meat-consumption-for-nutrition/en>

## WHH

WHH implements various projects in Kenema district that combine agriculture and nutrition. It often applies the Linking Agriculture, Nutrition and Natural Resources (LANN) approach, including assessments of children under five in collaboration with MoH, nutrition education<sup>85</sup>, nutrition camps<sup>86</sup> for malnourished children and their mothers, and for pregnant women, WASH activities, Village Savings and Loan Associations (VSLA)<sup>87</sup>, sustainable agronomic practices<sup>88</sup>, post-harvest management<sup>89</sup>, livestock development<sup>90</sup>, and FFSs facilitated by project staff and MAFS staff. WHH often implements its projects in collaboration with local NGOs. Currently, the following projects are running in Kenema district:

- Com-Unity/Nutrition Community Smart Project financed by BMZ, which is in year 4 of its 4 year duration, in collaboration with Mopanda and SEND
- New approach project
- Agribusiness Development from Organic Resources (ADORE) project, which focuses on the cacao sector

In Bandi community in Niawa chiefdom farmers indicated that they received support from WHH/Mopanda on OFSP, groundnut and maize. They indicated that they were provided with the right advice to cultivate at the right time. They indicated that they have very good yields. They sell a part of their harvest and they consume a part themselves.

In Kpai community in Small Bo chiefdom farmers indicated they received support from WHH/SEND, who provided seed material (groundnut, OFSP) and funding for labour.

## Concern Worldwide

Concern Worldwide is or was implementing two relevant projects that integrate agricultural development and nutrition, which (partly) cover Port Loko district

The '*Food and nutrition security through equity and climate smart system*' project was a 3 year LANN/nutrition smart communities project financed by Irish Aid, which ran from November '21 to November '24. It was implemented in Kamasondo and Lokomasama chiefdoms. It focused on agriculture, post-harvest management<sup>91</sup>, NRM<sup>92</sup>, nutrition, WASH, with as crosscutting themes gender and VSLAs. The project worked with relevant government line ministries (MAFS, MoH, MOGSA, MWR) and the district council. As part of the agricultural activities, the project implemented FFSs, which were provided with seeds for food diversification. Community groups were formed with community animators, which provided recipes, cooking demonstrations, and trainings on complementary feeding for the weaning phase, when many children get sick.

The '*Food and Nutrition Security through Equitable and Climate Smart Food Systems*' or 'Yoti

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<sup>85</sup> Including local food recipes, cooking demonstrations in collaboration with MoH and SUN

<sup>86</sup> During the camps mothers identify the recipes that please their child. Recipes are based on local foods available from the household or the wild.

<sup>87</sup> Which are generally working well and enthusiastically adopted by communities

<sup>88</sup> Including improved seeds being provided, in collaboration with SLARI

<sup>89</sup> Including provision of small machines for processing, like rice mills, oil palm presses and grinders of food for infant food, provided at community level in a small, constructed processing centre.

<sup>90</sup> Providing small livestock (eg goats, sheep, chicken) depending on their needs, by providing grant, with which the community purchase themselves. Community needs to provide sheds. Works well generally.

<sup>91</sup> In particular improved palm oil processing

<sup>92</sup> Including forest management committees

Yoti' project<sup>93</sup> is a 5 year project financed by Irish Aid, in collaboration with WHH. It started in 2023 will end in 2027. The project is similar to the other project. Support focuses on value chains that the beneficiaries are most interested in<sup>94</sup>. It also works on land access for women, livestock vaccinations, home gardens, climate interventions (eg solar irrigation). In one of the districts the project implements latrines that convert excrements into compost.

In Kegbal community in Loko Massama chiefdom farmers indicated that they received trainings from a nutritionist on food preparation and nutritional balance, and also thanks to that they say they now have better feeding practices. They also improved their cultivation practices, they introduced new crops<sup>95</sup>, so their crops are now more diversified. A VSLA was also established in their community 4 years ago as part of the first mentioned project. They were trained by CW to manage the VSLA. The VSLA shares out to its members each year in December. They indicated that the money that is shared out is used more for festive events, than for agriculture, but they do use it to buy seeds for the dry season crops. Thanks to the VSLA they say they also have more money to buy appropriate food and it helps them in case of emergencies. The VSLA is the most appreciated part of the project.

### **Solidaridad<sup>96</sup>**

Solidaridad's work in Kenema district focuses on nutrition, empowering farmers and promoting sustainable agricultural practices.

The nutrition component is implemented as part of the Resilient Food and Nutrition Security (RFaNS) Project funded by The Church of Jesus Christ of Latter Days Saint Charities is implemented in Bo, Kenema and Moyamba Districts. In Kenema district the project is implemented in Nongowa, Lower Bambara, Small Bo, Dama and Koya chiefdoms. The project seeks to improve the food and nutrition security situation of women and children under-five in smallholder farming communities by increasing access to agricultural inputs and enhance ecological stability through sustainable land use practices and alternative livelihood opportunities. The project provided 75 women groups with improved varieties of seeds, tools and livestock to increase production and consumption.

'The project seeks to strengthen socio-economic conditions to improve nutrition and the ability of families to provide for their children, improve women's understanding and engage fathers, mothers and caregivers to improve and support mother's dietary needs of infants and young children feeding patterns by:

- Establishing a network of gender sensitive nutrition education and information services in communities with strong links to Community Clinics (CC) and other community-based health facilities
- Developing nutrition education materials; organize training on nutrition education; implement nutrition education as part of agriculture and livelihoods interventions.
- Conducting training on food and nutrition for under-five children. The project collaborates with the Ministry of Health (MoH) to engage fathers, mothers, and caregivers to improve and support mothers' dietary and infant and young child feeding practices. Followed by community sensitization on nutrition for children.

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<sup>93</sup> <https://www.concern.net/knowledge-hub/food-and-nutrition-security-through-equitable-and-climate-smart-food-systems-yoti>

<sup>94</sup> For instance cassava, rice, vegetables, poultry, sweet potato, pepe

<sup>95</sup> Eg yam, cocoyam, banana, cassava, sweet potatoes, Chinese yam

<sup>96</sup> <https://www.solidaridadnetwork.org/news/improving-food-security-chasing-out-hunger-in-sierra-leone/>

- Supporting women groups with the cultivation of food crops, vegetables and livestock production farming, enabling communities to produce their own diverse foods (e.g., vegetables, fruits, and even poultry) to improve dietary diversity.
- Organizing under-5 baby food cooking demonstration practices at community levels with locally produced food crops in collaboration with DHMT nutritionists.
- Organize Radio Talk shows with women involved in Income Generating Activities (IGA) and nutrition. Female role models and Health workers will be invited to share their experiences.’ (Solidaridad, 2025)

In the same communities the agricultural component is implemented as part of the Responsible Agriculture Investment (RAI) initiative (2022-2026). It is being implemented in collaboration with the Food and Agriculture Organization (FAO), MAFS and MoH, has been supporting over 200 rural women farmers in Kenema. The project provides fertilisers and seeds (vegetables, groundnut, IVS rice, and others) from certified dealers. The project also works with agro-input providers to sell hybrid vegetable seeds. The project also taught farmers to use limited amounts of pesticides responsibly for their vegetables only. These agro-chemicals are supplied by National Fertilizer Regulatory Agency (NaFRA) of MAFS. As part of the project also VSLAs were established, who share out every year. This money is often spent on educating their children, agriculture, and other household needs. The VSLAs have usually 30 members, but some of the VSLAs have given birth to other VSLAs. Impacts of the project can be seen in female farmers who were able to build successful agro-businesses. Monitoring also revealed that 80% of the beneficiaries improved their income and the diversity of their nutritional intake.

The town chief of Kpai community in Small Bo district mentioned that women in his community received support on vegetables, groundnut, and that they are still cultivating the seeds that were provided to them.

Solidaridad also has another project, which focuses on cash crops (oil palm, poultry, cocoa, cashew, coffee), but this project doesn’t have a nutrition component.

