

Integrating Gender and Nutrition within Agricultural Extension Services

SIERRA LEONE Landscape Analysis



© Dan Tucker, 2012.



© 2017 Authors and INGENAES

This work is licensed under a Creative Commons Attribution 3.0 Unported License.

Users are free:

- To share — to copy, distribute and transmit the work. (without participant contact information)
- To remix — to adapt the work.

Under the following conditions:

- Attribution — users must attribute the work to the authors but not in any way that suggests that the authors endorse the user or the user's use of the work.

Technical editing and production by Katy Mosiman.

The mural on the cover page is by Dan Tucker is available at <https://dantucker.wordpress.com/murals-custom-work>. He painted the mural over the course of a few days in January 2012, with many people stopping to comment and converse with him. The title of the mural is "Forest en Water, Nar Life!" a phrase he saw there, meaning, in Krio, forests and water are life. It is on Collegiate Road, opposite a school and soccer field, in Freetown.

This report was produced as part of the United States Agency for International Development (USAID) and the United States Government Feed the Future project "Integrating Gender and Nutrition within Extension and Advisory Services" (INGENAES). Leader with Associates Cooperative Agreement No. AID-OAA-LA-14-00008.

www.ingenaes.illinois.edu

The report was made possible by the generous support of the American people through USAID. The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States government.

SIERRA LEONE

Landscape Analysis

Prepared by

Festus O. Amadu, Colby Silvert, Cortney Eisenmann, Katy Mosiman, and Ruiting Liang
University of Illinois at Urbana-Champaign

Working document

July 6, 2017

*This is a working document that is intended to be updated regularly.
This version is being released to the public in July 2017 for comment and discussion.*

*Inputs of additional information and correction of possible errors are welcome.
Please submit these via email to Katy Mosiman at katy.heinz@gmail.com.*

Abbreviations

A4D	Agriculture for Development
ABCs	Agricultural Business Centers
AfDB	African Development Bank
AFR/SD	Bureau for Africa/Office of Sustainable Development
AgCLIR	Agribusiness Commercial Legal and Institutional Reform
BAFS	Boosting Agriculture and Food Security
BFS	Bureau for Food Security
CB	Community Bank
CDC	Country Development Cooperation
COP	Community Of Practice
CRS	Catholic Relief Services
DAOs	District Agriculture Offices
DRC	Democratic Republic of the Congo
EAIN	Entrepreneurial Agriculture for Improved Nutrition
EAS	Extension and advisory services
EU	European Union
FAO	Food and Agriculture Organization
FBO	Farming Business Organizations
FFP	Food for Peace
FFPFS	Food for Peace Food Security
FSA	Financial Service Association
FTF	Feed the Future
FY	Fiscal year
GFRAS	Global Forum for Rural Advisory Services
GDP	Gross domestic product
GGGI	Global Gender Gap Index
GHI	Global Health Initiative
GII	Gender Inequality Index
GOB	Government of Burundi
GoSL	Government of Sierra Leone
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
IDB	Islamic Development Bank
IFPRI	International Food Policy and Research Institute
IITA	International Institute of Tropical Agriculture
IMF	International Monetary Fund
INGENAES	Integration Gender and Nutrition within Agricultural Extension Services
JICA	Japan International Cooperation Agency

Kcal	Kilocalorie
MAFFS	Ministry of Agriculture, Forestry and Food Security
MINAGRIE	Ministry of Agriculture and Livestock
MOHS	Ministry of Health and Sanitation
MPI	Multidimensional Poverty Index
NARC	Njala Agricultural Research Center
NGOs	Non-governmental organizations
PEMSD	Planning, Evaluation, Monitoring and Statistics Division
PMTCT	Prevention of mother-to-child transmission
PNIA	National Agricultural Investment Plan
RCPRP	Rehabilitation and Community-based Poverty Reduction Project
RFCIP	Rural Finance and Community Improvement Program
RUF	Revolutionary United Front
SAP	Scaling up Aquaculture Production
SBCC	Social and behavior change communication
SCP	Smallholder Commercialization Programme
SCADP	Smallholder Commercialization and Agribusiness Development Project
SLARI	Sierra Leone Agricultural Research Institute
SNAP	Sustainable Nutrition and Agriculture Promotion
SUN	Scaling Up Nutrition
T&V	Training and Visit
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
VSLA	Village Savings and Loan Association
WAAPP	West African Agricultural Productivity Project
WARC	West African Rice Company
WB	World Bank
WDC	Washington, DC
WFP	World Food Program
WHH	Welt Hungerhilfe
WHO	World Health Organization
WIAN	Women in Agriculture and Nutrition

Contents

Abbreviations.....	i
Introduction	1
Background.....	1
Agriculture.....	3
Agricultural Challenges.....	4
Nutrition	5
Gendered Gaps and Challenges	7
EAS Institutional Framework	8
Pluralistic Extension and Advisory Service System	8
Agricultural Extension and Policy Implications for Women Farmers.....	11
Limitations to MAFFS EAS Delivery	12
Major Extension Initiatives.....	12
Establishment of Agricultural Business Centers (ABCs).....	12
Capacity Building and Development	13
Establishment of Farmer Field Schools and Farmer Business Organizations (FBOs).....	13
Key Public-Private Partnerships and Collaborations.....	14
Conclusions.....	15
References.....	17
Annex 1: Map of Sierra Leone.....	21
Annex 2: Background Information on the USG Support Strategy for West Africa and Sierra Leone	22
West Africa Region’s Feed the Future Multi-Year Strategy	22
USAID/Regional Development Cooperation (CDC) Strategy.....	23
USG Aid Assistance to Sierra Leone.....	25
USAID and Feed the Future Food Security Projects.....	26
Agriculture and Food Security.....	26
Feed the Future Entrepreneurial Agriculture for Improved Nutrition (EAIN) Project	26
Democracy, Human Rights, and Governance.....	28
Annex 3: Trends in Maternal and Child Health Status in Sierra Leone.....	29
Annex 4: Stunting and Malnutrition Trends and Status.....	30

Introduction

This landscape analysis provides an overview of Sierra Leone's agricultural extension services system. It also provides information on the prevalence of poverty, nutrition and gender related issues in the country with special focus on rural areas. Current agricultural extension and nutrition policies, and their implications for the engagement of USAID and other donors, are highlighted. Moreover, the on-going projects by USAID and other donors in the country in relation to extension, gender, and nutrition impacts can provide a reference point for policy makers and other actors in extension, nutrition, and gender-focused programming in Sierra Leone and elsewhere. Agricultural advisory and extension services (henceforth referred to simply as extension) are widely recognized as important for improving the agricultural productivity and incomes of the rural poor because of the prospect to link farmers with improved agricultural innovations, information, and resources (Abdulai, 2016; GFRAS 2015; Davis, 2008).

This analysis was prepared under the framework of the Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) project is funded through the Bureau for Food Security (BFS) of the United States Agency for International Development (USAID) to support the United States Government Global Feed the Future (FTF) Initiative¹. FTF strives to increase agricultural productivity and the incomes of both men and women in rural areas who rely on agriculture for their livelihoods.

Landscape analysis like this one are available for almost all of the FTF countries and readily accessible at <http://ingenaes.illinois.edu/library>. The purpose of these analyses is to provide a backdrop for the INGENAES project as it engages with stakeholders in each country to find ways of integrating gender and nutrition in extension. In each country the nature of the engagement varies slightly, depending on the needs and opportunities jointly identified by prospective partners and the INGENAES team as well as recommendations by USAID BFS and the USAID country missions. The landscape analyses are a snapshot in time that are intended to be updated periodically. They are intended to inform a broad range of stakeholders about the status agriculture, agricultural extension, gender issues, and nutrition challenges, as well as major programs that are being implemented to improve food and nutrition security. It is hoped that having these reports publicly available will inform the debate on how to make progress and to more widely share information about what measures are already being undertaken.

Background

The Republic of Sierra Leone is a small West African country and borders the Atlantic Ocean. The country has an area of 27,925 sq. miles (71,740 sq. kilometers), and shares a North and East border with Guinea and a South-East border with Liberia. Sierra Leone has a population of about 6.4 million. Freetown is the capital city, which is located along the west coast of the country (CIA, 2015). The country is rich in natural resources, including minerals (such as diamonds, titanium ore, and iron ore) and fertile arable lands for agricultural development (CIA, 2015). There are fourteen districts and four provincial regions in Sierra Leone. They include Northern Province, Eastern Province, Southern Province, and Western Area. English is the official language, while Krio, Mende, and Temne constitute the major ethnic languages spoken (UNDP, 2016)

¹ The USAID cooperative agreement (Award No. AID-OAA-LA-14-0008) has been granted to the prime implementer, the University of Illinois at Urbana-Champaign. The consortium also includes the University of California-Davis, the University of Florida, and Cultural Practice, LLC. The project is working in select FTF and aligned countries, including Sierra Leone. Implementing partner and subawardee in Sierra Leone is Njala University.

From 1991 to 2002, Sierra Leone had a brutal civil war characterized by extreme violence resulting in over 50,000 deaths and the displacement of over 2 million people (Anders, 2014; Beevers, 2015; UNDP, 2016). With the help of the international community, including ECOWAS (Economic Community of West African States), the United Nations (UN), and the British government among others, the

war ended on January 18, 2002. Sierra Leone is gradually recovering from the effects of this decade-long civil war. There has been a prolonged period of reconciliation and forms of retribution through the establishment of a “Special court” that targeted the most responsible persons for the war (Anders, 2014). Vital economic indicators including unemployment, poverty, and gender gaps and opportunity constraints in the public sector remain as dismal challenges hindering institutional development (Casey, Glennerster, & Miguel; 2012). For instance, many women still struggle with the effects of the war through domestic violence perpetrated by combatants. The proportion of the country’s legislative seats occupied by women is only 13.2% (UNDP, 2016).

While still emerging from impacts of the Civil War, Sierra Leone was struck by the Ebola Virus Disease (EVD) in 2014. Ebola, one of the world’s most contagious and dangerous viruses, suspended most operations in the country. Faced with local and household quarantines, farmers were often limited in their ability to work on their plots and bring in the harvest. In West Africa, over 10,000 deaths were confirmed to have been caused by the EVD (WHO Ebola Situation Report, 2015).

In the 2015 human development index report, Sierra Leone ranked 181st, out of 188 countries on the index, which places Sierra Leone at the bottom of the development charts. According to UNDP (2015), 60% of Sierra Leoneans live below the national poverty line, with less than \$1.25 USD per day. Life expectancy at birth is currently 46 years, which is the lowest in the world, according to the WHO 2015 ranking. Child labor is common in Sierra Leone, with about 48% of children between the ages 5-14 employed in various ways. Some children work after the school day, but many do not go to school at all in order to work and contribute to their family’s income (CIA, 2015).

Sierra Leone has a population of 6.4 million and a population growth rate of 2.35%. A large percentage of the population are young people, with the total median age being 19 years. The median male age is 18.4 years and the median female age is 19.6 years (CIA, 2015). About 70% of the youth population is either unemployed or underemployed (UNDP, 2016).

Table 1: Major causes of rural poverty in Sierra Leone

- High population growth
- Social and economic effects of a decade of civil war that ended in 2002
- Unemployment: lacking skills and education
- Low levels of health, nutrition, education, and food security
- Limited access to land and technologies
- Low productivity
- Limited investment in infrastructure

Source: IFAD, 2010

Table 2: Sierra Leone Age Structure

Age in years	Percentage of the population
0-14	41.9 %
15-24	18.7 %
25-54	31.9 %
55-64	3.8 %
65 years and over	3.7 %

Source: CIA, 2015

Agriculture

Sierra Leone is a tropical country with a hot and humid climate. There are two main seasons: The rainy season, which spans from May to October, and the dry season, which lasts from November to April (FAO, 2012). The rainy season brings 3,000-5,000 mm rain per year to the coastal areas, and 2,000-2,500 mm, or 118-197 in, of rain per year to the inland areas (FAO, 2012). For a short time during the dry season, winds blow from the Sahara Desert, causing the climate to have low humidity and cool evenings. This is known as Harmattan, and lasts approximately six weeks from December to January.

Table 3: Land Use in Sierra Leone

Agricultural land	56.2%
• Arable land	23.4%
• Permanent crops	2.3%
• Permanent pasture	30.5%
Forest	37.5%
Other	6.3%
Source: CIA, 2015	

Sierra Leone's terrain varies from mangrove swamps in the coastal belt, to wooded hill country, upland plateau, and mountains in the Northeast.

About two-thirds of the labor force in Sierra Leone is in agriculture, which is the primary employer. Agriculture accounts for 50% of the gross domestic product (GDP) (FAO, 2012). 59.2% of the working population are classified as self-employed in agriculture (Statistics Sierra Leone, 2014). The majority of women are in Sierra Leone's agricultural labor force, which spans the ages of 15-64 years (Sannoh, 2011).

The major food crops are rice, cassava, maize, millet, sorghum, sweet potato, and groundnut. Smallholder farmers with average land holdings of 0.5-2.0 hectares (1.2-5 acres) produce the majority of these crops. Nearly 85% of farmers grow rice, which makes it the most important crop in the country. Cassava is the second most important crop, with both leaves and tubers being consumed. Various cassava products, such as "gari" and "foo foo" as well as cassava flour are derived from cassava tubers. These products are highly popular in urban areas (FAO, 2012). Cassava leaves are also commonly consumed in stews. Poultry, livestock, and fisheries also contribute significantly to the agriculture sector.

Table 4: Food Crop Production (1000 metric tons) Trends, Sierra Leone, 2008-2010

Crop Type	Year			Annual Growth Rate (%), 2008-2010
	2008	2009	2010	
Rice	640	785	2010	33.0 %
Cassava	4,058	2,516	1,062	5.1 %
Sweet Potato	180	161	187	1.9 %
Groundnut	113	75	147	5.3 %
Maize	57	30	79	19.3 %
Source: IMF, 2011				

Oil palm has been a major economic crop in the country since the end of the civil war. Kernels are processed into palm oil, and sold both locally and exported. Perennial crops include citrus, cocoa, coffee, sugarcane, and coconut (Frausin et al., 2014; FAO, 2012). The main exported crops are coffee, cocoa, kola nut and palm oil (Sannoh, 2011). Women's participation is high in the oil palm industry, especially in terms of processing the kernels. For instance, Frausin et al. (2014) report that "women value kernel oil for cooking in the rainy season when palm fruit oil is scarce, use it as a moisturizer, to plait their hair, as

well as to make soap and sell for their own income.” According to the Sierra Leone 2003 to 2011 Integrated Household Surveys, cocoa beans have accounted for the highest value in exported agricultural products since the end of the war, possibly supported by a surge in the global demand for chocolate contributing to revitalization of cocoa bean production in Sierra Leone. Just between 2003 and 2010, export value increased tenfold reaching 28 thousand metric tons. Coffee exports have also increased, from 113 metric tons in 2003 to 7,951 metric tons in 2011. Most recently, in 2015, exported cocoa beans were valued at 61,275.22 million USD (World Bank Trade Summary, 2015).

Agricultural Challenges

Agriculture is the mainstay of Sierra Leone’s economy, and many systemic and deeply rooted challenges exist within the sector. Crop yields are often subpar due to poor soils with low fertility (Frausin et al., 2014), limited access to agricultural inputs, and problems with pests and diseases. Lack of market information and inaccessibility of markets, low levels of mechanization, and labor shortages are among other negatively factors affecting production (FAO, 2012).

Agricultural productivity is also constrained by limited access to technical knowledge to learn about improved practices, and innovations and technologies, as the extension systems in the country cannot always effectively reach and serve many rural smallholder producers (Gboku & Bebeley, 2016). Moreover, lack of adequate rural infrastructure, storage facilities, and drying floors usually cause farmers to suffer high post-harvest losses. As few as 5% of smallholder farmers have access to a proper storage facility, and only 5% of farmers have access to rural financial services (Sannoh, 2011).

Limited access to rural financial services (microfinance and credit) constrains farmers in investing in agricultural inputs. Access to credit and microfinance is particularly challenging for smallholder farmers. Many loan and microfinance programs requiring monthly repayments are not appropriate for farmers that will not have funds for repayment available until after the harvest. Rural smallholder producers also seem to shy away from applying for loans, because of the perceived high risks and high interest rates. The Government of Sierra Leone (GoSL) began working with IFAD in 2008 in an effort to improve the market chain infrastructure for smallholder farmers. Under the IFAD-funded Rural Finance and Community Improvement Program (RFCIP), a system of lending institutions specializing in appropriate programs for smallholder farmers was established. The initiative, managed by the Apex Bank in Freetown, and under the supervision of the Ministry of Agriculture, Forestry and Food Security (MAFFS), failed to deliver the hoped for widespread results (AgCLIR 2016).

Two institutions were founded through the RFCIP:

1. Financial Service Associations (FSAs): These community/group-owned financial associations are modeled after the “osusu” tradition village banks. The FSAs promote ownership by members by requiring share purchase to access agricultural credit. FSAs intend to be practical and accessible for smallholder farmers with limited assets (AgCLIR 2016).
2. Community Banks (CBs): Supervised by the Bank of Sierra Leone to serve small to medium agribusinesses with credit programs and savings accounts. There are 17 CBs presently in operation in the country (AgCLIR 2016).

Similar to the crop sector, Sierra Leone’s livestock industry is underperforming, and decreased significantly during the war. It is expected to take many years to rebuild the industry to pre-war levels (Sannoh, 2011). Theft of livestock is also prevalent, and therefore, high risk is involved in owning farm animals. Semi-

nomadic herders manage the majority of cattle in the northern part of Sierra Leone. Livestock is too expensive of an investment for many smallholder farmers in Sierra Leone.

With high rainfall levels and abundant arable land, there remains great potential for the agricultural sector in Sierra Leone to become more productive and profitable. It has a favorable population to land ration (population density), diversified resources, and significant potential for yield increase. Despite the enabling climate and land, rice continues to be imported annually into Sierra Leone. According to a 2014 World Bank report, rice accounted for the greatest portion of household expenditure, and only 15% of rice consumed was produced by the household (USDA PSD, 2014). The current minister of the MAFFS has publicly pushed to end the over 100 million USD annual importation of rice, and to boost the country's production to supply enough rice for domestic consumption with excess to sell for export (Kamara, 2016).

Nutrition

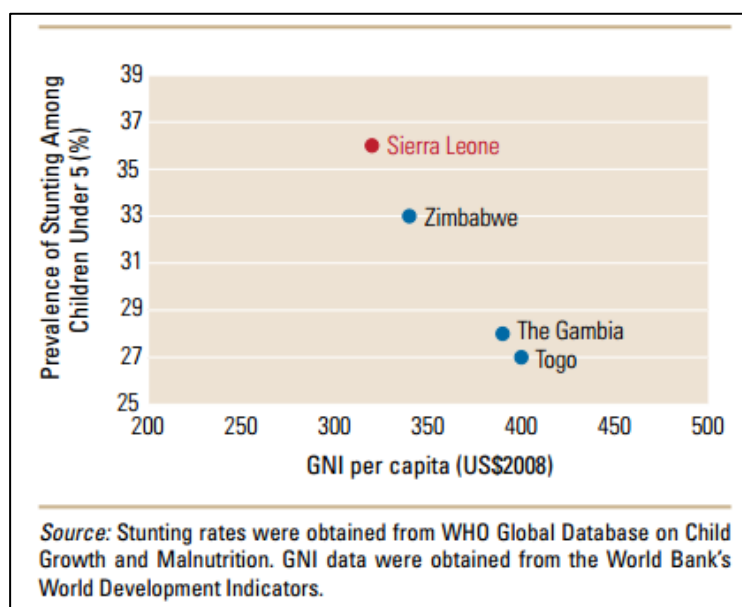
Malnutrition and food insecurity are major problems in Sierra Leone. Over 30% of children under five years of age are stunted or chronically malnourished resulting in failure or “stunting” of growth over long period (MOHS and UNICEF, 2014). In addition to inadequate consumption of nutritious foods, unhygienic conditions and contaminated water also increase the prevalence of malnutrition. Figure 1 from 2008 shows how the high stunting level in Sierra Leone compared with other African countries of similar income levels.

The period of June to August or September is usually the lean season in Sierra Leone. It is often characterized by lulls between harvests, and corresponding elevated hunger levels, with hunger peaking in August. During this period, most households rely less on rice and more on cassava due to seasonality of production and harvest times. Nearly half (45%) of households in Sierra Leone are classified as food insecure during the lean season. Among these, 6.5% are severely food insecure (WFP, 2011).

Sierra Leone still ranks lowest in West Africa on the Global Hunger Index, a composite measurement of undernourishment, stunting, wasting, and childhood under-five mortality (von Grebmer et al, 2015). Data collected in 2015 during the end of the Ebola Disease Outbreak indicated that Kailahun, Pujehun, Kambia, Tonkolili, and Port Loko are the most food insecure districts in the country, with 60 to 70% of households reported as food insecure (MAFFS, FAO, 2015).

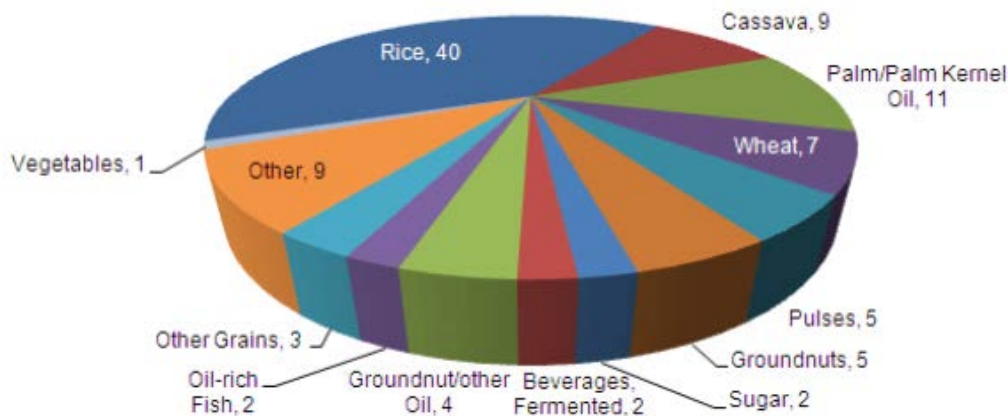
Infant mortality rates are also high with 87 deaths per 1,000 live births. The under-5 mortality rate in Sierra Leone is 120 deaths per 1,000 live births (World Bank 2015b, 2015c). Malnutrition is the underlying

Figure 1: Sierra Leone has Higher Rates of Stunting than some of its Income Peer Countries



cause of 57% of these deaths in children under five. Other contributing factors are improper infant and young child feeding practices, lack of access to clean water, improper sanitation, and high levels of vitamin A and iodine deficiencies. In rural areas, approximately half of households access water from non-improved sources such as streams or rivers. The vast majority of households (85%) do not treat their drinking water (Statistics Sierra Leone and ICF International 2014).

Figure 2: Composition of the national diet (% Share Daily Energy)



Source: USAID, 2009

As depicted in Figure 2 rice is the staple food item in Sierra Leone, and is eaten at almost every meal. It is also imported in high volume, due to higher demands against the generally low production levels in the country. The Government and Agencies have looked to draw inspiration from Nigeria and Ghana on changing eating habits to promote diversification of diets. Sierra Leone's annual per capital consumption of rice is amongst the highest in sub-Saharan Africa (Ighobor, 2014).

Household food allocation typically often is not informed by the nutritional needs of different family members, and rather follows a family hierarchy, with the man of the house receiving the majority of the food and protein, and the smaller children receiving the least amount of protein. Children, women, and mothers traditionally have less access to animal protein (Pasqualino et al, 2016). The inaccessibility and inability to purchase animal proteins contributes to the low protein diet. Traditional beliefs can also be a hindrance to protein consumption. In some ethnic groups, for example, it is believed that if you feed eggs to a child, she or he will grow up to be a thief. Data from 2003 reported that around 80 percent of animal protein consumed was fish, and it remains a commonly consumed animal protein source in the country (SPRING, 2015, FAO, 2016).

There are reports that the country has made some progress since the early 1990s to improve nutritional status and food security in Sierra Leone (Pasqualino et al, 2016). Undernourishment has decreased, and the average adequate dietary supply (percentage of average dietary energy requirements) has increased since 1991. Yet an alarming 22% percent of the population is still undernourished (FAO STAT, 2015), relying on subsistence agriculture and seasonal production of rice as the primary energy source. In 2012 Sierra Leone joined the Scaling Up Nutrition (SUN) movement to better coordinate food and nutrition security efforts by partners and the GoSL. SUN is supported by UN agencies, donors, private sector partners, and academic institutions (SUN, 2014). Also, in 2012 a National Nutrition Policy was developed by the GoSL, with its objectives listed in Table 5.