## **SEND**

SEND Sierra Leone collaborates with WHH to implement some of their projects in certain areas. But SEND also has many other projects, with funding from for instance EU, UNDP, Tetratech, Irish Aid, USAID, FCDO, Trocaire, WHH, Concern Worldwide, Care, and FAO. SEND is active in almost all districts of Sierra Leone. In Kenema district, both in collaboration with WHH as described under the WHH section, as well as through other projects, SEND is supporting the establishment of VSLAs and provides seeds of climate smart crops to farmers, in collaboration with MAFS. In the health sector, there is a nutrition component in the ‘Saving Lives in Sierra Leone’ phase 3 project, which includes cooking demonstrations and collaborates with the government’s local health facilities. This includes the creation of ‘backyard gardens’<sup>97</sup> at health centres, so communities can replicate such gardens. MAFS provided technical expertise for these backyard gardens at health facilities, for instance on bedding, seeds, and (organic) pest control. People from the community do the work in these backyard gardens at health centres. Before the project started, 90% of local health centres didn’t have such a demonstration garden.

SEND also has a project focused on climate smart agriculture and access to land, financed by Engineers Without Borders, in collaboration with MAFS and SLARI. Women are often deprived from access to land by traditional practices. The project supports 15 communities in Lower

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<sup>97</sup> Including for instance peas, vegetables, fruits

Bambara and Nongowa chiefdoms. Women groups and CBOs receive support to improve their IVSs. They are provided with the Nerica variety rice seed, which can be harvested at 3 months instead of the 6 months of the local varieties. Beneficiaries are also provided with vegetable, groundnut, and cassava seed material. VSLAs are also part of the project. As part of the project an assessment was conducted in the targeted communities to see how they are affected by climate change. Through FFSs for women, beneficiaries are encouraged to do mixed cropping, organic fertilisers, and more IVS instead of upland farming, so they also cut less trees. Livestock is also promoted, so people don't have to eat wild animals. The project also promotes processing machines and irrigation facilities for vegetables during dry season.

SEND also has a home-grown school feeding pilot project with FAO and MAFS, focused on two secondary, boarding schools. The aim is to expand production of vegetables and livestock, both to generate income for the school and to make their school meals more diverse. Nutrition education and seed banks are also part of the project. As part of a Tetratech project on strengthening women in education, it also implements activities to reduce teenage pregnancies.

SEND also has a project in Port Loko, but no details on that project were obtained.

### ***Mopanda***

Mopanda is another national NGO that is active in the areas of agricultural development and nutrition. Like SEND, it also works with WHH to implement its projects in certain areas. No more detailed information on Mopanda's activities was obtained.

### ***Goal<sup>98</sup>***

Goal works in nine of the 16 districts on food and nutrition security, health, and WASH. (Goal, 2025). Only one of the sampled communities, Kpai community in Small Bo chiefdom in Kenema district was a beneficiary of interventions by Goal, but no additional information on the nature of these interventions was obtained.

### ***Focus 1000's interventions***

Focus 1000 is also a national NGO that is active in the areas of agricultural development and nutrition. From July 2023 until June 2024 it promoted nutritious crops and cash crops, through community champions, in 55 communities in Nongowa chiefdom in Kenema district. The impact of the project was estimated to be good, with beneficiaries still cultivating the promoted varieties and keeping seeds for the next season. Focus 1000 is also active in Port Loko district, among other districts.

### ***AAD-SL***

Action for Advocacy and Development – Sierra Leone (AAD-SL) works with Concern Worldwide in Port Loko, in particular on the coordination of food and nutrition security related activities at the district level, between district level government authorities and NGOs. As far as known, it does not have field level interventions in the areas of agricultural development and nutrition in Port Loko district.

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<sup>98</sup> <https://www.goalglobal.org/countries/sierra-leone/>

## ***FoRUT***

Foundation for Rural and Urban Transformation (FoRUT) is working through MAFS with farmers in Bakaloko and Maforki chiefdoms. Among others, the interventions focus on tools, FFS, climate smart technologies, fertilisers, irrigation, marketing, seeds<sup>99</sup>, VSLAs, seed stores, dry floors, and processing<sup>100</sup>.

## ***Cotton Tree Foundation***

Cotton Tree Foundation is thought to have relevant interventions in Port Loko district, but no more details on the nature of these interventions was obtained.

## ***HKI's interventions***

Helen Keller International has significant interventions in the fields of agricultural development and nutrition, but not in the target districts of Kenema and Port Loko.

As part of its food systems work stream, in collaboration with MAFS, it works among others on seeds (in particular OFSP<sup>101</sup> in collaboration with SLARi), mechanisation and irrigation (including solar pumps and harvesting of rainwater) and post-harvest management. It is also promoting climate smart techniques, organic agriculture, and alternatives to slash and burn. It also works on access to finance through micro-finance and VSLAs, and integration of youth and women.

HKI collaborates with MoH at district level, among others with trainings on OFSP and cooking demonstrations. HKI used to work on OFSP powder that was being distributed to health facilities. Now it is rather promoting the production of OFSP by the government's local health facilities themselves, so they can use it for cooking demonstrations. HKI chooses to work on production and campaigning for the consumption of OFSP at the same time, because if people have to buy it, it will become too expensive for people.

## ***ACF's/AAH's interventions***

Action Contre la Faim (ACF) or Action Against Hunger (AAH) has significant interventions in the fields of agricultural development and nutrition, but not in the target districts of Kenema and Port Loko as far as known. No more details on AAH's interventions in Sierra Leone were obtained.

## ***Small machinery***

The gradual adoption of small processing machinery has been an important innovation for a part of the rural households<sup>102</sup>. The machinery reduce the labour burden on women, who are often responsible for food processing (in particular when it is done by hand) and for providing food for the whole household. Machinery generally also allow for a higher quality of the processed products and fewer losses, and in that way it also enhances the availability of food and/or enhances incomes.

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<sup>99</sup> Farmers have asked for Pakjam and N19 rice varieties and the bitter cassava variety

<sup>100</sup> Including plans for farmer group to process cassava into biscuits

<sup>101</sup>Which are considered to have high protein and beta-carotene (vitamine A precursor) contents

<sup>102</sup> See also the earlier sub-section on technology drivers and the section on WHH

## **VSLAs**

VSLAs have also been an important innovation for many rural households who became a member of a VSLA. As indicated above under the respective sections on the interventions of the various NGOs, many of them promote VSLA in their target communities as a way to enhance access to finance. At least in Kenema district, VSLAs were also promoted under the WFP interventions there, where they were linked to farmer groups that were formed linked to IVS development.

## ***Nyam Nyam Pap***

The Nyam Nyam Pap factories are located in Moyamba, Kambia, and Pujehun districts. They were established to support Mother Support Groups (MSGs) as part of a targeted nutrition interventions. This initiative was implemented by the World Food Programme (WFP) with financial support from the French government.

Each factory was constructed and equipped with locally fabricated machinery by Finic and installed to meet the operational needs of the MSGs. The facilities are solar-powered and equipped with boreholes and rainwater harvesting systems to ensure a sustainable and reliable water supply for food processing activities.

Women involved in the project received comprehensive training in:

- Food production standards and guidelines
- Infant and young child feeding (IYCF) practices
- Basic bookkeeping and financial management

The MSG members procure raw materials from local open and periodic markets within Moyamba, Kambia, and Pujehun districts, with the aim to improve nutrition through the production of safe, locally made complementary food for young children.

Nyam Nyam Pap is mostly composed of rice or orange fleshed sweet potato based (OFSP) blended with soybean/pigeon pea (kusho), groundnut and sugar.

## ***Bo Food Company's (BFC) Bennimix***

The Bo Food Company (BFC) factory is located in Bo District. Through recent investments in modern equipment and staff capacity building, the factory has scaled up its production capacity to approximately 400 metric tonnes per annum.

BFC has successfully developed and commercialised value chains for four key crops, managing the entire process from production, processing, and marketing to export. The company works closely with smallholder out-growers and is progressively expanding into mechanised cultivation with medium-scale out-grower groups. BFC's crop selection strategy and rotation practices are tailored for rain-fed agriculture, reducing dependence on synthetic fertilisers while promoting sustainability and soil health.

BFC has launched a variety of nutritionally blended food products, including:

- SierraMix
- PikinMix
- PetetePap (formulated with Orange-Fleshed Sweet Potato)
- LiberMix (targeted for adolescent feeding programmes)
- SuperMix (formulated as a nutritious family breakfast cereal)

All products are micronutrient fortified and have a shelf life of up to 12 months. These blends

are tailored for both household consumption and institutional feeding programmes that support food and nutrition security across diverse demographics.

### ***Community banks***

'Community banks' were meant to be an important innovation to facilitate access to finance for farmers. However, it appears that farmers usually can't access loans through these banks, because that is considered too risky. They are lending rather to agri-businesses, which is an important function as well.

## Appendix 2 - Flipcharts from the Multi-Stakeholder Dialogues

### Kenema

#### SWOT analyses

#### Group 1

GROUP I

STRENGTHS

- Availability of Agricultural Land
- Availability of Hand tools (Cutlasses, hoes etc)
- Dissemination of Extension services to producers
- Availability of human resource (Some farmers are willing to work)
- Support from Govt in the form of inputs eg. Fertilizers
- Availability of varieties, local foods eg. Cassava, pineapple, potato, rice etc.
- Availability of cocoa processing factory - Cocoa powder etc.

WEAKNESSES

1. poor road network in the rural sector - *Motorists, drivers*
2. Lack of proper storage facilities *(No machine to work in farms)*
3. Erratic electricity *- A lot of rotting, but not properly implemented.*
4. Lack of Transport facilities *- Seasonal or cropping calendar to farmers.*
5. No preservative facilities *- Lack of Behaviour change education from the Ministry of Agriculture and Food Security.*
6. No proper irrigation facilities *- No food banks.*
7. Lack of enough poultry & cattle production & Fish ponds *- Lack of branding of products by farmers.*

Opportunities

1. Support from dev. partners partners (NGO, private sector)
2. Extension Messages in Rural Communities
3. More women & some youths engaged in Agricultural Activities
4. A factory for the production of Cocoa & Fruit juice
5. Some Farmer's have income have increased considerably (Especially Cocoa & Rice Farmers)

GROUP I

Threats

1. Climate Change
2. Disturbance of Pests in the Farm
3. Lack of irrigation Facilities - Green house Facilities
4. Some youths migrate from Farming Communities to urban towns eg bike riders
5. Misuse of Drugs (Kush) by able bodied people.
6. Theft of Farmers goods\*
7. Threats of Cattle and birds\*

STRENGTH: WEAKNESS

STRENGTH:

- Land Tenure : swamp + UPLAND.  
↳ can grow diversity.
- Tubbers - cocoa - Palm Trees - Vegetable....
- Mines → money.
- Fertile soil.
- Fish Ponds and streams / rivers
- New people coming in the district to settle

OPPORTUNITY

- More project from NGO in Agriculture sector
- Feed Salone. Agriculture is supported.
- Presence of Factories to process
- Marketing opportunities in the village (Businessmen are going in village)
- Farmers are trained to new methods
- Development of mix farming system

WEAKNESS

- Roads → TRANSPORT
- Lack of electricity Weak coordination among Farmers
- Lack of storage
- Poor water access and Sanitation
- No loan for farmers (only for groups)
- Land allocation to foreigners for business
- Dependency of the farmers to get inputs.
- Lack of Health facilities in Communities
- Lack of coordination among Farmers

THE THREAT

- WEATHER is erratic
- Land allocation. (equity)
- Gender issue for land tenure
- Inputs (availability and late distribution)
- Lack of Labour
- Thefts\*
- Mining is competing with agriculture
- 75% of agriculture activities by women.

Group 3

GROUP 2

1 Diet Composition in Kenema

A - FRUITS:

- \* Oranges
- \* Banana
- \* Pear
- \* Pineapples
- \* Watermelons \*
- \* Goyava xxx
- \* Mangoes
- \* Plums
- \* Sweet sharp
- \* Pumpkins
- \* Lemon
- \* Grapefruits \*

*If fruit and vegetables are missing in daily meals*

B. Proteins:

- \* Fish
- \* Meat (bush)
- \* Chicken
- \* Eggs
- \* Milk
- \* Sausages
- \* Snails
- \* Maggots \*
- \* Green grasshoppers
- \* Frogs/Bulfrog
- \* Crabs
- \* Swimps
- \* Mushrooms \*

C. Pulses

- \* Beans
- \* Lentils
- \* Pigeon Peas
- \* Broad beans

D. Vegetables

- \* Dark green Vegetables leaves
- \* Orange fresh Potatoes
- \* Lectules \*
- \* Onions
- \* Tomatoes
- \* Peppers
- \* Cucumbers
- \* Okra

Vegetables (cont)

- \* Cabbages
- \* Carrots
- \* Garlic \* (only when sick)
- \* Ginger \*

E - Carbohydrates

- \* Rice
- \* Yams
- \* Wheat \*
- \* Cassava
- \* Cocoa yams
- \* Potato roots
- \* Maize

F. Oil, Nuts & Seeds

- \* Palm oil
- \* Ground nut oil \*
- \* Palm kernel (nut)
- \* Cocoa nut oil \*
- \* Ground nuts

Food Group lacking

- \* Fruits
- \* Vegetables
- \* Pulses (Available but not affordable)

Products

1. Corn blend

- Corn
- milk
- Beans
- oil
- sugar

2. Benimix

- Benni
- Rice
- Beans
- Fish
- Sugar
- orange fresh Potatoes
- milk

## Group 4

1. Describe current diet composition of majority of people in Kenema with separate description of diet composition of young children

Food Groups	Diet composition of majority of people in Kenema	Diet composition of young children's in Kenema District. 6 months and above
Fruits	Seasonal: Banana, Orange, Guava, Pineapple, Avocado, Limon, Grape Fruits. Mango.	Seasonal: Banana, Mango, Orange, Pineapple, Grape Fruits, Guava.
Animal Protein	Fish, Chicken, Egg, meat, frog,	Fish, chicken foot.
Pulses	Broad Eye Beans, Bennie, Black Eye Beans, Lenties, Pigeon Pea (Konsho)	Broad Eye Beans, Bennie,
Water	Less Intake	More Intake
Salt	More Intake	More Intake
Dark Green, Orange Yellow Purple Vegetables	Cassava Leave, Potato Leaves, Spinach(green), Okra, Krain-krain, Calami, Man Plasas (Pillar), Garden eggs, Bitter Balls, Cucumber	Cassava Leave, Potato Leaves, Spinach(green), Okra, Krain-krain, Calami, Man Plasas (Pealar), Garden eggs, Bitter Balls, Cucumber
Grains and Tubers	Rice, Cassava, Orange Flesh Potato, Corn,	Rice, Cassava, Orange Flesh Potato, Corn,
Oil Nuts and seeds	Ground nut, Palm Oil, Palm Karnel Oil (Natie),	Ground nut, Palm Oil, Palm Karnel Oil (Natie),
Physical Exercise	Less	Done Regularly.
Sugar	More intake	More Intake.

2. Identify which food groups are often lacking in people's diet again with separate description for young children

Food groups that are often lacking in people's diet	Food groups that are often lacking in young children's diet.
Fruits: (Seldomly Eaten-Avocado, Water melon, apples) All others are consumed based on season.	Fruits: (Seldomly Eaten-Avocado, Water melon, apples) All others are consumed based on season.
Egg, Meat, Chicken, Snails, Shrimps, Oyster, Prawn, milk, Snail, crab	Egg, Chicken, Meat, Milk, Snails, Shrimps, crab Oyster, Prawn, milk, Snail.
Increase the intake of safe drinking water	Increase the intake of safe drinking water
Reduce intake of Salty Product.	Reduce Intake of salty product.
Encourage the intake of Iodize salt	Encourage the intake of Iodize salt