Table 5: 2012 Government of Sierra Leone National Nutrition Policy Objectives
1. To undertake advocacy for policy makers, policy advisors and programme designers at national and district levels on nutrition and its relationship to development.
2. To actively promote and facilitate adequate household food security (quantity, quality and safety) to satisfy the daily dietary needs of the population.
3. To promote adoption of appropriate feeding practices by households.
4. To strengthen preventive measures against nutrition related diseases
5. To provide curative services to individuals who are either malnourished or present a condition requiring diet therapy.
6. To institute a nutritional surveillance system for monitoring the food and nutrition situation in the country.
7. To promote operational research and periodic surveys into food and nutrition issues
8. To coordinate activities of relevant agencies involved in food and nutrition issues
<i>Source: 2012 Sierra Leone Nutrition Policy</i>

Gendered Gaps and Challenges

In the Gender Inequality Index, Sierra Leone ranks 145th out of 188 countries. This reflects a composite measurement of significant gender-based inequalities in reproductive health, empowerment, agency and political voice, and economics (UNDP, 2015). A specific example of gender inequality is that only 9.5% of adult women have reached a secondary or higher level of education, while more than 20% of males have attained this level of education or higher. Literacy rates are 59% for men and 38% for women, further reflecting the gendered gap in education (UNESCO 2015). Child marriage and early pregnancy are main reasons why girls are forced to discontinue their education (UNDP, 2015).

The average age of a female at first birth is 19.2 years (CIA, 2015). In rural areas there is an average of 5.8 births per woman. Sierra Leone has one of the highest maternal mortality rates in the world of 1,300 deaths/100,000 live births. There are several factors that contribute towards this alarmingly high rate including an inadequate number of healthcare facilities, poorly trained and unmotivated staff, poor access to electricity and water, fees for drugs, materials, and services from healthcare facilities, difficult and long travel times to health units, as well as women's poor nutrition and care before and during pregnancy (USAID, 2009).

Child marriage is common in Sierra Leone, specifically in the rural areas. Even though the Sierra Leone Child Rights Acts of 2007 forbids marriage under the age of 18, the latest survey showed that 51% of women in the country were still married before reaching 18. Parents often still arrange marriages. Early pregnancy rates parallel child marriage (UNICEF, 2012). Girls are often married to men much older than themselves. Girls and young women commonly become victims of abuse. Despite a law that banned domestic violence, women in Sierra Leone struggle to escape from abusive relationships. A common misconception surrounding abuse against women in Sierra Leone is that it is the women's fault for being abused and that she must be provoking it. The gender-based violence coordinator for International Rescue Committee (IRC) in Freetown stated, "When a woman reports violence to a close friend or family member, she is most frequently encouraged to change her own behavior so as not to give her husband a

reason to abuse her”. Even when a women’s life is at risk, there is strong cultural pressure to stay in the marriage (Larson, 2013).

The rate of Female Genital Mutation (FGM) practice in Sierra Leone is one of the highest in the world. Over 90% of women between the ages of 15-49 have undergone some type of FGM. FGM is deeply rooted in culture and tradition in Sierra Leone and therefore is a challenge to eradicate. Because of unsafe cutting procedures including unsanitary razor blades, unhygienic environments, and individuals without professional medical experience doing the FGM, the practice often results in large losses of blood, infection, and sometimes death (FAO, 2013).

Customary laws limit women’s’ access to agricultural assets and resources. The majority of paramount chiefs, regarded as “custodians of land,” are men, and in the North of the country all are men. Chiefs often consider family-managed as belonging to men in the household and being passed on to male family members. Women, nonetheless, dominate the agricultural workforce (Statistics Sierra Leone, 2014). Women’s labor dominates in horticultural crop production, poultry farming, most post-harvest processing, and some marketing activities including fish selling (McFerson, 2011).

EAS Institutional Framework

Pluralistic Extension and Advisory Service System

The extension system in Sierra Leone is largely pluralistic, pulling together resources and partners from the public, including the government and universities, as well as nongovernmental organizations, civil societies, and the private sector.

MAFFS is the governmental unit in charge of providing public extension services to farmers. MAFFS is organized into seven specific divisions: Crops, Livestock, Forestry, Agric-Engineering and Services, Planning, Evaluation, Monitoring and Statistics, Agricultural Extension Services, and administration support of district MAFFS branches. There are 12 district offices across the country. MAFFS is primarily responsible for drafting agricultural development policies, advising the government on policies that concern the agricultural development of Sierra Leone, and providing extension and support for the agricultural sector.

According to its website there are several development partners collaborating with MAFFS that help influence and fund the extension system, including the African Development Bank, Japan International Cooperation Agency (JICA), World Bank, International Fund for Agricultural Development (IFAD), World Food Program (WFP), European Union, Food and Agriculture Organization of the UN (FAO), and Islamic Development Bank.

Over the past ten years, MAFFS is has implemented several major affiliate EAS strengthening projects. Key ones include:

- Rehabilitation and Community-based Poverty Reduction Project (RCPRP) funded by the International Fund for Agricultural Development (IFAD)
- West African Agricultural Productivity Project (WAAPP)
- Diversified Food Production Project, and Linking Farmers to Market Project both funded by the Islamic Development Bank are examples of past projects.

Most of these recent projects are aligned with the Smallholder Commercialization Programme (SCP), which began in 2011 and is targeted to conclude in 2018. The SCP’s objective, according to the program

overview on the IFAD website, is “to empower the rural poor to increase their food security and incomes on a sustainable basis,” specifically aiming to narrow the gap between rice production and demand, and to facilitate a 10% increase of farm incomes for direct beneficiaries. There was a vision under the SCP for farmer groups to support and sustain aggregate marketing and service centers with establishment of 410 Agricultural Business Centers beginning in 2010. By the end of 2013, only 25 percent of the ABCs in the country were “operating well” according to performance criteria by MAFFS. The GoSL is currently promoting a transformation project to strengthen selected well-performing ABCs in each district as service centers and independent businesses (AgCLIR, 2016).

In 2017, two new projects being implemented through the MAFFS were launched. The first is the Smallholder Commercialization and Agribusiness Development Project (SCADP) funded by the World Bank and DFID for a span of 6 years. SCADP will broadly aim to enhance agribusiness development focusing on value chains for smallholder farmers through infrastructure investments, improving access to finance and credit, boosting ICTs and access to production and business resources and information for farmers. The second one is the European Union-funded Boosting Agriculture and Food Security (BAFS) 3-year project concentrating on capacity and institutional development for MAFFS and strengthening of specialty value chains such as cocoa or cashew. BAFS builds on efforts by the previous EU-funded Agriculture for Development (A4D) project which concentrated on improved productivity of specialty tree crop production such as coffee, cocoa or cashew. Additionally, two USAID-funded FtF projects were launched in 2016 and 2017 in partnership with MAFFS, the Scaling up Aquaculture Production (SAP) project, implemented by WorldFish, and the Entrepreneurial Agriculture for Improved Nutrition (EAIN) project led by CRS and a four-partner NGO and private sector consortium (See EAIN and SAP project descriptions under USAID and FtF Food Security Projects).

Agricultural research and training institutions also support EAS in Sierra Leone, including Njala University (NU), Sierra Leone Agricultural Research Institute (SLARI), and the International Institute of Tropical Agriculture (IITA) – Sierra Leone, a CGIAR international agriculture research center with recent notable work to improve cassava genetics and production practices.

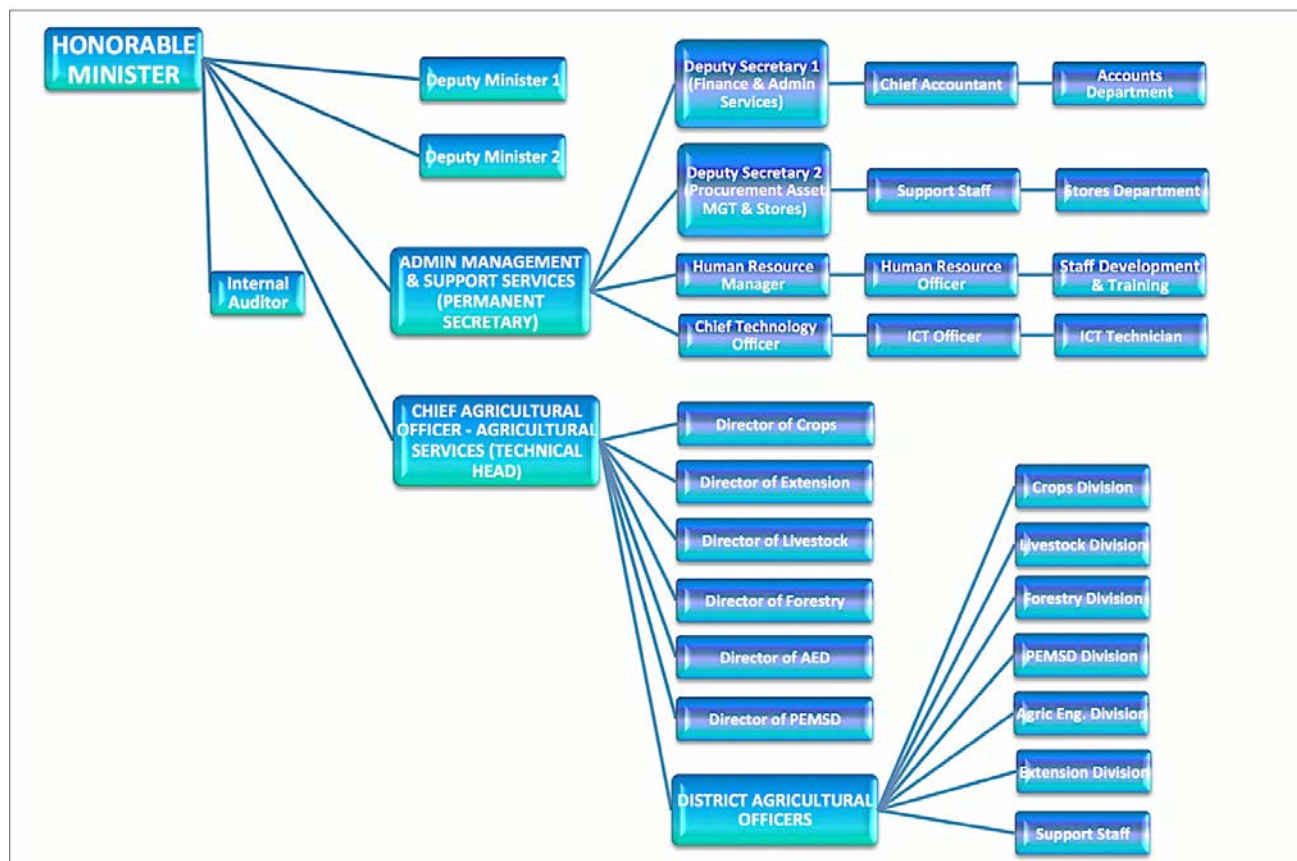
Several include non-governmental organizations (NGOs) as providers of EAS through their programming, namely World Vision, Catholic Relief Services (CRS), Plan International, Welt Hungerhilfe (WHH), Concern Worldwide, among others.

The agricultural extension sector has been rebuilding since the end of the Ebola epidemic that necessitated a rerouting of resources and funding for emergency aid relief and community resilience efforts, especially within MAFFS, SLARI, and the NGO community (Sierra Leone Gazette, 2015). Recent projects seek to strengthen the agriculture sector and increase resilience through longer-term visions and investments rather than immediate relief delivery.

Overview of Agricultural Extension in Sierra Leone through MAFFS

Since becoming independent in 1961, Sierra Leone has employed a variety of extension models, and among them, the Training and Visit (T&V) approach is the most dominant model used (GRAS, 2015). The nation has also implemented participatory extension models like Farmer Field Schools (FFSs), Farmer-Based Organizations (FBOs) and Agricultural Business Centers (ABCs), and Innovation Platforms. However, the agricultural capacity in terms of trained experts, such as agricultural extension staff, among others, remains very low across the country (Gboku & Bebeley, 2016).

Figure 3: Organizational Structure of the Ministry of Agriculture, Forestry, and Food Security



Source: <http://maffs.gov.sl/about-us/ministry-s-organogram>

Over time, the GoSL created an agricultural extension service division within MAFFS to counter historically weak extension services. The extension division coordinates extension delivery across the whole country (Sierra Leone Gazette, 2015). Prior to the creation of the extension division, public extension was largely disjointed in the country. Multiple divisions/departments of MAFFS ran their own extension programs in the country (Sierra Leone Gazette, 2015).