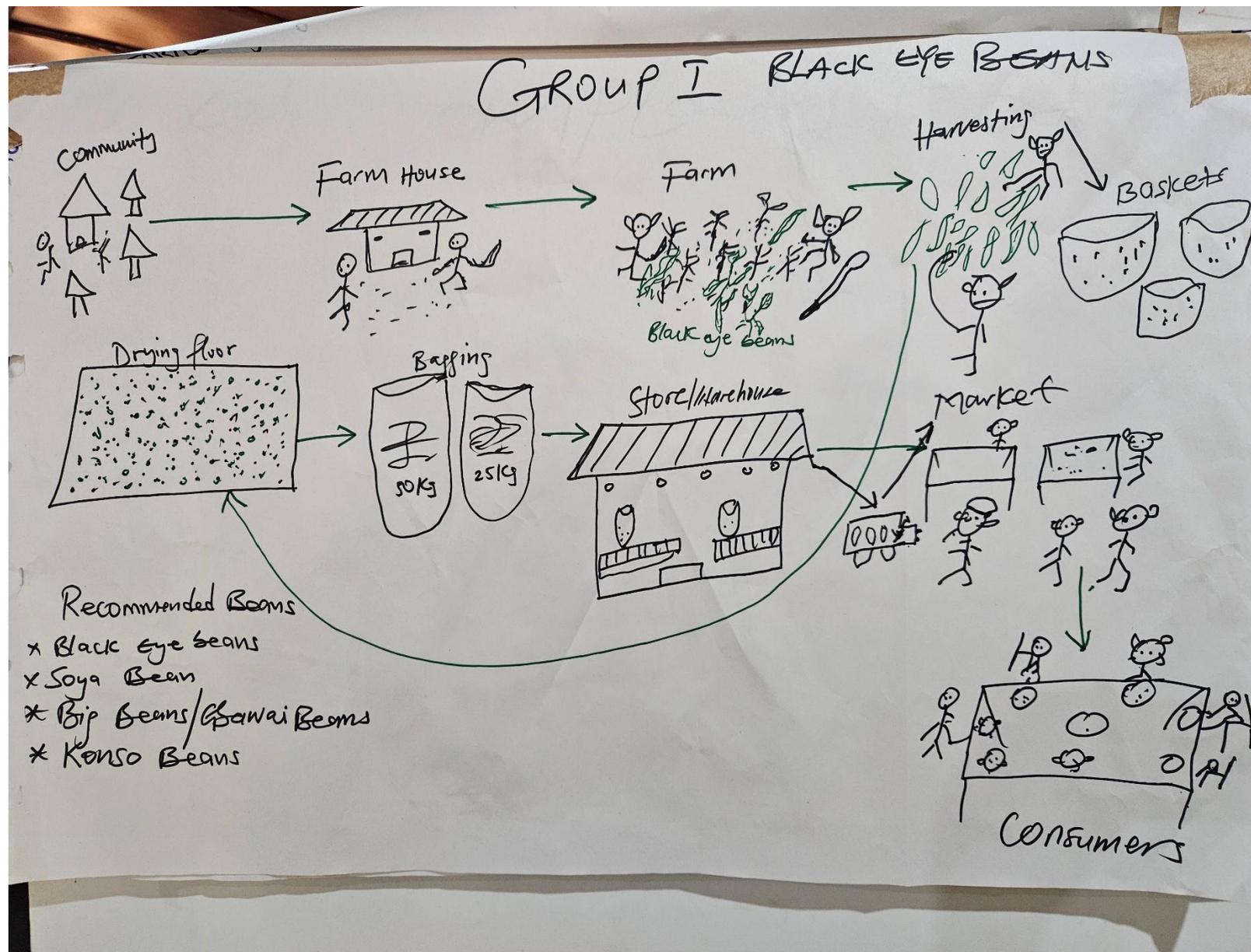
3. Identify which product could be added to people's diet in Kenema to make sure they eat from all four groups again with separate consideration for young children;

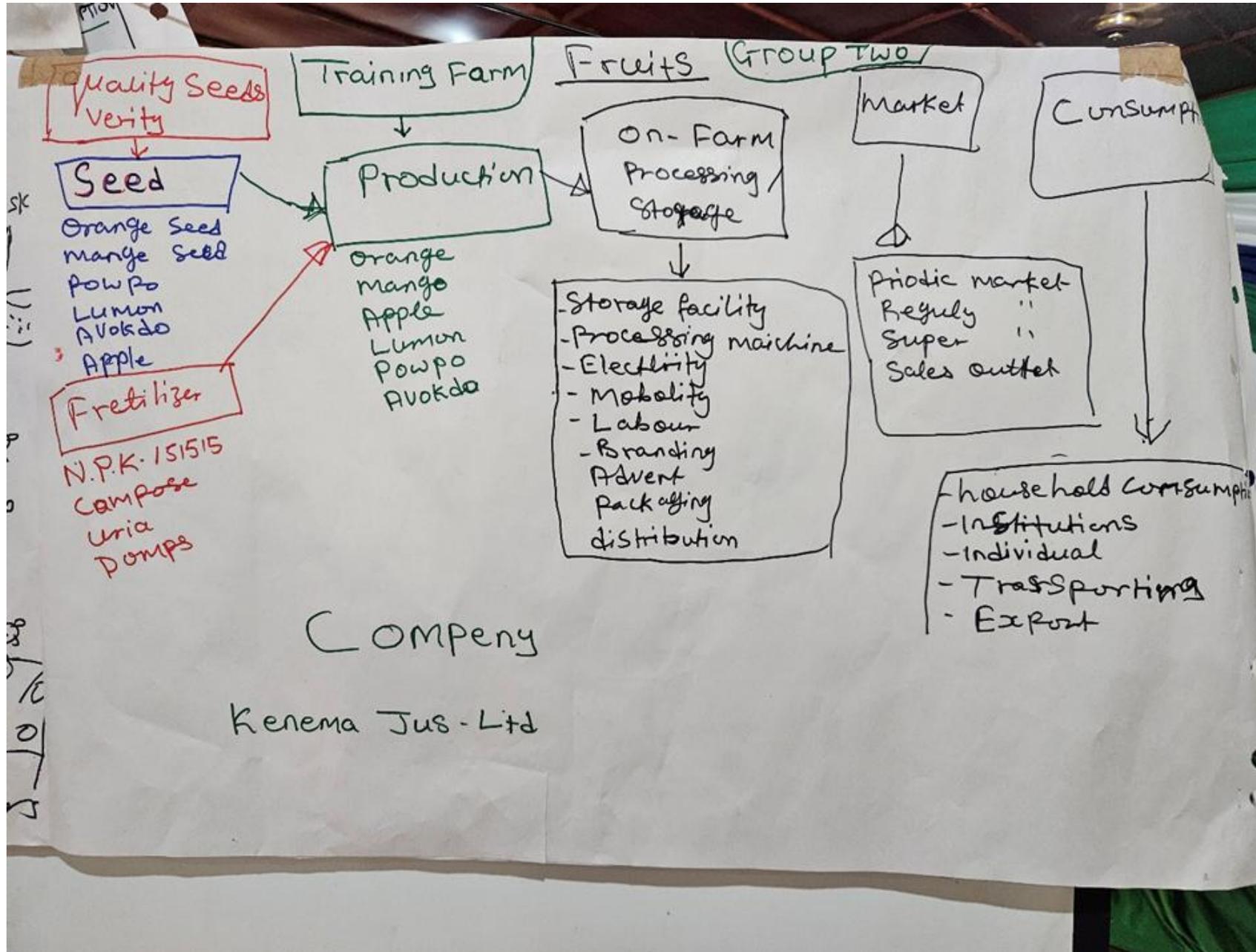
Product that could be added to people's diet in Kenema	Product that could be added in young children's diet
Assorted Fruits (Pineapple, Orange, avocado, water melon, apple etc) Plantin In and off season.	Assorted Fruits, (Pineapple, Orange, avocado, water melon, apple etc) Plantin In and off season.
Intake of Meat Chicken and egg.	Intake of Meat Chicken and egg.
Pigeon Pea	Pigeon Pea
Lettuce, Tomato, Carrot,	Lettuce, Tomato, Carrot.
Coconut Oil	Coconut Oil
Increase the level of exercise	Increase the level of exercise
Cocoa Yam, Yams, Sorghum etc	Cocoa Yam, Yams, sorghum etc

For both categories, we are encouraging the increase intake of vegetables and fruits.