In general, the extension division is responsible for the following activities:

- help rehabilitate facilities for agricultural information and communication trainings;
- harmonize extension services management across sectors of MAFFS and related partners in agricultural development;
- initiate higher use of participatory extension models like Farmer Field Schools and innovation platforms;
- strengthen the agricultural productivity capacities of rural communities through support to farmer-based organizations;
- address topical issues like women and youth in agriculture, farmer health concerns (i.e. HIV/AIDS), climate change and environmental degradation.

The research and extension liaison unit links the MAFFS extension system with other agricultural departments such as Crops, Livestock, and Natural Resources. One initiative MAFFS has been involved in was the Agriculture for Development (A4D) EU-funded project, developing the cash crop industry (such as coffee, cocoa, cashew) and working with World Vision, WHH, and CRS (MAFFS, 2014a).

MAFFS staff training and development aims to create knowledge and disseminate resources throughout the extension system through links with universities and organizations including the Food and Agriculture Organization of the UN (FAO), the World Bank, and IFAD.

Field-level operations, based out of MAFFS district offices, focus on coordinating the activities of farmer-based organizations and agricultural business centers, as well as working with NGO and development partners. This unit is staffed with subject matter specialists (i.e., plant doctors and soil scientists), block extension supervisors, and field-level extension workers who work directly with farmers.

There remains limited use of ICTs in Sierra Leone, although extension agents do use mobile phones to communicate with other agents and farmers. Social media use has increased through the use of mobile applications like WhatsApp, and radios are used to share information at the community level. There is a Ministry of Information and Communication that works to strengthen the capacity for effective ICT use and dissemination. The use of radio programs has been a particularly common and effective means to inform farmers and extension agents. New agricultural development projects such as the SCADP are promoting enhanced ICT systems to support extension, information accessibility for smallholder farmers, and sector coordination.

As with many post-war activities in Sierra Leone, the extension system also attempts to address several cross-cutting issues, including gender and youth empowerment in a decentralized framework (Edwards, Yilmaz, & Boex, 2015). Extension is generally aimed at raising awareness of and implementing strategies to adapt to and counter climate change and extreme weather variability, farmer health issues (e.g., HIV/AIDS, malaria, and typhoid, etc.), among others.

Agricultural Extension and Policy Implications for Women Farmers

Although agricultural and nutrition policies and programs have attempted to mainstream gender equity and inclusion, opportunities are still limited for women to have voice and access information and resources. The Agenda for Prosperity 5-year (2010-2015) strategy paper promoted empowerment of girls and women, especially through education and social economic opportunities. Yet as women are intensively involved in agricultural activities but cannot access important resources, the paper fell short of addressing land access issues that women farmers face (AgCLIR, 2016).

At a higher level of political representation, in 2016 only 12 percent of 124 parliament seats were filled by women, and of 23 line ministries only one was led by a woman and two seats were vacant. At the district and local levels, informal accounts suggest that less than 10% of paramount chiefs are women (AgCLIR 2016). Most women farmers receive information from male extension officers. A new unit was created within MAFFS called “Women in Agriculture and Nutrition (WIAN)” with the official launch of the agriculture policy in 2015 (Sierra Leone Gazette, 2015). WIAN aims to promote full inclusion in community extension systems, especially by helping address key issues affecting women and women farmers. The agricultural policy calls for women to comprise 30% of innovation platform membership at the community level, which are foundational to the implementation of extension work programs, plans, and budgets at the district and sub-district levels (Sierra Leone Gazette, 2015).

The Women's Farmers Forum also seeks to facilitate voice and agency for women farmers, with over 500 linked groups throughout the country according to the MAFFS Deputy Minister in an interview for the 2016 AgCLIR Sierra Leone Report. In 2016, Njala University also worked with the INGENAES Project to launch the Network for Gender and Nutrition Strengthening in Extension, to build a community of practice of NGO, public sector, and private sector extension actors to better serve women farmers and promote awareness around gender and nutrition issues and opportunities.

One project that has integrated women-sensitive approaches is the aforementioned RCPRP, which is a MAFFS partnership with IFAD to address climate change concerns (MAFFS, 2014b). A focus is on sustainable development of inland valley swamps for rice and other food production, which has included the introduction of climate-resilient rice varieties for cultivation in the rehabilitated swamp areas. Through the Gender Action Learning System (GALS) methodology, 260 women have been trained on climate change issues (MAFFS, 2014b).

Another current project emphasizing women in agriculture is the Women Empowered for Leadership and Development (WELD) project, which is being implemented by a World Vision Sierra Leone-led consortium². The initiative aims to increase women and girls' participation in socio-economic activities at the community levels.

Limitations to MAFFS EAS Delivery

Some major constraints of extension services in Sierra Leone may include:

- Limited amount of extension workers available.
- Inadequate number of technically trained and qualified personnel.
- Lack of adequate logistics such as transportation and communication facilities for most extension workers.
- Poor visibility – Although every district in Sierra Leone has extension staff working with MAFFS, there is very low level of visibility of extension field agents at the district and sub-district levels.
- Negative perception of extension workers in the rural setting.
- Poor road network system, extension workers hardly travel to visit their targeted farmers.

Major Extension Initiatives

Besides mainstreaming gender issues into agriculture and nutrition as outlined above, the pluralistic extension system has initiated innovative projects and programs to better provide effective agricultural extension services to smallholder farmers in Sierra Leone (Sierra Leone Gazette, 2015). These include trainings on agricultural product value chains (APVCs), undertaken by SLARI, (Gboku & Bebeley, 2016), innovation platforms, among others (Asenso-Okyere et al., 2009; Gboku et al., 2015; Ugbe, 2011). Other examples are listed below.

Establishment of Agricultural Business Centers (ABCs)

The ABC concept promotes a culture of agribusiness in rural communities by effectively linking smallholder farmers to markets. It seeks to underpin MAFFS's overarching objective of ensuring that agriculture succeeds as the main driver of socio-economic improvement in Sierra Leone by empowering

² Funded by USAID, other consortium partners include Other partners of the consortium include Network Movement for Justice and Development (NMJD), Action Aid International and Advocacy Movement Network

smallholder farmers for commercial agriculture. Recently, MAFFS secured funding from IFAD to implement the Smallholder Commercialization Program (SCP). The SCP empowers smallholder farmers, particularly women and youths to raise their annual agricultural productivity. Specifically, SCP aims to reduce the gap between national rice production and demand, increasing farmer incomes by at least 10%, and to improve agricultural commercialization through enhanced irrigation systems and access to rural finance, among others (MAFFS, 2015).

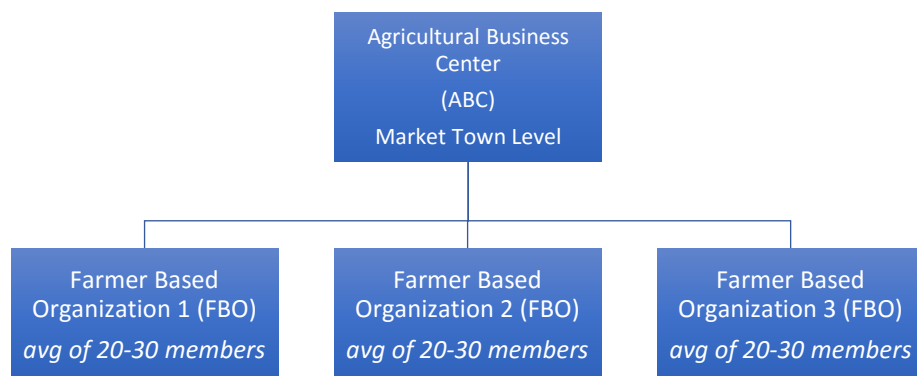
Capacity Building and Development

Through the World Bank-funded WAAPP project, MAFFS promotes extension staff development, both at the district and sub-district levels in Sierra Leone. WAAPP is designed to strengthen the creation, adoption and dissemination of agricultural technologies at the national level in Sierra Leone. It also seeks to build up institutional capacity for agricultural research across the country. To that end, the project seeks to empower the capacity of SLARI for its oversight of the main crops. Specifically, SLARI's Njala Agricultural Research Center (NARC) and its Rokupr Rice Research Center (RARC) are empowered to improve their efficiency in root and tuber crops (mainly, cassava and potatoes) and the rice production, respectively. The WAAP empowerment includes rehabilitation of various facilities and laboratories, research fields and training facilities of SLARI, in order to establish an effective means of coordination, management, monitoring and evaluation of agricultural production across the country (MAFFS, 2014c).

Establishment of Farmer Field Schools and Farmer Business Organizations (FBOs)

FFS's and FBOs support farmers' training at the community level through funding from the RCPRP, SCP, and Rural and Private Sector Development Project (RPSDP). Each of the main projects under MAFFS participate to improve agricultural development across the country through various areas of concentration. For example, the aim of RPSDP is to enhance efficiency along the value chain of major crops in the Sierra Leone, by linking farmers to the private sector actors. Such aims ultimately lead to increased producer benefits and national food security among others (MAFFS, 2015).

Figure 4: Intended Structure for Agricultural Business Centers supported by Farmer Based Organizations



Source: AgCLIR, 2016

Key Public-Private Partnerships and Collaborations

The various partnerships that have been established between MAFFS and private sector institutions and organizations have positively affected extension efforts in Sierra Leone, as outlined above. Another example is Mountain Lion, which is a private agribusiness company that buys rice from farmers, supports farmers to grow rice, and buys parboiled, milled rice from farmers that they package and sell to the World Food Program (WFP) and other institutions. Through support from WAAPP, MAFFS and SLARI collaborate with private sector agencies such as Genesis in Port Loko to implement a seed multiplication project that ensures the production and supply of quality seeds for the farming community.

The West African Rice Company (WARC) is another private sector partner that is collaborating with MAFFS and included in agricultural development projects such as the USAID-funded EAIN Project led by CRS and the BAFS project funded by the European Union. WARC brings background in rice and grain crop production from Argentina, and has established a training commercial farm in Bonthe. According to the company website, WARC has now manages over 3,000ha of agricultural production in Sierra Leone. WARC seeks to facilitate a 1-year training program for smallholder farmers to learn about improved practices, seeds, inputs, and technologies. Following the training program, the farmers may either choose to become permanent WARC staff or produce independently with support and access to inputs and technologies from the company.

Partnering with WARC to support extension for palm oil producers is Goldtree SL Limited, a large-scale palm plantation and milling company based in the Kailahun District of Sierra Leone. According to its website, Goldtree was incorporated in 2007 as the first commercial palm oil producer since the Civil War. A fully integrated automated mill for processing became operational in 2013. The sustainable design of the 20 tons per hour capacity mill includes a furnace and turbine enabling waste fiber to be recycled for power generation. Goldtree has its own nursery for both production and genetic improvement of hybrid highly productive palm seedlings. Then under an outgrower scheme, over 7,500 farmers are supported to own or rent palm production. The community-based farmer's Oil Palm Growers Association also partners with Goldtree for the outgrower program.

Fresh Salone is a company specializing in inputs for high value horticulture production systems. Fresh Salone is responsible for implementing horticulture demonstration farms for the EAIN Project. Product offerings include greenhouses, drip irrigation equipment, improved seeds, fertilizers, and packages (kits) suited for smallholder farmers. After-sale technical support and trainings are also offered.

USAID is also promoting private sector development initiatives, namely in partnership with Chevron to support the ReGrow initiative, to promote post-crisis economic development in Ebola impacted countries. ReGrow aims to facilitate investments in small and medium-sized enterprises (SMEs) by linkages investors, donors, and the private sector, by working with the NGO Cordaid, and providing Resilient Business Development Services. Upon completion of training, SMEs may apply for a loan with a ReGrow revolving fund. For market linkages and opportunities, the ReGrow Marketplace will be hosted with the Sierra Leone Investment and Export Promotion Agency. This USAID-supported initiative seeks to be a catalyst for business development and private sector investment.

Private sector collaborations are also present at the farmer group level, with FBOs linked with ABCs and the development of smallholder associations and cooperatives. Many farmer groups are still informally organized and not registered with the government. Current and recent projects, such as the WorldFish SAP project, seek to organize farmers into clusters and groups that may then strengthen their production, management, and marketing structures to pursue official business opportunities.