Food chain analysis key products and identification of external drivers

Group 1 – Black eyed beans





# ✓ VEGETABLES in general

Can be applied to  
TOMATO

not available everywhere and all the time.  
variable Seeds

Land  
- Fertilizers  
- Manure

Develop small irrigation system

Production

Processing

TRANSPORT MARKET

CONSUMPTION

- + Irrigation (small irrigation systems)
- + Tools (watercan)
- + Labour
- + Knowledge gap on practices (cultural calendar and climate change)

BRAND and packaging for large scale farming

- Link to Market
- Road conditions
- High cost

- Food Taboo
- Eating habits

↑ ACCESS TO FINANCE ↑

## Harvest → Labour

### Preservation

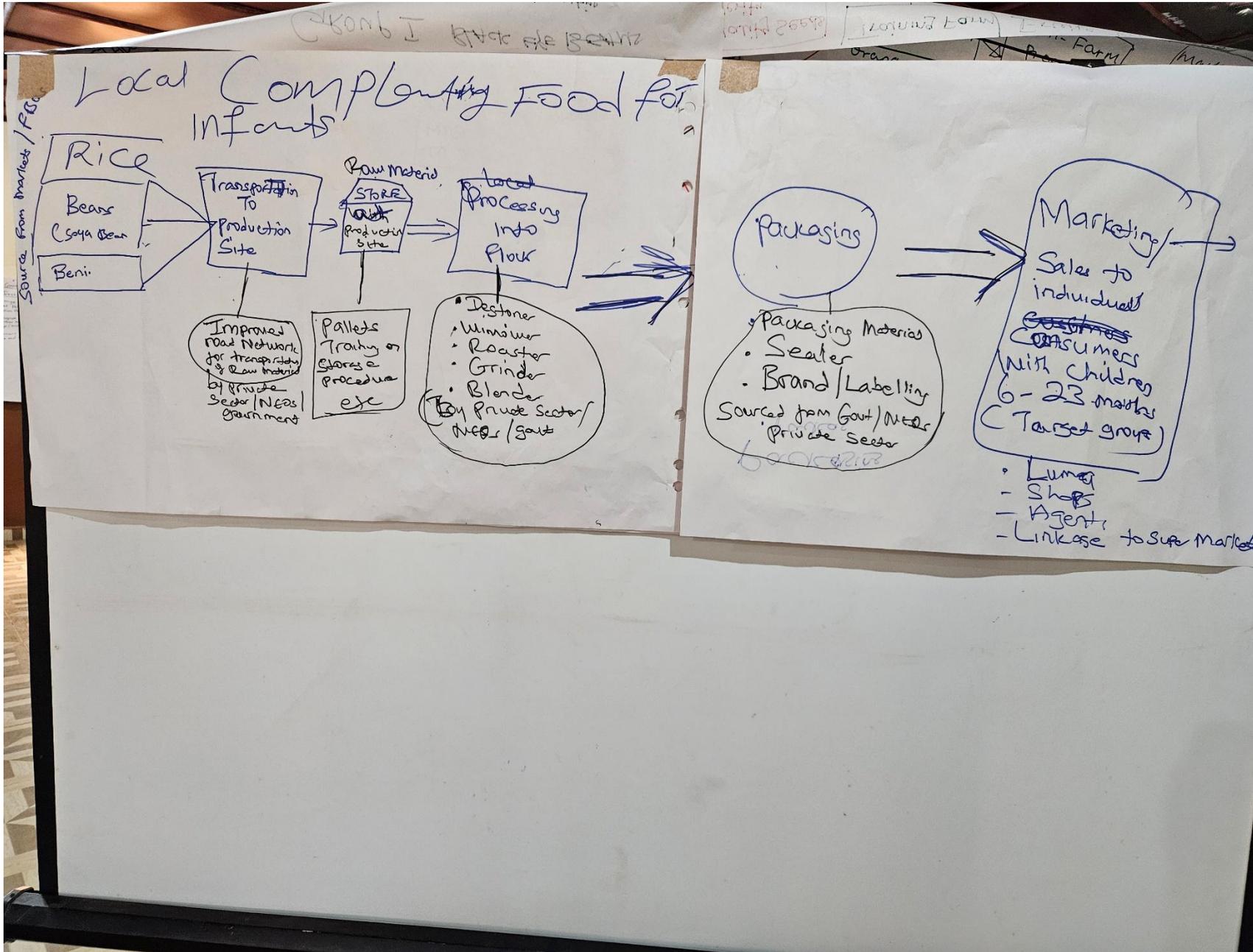
- Storage facilities
- Cool room (electricity)
- Process some vegetable for longer time duration (like tomato paste)

Exchange System (Good for Good)

Link Private Sector to Farmers

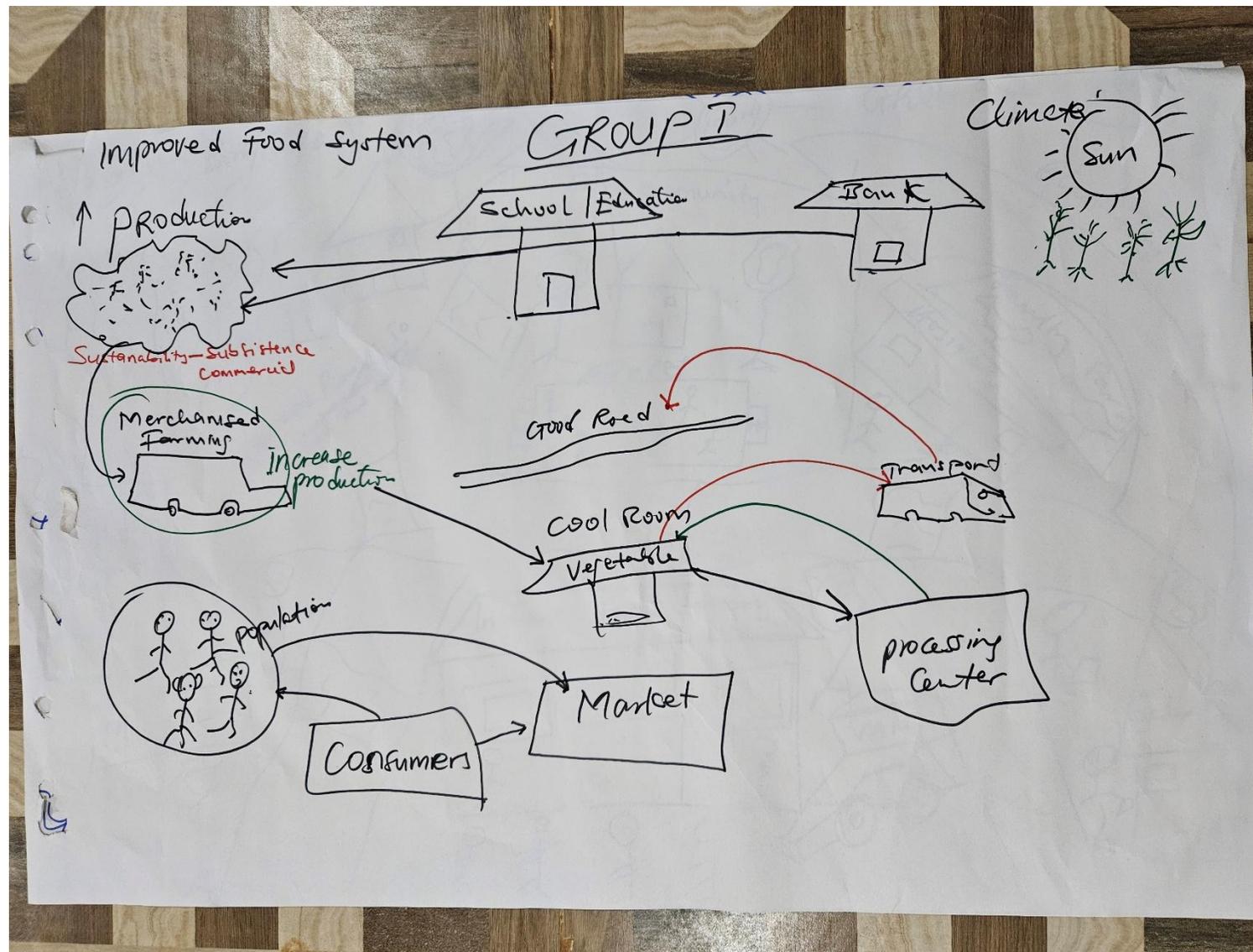
BUYING at the Farm Gate  
Having more periodic markets

- Adapted Cooking practices + to preserve Vitamin
- Sensitization to eat vegetable

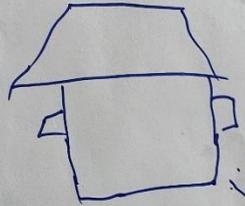


Drawings of improved food system that can provide healthy diets for the people of Kenema district

Group 1



# Apply decide on improved Farming method System



La

- Land Preparation
- Bush/clearing
- Nursery
- Transplanting
- Harvesting

Home consumption

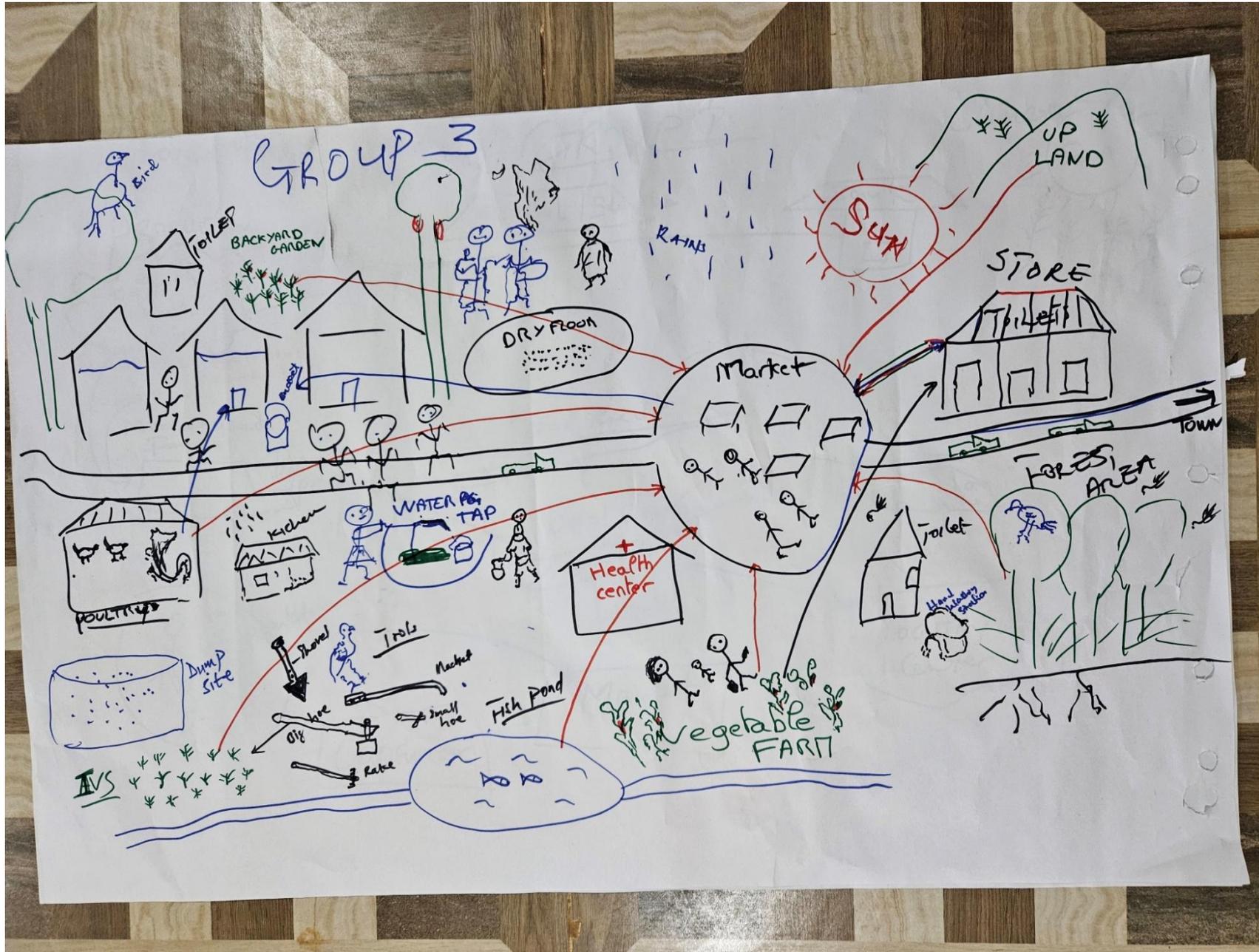
Processing of farm product

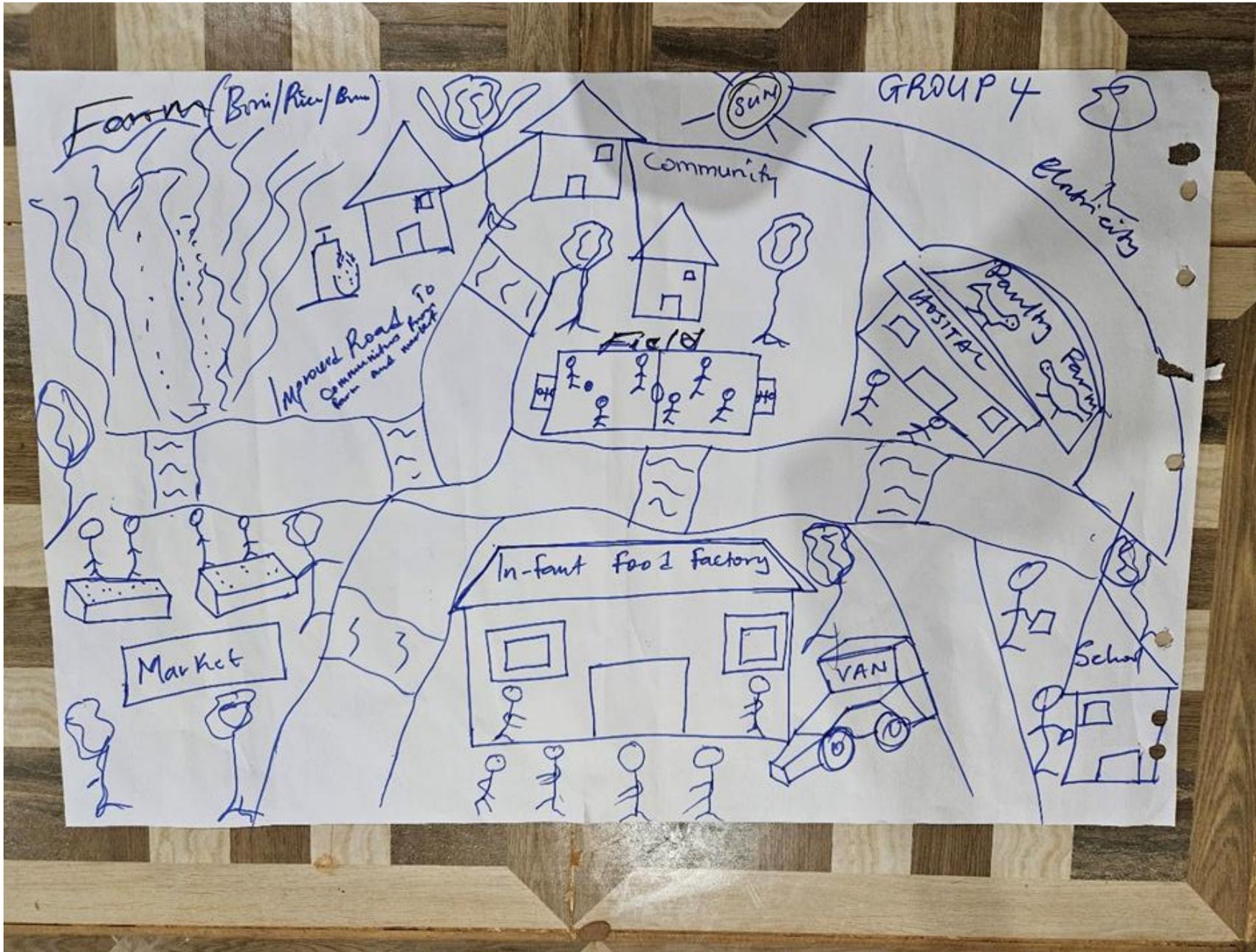


Consumption  
Sales  
Seeds

Sales Market  
Transportation  
Labour  
Advert

Bagging, st  
Storage  
Preserving for next  
planting session





## Port Loko

### SWOT analyses

#### Group 1

## GROUP ONE (1)

### SWOT analysis port Loko district

- S** - Good roads network within port Loko City.
- Land availability
  - Opportunity for livestock rearing
  - Fish farming
  - Different economic activities on the land like mining etc.
  - Hydro electricity power.
- W** - Linking to farm gates is very poor
- Land not irrigated
  - Limited veterinary drugs
  - insufficient fish ponds
  - Mining activities reduces land availability for farming activities.
  - Energy supply is <sup>not available</sup> ~~limited~~ during dry season.
- O** - If road are linked from the city to the communities there will be increase in food availability around port Loko district