Conclusions

In the past several decades, Sierra Leone has faced many challenges, notable ones being the civil war, and most recently, the Ebola epidemic that ravaged entire communities, rerouted resources and funding, and wiped out agricultural production in much of the country. The national economy has also suffered recently from a steady decline of iron ore prices, a major economic activity and GDP contributor in Sierra Leone. Up until 2014 Sierra Leone was experiencing positive growth. Yet 20.1% growth in 2013 decreased to 4.6% in 2014, and since, the depreciation of the Leone and the drop in crude oil prices have further discouraged the country's recovery from Ebola. The GoSL and the Bank of Sierra Leone must work to control inflation and access to products and food (African Development Bank, 2016). Smallholder farmers, among the greatest employment sector in Sierra Leone, are vulnerable to effects of the economy and price fluctuations, as they still recover their production to pre-Ebola levels

Agriculture is still widely perceived as labor-intensive farming for subsistence driving migration to cities without adequate industrialization and job opportunities. As past and current projects have attempted to transition the agriculture sector toward commercialization and modern production systems, traction has been limited, and market demand is limited, especially given recent inflation. A greater emphasis to empower youths and women as agricultural innovators and decision-makers, with access to resources, tools, and advanced production methods may enhance rural livelihood opportunities.

Agricultural extension is pluralistic in the country because of the multitude of donor projects and agendas that influence public-sector extension or implement their own extension programs. Such fragmentation of EAS programming may not be sustainable, as farmers should be able to depend on reliable sources for technical support even after projects phase out. Improvements in the EAS system in Sierra Leone could help sustain value chain interventions for farmers to access inputs, financial services and credit, and link to markets. Current projects, including the FTF SAP and EAIN projects, emphasize market-oriented value chain interventions with private sector investments. Marketing infrastructure development, such as revitalization of ABCs, is a channel to sustainably phase out project support, but continued extension services, capacity development, and linking farmers to information sharing and ICT systems are also important.

Progress is being made to improve nutrition in Sierra Leone. Households are becoming more food secure and malnutrition is decreasing. In addition to focusing on food availability and consumption, USAID is joining the MOHS and others in a push to improve WASH practices and systems, as many nutrition-related illnesses and problems can be caused by preventable contamination. Additional efforts are also important to combat food insecurity related to seasonality and agricultural and weather constraints that affect availability and access to food. As some projects promote improved nutrition through income generation by marketing of agricultural produce, for this pathway to succeed research coupled with capacity development is critical at the farming household level to support better nutrition-sensitive decision making.

Tackling deeply-rooted gender issues in extension and agriculture is very challenging. First, efforts by projects and the EAS sector to understand cultural and contextual norms, traditions and structures are crucial to facilitate social inclusion, enhanced voice and agency of women farmers, and to refine extension programming to better serve women farmers. Women should also be encouraged to study agricultural extension and related fields to then become extension workers and more appropriately serve women farmers. Food insecurity is worsened when girls and young women drop out of school due to early pregnancy or do not attend school to help on their family farms. Females 15 and older constitute 50-75%

of farm labor (Statistics Sierra Leone, 2014). EAS can support livelihood opportunities especially for young women in agricultural education, production, processing, and marketing to improve nutrition outcomes and agricultural productivity.

Since beginning work in-country in 2016, INGENAES has worked with Njala University, a partner of the University of Illinois since the 1960s, to establish a community of practice (COP) of EAS actors from the public and private sectors, NGOs, and local and civil societies. The community of over 40 actively participating members has already integrated tools to assess technologies for impacts on gender and nutrition and have been trained in practical field-based activities for farmers to understand how power, control and decision-making can affect nutrition and agricultural productivity. Also, corresponding with the INGENAES action area to strengthen institutions in the areas of gender and nutrition integration into extension, the COP is based with Njala University to engage students in relevant outreach and experiential learning and to infuse gender and nutrition within the NU extension curriculum. To raise awareness, COP members have been featured on local and national radio programs throughout the country.



Women carrying vegetable harvest to market © Anne Marie Kelly 2014

References

- Abdulai, A. N. (2016). Impact of conservation agriculture technology on household welfare in Zambia. *Agricultural Economics*, 47(6), 729-741.
- AgCLIR. 2016. Sierra Leone Final Report. Arlington: International Development Group LLC. Agribusiness Commercial Legal and Institutional Reform.
- African Development Bank Group. OECD Development Centre. UNDP. United Nations Development Program. 2016. African Economic Outlook 2016
- Anders, G. (2014). Transitional justice, states of emergency and business as usual in Sierra Leone. *Development and Change*, 45(3), 524-542.
- Asenso-Okyere, K., Workneh, S., Rhodes, E., & Sutherland, J. (2009). *Rebuilding after emergency: revamping agricultural research in Sierra Leone after civil war*. Intl Food Policy Res Inst.
- Kamara, A. M. (2016). Sierra Leone News: New Agric Minister vows to increase productivity. *Awoko*
- Beevers, M. D. (2015). Governing natural resources for peace: Lessons from Liberia and Sierra Leone. *Global Governance*, 21(2), 227-246.
- Casey, K., Glennerster, R., & Miguel, E. (2012). Reshaping institutions: Evidence on aid impacts using a pre-analysis plan. *The Quarterly Journal of Economics*, 127(4), 1755-1812.
- CIA. Central Intelligence Agency. 2015. The World Factbook: Sierra Leone. Retrieved May 06, 2016, from www.cia.gov/library/publications/the-world-factbook/geos/sl.html
- Davis, K. (2008). Extension in sub-Saharan Africa: Overview and assessment of past and current models and future prospects. *Journal of International Agricultural and Extension Education*, 15(3), 15-28.
- FAO. Food and Agriculture Organization. 2016. AQUASTAT database. Retrieved March 26, 2016, from www.fao.org/nr/water/aquastat/data/query/results.html
- FAO. Food and Agriculture Organization. 2014. Frausin, V., Fraser, J. A., Narmah, W., Lahai, M. K., Winnebah, T. R., Fairhead, J., & Leach, M. "God made the soil, but we made it fertile": Gender, knowledge, and practice in the formation and use of African dark earths in Liberia and Sierra Leone. *Human Ecology*, 42(5), 695-710.
- FAO. Food and Agriculture Organization. 2013. Global push to end female genital mutilation. Retrieved May 08, 2016, from <https://sl.one.un.org/2014/02/06/unicef-unfpa-press-release-global-push-to-end-female-genital-mutilation>
- FAO. Food and Agriculture Organization. 2012. Larbi, A. Sierra Leone. Retrieved April 2, 2016, from www.fao.org/ag/AGP/AGPC/doc/Counprof/SierraLeone/SierraLeone.htm#2._SOILS_AND
- FAO. Food and Agriculture Organization. 2011. Sannoh, I. J. Table 2:, Table 3A:, and Table 3B. Agricultural and Rural Development Statistics in Sierra Leone. Retrieved on May 10, 2016, from www.fao.org/fileadmin/templates/ess/pages/rural/wye_city_group/2011/documents/session6/Sannoh_-_Paper.pdf
- FAO. Food and Agriculture Organization. 2011. Sierra Leone. IMF (International Monetary Fund). Retrieved from April 07, 2017, from www.fao.org/ag/agp/agpc/doc/counprof/Sierraleone/Sierraleone.htm
- FAOSTAT. Food and Agriculture Organization of the United Nations Statistics Division. 2015. Suite of food security indicators. Retrieved from <http://faostat3.fao.org/browse/D/FS/E>

- FAO. Food and Agriculture Organization of the United Nations. 2016. National aquaculture sector overview: Sierra Leone. Rome: Food and Agriculture Organization of the United Nations. Retrieved from www.fao.org/fishery/countrysector/naso_sierraleone/en
- ForeignAssistance.gov. 2017. Sierra Leone Foreign Assistance. Retrieved June 12, 2017 from <http://foreignassistance.gov/explore/country/Sierra-Leone>
- FTF. Feed the Future. Sierra Leone Agriculture Project. 2016. Retrieved April 10, 2017, from www.worldfishcenter.org/content/feed-future-sierra-leone-agriculture-project
- GFRAS. Global Forum for Rural Advisory Services. 2015. Amadu, F., McNamara, P., Davis, K. and Rodriguez, L. 2015. Community Knowledge Workers for Rural Advisory Services. Note 14. GFRAS Good Practice Notes for Extension and Advisory Services. GFRAS: Lindau, Switzerland.
- GFRAS. Global Forum for Rural Advisory Services. 2016. Gboku, M. L., & Bebeley, J. F. Training for innovation: capacity-building in agricultural research in post-war Sierra Leone. *International Journal of Training and Development*, 20(2), 140-151.
- GFRAS. Global Forum and Rural Advisory Services. 2015. Gboku, M. L., Modise, O. M., & Bebeley, J. F. A Case Study of Innovation Platforms for Agricultural Research, Extension, and Development. *Cases on Leadership in Adult Education*, 173.
- Government of Sierra Leone. 2010. Republic of Sierra Leone. *Millennium Development Goals Progress Report 2010*. Retrieved June 8, 2017 from www.undp.org/content/undp/en/home/librarypage/mdg/mdg-reports/africa-collection.html
- IFAD. International Fund for Agricultural Development. 2010. Sierra Leone country strategic opportunities programme. Retrieved June 8, 2017 from www.ifad.org/documents/10180/e60849b8-6062-4ebf-900a-84c7736a734a
- Ighobor, Kingsley. "Sierra Leone: Nursing Agriculture Back to Health | Africa Renewal Online." Africa Renewal. United Nations, February 20, 2014. Retrieved June 8, 2017.
- ILO. 2004a. "Employment in agriculture, female (percent of female employment). <http://data.worldbank.org/indicator/SL.AGR.EMPL.FE.ZS?locations=SL>
- IMF. International Monetary Fund. 2011. Sierra Leone: Poverty Reduction Strategy Paper-Progress Report, 2008-2010. IMF Country Report No. 11/95.
- JICA. Japan International Corporation Agency. 2015. Strategic Rice Development Project in Sierra Leone. Technical Package on Rice Production.
- Larson, K. (2013). For women in Sierra Leone, another kind of civil war. Retrieved April 3, 2016, from www.usatoday.com/story/news/world/2013/01/12/sierra-leone-domestic-violence/1828623
- MAFFS. 2014a. Ministry of Agriculture, Forestry and Food Security. 2014. Agriculture for Development (A4D) Project. Retrieved June 8, 2017 from <http://maffs.gov.sl/projects/agriculture-for-development-a4d>
- MAFFS. 2014b. Ministry of Agriculture, Forestry and Food Security. 2014. Climate Change. Retrieved June 8, 2017 from <http://maffs.gov.sl/projects/climate-change>
- MAFFS. 2014c. Ministry of Agriculture, Forestry and Food Security. 2013. Development of a Prioritized Capacity Plan for WAAPP-IC Project Coordinating Unit and Implementing Partners in Support of Agricultural Research and Extension Services in Sierra Leone. Retrieved June 8, 2017 from <http://maffs.gov.sl/projects/agriculture-for-development-a4d>

- MAFFS. Ministry of Agriculture, Forestry and Food Security, WFP. 2015. World Food Program, FAO. Food and Agriculture Organization. 2015. The State of Food Security in Sierra Leone Post Ebola 2015.
- McFerson, Hazel M. (2012). Women and Post-Conflict Society in Sierra Leone. *Journal of International Women's Studies*, 13(1), 46-67. Available at: <http://vc.bridgew.edu/jiws/vol13/iss1/4>
- MOHS. Ministry of Health and Sanitation, UNICEF. United Nations Childrens Fund. HKI. Helen Keller International, WHO. World Health Organization. 2015. 2013 Sierra Leone Micronutrient Survey
- Nations Encyclopedia (n.d.). Sierra Leone. Retrieved June 09, 2016, from www.nationsencyclopedia.com/economies/Africa/Sierra-Leone.html
- Pasqualino, M.M., Thilsted, S.H., Phillips, M.J., Koroma, A.S. 2016 Penang, Malaysia: WorldFish. Program Report: 2016-23
- Political Map of Sierra Leone. (n.d.). Retrieved March 20, 2016, from www.nationsonline.org/oneworld/map/sierra_leone_map2.htm
- Rural Poverty Portal (2015). Rural Poverty Portal. Retrieved March 20, 2016, from www.ruralpovertyportal.org/country/home/tags/sierra_leone
- Sierra Leone Gazette. Volume CXLVI, Number 62. Published by authority of the Government of Sierra Leone, on November 27, 2015.
- SLARI. Sierra Leone Agricultural Research Institute. 2012. Investment Plan 2012 – 2016, March 2012.
- SLARI. Sierra Leone Agricultural Research Institute. 2012. Strategic Plan 2012 – 2021, November 2011.
- SLARI. Sierra Leone Agricultural Research Institute. 2012. Operational Plan 2012 – 2016, November 2011.
- SPRING. 2015. Integrated Nutrition and Agriculture Needs Assessment for Sierra Leone. Arlington, VA: USAID Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project.
- Statistics Sierra Leone. 2014. Labor Force Survey 2014. Report generated October 3, 2016
- Statistics Sierra Leone and ICF International. 2014. Sierra Leone demographic and health survey, 2013. Statistics Sierra Leone and ICF International. Retrieved from <https://dhsprogram.com/pubs/pdf/PR42/PR42.pdf>
- SUN. Scaling Up Nutrition. 2014. Sierra Leone. Retrieved from <http://scalingupnutrition.org/sun-countries/sierraleone>
- Ugbe, U. P. 2011. Embedding research-into-use ideas in the policy space: the case of Riu in Nigeria and Sierra Leone. Discussion paper.
- West Africa Regional Development Cooperation Strategy. (2015). Retrieved May, 2016, from www.usaid.gov/sites/default/files/documents/1860/USAID-WA-RDCS-Public-Version-June-2015.pdf
- UN. United Nations. 2014. Ighobor, K. Sierra Leone: Nursing agriculture back to health | Africa Renewal Online. Retrieved May 08, 2016, from www.un.org/africarenewal/magazine/special-edition-agriculture-2014/sierra-leone-nursing-agriculture-back-health
- UNDP. United Nations Development Programme. 2015. About Sierra Leone. Retrieved April 18, 2016, from www.sl.undp.org/content/sierraleone/en/home/countryinfo.html

- UNDP. United Nations Development Programme. 2016. About Sierra Leone. Retrieved April 18, 2016, from www.sl.undp.org/content/sierraleone/en/home/countryinfo.html
- UNESCO. 2016. Sierra Leone : Literacy Rate. Montreal: UNESCO Institute of Statistics. <http://uis.unesco.org/country/sl>.
- UNICEF. United Nations International Children's Emergency Fund. 2012. Davies, I. My husband gives me money, yet I don't like this marriage. Retrieved April 18, 2016, from www.unicef.org/wcaro/english/4501_6729.html
- USDA. United States Department of Agriculture. Production Supply and Distribution. Retrieved originally for the World Bank Rice Prices in Sierra Leone Report in 2014.
- U.S. Overseas Loans and Grants to Sierra Leone. 2013. Retrieved June 20, 2016, from <http://us-foreign-aid.insidegov.com//154/Sierra-Leone>
- USAID. United States Agency for International Development. 2009. Sierra Leone Food Security Country Framework FY 2010-2014. (2009, October). Retrieved March 23, 2016, from http://pdf.usaid.gov/pdf_docs/pdacu314.pdf
- USAID. United States Agency for International Development. 2016. Our Work: Sierra Leone. Retrieved April 10, 2017, from www.usaid.gov/sierra-leone/our-work
- WHH. Welt Hungerhilfe. 2015. Disaster preparedness and reactivation of agricultural production and trade in Ebola affected Districts of Southern and Eastern Sierra Leone. Retrieved April, 7, 2017 from <https://awoko.org/2015/07/20/sierra-leone-news-welthungerhilfe-empowers-sierra-leone-traders-union/>
- WHO. World Health Organization. 2015. Ebola Situation Report. Retrieved May 22, 2017, from http://apps.who.int/ebola/sites/default/files/atoms/files//who_ebola_situation_report_30-12-2015.pdf?ua=1&ua=1
- World Bank. 2011. Nutrition at a Glance, Sierra Leone. World Bank. Retrieved March 21, 2016 from <http://documents.worldbank.org/curated/en/516171468104058255/pdf/771950BRI0Box00orra0leo0April02011.pdf>
- World Bank. 2015a. Sierra Leone Trade Summary. Published online by the World Integrated Trade Solution. Retrieved May 19, 2017 from <http://wits.worldbank.org/CountryProfile/en/Country/SLE/Year/LTST/Summarytext>
- World Bank. 2015b. Mortality rate, infant (per 1,000 live births). World Bank. Retrieved June 8, 2017 from <http://data.worldbank.org/indicator/SP.DYN.IMRT.IN>
- World Bank. 2015c. Mortality rate, under-5 (per 1,000 live births). World Bank. Retrieved June 8, 2017 from <http://data.worldbank.org/indicator/SH.DYN.MORT>
- WVSL. World Vision Sierra Leone. 2015. Women Empowered for Leadership and Development (WELD). Annual Performance Report, September 2015.
- WFP. World Food Program. 2011. The State of Food Security and Nutrition in Sierra Leone 2011. Comprehensive Food Security and Vulnerability Analysis (CFSVA).

Annex I: Map of Sierra Leone



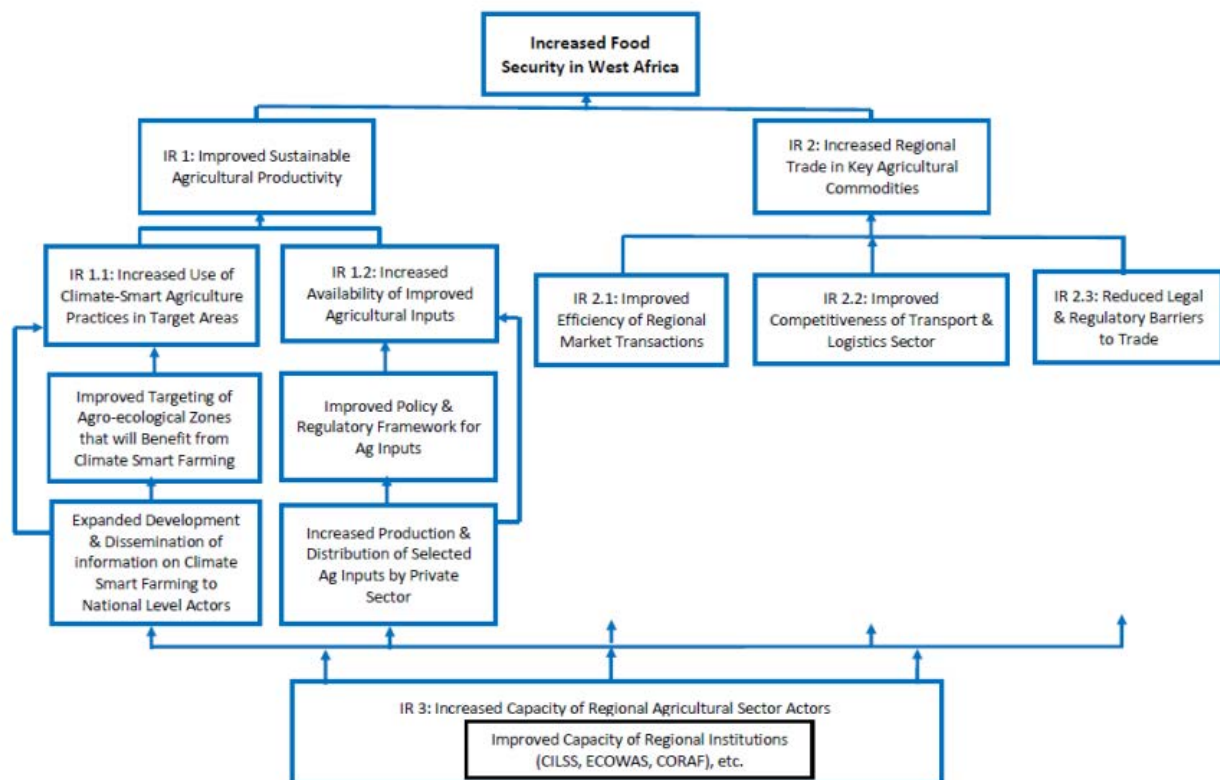
Source: Nations Online Project. n.d.

Annex 2: Background Information on the USG Support Strategy for West Africa and Sierra Leone

West Africa Region's Feed the Future Multi-Year Strategy

Sierra Leone is not an official Feed the Future (FtF) country. Instead, it is an FtF-aligned country, meaning there is no specific strategy. However, the West Africa regional FtF strategy does apply in many ways, namely through supporting the Comprehensive Agriculture Development Program (CAADP) 2014 Malabo Declaration and aligning with the ECOWAS regional agricultural plan. For more information, please visit the [USAID West Africa Regional webpage with resources](#).

Figure 5: West Africa Regional FTF Results Framework



Source: FTF Multi-Year Strategy for West Africa, 2011

USAID West Africa Ebola Recovery

Since the outbreak of the Ebola Disease in West Africa, USAID has noticeably increased its programming and profile in Sierra Leone. Much of the enhanced presence is in line with USAID's Ebola recovery plans, focusing on mitigating the loss of development gains and institutional re-strengthening and strengthening to improve the health system response and to promote resilience to shocks and disaster.

There are 5 key target interventions outlined by USAID on its website:

1. Food Security: support to households, communities and markets to recover from impacts of the EDV outbreak, and to contribute to increased food security.
2. Health Systems and Services: support improvements in accessibility of services, especially basic care and common disease treatment, which were weakened largely due to reallocation of resources during the Ebola outbreak.
3. Innovation Technology and Partnerships: Learn how inadequate communications and technology weakened the response to the outbreak, and focus on strengthening health information systems.
4. Governance and Economic Crisis Mitigation: Support from USAID, especially to governments, to attract private sector investment and empower the civil society.
5. Global Health Security Agenda: Preventing repeated widespread disease outbreaks by enhancing the capacity to detect, prevent, and respond.

Source: www.usaid.gov/ebola

USAID/Regional Development Cooperation (CDC) Strategy

The United States Agency for International Development established as Regional Development Cooperation Strategy 2015-2019 for West Africa countries (See full strategy at [here](#).) The region is immense and diverse comprised of 21 countries facing some of the most significant development challenges, and Sierra Leone is one of them.

The principal purpose of the strategy is to advance social and economic wellbeing by West Africans. This regional strategy outlines the development goal of West Africa, which contains three Development Objectives (DO) and one Support Objective (USAID. West Africa):

DO 1: Systems of Non-violent Conflict Management Strengthened in West Africa

- Effective Management on poverty and unemployment triggered violence, transparency in governance, and management of natural resources

DO 2: Broad-Based Economic Growth and Resilience Advanced through West African Partners

- Improving food and agricultural security, overcoming low degree intra-regional trade, sufficient funding for environmental institutions and proper protection of ecosystems

DO 3: Utilization of Quality Health Services Increased through West African Partners

- Control on prevalence of HIV/AIDS, reduce maternal and infant mortality rate, support unmet needs for modern contraceptives to reduce high fertility rate and health product distribution to households

Support Objective: USAID's Capacity to Advance USG Objectives in West Africa Enhanced

- Regional programs focus on strengthening regional institutions, policy harmonization, transboundary issues, and Presidential Initiatives as related to the mission's DOs and goal.



Source: https://commons.wikimedia.org/wiki/File:West_Africa_regions_map.png

The USAID/West Africa development goal hypothesizes that if the development objectives can be achieved, the social and economic well-being will be advanced by West Africans, including Sierra Leone. The support objectives will help achieving the development goal by supporting USAID's own capacity to deliver development programming for the countries in the region. The regional strategy advances the objectives agriculture, gender disparity and food security. The report stated the strategy would target women's access to productive resources and agricultural technology constraints, overcoming health challenges by enhancing women's accessibility to family planning and necessary treatments. Other health challenges such as high fertility rate, high child mortality rate, and HIV/AIDS prevalence will also be attended to under the execution of the strategy.

Besides the development objectives and support objective, the development hypothesis also encompasses the strategic, crosscutting issues that overlap with INGENAES project objectives. This strategy plans to build capacity within institutions, integrate gender into the regional strategy, eliminate underrepresentation of youth in decision-making circles, improve governance by working with authorities and local communities, expect and react to climate changes, promote resilience "the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth", and target conflicts across all sectors to achieve long-term stability in the West Africa region. These strategic issues overlap

with INGENAES's project objectives aimed towards promoting a pluralistic extension and advisory services (EAS) system to empower women to contribute to household incomes, increase productivity, reduce gender gaps in agriculture, and improve nutrition outcomes for farming families (USAID. West Africa).