- O** - If irrigated we can be able to work ~~later~~ through out the year.
- vast land for animal grazing
  - Closer to seas and provide fishermen to access more fish to be sold in PLK and other districts and even nearby countries (Guinea)
  - Create job opportunities
  - If strengthened and Consistence, there will be more investors and economic development.
- T** - If the road are not properly connected there will be food shortage.
- Thieves
  - Disease outbreak
  - Bad fishing techniques
  - Shortage of land for farming and other infrastructural activities
  - Discourages investors, and perishable goods for farmers will lead to great loss.

# GROUP THREE (3)

## STRENGTHS

- Land Availability with different types of ecology.
- Availability of Manpower.

## WEAKNESSES

- Limited Infrastructural facilities (road network, storage facilities, transportation).
- ~~Lack~~ Quality Crops (improved variety of seeds).
- ~~Lack~~ of extension services (Capacity building).
- ~~Lack~~
- Limited Mechanical equipments.

## OPPORTUNITIES

- Ministry of Agriculture and Health
- Financial Institutions

## THREATS

- Climate change
- Security (Theft)
- Pest and ~~crop~~ diseases outbreak.
- Economic challenges.
- Land Degradation.

Carbohydrates (Staple Food)

• Available

Vegetables

- Green leaves: OK plenty
- Other vegetable: not enough (Few quantities)
- + Cabbage: not available
- + Carrot: not available
- + Eggplant: few available.

FRUITS

- Fruits are not enough present and expensive.
- It is very SEASONAL
- Fruits are sold instead of being consumed.
- Not given to the children.

Pulses and Beans

- \* Soya beans not for the entire population
- Black eye beans: imported and expensive
- In general this food group is not regularly consumed except for country beans

Animal Proteins

- Fish is present for everyone
- Chicken / Meat: expensive  
↳ only for Head of family → not for children
- Eggs → expensive and not enough

Palm oil available at any time. everywhere affordable.  
+ Palm kernel oil available

GROUP 2

3 Food Group to improve on GROUP 2

- Vegetables
- Garden eggs
  - Cabbage
  - Tomato

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FRUITS

- watermelon
- pineapple

---

Beans

- \* Black ~~eye~~ Beans
- can grow in the area  
but mainly imported  
for the moment

- M-Permit Food
- Orange Fresh Potatoes for  
supplement for children

# ANALYSIS OF CURRENT DIETS (INCLUDING YOUNG CHILDREN) IN PORT LOKO DISTRICT GROUP 4

Current diets  
that is widely  
eaten in port loko



## Group 4.

Identify which food groups are often lacking in people's diets, again with separate description for young children

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\* protein food =

- Fish
- Meat.
- Milk
- Egg
- Benni
- Beans (Broad beans)  
Soya beans,  
Pigeon pea.
- Breast milk.
- Fruit (missing)
- Poor feeding practices

When the above food are lacking (intake of food) the child will be Malnourish.

GROUP FOUR (4)  
PRODUCT THAT SHOULD BE ADDED  
TO PEOPLE'S DIET IN PATTI LOKO

1 Protein Food

Beans - Chicken - Fish - Benni

Dairy

Milk - Egg - Water

Vegetable

Eg: Tomatoes, Pepper  
Onion, and Lettuce

FRUITS

Eg Banana - Orange

FORTIFIED DIET

Eg Micronutrient  
- potato leaf  
- cassava leaf

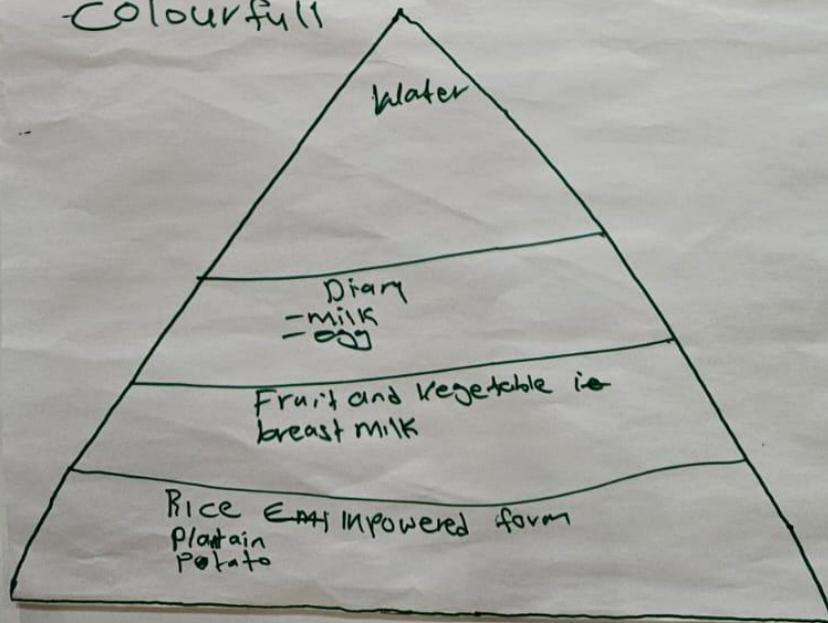
ADDED FRUITS

Yorshut

Limit ~~to~~ processed food  
Can food

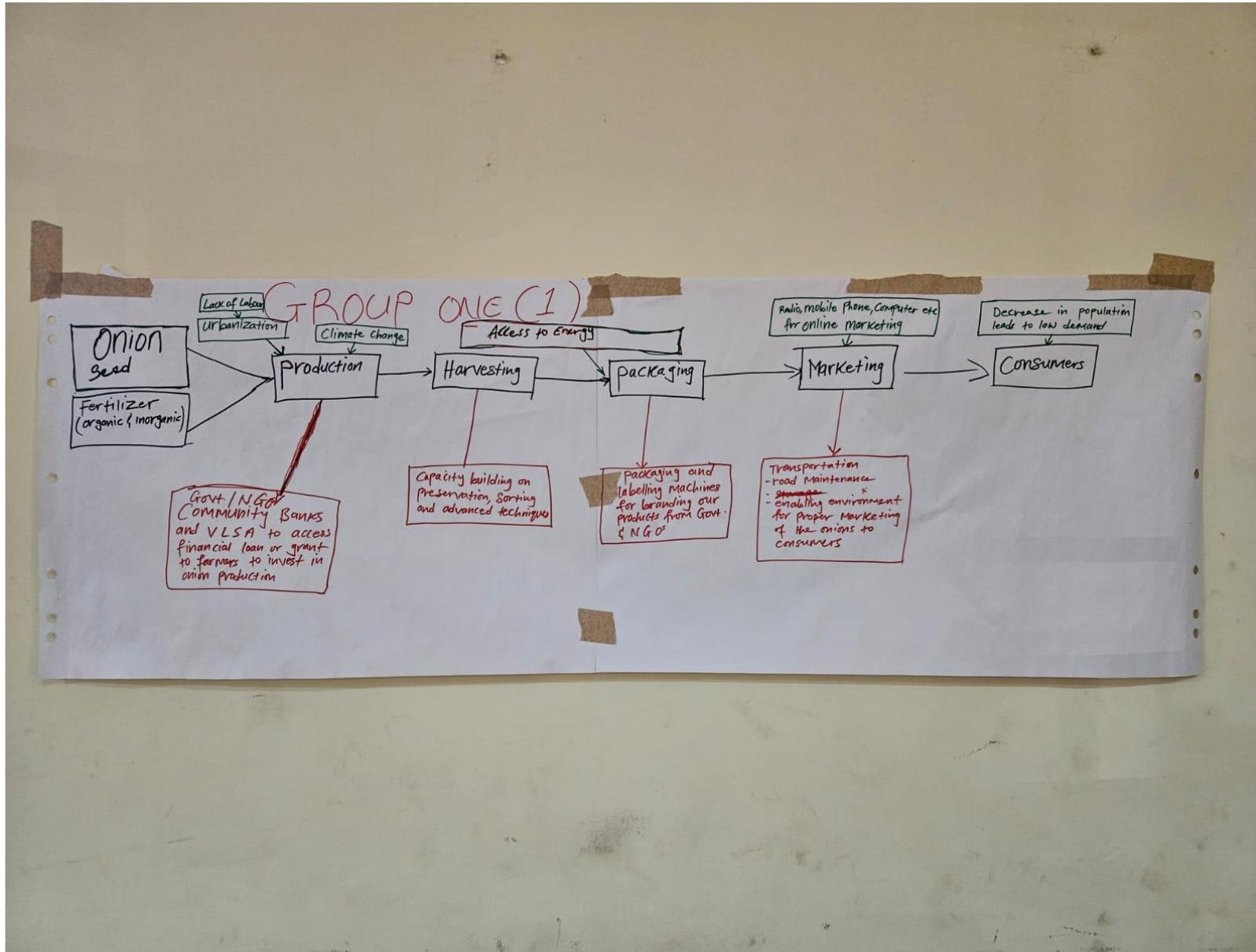
Minimise sugar sweet for children

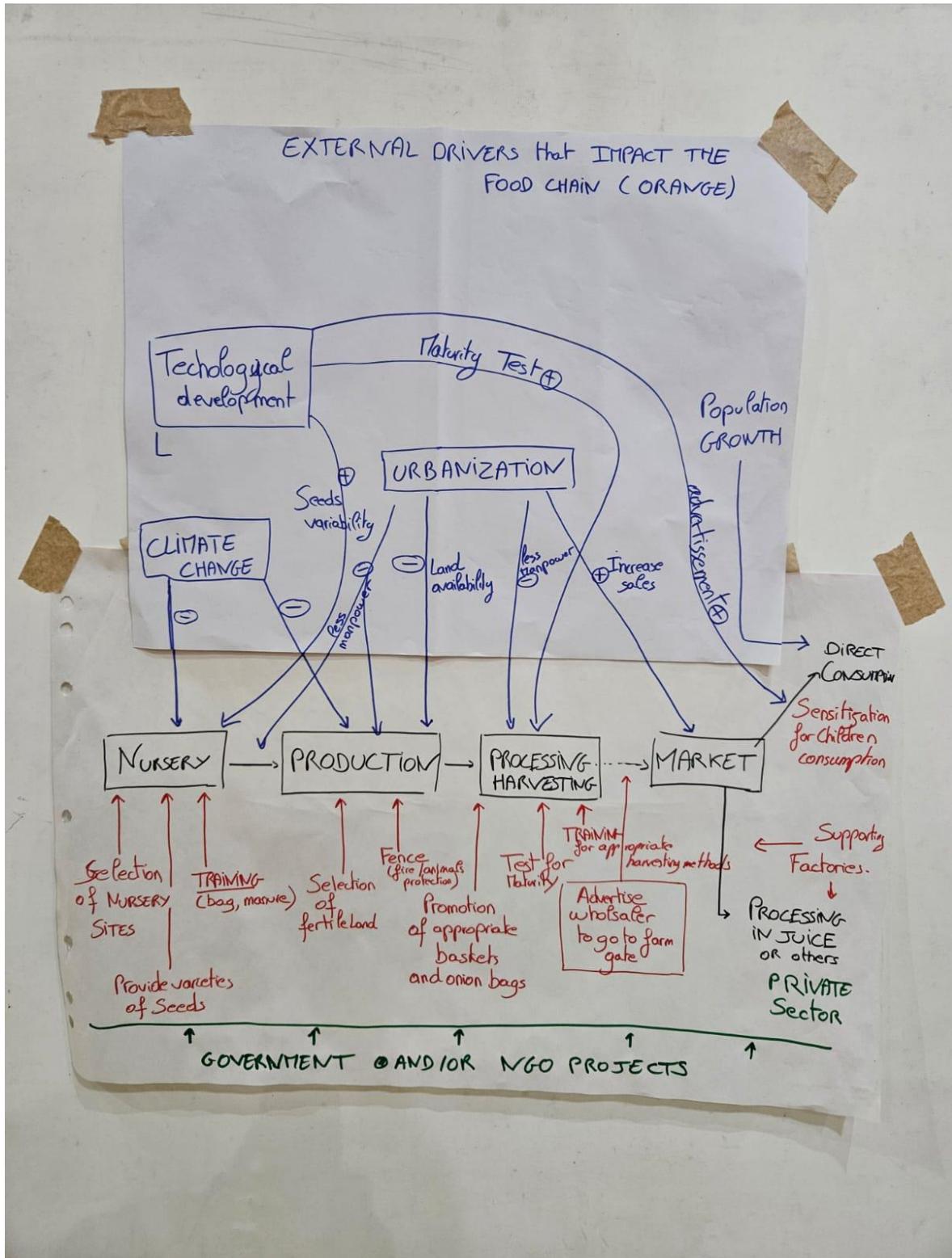
Colourfull



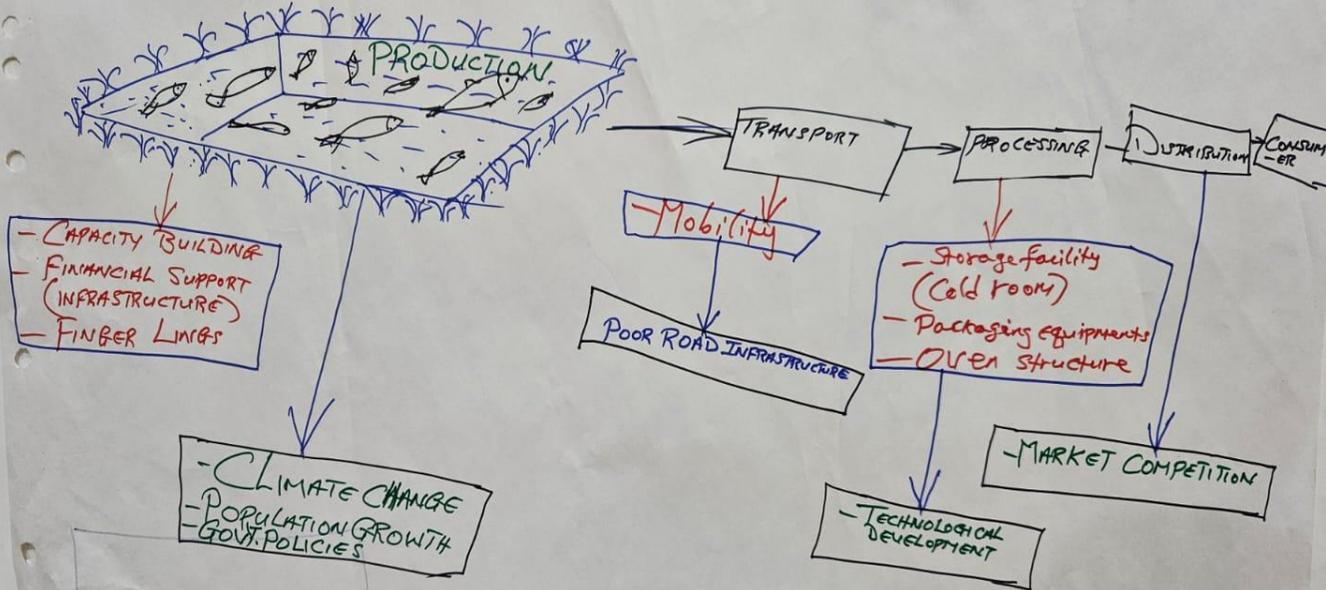
Food chain analysis key products and identification of external drivers

Group 1





# GROUP-3 FISH POND



FISH POND PRODUCTION  
GROUP 3