USG Aid Assistance to Sierra Leone

In 2017, the US Government (through the Department of State and USAID) plans to spend \$9.46 million on aid assistance to Sierra Leone. The assistance can be broken down as such:

Assistance Category	Percent of Total	Amount (in USD million)	Subcategory and amount
Economic Development	63%	\$6.00 million	Agriculture (\$6 million)
Democracy, Human Rights, and Governance	27%	\$2.56 million	Good Governance (\$1 million)
			Civil Society (\$1 million)
			Rule of Law and Human Rights (\$561K)
Health	5%	\$0.50 million	HIV/AIDS
Peace and Security	4%	\$0.40 million	Stabilization Operations and Security Sector Reform
Total		\$9.46 million	
<i>Source: ForeignAssistance.gov, 2017</i>			

The US Government may spend more than what is planned based on past years' data. In 2016, the US Government planned to spend \$3.31 million on aid assistance to Sierra Leone, but the Ebola Outbreak response required the US Government to spend \$123.97 million instead. The difference was spent on humanitarian assistance. Likewise, in 2015, the US Government planned to spend \$11.81 million but spent \$73.54 million by the end of the fiscal year. Planned spending in 2014 was, however, higher than what was spent by the end of the fiscal year (\$24.59 million planned vs. \$17.7 million spent).

The 2017 planned spending on agricultural development is higher than in the past several years, as depicted in the chart below.

US Government Spending on Agricultural Development	
Year	Spent
2017 planned	\$6.00 million
2016	\$1.68 million
2015	\$0.919 million
2014	\$0.237 million
2013	\$1.67 million
2012	\$0.054 million
2011	\$0.047 million

USAID and Feed the Future Food Security Projects

USAID assisted Sierra Leone on gaining political stability, achieving food security and strengthening democratic governance since 1961. The USAID assistance downgraded during late 70s but the programs were reignited in 2000 in Sierra Leone. USAID is building current gains in Sierra Leone to deepen good governance programs and to foster economic growth through public-private partnership on its path towards a peaceful and prosperous future. (Citation/ www.usaid.gov/sierra-leone/history)

USAID assist Sierra Leone's development primarily in four distinct areas: Agriculture and food security, Democracy, Governance and Human rights, Gender Equality and Women's Empowerment and Global Health. Below are the projects/programs conducted by USAID and other USG agencies in Sierra Leone.

Below are the projects/programs conducted by USAID and other USG agencies in Sierra Leone.

Agriculture and Food Security

Agriculture remains the backbone of the Sierra Leone economy and contributes about 50% of GDP. Poverty is directly linked to the problems faced in agricultural production and commercialization. The government-imposed Ebola response measures such as travel restrictions, quarantines, reduced business hours, closed markets, and bans on public gatherings limited the ability of farmers to harvest and sell their crops during the outbreak; widespread household income loss, labor shortages and widespread food insecurity especially in hard hit Ebola regions.

USAID assistance supports community-based savings and loans schemes, provides innovative grants to small – and medium-sized enterprises along the value chain, introduces new agricultural technologies, strengthens linkages between farmers and markets, and provides business training and assistance to producer and market associations. Women and youths are both beneficiaries and partners in all these interventions. USAID is currently in the assessment phase for a Feed the Future program. Findings from the assessment will inform the development of a strategy for food security that will endeavor to raise farmer incomes, increased private sector investment in agriculture, improved household nutrition practices and reduced stunting.

Source: USAID, 2016. www.usaid.gov/sierra-leone/our-work

Feed the Future Entrepreneurial Agriculture for Improved Nutrition (EAIN) Project

The USAID-funded EAIN project began field work in 2017, and is being implemented by a 5-partner consortium led by CRS. The two other NGO partners are ACDI-VOCA focusing on market linkages and value chain actor strengthening, and Helen Keller International (HKI) designing nutrition and sanitation and hygiene-related messaging and SBCCs. There are also two private sector partners: Fresh Salone will implement high value horticulture production systems, and the West African Rice Company will enhance rice and maize production working with farmer groups and establishing satellite farms. The 16.9 million USD project aims to reach 30,000 households, with an emphasis on women and children, over its 5-year span. Activities will focus in the Tonkolili District, in coordination and collaboration with the FtF SAP Project implemented by WorldFish. EAIN is also collaborating with Africa Lead and the INGENAES Project to better align all FtF engagements in Sierra Leone.

Source: <http://photos.state.gov/libraries/adana/5/U%20S%20A%20I%20D/FeedtheFuture.pdf>

Feed the Future Sierra Leone Agriculture Project

WorldFish implemented the FtF Sierra Leone Agriculture Project (WorldFish FtF Pilot Project) for 15 months, from July 2015 to September 2016. Primary partners included CARE International, SNAP, CARITAS, INGENAES, MAFFS, MOHS and the Ministry of Fisheries and Marine Resources. The pilot project designed and tested integrated agriculture-aquaculture production systems, fish-rice and fish-vegetable, working with smallholder farmer learning groups. Assessments were conducted about the current status of fisheries, inland valley swamps, and agricultural farming systems and value chains, with an emphasis on rice and fish value chains and integrated farming systems. An assessment of potential fish feed ingredients available and accessible for smallholder farmers to produce on-farm feed was also conducted in collaboration with the aquaculture program of Njala University. According to land suitability for aquaculture and the FtF identified Zone of Influence, particular attention was paid to the Tonkolili District, which has large areas of rice farming associated with inland valley swamps.

The pilot project also aimed to promote improved nutrition, especially for mothers and children with the introduction of nutrient-rich foods made from small nutritious fish for infants and young children. Recipe acceptability studies were conducted using fish and nutritious locally available products to make foods for infants like porridges. Participatory action research (PAR) was facilitated in all 23 pilot communities to engage approximately 400 farmers in a process to identify the root causes of malnutrition, low income and low productivity and how integrated aquaculture and agriculture systems might improve them. An output of the process was a five-year community vision including an action plan with roles and responsibilities. Seasonal food availability calendars were also developed through PAR to illustrate year round access to a diversity of foods and track the effect of seasonality on consumption.

During its initial phase in 2015 and 2016, the pilot project captured learning and identified the possibilities for longer-term investments into fish-based farming systems within Sierra Leone to improve the nutrition and income status of rural women, men and children at wider scale. WorldFish, in consultation with partners within the CGIAR system and beyond, draws on wider learning to support and enhance this initiative in Sierra Leone, including learning from other WorldFish Feed the Future collaboration experiences in Bangladesh and Cambodia.

Scaling up Aquaculture Production (SAP) Project

Building upon learning and research from the WorldFish FtF Pilot Project, the 4 to 5 year SAP project was awarded by USAID to develop and test pro-poor aquaculture business models. Transitioning from a group learning focus to individual household fish farming, the SAP project aims to scale up fish farming, production, and consumption through value chain interventions linking farmers to finance, inputs, extension, and to markets. Collaborations and activities are being aligned with the CRS-led EAIN Project, and other partners include the MAFFS, MFMR, and the University of Illinois and INGENAES focusing on extension programming.

The SAP Project began implementation in January 2017 and is organizing farmers into cluster groups of approximately 15-25 farmer each, first focusing in Tonkolili and working with many communities that participated in the WorldFish FtF Pilot Project.

In 2016, WorldFish worked with the Ministry of Fisheries and Marine Resources to rehabilitate and make operational the Makali Fish Farming Station, which had been abandoned during the Civil War in the 1990s. Makali serves as a central research and production station for tilapia bloodstock and fingerlings. As genetic

characteristics are being improved by crossing two strains of tilapia, fingerlings are also being made available for farmer groups. Fingerlings to stock ponds will be provided by the project only during the first production cycle sourced from Makali, and in subsequent production cycles, 1-2 breeder farmers will be trained to breed and sell to fish farmers within their clusters.

The SAP Project will link farmers to microfinance, chiefly through the Apex Bank-managed FSAs and CBs, with each farmer household trained to develop business plans detailing how their supply, production, and marketing will allow for loan repayment and extra for household savings. In each cluster group, a VSLA is also being formed to support fish farming and household activities. Currently a market chain study is in progress to test and/or assess potential market actors for the prices and returns farmers would receive for their tilapia. Two research farmers are appointed in each cluster group to support this effort and transition the information collection to the responsibility of the farmers.

The University of Illinois and the INGENAES Project are collaborating with WorldFish to write a gender strategy for the SAP Project. The strategy will build upon efforts by INGENAES with WorldFish during 2016 and 2017 to integrate gender and nutrition into the project extension, to assess on-farm produced fish feed for gender and nutrition impacts, and to facilitate Njala and Illinois student involvement in project activities. The gender strategy will look to involve stakeholders and partners, beginning with in-country work in July 2017. It will emphasize household empowerment for all members through involvement in testing and developing pro-poor aquaculture business models.

Sources: WorldFish, 2016. http://pubs.iclarm.net/resource_centre/2016-08.pdf and the SAP Project Technical Application submitted to USAID (WorldFish, 2017)

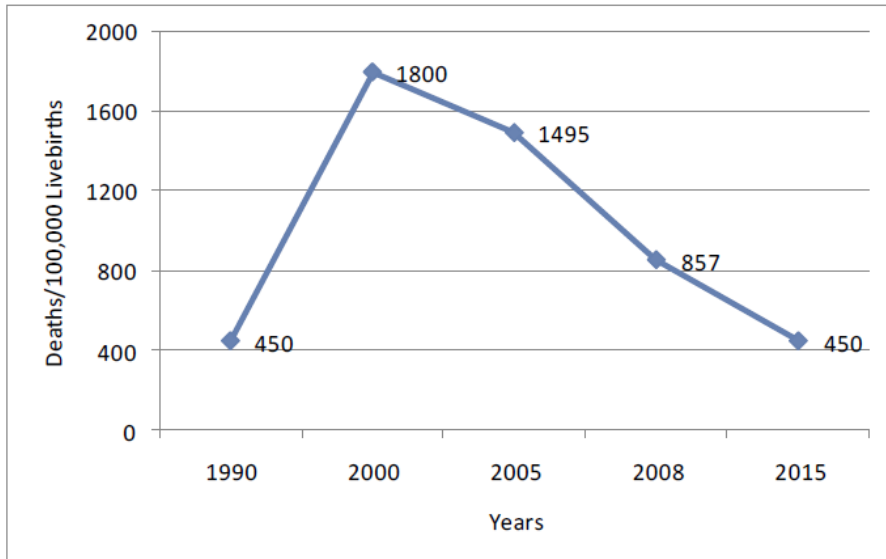
Democracy, Human Rights, and Governance

Sierra Leone is working to grow into a vibrant democratic society, increasing its stature as a key player in international peace-keeping operations. However, a lack of depth in transparent and participatory governance and the rule of law, and the negative impact of corruption and unclear roles and responsibilities in local governance remain key impediments to rebuilding and strengthening democratic practices. USAID is currently supporting the Women Empowered for Leadership and Development (WELD) project being implemented by World Vision that aims at reducing the significant ongoing barriers to women and girls' full integration into the decision-making sphere from the household, to community and national levels. WELD is currently promoting involvement by women in the political process in Sierra Leone, by encouraging the right to vote and seeking to empower women to take political offices. Work has also been done around empowerment and economic advancement through membership in village savings and microfinance groups, such as VSLAs.

Source: USAID, 2016. www.usaid.gov/sierra-leone/our-work

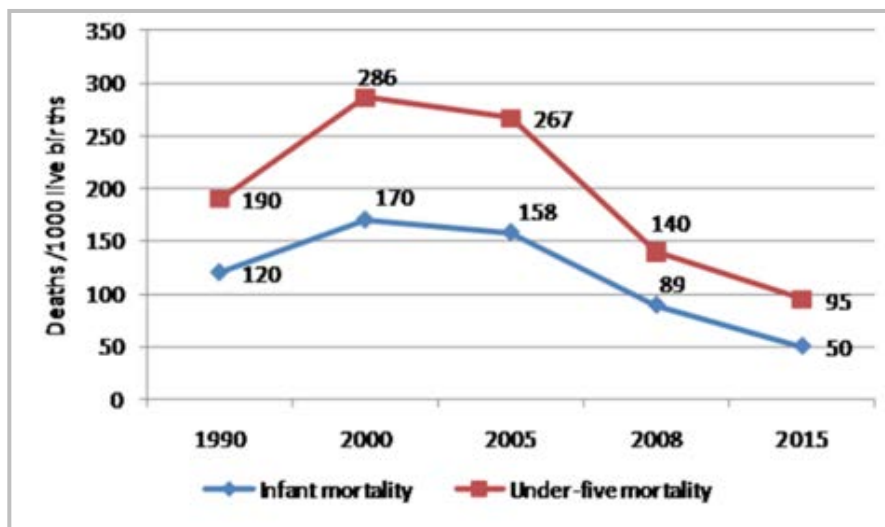
Annex 3: Trends in Maternal and Child Health Status in Sierra Leone

Trends in Maternal Mortality



Source: Government of Sierra Leone, 2011

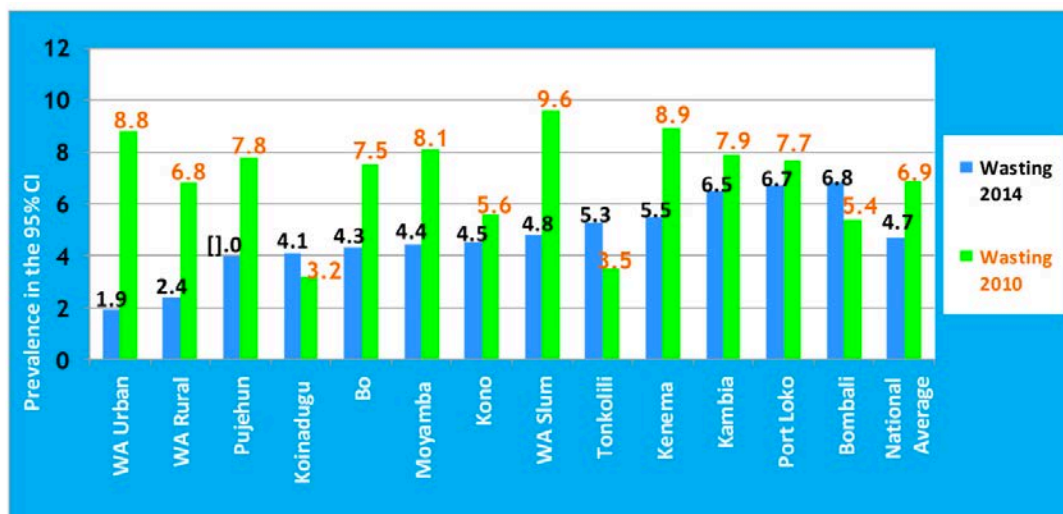
Trends in Under-five and Infant Mortality



Source: Government of Sierra Leone, 2010

Annex 4: Stunting and Malnutrition Trends and Status

Comparing Wasting 2010 and 2014 Levels by District



Source: Sierra Leone 2014 National Nutrition Survey (MOHS & UNICEF)

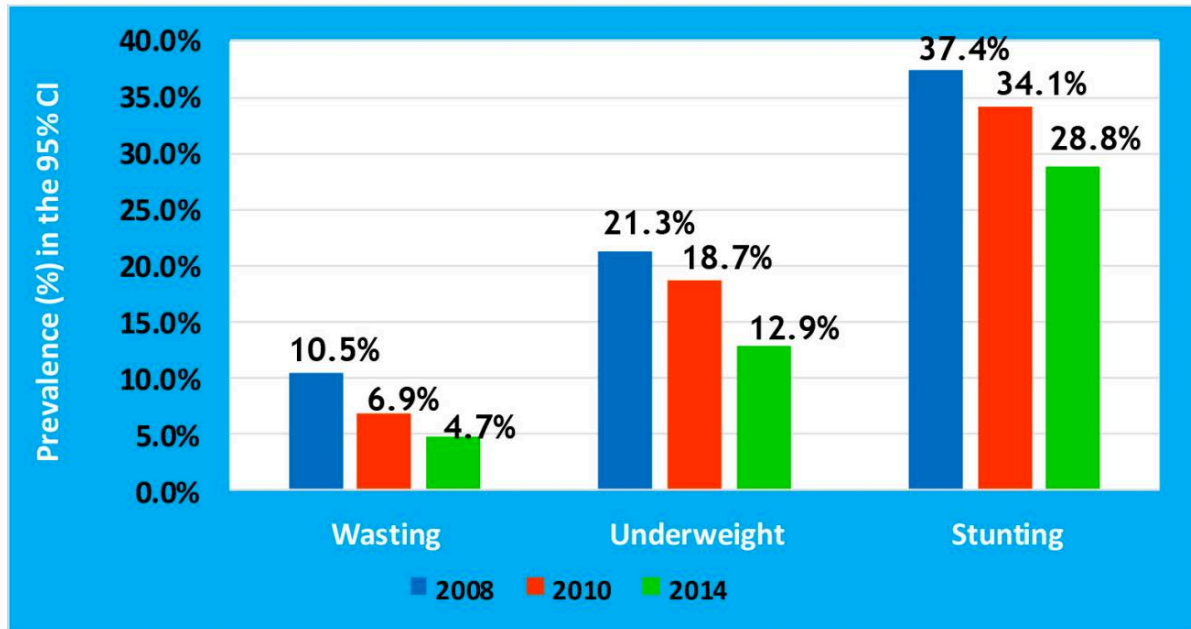
Comparing the Prevalence of Stunting by District

Province	District	N	Prevalence of Stunting	Moderate Acute Malnutrition (WHZ <-2 & >=-3, no edema)	Severe Acute Malnutrition (WHZ <-3, and/or edema)
Western	Urban	872	17.4% (12.8-23.2)	13.3% (9.7-17.9)	4.1% (2.7- 6.2)
	Slums	1292	17.0% (13.6-21.0)	13.5% (10.6-17.1)	3.4% (2.5- 4.7)
	Rural	936	22.3% (19.2-25.8)	18.4% (15.6-21.5)	4.0% (2.7- 5.7)
Eastern	Kono	469	30.1% (23.8-37.2)	19.8% (15.7-24.7)	10.2% (6.5 -15.7)
	Kenema	695	39.6% (34.4-45.0)	26.5% (23.0-30.3)	13.1% (10.3-16.5)
Southern	Pujehun	783	41.0% (35.3-46.9)	30.7% (26.3-35.4)	10.3% (7.7-13.8)
	Bo	896	22.7% (17.0-29.5)	17.6% (13.0-23.4)	5.0% (3.3- 7.6)
	Moyamba	984	34.5% (31.1-38.0)	24.1% (21.8-26.5)	10.4% (8.0-13.3)
	Kambia	832	28.2% (22.7-34.5)	20.7% (16.5-25.6)	7.6% (5.6-10.2)
Northern	Port Loko	1032	32.2% (27.6-37.1)	23.2% (19.9-26.8)	9.0% (6.8-11.8)
	Koinadugu	442	27.4% (22.0-33.4)	19.5% (15.5-24.1)	7.9% (5.1-12.0)
	Tonkolili	712	41.2% (35.9-46.6)	26.0% (22.1-30.3)	15.2% (12.3-18.6)
	Bombali	703	33.3%(28.3-38.7)	24.8% (20.6-29.5)	8.5%(6.4 - 11.3)
National Average		10,630	28.8% (27.5-30.2)	21.0% (19.9-22.1)	7.8% (7.2- 8.5)

The numbers in bracket are 95% CI

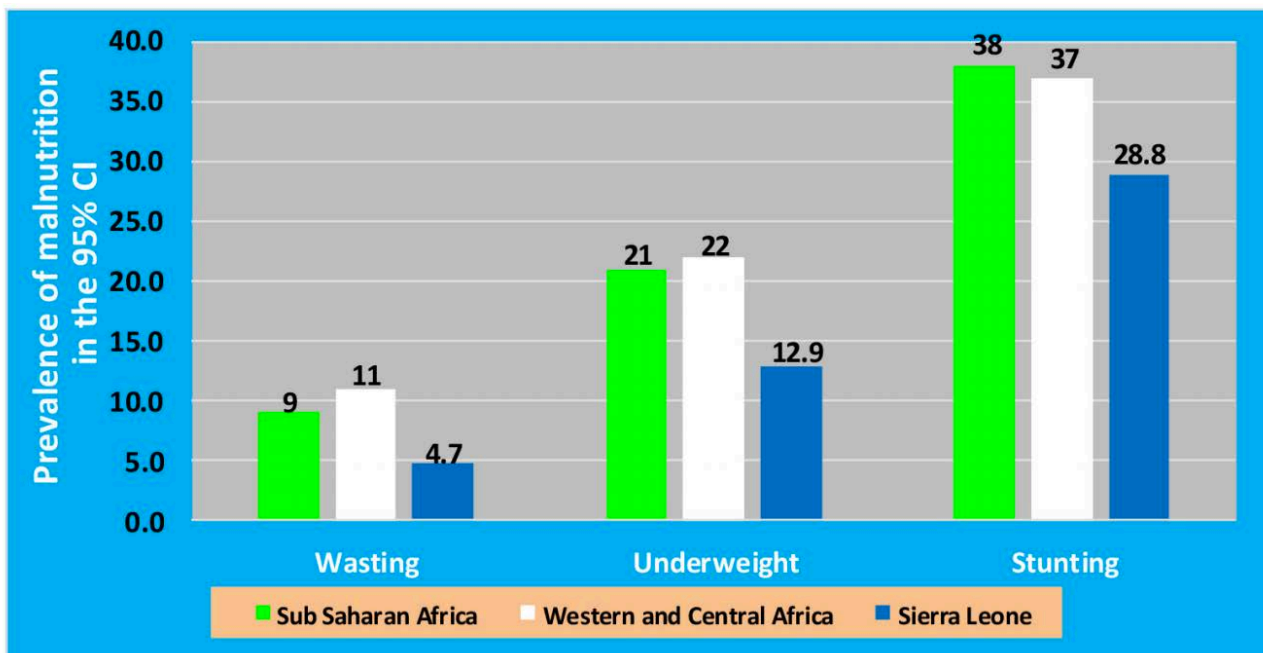
Source: Sierra Leone 2014 National Nutrition Survey (MOHS & UNICEF)

Comparing Nutrition Status in Children 6 to 59 months between 2008, 2010, and 2014



Source: Sierra Leone 2014 National Nutrition Survey (MOHS & UNICEF)

Malnutrition in Sierra Leone Compared to other regions in Africa



Source: Sierra Leone 2014 National Nutrition Survey (MOHS & UNICEF)

INGENAES supports the development of improved extension and advisory systems (EAS) to reduce gender gaps in access to extension services and to enhance the empowerment of women farmers. The goal is to improve gender and nutrition integration within extension services by directly or indirectly assisting multiple types of stakeholders within a country, such as farmers, producer groups, cooperatives, policy makers, technical specialists, development non-governmental organization (NGO) practitioners, and donors.

INGENAES' efforts will strengthen the capacity of key stakeholders and provide the fora and networks for them to coordinate and reach agreement on policies and strategies to implement improved EAS that better meets the needs of men and women farmers. While INGENAES project does not directly monitor beneficiary impacts, it will focus on changes in institutions that directly affect men and women in terms of access to agricultural information, trainings, new technologies, and nutrition information. Improved services empower women and engage men.

INGENAES will strengthen institutions by identifying their needs and strengthening their capacity to integrate gender and nutrition-sensitive information and activities into extension systems. Thus, it aims to promote gender equality, improved household nutrition, and increased women incomes and, subsequently, household food security. Based on the identification of four main gaps in extension services in terms of gender and nutrition integration, INGENAES activities can be divided into the following action areas:

- Build more robust, gender-responsive, and nutrition-sensitive institutions, projects, and programs capable of assessing and responding to the needs of both men and women farmers through extension advisory services (EAS);
- Identify and scale proven mechanisms for delivering improved EAS to women farmers;
- Disseminate technologies that improve women's agricultural productivity and increase household nutrition; and,
- Apply effective, nutrition-sensitive extension approaches and tools for engaging both men and women.

Indicative activities of the INGENAES project include learning exchanges, assessments, curricula development, and training into action, mentoring relationships, internship experiences, and networks that focus on identifying gender-responsive and nutrition-sensitive innovations that EAS organizations can promote and men and women farmers can adopt. Developing these outputs collaboratively with extension experts and other partners will transform extension-relevant institutions working directly with men and women farmers.

In each country, INGENAES needs to examine the relationships, identify the key change actors, build their capacity, and provide them with the incentives to make changes (e.g., set new policies, employ new management practices, modify organizational structures, make changes in practice, and adopt innovations). The key actors will vary from country to country, although policy makers, the Ministries of Agriculture and Health, NGOs and the private sector, and of course, women farmers, are likely to be involved in most countries. Key actors will be identified as part of the needs and scoping assessments. Thus, and in preparation of country-level activities, the consortium gathers information and key contacts to develop a landscape study of the agricultural sector in that country. The landscape study is a simple description of the pluralistic extension system, nutrition related initiatives, and gender issues in target country. As such, the landscape study is intended to be a preparatory tool and handy reference document for work in each country.